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PROGRESS REPORT No. 13

MACHINE TOOLS

BY THE

JOINT COMMITTEE ON DEFENSE PRODUCTION
CONGRESS OF THE UNITED STATES

EIGHTY-SECOND CONGRESS
SECOND SESSION

JANUARY 23 (legislative day, JANUARY 10), 1952.—Ordered to be printed with illustrations

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LETTER OF TRANSMITTAL

CONGRESS OF THE UNITED STATES,
JOINT COMMITTEE ON DEFENSE PRODUCTION,
January 23, 1952.

The honorable the PRESIDENT OF THE SENATE.
The honorable the SPEAKER OF THE HOUSE OF REPRESENTATIVES.

In accordance with section 712 (b) of the Defense Production Act, as amended, there is transmitted herewith from the Joint Committee on Defense Production, a report on the machine-tool program as it affects our mobilization effort.

The Joint Committee on Defense Production has no legislative powers. We prepare reports setting forth the facts as we see them on the activities performed by Federal agencies under authority of the Defense Production Act, as amended. Legislative action, if any, is handled by the appropriate standing committees of the Senate and the House of Representatives.

Respectfully submitted.

BURNET R. MAYBANK, *Chairman.*
PAUL BROWN, *Vice Chairman.*

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82D CONGRESS 2d Session } SENATE { REPORT No. 1107

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JANUARY 23 (legislative day, JANUARY 10), 1952.—Ordered to be printed with illustrations

Mr. MAYBANK, from the Joint Committee on Defense Production, submitted the following

REPORT

PART I

INTRODUCTION

Our Nation's security rests in large measure on machine tools. The total industrial capacity of the country must continue to increase. Expanding military schedules must be met and reasonable levels of civilian production maintained. These goals can only be achieved as rapidly as the machine-tool industry can build the tools.

That is the national objective for 1952. True, the Nation is emerging from the "tooling-up" stage on many critical defense items. True, we are at the gateway of an era of far greater volume of production than this Nation has ever known. But the demands for a much wider expansion of our industrial economy are clearly projected.

Fortunately, large-scale expansions are well under way in many basic industries. But when the constantly increasing military requirements are superimposed upon our present national capacity, the total impact is well beyond the limits of our machine-tool industry in 1952.

That is true even in the face of the industry doubling its output over last year and expecting to double it again in 1952. Yet, it will be some time in late 1953 before the huge backlog of orders can be delivered. Besides, there are millions of dollars of new tools on the drawing boards yet to come. This means that this year will be a year when first things must be put first. It means that the already stringent situation with respect to machine tools will become further aggravated before it gets better.

The complexity and size of the new implements of war such as guided missiles and jet engines, and new types of aircraft, tanks, and guns, require machine tools of an unprecedented degree of quality and

performance. These are precision machines—of countless types and sizes. They require special attachments. Many are built to order for special purposes. They just cannot be built by mass-production techniques. This tends to make present equipment obsolete. It necessitates long production cycles extending many months and places a heavy financial burden on the industry.

These are but a few of the many factors that have made machine tools the most serious bottleneck today. These are some of the causes why defense projects are now waiting for tools. There are others; in fact, several basic factors have had to have special considerations. The need for higher price adjustments has been one; financial aid has been another; and special priority assistance was among the others.

It is the job of our defense officials to overcome such obstacles. Their task is to see that all defense production is kept on schedule. It was not until mid-1951 that the necessary action was taken with regard to machine tools.

When the machine-tool industry was given top priority status comparable to the other urgent defense programs, it required directive action by the Director of Defense Mobilization to give the industry adequate prices, financial aids, special priorities, and a manpower program—the things that tool builders had to have to expand production. That directive was issued July 9, 1951, and it was implemented immediately by a most effective drive throughout all agencies to remove any obstacles in the way of greater output.

The industry was greatly stimulated. Today machine-tool output is increasing by leaps and bounds and subcontracting is gaining rapidly. The fight is far from over and it will be many months before the industry is operating at top speed but the major bottlenecks have been broken.

Many of the officials charged with the responsibility for carrying on this program are top executives from the machine-tool industry. Your committee is confident that the assignment is now in capable hands and has good reason to believe that the industry will cooperate to the fullest. It did in World War II and it is doing so right now.

In accordance with the authority and the responsibility invested in your committee under the Defense Production Act of 1950, as amended, it has undertaken to investigate all the facts relating to this serious bottleneck to our national preparedness program. In approaching this study, your committee has kept in mind two things. First, the immediate urgency for the maximum output of machine tools; and secondly, that our defense mobilization is a long-range program.

Many of the problems troubling the machine-tool industry were peculiar to that industry and required special consideration to resolve effectively. Others were of a general type while some had to wait upon the final developments in certain major defense programs. A review of these various situations is covered in our report.

MOBILIZATION POLICIES

The day South Korea was invaded, machine tools were not considered a potential problem. Most of the tool industry had been hungry for business for 2 to 4 years and total employment was down to 37,000 workers—the lowest in over a decade. Many plants had

been forced to release even some of their most experienced men. Many plants were working short hours, cutting back in every way to break even. It had been nip and tuck for some time and in many cases the working capital was running low. True, the picture was beginning to look up when the Koreans hit, but it was far from rosy. The automotive business with its new models and resulting need for new tools had been a salvation to a segment of the tool industry: that is, for certain firms enjoying automobile orders. The orders from NATO countries and other "free world nations" were also helping to fill the gap. From all appearances, there were plenty of machine tools in American industry. More than double the number that existed when the Pearl Harbor catastrophe occurred. Yes, United States industry was well supplied. It not only had become "tooled-up" to the teeth for World War II but it had absorbed thousands upon thousands of surplus tools after the war.

In addition the Government was holding over 130,000 pieces of production equipment—60 percent of which were machine tools—in reserve inventories held by the services and General Service Administration. These had been put in storage to augment our industrial capacity, if necessary, in time of a national emergency. Besides there were several hundred Government-owned stand-by plants, many equipped with tools waiting to be called to action.

On top of all this were the thousands of tools standing idle in used and reconditioned dealers' hands all over the country. In time of emergency, this reservoir had proven to be a great potential source, too.

Your committee can well understand why no one at that time considered that machine tools offered a serious problem. That goes not only for Government officials but for the Department of Defense and industry leaders.

There was one group, however, who did not share that feeling. That was the machine-tool industry itself. From the beginning of Korea they met and discussed through their trade association, the National Machine Tool Builders Association, the problems that they foresaw accumulating as the defense program began to take shape. They knew from past experience what they would eventually be called upon to do. They knew they would need assistance if they were to organize their resources to meet the impact of the military programs when it hit.

The machine-tool industry was one of the first to come to Washington as soon as the NPA Administrator was appointed. Industry representatives not only came once but several times in October and November. They presented their story and tried to learn what was expected of them. They pointed out what they needed in the way of priority assistance, financial aids, and rapid tax amortization so that they could start increasing their output. In the four intervening months from June 25, their unfilled orders had jumped from a normal 5-month to a 12-month backlog while their production had remained practically stationary.

However, it was the policy at that time that whatever material remained after the military needs were supplied should be available to all industries on a share-and-share-alike basis.

Your committee is agreed that any other plan prior to a greatly expanded military program would have resulted in a most serious dislocation of labor and industrial resources, and would have inflicted

an unwarranted hardship upon the American people. There was no point in cutting back civilian production until the military was ready to pick up the slack.

What happened is legend. The most vexing problem was and still is the lack of any definite information about the future tool requirements. The military, up to now, has claimed that it was impossible to determine requirements until programs were set, designs completed, and contracts awarded. Later in the report we have outlined a plan that is under way that should do much to correct this situation early in 1952.

Like many a Monday morning quarterback, it is fairly easy to ask now "Why didn't NPA do this?" or "Couldn't you have seen that this was certain to happen?" or say "It was obvious that this would be the result." As the backlog kept climbing while little was being done to give industry what is claimed to need to increase production, it is difficult not to criticize. But the fact remains that in those early months every major industry was contributing to our national economy—all were enjoying large increases in their civilian business. Each industry came to Washington seeking priority assistance to maintain its level of production in a market of diminishing materials. The machine-tool industry was no exception as its general problems were similar until later when actual defense requirements made it evident that a bottleneck was developing.

Whatever mistakes and delays did occur can be charged in part to the fact that the Government and defense officials were reluctant to share the concern of the tool industry over the future outlook.

Mr. C. E. Wilson, Director of Defense Mobilization, summed up the situation most aptly in discussing the machine-tool situation before the National Press Club in Washington on December 13. He said:

> I cite this case because in my judgment we took too long to identify and solve these problems. Neither in the civilian, or military arms of the Government, nor in industry was there enough sense of urgency and drive.

In this report your committee has identified the major problems and actions that have been taken by the various agencies. Our report also shows the results that have been achieved to date and what programs the defense agencies have for removing the remaining hurdles to assure an all-out production program in 1952.

Historical Background

In order to better understand the problems facing the machine-tool industry, it may be helpful to review the developments that occurred in the industry prior to Korea and some of the factors which contributed to these developments. Naturally, these had a paramount bearing on the general attitude of the industry in the months to follow. Besides, these tend to explain the reasons why industry leaders frequently came to Washington to urge upon Government officials their need for special assistance beyond that required by other American industries which had been experiencing their greatest volume years.

DEFINITION OF MACHINE TOOLS

Before proceeding it would be well to define, for purposes of this report, what types of metalworking tools have been included under

the term of "machine tools." The term is loosely used among the trades to apply to any type of tool from a huge lathe or gigantic forging hammer, to small precision measuring tools and miscellaneous attachments.

There are some 300 different kinds of milling machines, grinders, presses, jigs, and fixtures. However, for statistical purposes, the various types have been grouped under three generally accepted classifications. These are designated as machine tools, metalworking machinery, and machine-tool accessories.

It is the first two groups that we are primarily concerned with, as they represent the greatest bottleneck problem. Therefore, whenever the term "machine tools" is used throughout this report, it refers to either or both of these classifications according to the particular context. The following gives a general description of the kind of tools included in each group.

Machine tools: Power-driven machine tools that shape metal by grinding or progressively cutting away chips. Important products of this industry include boring, broaching, drilling, gear cutting, finishing, grinding, milling and planing machines; lathes, shapers, and slotters; honing and lapping, polishing and buffing; sawing and cutting-off, contour sawing and filing; tapping, threading, and rifling machines; and replacement and repair parts for machine tools.

Metalworking machinery (except machine tools): Machinery for shaping, pressing, forging, or bending metal, where the shaping action of such machines is not dependent upon a cutting tool. Important products of this industry include bending machines; die-casting machines; forging machines, such as drop hammers, forging hammers, and forging presses; bulldozers and upsetters; presses (forming, stamping, and punch); riveting machines (not portable); rod and wire forming and fabricating machines; shears, spring winding and forming machines; acetylene welding and cutting apparatus; wire-drawing machines.

It will be noted that such items as attachments and accessories for machine tools and other metalworking machinery are not included in the above groups. This is also true of dies, jigs, fixtures, drills, gages and other measuring tools that are so vital to industry. Fortunately, the majority of these items are not in critically short supply. However, they all do have material or other production problems that have to be resolved constantly. Two other classes of tools that also are not included are the light power tools, such as "hobby" tools, jigsaws, small drill presses, and home workshop tools which because of material shortages have had to be materially restricted in production.

INDUSTRY SITUATION

In 1940 the United States had installed in all of its vast metalworking industry, 1,247,000 power-driven machine tools, not including presses, shears, and brakes.

In the 6 years from 1940 to 1945, inclusive, the United States machine-tool industry produced 1,093,000 metal-cutting machine tools. In other words, the Nation practically doubled the number of machines in order to produce the weapons that were necessary to win World War II. Besides, the machines produced during the war were

far more productive than those already installed in American industry. Therefore, the metal-cutting capacity of this Nation was more than doubled.

The industry met the enormous demand in World War II by practically doubling its output from year to year. In 1939 the output was $200 million. Then the war in Europe brought large orders from France and England and in 1940, with the additional impetus of the American defense program, the industry more than doubled its output to $440 million.

Doubling the production the first time is not too difficult to attain. Ofttimes it means merely instituting a second shift on the bottleneck machines, working full time and possibly diluting the skilled labor force with some learners. However, in 1941 the industry almost doubled its output again, going to $775 million. It began to subcontract in earnest, to run two full shifts, each operating overtime, and to add substantially to its plant capacity. In 1942 the amazing output of $1.3 billion was reached and the performance was almost duplicated in 1943 with $1.2 billion. By that time the major demands had been met and so output fell off to about $497 million in 1944 and $423 million in 1945.

It is significant to note that at no time during the war period, due to the industry actually becoming geared up almost 3 years before Pearl Harbor, did the backlog of unfilled orders exceed 12 months' production. As the demand increased, the capacity of the industry kept step with it. But even at that the industry was "the bottleneck of the defense program" from 1941 to 1944.

Unfortunately, the industry dwindled in size after World War II. The demand for machine tools fell off steadily from 1946. Part of this was due to the Government dumping an enormous quantity of war surplus tools on the market and depressing the industry until it hit bottom in 1949.

Then a pick-up occurred in the first 6 months of 1950, particularly for those who were getting tool orders for the new automobile designs. Yet in June 1950 many machine tool builders were still working under 40 hours a week and had been forced to cut back their employees to mainly veterans of many years' experience.

The situation was highly competitive. Over 30 companies either changed hands or went completely out of existence during the postwar period. This represented a serious loss of capacity in the industry. Employment in June 1950 was only 37,700 wage earners. The following figures show what happened from 1939 through 1950.

1939	$200, 000, 000
1940	440, 000, 000
1941	775, 000, 000
1942	1, 320, 000, 000
1943	1, 180, 000, 000
1944	497, 000, 000
1945	423, 000, 000

For the postwar years prior to Korea:

1946	$334, 800, 000
1947	306, 000, 000
1948	288, 000, 000
1949	249, 500, 000
1950 (including Korea)	305, 500, 000

Since 1940 machine tool prices have increased about 100 percent. When viewed in this light the industry actually produced in 1950 less than one-half the number of the tools manufactured in 1940. On a similar basis, the output in 1949 was about the same number of units as were produced in the depression year of 1938. This indicates the extent to which the industry had depreciated just prior to the invasion of South Korea.

GEOGRAPHIC CONCENTRATION OF THE INDUSTRY

The last Census of Manufacturers in 1947 shows that the machine-tool industry was made up of about 316 establishments, with 28 of the largest firms producing over half of all the tools; 202 of the establishments had less than 100 employees each at that time and accounted for only 10 percent of all the tools; 13 percent of the tools were built by concerns other than primary manufacturers of machine tools.

The role played by the smaller companies is a particularly vital one since many specialties are provided by the small firms which are indispensable to the larger concerns. Many small concerns are today subcontractors in the production of numerous components supplied to the industry in general.

The following tables summarize the location of these manufacturers and their 1950 volume:

Machine tools

Division, State, and class of product	1950 shipments		Approximate number of plants [1]
	Number	Value (thousands of dollars)	
Total		$305,553	316
New England States		80,052	59
Connecticut		28,529	21
Massachusetts		24,073	21
New Hampshire, Rhode Island, and Vermont		27,450	17
Middle Atlantic States		29,845	55
New Jersey		3,220	11
New York		15,306	30
Pennsylvania		11,319	14
East North Central States		182,879	164
Michigan		30,764	52
Ohio		94,272	59
Wisconsin		24,328	29
Illinois and Indiana		33,515	24
West North Central States		6,871	15
Minnesota		3,655	6
Missouri		1,820	
Iowa, Kansas, Nebraska, and South Dakota		1,396	
Pacific States		1,144	23
All other States (Arizona, Delaware, Kentucky, Maryland, Tennessee, and Texas)		4,762	

[1] Based on 1947 Census of Manufactures.

It will be noted that the machine-tool companies located in New England and East North Central States accounted for over 85 percent of the total value of all machine tools produced in 1950. Those firms

located in the State of Ohio made up over 30 percent of the United States total and the combined States of Ohio, Indiana, Illinois, Michigan, and Wisconsin accounted for 60 percent of the total United States production.

Manufacturers located in Ohio and Wisconsin lead in the production of boring machines, building 38 percent of the total. Companies in the East North Central States produced 45 percent of the total value of grinders and polishing machines with the New England States making up 34 percent. Ohio builders shipped 45 percent of the total value of lathes and those in the East North Central States shipped 70 percent of the milling machines.

The next table shows a breakdown of 1950 shipments by numbers of companies in terms of the major types of tools.

Class of product	Number of companies	Shipments		Percent of dollars change; 1950 over 1949
		Number of units	Value	
			Millions of dollars	
Boring	39	1,333	28.8	−2
Drilling	54	9,900	32.8	+30
Gear cutting and finishing	18	1,498	19.8	+39
Grinding and polishing	243	79,146	60.6	+33
Lathes	166	30,021	79.5	+28
Milling	61	5,486	35.8	+14
Planers	6	84	3.0	−18
Shapers	12	770	3.4	+19
Keyseating	5	161	.4	+4
Saw and cut-off	40	7,649	4.3	+29
Contour sawing and filing	13	11,296	4.5	+50
Tapping	27	938	3.3	+74
Threading	22	10,777	7.0	+15
Broaching	14	363	4.9	+43
Centering	5	68	.5	−16
All other	38	----------	16.9	+81
Total	----------	----------	305.5	----------

STATUS OF INSTALLED TOOLS

In any general appraisal of the machine-tool industry and its relationship to the mobilization program, there is another key factor that should be kept in mind. We should go further than merely to study how many machines were currently installed or stored in standby plants and Government reserves. We should analyze the age of these machines to determine their current condition and their degree of obsolescence in order to evaluate their utility potential in our present emergency. From such data, we can get some estimate of the replacement problem that confronts the vast metalworking industry over the next few years.

We have just stated above that the United States had installed in its vast industrial plants over 1,247,000 power-driven machine tools. By the middle of 1950, according to a survey made by the American Machinist, in November 1949, the net figure had increased to approximately 1,775,000 units. Of this total, nearly 45 percent, or 759,000, were over 10 years old and half of these were over 20 years—actually built prior to 1929. In other words, out of all the usable machine tools in this country, including those in Government reserves, maintenance shops, and educational institutions, only 1,100,000 were estimated to be less than 10 years old when the emergency started.

However, we must not overlook the fact that with 45 percent greater number of machine tools available, this Nation had a far greater potential capacity for mobilization in June 1950 than at the time of Pearl Harbor. Unfortunately the discounting factor is that the new jet engines, guided missiles, and atomic weapons, to mention a few, require not only the very latest in scientifically designed tools, but in some cases the design of entirely new tools. In fact it is now estimated that upward of 90 percent of all existing tools are more than 10 years old in design. Only a limited number incorporate the remarkable postwar developments of greater power, higher feeds and speeds, automatic cycles and tracer controls, and automatic handling to name a few of the mass-production and high-precision features so necessary for today's production.

Moreover, many of these tools have depreciated far beyond their normal age because of their hard usage around the clock, lack of proper maintenance and poorly trained operators during the last war. All of these factors add up to this point: There has been a critical lack of modernization since World War II in the metalworking industries. Several industry representatives attribute this mostly to high taxes, low-tax depreciation policy by the Government, low net income, and restrictive labor practices.

The following tables summarize the machine-tool situation in American industry early in 1950.

Age	Machine tools		Metalworking equipment		Total	
	Units	Percent of total	Units	Percent of total	Units	Percent of total
Less than 10 years	1,003,114	56	211,125	44.5	1,214,239	54
10 to 20 years	382,169	23	128,677	27.5	510,846	23
Over 20 years	376,882	21	131,455	28	508,337	23
Total	1,762,165	100	471,257	100	2,233,422	100

Summary of inventory data by industries

	Machine tools			Metalworking equipment			Total	
	Units	10 years and over	Over 20 years	Units	10 years and over	Over 20 years	Units	Percent of total
		Percent	*Percent*		*Percent*	*Percent*		
Agricultural machinery	48,498	50	25	10,623	64	35	59,121	2.6
Construction, mining, oil well	34,983	48	22	5,627	61	35	40,610	1.8
Metalworking machinery	14,327	43	22	7,193	47	23	154,520	6.9
Special-industry machinery	136,412	54	32	13,993	68	37	150,405	6.7
General industrial equipment	99,441	44	20	12,702	70	34	112,143	5.0
Office and store machines	45,645	52	32	10,700	65	44	56,345	2.5
Domestic and service equipment	48,151	42	19	20,357	52	22	68,508	3.1
Electrical equipment	161,914	37	18	52,866	43	21	214,780	9.6
Miscellaneous machine parts, jobbing	100,847	41	14	13,090	52	19	113,937	5.2
Motor vehicles and parts	138,595	56	28	42,382	68	38	180,977	8.1
Aircraft and parts	54.711	16	2	8,013	13	1	62,724	2.8
Railroad equipment	16,075	48	29	4,629	62	43	20,704	.9
Fabricated metal products	375,717	45	23	196,546	60	28	572,263	25.6
Shipbuilding, ordnance, miscellaneous	240,713	36	18	49,701	45	27	290,414	13.0
Precision mechanisms	113,136	35	15	22,835	46	24	135,971	6.2
Total	1,762,165	43	21	471,257	55	28	2,233,422	100.0

This tabulation discloses two pertinent facts.

1. The automotive group has the highest percentage of machine tools over 10 years old (56 percent) of all segments of the metalworking industries. In 1945 this industry had 244,000 units before dropping to 139,000 in early 1950.

2. The lowest percentage of old machines is to be found in the aircraft industry (16 percent)—not a surprising discovery because of its youth and terriffic growth during World War II. The present 55,000 units is low compared with 276,000 units at the war peak.

The following table shows the geographical distribution of machine tools:

Summary of inventory data by areas

	Machine tools			Metal working equipment			Total, all equipment	
	Units	10 years and over	Over 20 years	Units	10 years and over	Over 20 years	Units	Percent of total
		Percent	*Percent*		*Percent*	*Percent*		
Boston	149,536	47	27	27,894	60	35	177,430	7.9
Bridgeport	107,983	48	33	23,445	67	44	131,338	5.8
New England	61,986	56	39	10,819	56	34	72,805	3.2
New York	140,785	39	15	39,544	48	19	180,329	8.2
Buffalo	48,787	43	19	14,744	55	22	63,531	2.8
Philadelphia	73,941	43	22	21,879	55	30	95,820	4.3
Pittsburgh	28,058	54	27	12,993	63	38	41,050	1.8
Middle Atlantic	130,111	43	26	30,065	51	31	160,176	7.2
Baltimore	7,423	39	13	1,629	36	15	9,052	4.0
Southern	135,028	35	7	28,610	51	22	163,638	7.3
Cleveland	92,300	39	22	24,216	51	22	116,516	5.2
Cincinnati	32,863	46	27	10,663	53	26	43,526	1.9
Detroit	122,443	51	26	33,759	70	41	156,202	7.0
Milwaukee	37,315	43	22	7,370	57	32	44,685	2.0
Chicago	120,437	40	15	42,871	54	23	163,308	7.3
Indianapolis	11,580	34	4	2,539	51	20	14,119	.6
Midwestern	273,829	43	23	78,479	57	28	352,308	15.8
Minneapolis	11,883	33	13	4,333	35	15	16,416	.7
St. Louis	36,257	51	29	18,753	63	33	55,010	2.5
Central and Mountain	42,007	44	20	9,717	51	19	51,724	2.3
Houston	6,772	43	12	455	48	18	7,227	.3
Southwestern	29,373	39	17	8,505	47	23	37,878	1.7
San Francisco	12,375	42	19	4,153	59	26	16,526	.7
Los Angeles	30,368	24	6	8,589	26	7	38,957	1.7
Pacific	18,725	26	8	5,243	25	6	23,968	1.2
Total	1,762,165	43	21	471,257	55	28	2,233,422	100.0

These figures point up some interesting facts.

1. The figures bear out the statement that metalworking has become the No. 1 industry in New England since the war. The inventory figures for machine tools stand at 320,000 today as compared with 203,000 in 1945.

2. By contrast the dismantling of many war plants reduced the holdings in the Midwest from 870,000 to 700,000 today.

3. Because the Pacific coast is so dependent on the aircraft industry it has lost ground so far as metalworking goes. The number of tools installed is down about one-third from 1945 to around 61,000 units.

4. The rapid postwar industrialization of the South is one of the notable trends. Machine-tool installations in Southern States more than doubled since VJ-day from about 62,000 to over 142,000 tools. This area now has more tools per thousand population than any section outside of the established metalworking areas of New England, Middle Atlantic, and Midwestern States.

5. The highest concentration of machine tools in any industrial area is in the Bridgeport-New Haven-Hartford area. That area has nearly 80 units per thousand population against an average of 12 for the entire country.

The survey estimates that at the beginning of 1950 Government agencies owned 13 percent of all machine tools in the Nation—some 259,000 items out of the estimated total of 2 million. (Plant inventories total plus estimates for tools in maintenance shops, colleges, institutions, and Government reserves.)

Most of the Government tools were owned by the Army, Navy, and Air Force, the remainder being held by GSA in the national industrial equipment reserve, and the national industrial reserve under the control of the Munitions Board.

Of the machine tools, owned by the Government, about 137,000 were estimated as being currently used by the Army, Navy, and Air Force or by their contractors.

The 13-percent figure for Government-owned machine tools compares with the 1945 inventory report of 33 percent, when the Government owned about one-third of all machine tools in the Nation. That, of course, was before such tools were released to the surplus warehouses and eventually many were resold to private industry.

For a more accurate figure, to the total of 259,000 should be added the machine tools, total at present unknown, owned by the Maritime Commission, Atomic Energy Commission, and others.

Total Requirements and Productive Capacity

DEFENSE REQUIREMENTS

Normally, the basis for expanding any industry is first to ascertain the over-all requirements for a given period and then determine the capacity necessary to meet the demand. This would be the logical approach in the case of the machine-tool industry if future defense needs could be accurately estimated. Officials in the Defense Department and other Government agencies claim that up to the present time such data has not been available. The reasons advanced are as follows:

The armed services themselves buy very few machine tools. They award contracts to industry to produce various armaments and implements of war. These firms in turn require machine toools for their production operations. These contractors are the ones who decide what kind of tools must be used to build individual components. In many instances the specifications must be studied to determine what tools will be required, and contractors are understandably reluctant to place orders for the necessary tools until the contract is awarded.

Even where contracts for the same item are placed with several private industrial concerns the problem is not solved. Let us take jet engines, for example. Each company is likely to use a different production method and therefore might need a different machine tool because machine tools are extremely flexible. Before bidding, a contractor studies every possible way to utilize his existing facilities without incurring the cost of new equipment.

Since a given piece of equipment can be built in a variety of ways, utilizing machine tools of varying kinds and types, NPA and the Department of Defense have requested all defense contractors to

screen their machine-tool requirements closely. If a simple tool can do the job efficiently, the manufacturers have been requested to refrain from procuring a more complex tool, particularly if the more complex tool is in short supply.

However, indirect military spending for machine tools during 1952 is expected to approach a rate equal to that of peak World War II.

The Munitions Board alone estimates that through the year of 1952, the Defense Department contractors will require approximately $2,500,000,000 additional tools. To this must be added the unknown requirements for tooling-up the privately financed plants which will need new machine tools to produce the military contracts still to be placed.

To date the NPA has been unable to obtain even a rough estimate as to the type of tools that will be required or an estimate of the quantity involved. Difficult as the problem is, a forecast of these requirements is vital if the industry is to be expected to fit them into its present huge backlog of orders. It undoubtedly will mean extensive subcontracting which necessarily requires months of planning. But industry can take little action until it knows what the requirements are.

The Munitions Board is fully cognizant that any worthwhile estimate must come from the services which originated the individual defense contract. To meet this situation, the Chairman of the Munitions Board recently issued a directive to all the services instructing them to undertake the compilation of such a requirements list based on the projected programs for 1952 and 1953. This to be available in January and for the first time will provide data so necessary for NPA and the industry to plan for the future.

The need for a definite program becomes even more obvious when the tables and graphs on pages 13 to 16 are studied. It will be noted that from July 1950 to January 1951, orders increased nearly threefold over the previous 6 months, but shipments rose only 46 percent during the same period. New demands continued to increase in 1951 until the unfilled backlog is now equivalent to 20 to 24 months' production in most of the critical items. Some companies have as much as 3 years backlog, a few have as little as 6 months.

From the monthly production orderboards of three-hundred-odd manufacturers, NPA estimates that shipments will total approximately $629,000,000 in 1951 and will double this rate during 1952. The attainment of such a production increase—over four times in 2 years—will greatly relieve the pressure on the more critical machine tools.

Total deliveries in 1950	$305,500,000
Estimated deliveries in 1951	629,000,000
Forecast deliveries in 1952	1,300,000,000

The backlog of orders represents a total of $1,371,370,000. About 70 percent of this backlog covers industry's requirements for the production of essential defense items with the remaining 30 percent covering nonrated defense supporting and civilian orders.

One word of caution about comparing backlog figures: Machine tools, unit for unit, are today both more complicated and more expensive than they were during World War II and prices are continually increasing. This means that a backlog figure of the same dollar amount in the two periods—World War II and the present time—would actually represent a current backlog of perhaps as much as 30 percent fewer units.

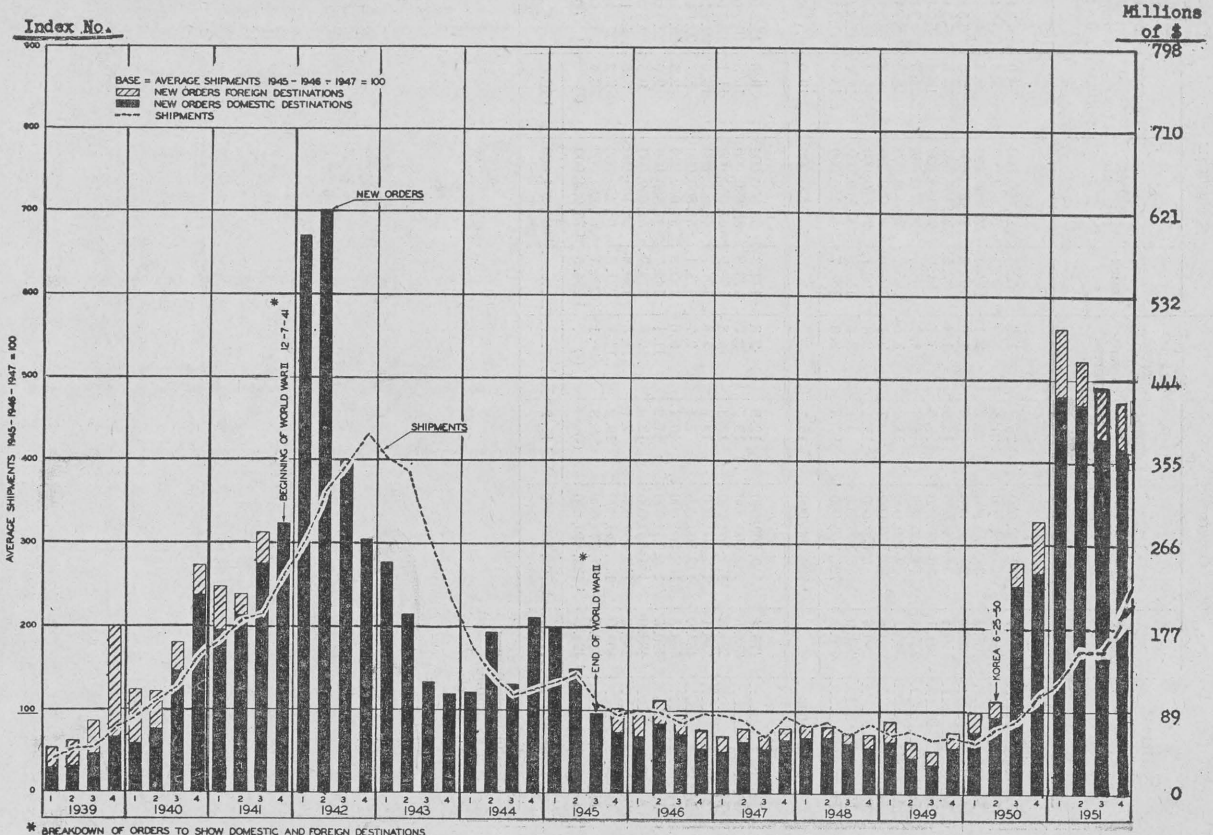
Machine-tool orders, shipments, and unfilled orders, estimated from reports received by the National Machine Tool Builders' Association

[Index: Average 1945–47 shipments equal 100 percent]

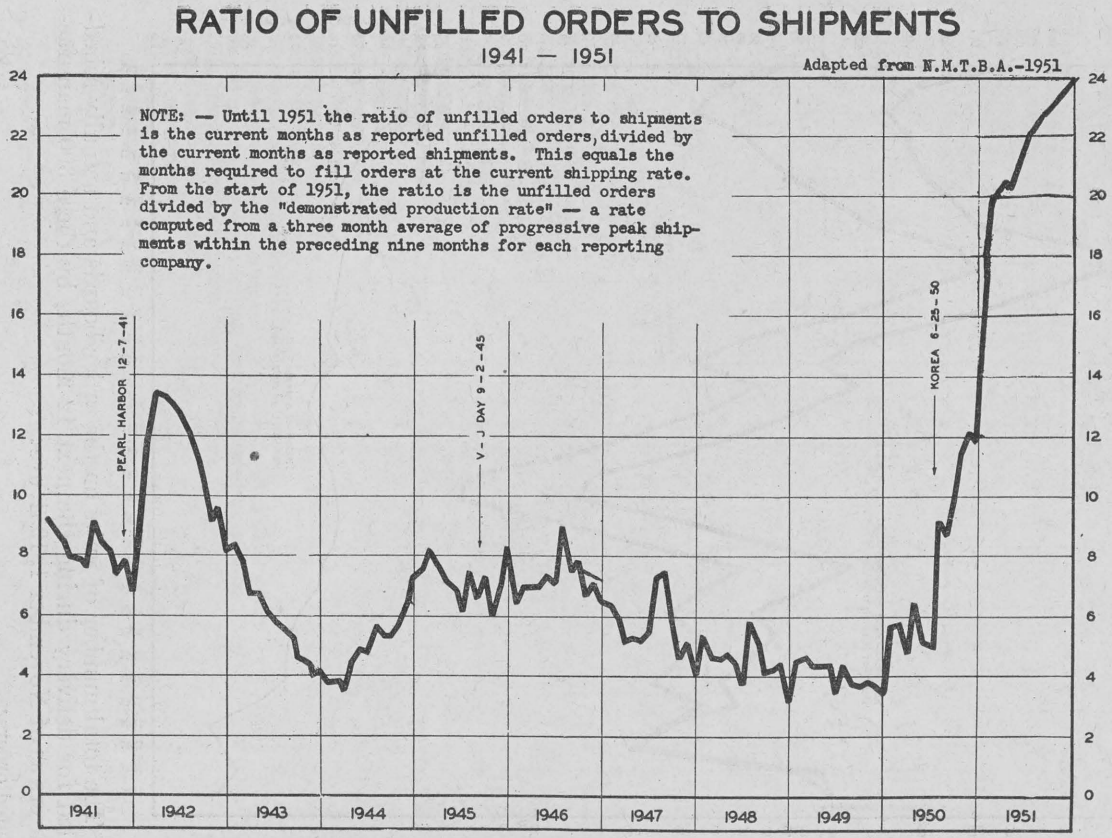
Date	Orders			Cancellations—percent of orders (as reported)	Shipments			Unfilled orders—Ratio unfinished orders to shipments (as reported)
	Index	Industry estimate	Percent foreign (as reported)		Index	Industry estimate	Percent foreign (as reported)	
1950								
January	99.7	$29,500,000	26.8	1.6	52.8	$15,600,000	26.0	5.7 to 1.
February	89.2	26,400,000	21.1	1.9	56.1	16,600,000	28.3	5.8 to 1.
March	107.4	31,750,000	23.2	2.1	75.3	22,250,000	29.4	4.8 to 1.
April	98.9	29,250,000	17.6	1.6	61.6	18,200,000	25.0	6.5 to 1.
May	116.4	34,400,000	15.8	1.4	82.5	24,400,000	16.6	5.2 to 1.
June	124.1	36,700,000	18.5	1.7	91.9	27,150,000	19.4	5.0 to 1.
July	253.1	74,850,000	8.8	1.7	68.3	20,200,000	21.3	9.2 to 1.
August	305.1	90,200,000	11.2	3.3	95.7	28,300,000	18.6	8.7 to 1.
September	280.6	82,950,000	9.7	2.1	101.6	30,050,000	18.2	9.8 to 1.
October	289.6	85,650,000	17.1	2.8	100.9	29,850,000	15.3	11.5 to 1.
November	291.9	86,300,000	9.1	3.5	110.9	32,800,000	16.0	12.2 to 1.
December	410.1	121,250,000	27.5	2.0	135.7	40,150,000	13.4	11.9 to 1.
12 months	--------	729,200,000	16.3	--------	--------	305,550,000	19.5	
1951								
January	475.4	140,600,000	12.9	2.8	114.3	33,800,000	9.6	15.2 to 1.
February	615.5	182,000,000	12.7	2.7	123.8	36,600,000	10.3	18.0 to 1.
March	590.3	174,550,000	17.3	4.8	158.9	47,000,000	11.1	19.9 to 1.
April	516.1	152,600,000	12.8	5.6	157.7	46,650,000	13.2	20.4 to 1.
May	483.0	142,800,000	7.4	9.7	175.1	51,800,000	8.7	20.1 to 1.
June	558.8	165,250,000	10.1	9.0	182.8	54,050,000	9.5	20.9 to 1.
July	490.6	145,050,000	11.2	11.1	144.7	42,800,000	9.0	22.0 to 1.
August	488.9	144,550,000	12.0	12.8	178.9	52,900,000	9.5	22.8 to 1.
September	380.2	112,400,000	7.1	11.6	189.8	56,100,000	8.5	23.5 to 1.
October	403.9	119,450,000	10.2	14.8	221.3	65,450,000	9.2	22.2 to 1.
November	330.0	97,600,000	8.8	20.1	226.1	66,850,000	10.9	20.1 to 1.
December	[1] 428.3	[1] 126,650,000	(2)	(2)	[1] 254.5	[1] 75,254,000	(2)	(2)
12 months	--------	[1] 1,703,500,000	[1] 11.2	--------	--------	[1] 629,254,000	[1] 10.0	

[1] Preliminary figures.
[2] Not available.

TOTAL NEW ORDERS AND SHIPMENTS



* BREAKDOWN OF ORDERS TO SHOW DOMESTIC AND FOREIGN DESTINATIONS NOT AVAILABLE FROM 4TH QUARTER 1941 TO 3RD QUARTER 1945

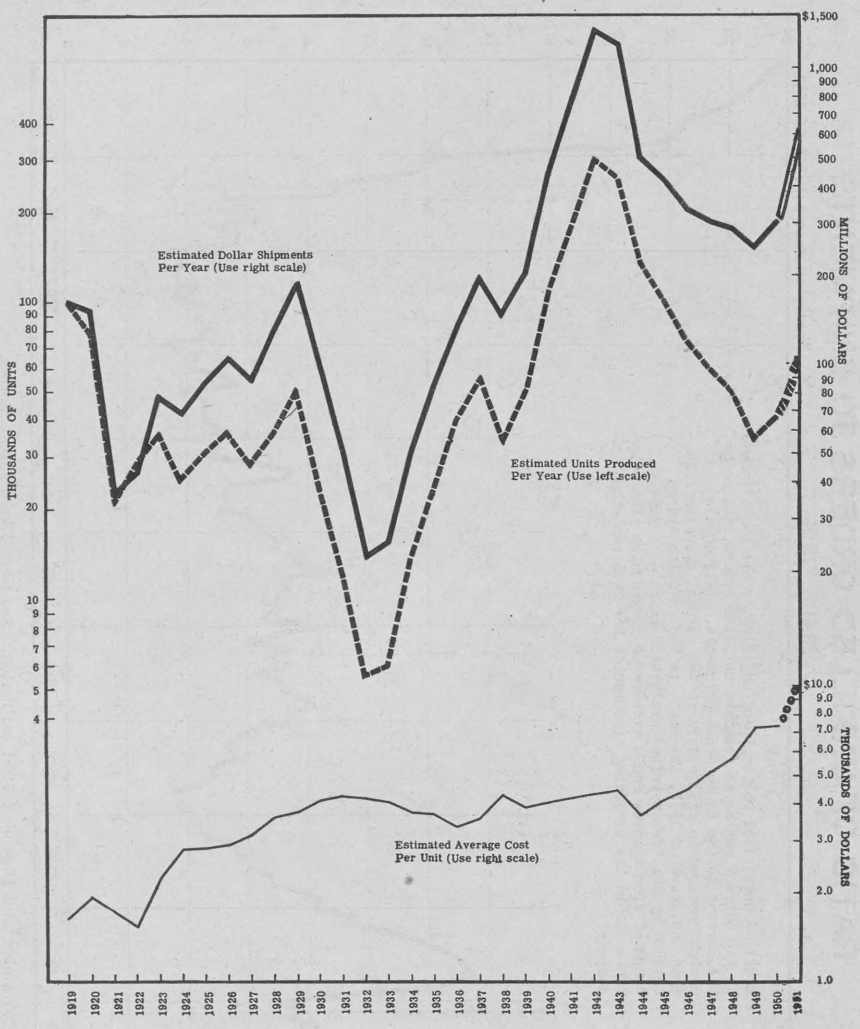


NOTE.—November and December 1951 estimated. See page 13 for latest figures.

MACHINE TOOLS

DOLLAR SHIPMENTS, UNITS PRODUCED AND AVERAGE COST

Yearly Estimates - 1919 to 1950



The total number of units on the order boards and actually scheduled for delivery during the next 12 months by these 300 manufacturers as of November 1, 1951, are:

Rated orders:	
Direct military	46,700
Defense supporting	4,010
Foreign	4,880
Nonrated orders:	
Domestic	24,391
Foreign	2,161
Total units	82,141

A lot has been said about the guns-and-butter concept in our mobilization planning. There have been relatively few nonrated orders for machine tools filled by producers for many months due to the huge backlog for military and defense supporting rated units. Where deliveries have been made they have been either replacements in industries essential to our economy or to meet temporary unemployment problems pending defense contracts.

Under the NPA regulation M–41, as amended on November 8, 1951, and NPA regulation M–41A, issued on the same date, relatively few, if any, of the above nonrated orders will be shipped during 1952. Order M–41, amended, places a freeze on nonrated shipments after February 1, 1952. There are certain exceptions to this limitation permitting applications to be filed to replace a wornout unit and for adjustment in hardship cases. A producer may not accept nonrated purchase orders calling for delivery before February 1. These tighter regulations will further assure the reservation of machine-tool production for direct military and defense-related programs.

REQUIREMENTS FOR NATO COUNTRIES

One of the primary objectives of the United States is to achieve the largest possible use of European resources for defense production consistent with essential civilian needs in that area. To this end, we are rendering whatever assistance is necessary to make certain that the highest level of production is reached rapidly.

To meet these objectives machine tools are required to build the most effective productive program in NATO countries which in turn will release United States productive facilities for domestic needs.

In reviewing the machine-tool requirements with officials of the Economic Cooperation Administration, your committee found that a determined effort has been made to carry out a constructive program.

In collaboration with several other United States European committees, including the military, every NATO program has been screened for essentiality and the required tools correlated with production target dates.

A brief summary highlighting the more pertinent phases of the Western European machine tool situation follows.

Military requirements

Shortly after the outbreak of the Korean conflict, the defense programs of NATO countries were quickly stepped up. The United Kingdom, whose defense program was in a more advanced state than those of other NATO countries, began placing substantial orders for machine tools for its 4.7 billion-pound rearmament program. This program called for approximately 27,000 machine tools. The United Kingdom placed orders on the Continent, in the United States, and placed additional orders with the British machine-tool industry.

Latest information indicates that orders placed with machine-tool manufacturers on the Continent exceeded 10,000, in the United States 6,500, and approximately 10,000 in the United Kingdom. They are still looking for additional tools on the Continent. The 6,500 tools ordered in the United States valued at 130 million dollars were mostly placed between October 1950 and June 1951. All of these orders are rated and have been cleared by United States Government including

the military authorities. They represent tools contracted by the British Ministry of Supply for their own armament programs.

The approximate total of these foreign requirements and shipments in units and millions of dollars are:

	Orders		Shipments to Nov. 1, 1950	
	Units	Value	Units	Value
England	6,500	$130	1,300	$26
France	1,200	24	542	108
Netherlands, Belgium, Denmark	1,000	20	600	12
Norway, Canada	1,400	28.1	200	4
Total	10,100	202.1	2,642	52.8

These figures become particularly noteworthy when it is realized that it would require 100 percent of our machine tool industry production for nearly 2½ months, at the current output, to meet these requirements.

Italy has not placed any orders since early in the ECA program. These were unrated and many have not been delivered. They are now being reviewed in the light of M–41 which prohibits delivery of unrated orders after February 2, 1952.

With the exception of some few types of tools for special requirements not yet crystallized, it is not expected that further orders will be placed by NATO countries, in the United States. In fact, new orders are not likely to match the cancellations that are being effected as European sources with adequate delivery dates are being uncovered.

Civilian requirements

The European tool orders for nondefense purposes now on the books of United States suppliers are nearly all old orders placed prior to the influx of defense program orders following the Korean outbreak. In view of the backlogs on the books of United States manufacturers, there have been few, if any, European orders placed for nondefense use since July 1950.

Deliveries to date

All foreign shipments both rated and unrated, must (in accordance with Order M–41) be taken out of the 30 percent group of each manufacturer's production. As of November 1, some one-thousand-three-hundred-odd tools have been shipped to England with 700 more scheduled before December 31, 1951. Another 3,800 are scheduled in 1952, with the remaining 650 in 1953 if not obtained from European countries earlier. France has received about 500 units to date.

Meeting NATO military schedules

The Defense Production Board of NATO, the Office of the Special Representative for ECA in Paris, and the ECA mission chiefs of NATO countries have become concerned about the tools for 30 top defense programs in NATO countries and have been making studies of the production schedules for the military items.

As a result, a mission came to Washington at the end of November to review with mobilization officials the tools scheduled too late to meet

their target dates. Meetings were held with NPA and the Department of Defense to see what might be done to improve deliveries. This matter is now under thorough consideration.

How requirements are determined

After a NATO country has received approval for the production of a military end item, the tools for which procurement is planned in the United States are screened by the appropriate groups overseas, to insure that all possible European sources have been thoroughly investigated. When the list arrives in the United States the ECA, NPA, and the Munitions Board again screen it for final approval.

In the case of the British, detailed information was supplied to ECA in Washington as to the end use of each tool, describing the machining operation to be performed on the particular military end item, the required delivery date for the tool to initiate end item production and the planned rate of production within the over-all rearmament program.

ECA control over reshipments

In accordance with bilateral agreements between the United States and all ECA countries, no reshipment of ECA or Mutual Defense Assistance Production financed commodities is allowed. ECA claims that, to their knowledge, no such reshipment of machine tools has taken place without ECA permission during the ECA program over the past 3½ years. Extremely close surveillance is maintained over all machine tool export licenses issued to firms in Western Germany, Switzerland, and Austria because of possible reshipments behind the iron curtain. Some confusion exists in the minds of many people due to stories in the press about such reshipments from Western Europe.

The subject of east-west trade is too broad to inject in this report; however, ECA points out that there were, in the past, instances when items manufactured by one firm in a European country may have been shipped behind the iron curtain while similar type items may have been purchased from the United States by another firm in the same country. ECA countries and the United States have agreed on a list of commodities which are embargoed for shipment behind the iron curtain. Machine tools are included on this list.

Estimated plant capacity in Western European countries

The Office of the Special Representative, ECA, Paris, completed, in September 1951, a survey of European machine tool productive capacity. This survey covered all types of metal cutting and metal forming machinery (with the exception of rolling mill machinery) and is broken down into 141 different types and sizes. For each machine-tool-producing country, the list includes:

1. The name and location of each machine-tool manufacturer.
2. Number of employees.
3. Annual productive capacity for each of the 141 types and sizes covered in the survey.
4. Indication as to whether or not the manufacturer had open capacity to deliver machines (*a*) before June 1952, and (*b*) before December 1952. (It is planned that the Office of the Special Representative, ECA, Paris, will keep this information up to date.)

A study of this survey indicates that this data should prove invaluable in reducing the drain on United States manufacturers. The

plan is that urgent NATO orders will be diverted to European manufacturers with open capacity and canceled on United States firms. Any new demands or requests for up-ratings of existing orders placed on United States firms by NATO will be checked by ECA-Paris against these European plant schedules.

During a recent visit, three Western Germany machine-tool companies gave as the three major causes for open capacity in European plants (1) inadequate working capital, (2) lack of housing, and (3) shortage of coal.

The relative essentiality of supplying NATO needs from United States production and meeting our own defense program at the same time is purely a military decision. However, your committee is satisfied that the ECA missions, the Office of Special Representative, and the Defense Production Board are all bending their efforts toward increased machine-tool production in Europe. That these efforts are bearing fruit is indicated by numerous cancellations of United States orders for which substitute sources have been uncovered through increased production in Western Europe.

It is believed, however, that even further relief would result from more critical screening of the end use intended for NATO required tools. Many jobs do not necessitate high precision work and therefore medium production tools would be adequate. It would appear that considerable emphasis has been placed on high-quality and high-accuracy machines in preparing some of the orders placed on United States firms.

REQUIREMENTS FOR OIT COUNTRIES

Pursuant to the authority contained in DPA, Administrative Order No. 1, of May 24, 1951, entitled, "Designation of Claimant Agencies," the Director of the Office of International Trade (Department of Commerce), was designated as claimant to present requirements to the Defense Production Administration for all foreign countries not designated elsewhere. These are known as OIT countries and specifically are as follows:

Afghanistan
Arabia Pen. Sts., N. E. S.
Argentina
Australia
Bolivia
Brazil
Ceylon
Chile
Colombia
Costa Rica
Cuba
Dominican Republic
Ecuador
Egypt
El Salvador
Ethiopia
Finland
Guatemala
Haiti
Honduras
India
Iran
Iraq
Israel and Palestine
Jordan
Lebanon
Liberia
Libya
Mexico
New Zealand
Nicaragua
Pakistan
Panama
Paraguay
Peru
Philippines, Republic of
Portuguese Asia
Saudi-Arabia
Spain
Spanish Africa, N. E. S.
Syria
Tangier
Union of South Africa
Uruguay
Venezuela
Yugoslavia

In the past the Office of OIT has requested NPA to include sufficient material in their quarterly requests to DPA for machine-tool manufacturers to cover the scheduled tool shipments to OIT countries. The last time such a request was formally presented by OIT was for the 1951 fourth quarter deliveries. Due to the restrictions recently imposed upon the delivery of unrated tool orders after February 1, 1952 (NPA Order M–41, as amended), OIT plans to devote its future attentions to determining the essentiality of the individual orders already awaiting delivery from tool builders in this country.

Some of these orders have been on the manufacturers' books for several months. Some idea of the number involved can be gained from the following breakdown of latest requirements (fourth quarter 1951) compiled for these OIT countries.

The tabulation shows the fourth quarter 1951 requirements, the total exports for the base period 1947, and the percentage of United States total production that was exported in 1947.

Machine tools, fourth quarter 1951 export requirements, OIT countries

Description	1951 fourth quarter export requirements		1947 total export		1947 export percentage of United States total production
	Units	Value	Units	Value	
Boring machines	94	$428,000	374	$1,713,000	6.6
Drilling machines	1,386	649,000	5,545	2,594,000	7.7
Gear cutting and finishing	48	279,000	191	1,117,000	6.3
Grinding and polishing machines	2,582	1,044,000	10,328	4,174,000	6.5
Lathes, including light industrial	2,443	2,765,000	9,772	11,058,000	11.9
Milling machines	248	822,000	992	3,289,000	10.3
Other machine tools	1,434	1,137,000	5,735	4,549,000	3.2
Other metalworking machinery	4,725	3,664,000	18,901	14,655,000	4.7
Total	12,960	10,788,000	51,838	43,149,000	6.0

OIT points out that the mobilization and stockpiling programs of the United States will benefit directly and indirectly from the fulfillment of many of the tool requirements from these countries. Many of the machine tools requested will be utilized for maintenance, others for expansion, or the development of new sources of raw material, either wholly lacking in the United States or in short supply. Some tools are needed for the facilities furnishing power and transportation in the recovery of these raw materials. Among these will be included cobalt for jet engines, uranium for the atomic energy program, tin from Latin America, bauxite, zinc concentrates, copper, lead, tungsten, iron ore, petroleum, and abacá and sisal fibers for cordage.

Other special projects necessitating specific uses include the following: Venezuelan oil, Chilean copper, Argentine steel, and Brazilian iron ore.

Many of the materials and the projects just enumerated are derived from programs financed through funds loaned by the International Bank for Reconstruction and Development and the Export-Import Bank of Washington. In both of these organizations, the United States has a substantial and important role.

In this connection, it is the expressed policy of the administration as set forth by the Director of Defense Mobilization on May 29, 1951, that—

adequate exports of scarce supplies to our allies should be assured by priorities and/or directives to producers whenever necessary.

The initial portion of the established policy statement follows:

The following specific guides to the allocation of resources which are to be devoted by the United States to foreign needs should be followed:

(1) When there are competing requirements of similar high essentiality in terms of the over-all objective, allocations policy should attempt to satisfy such requirements according to the degree to which they will contribute to the following results:

(*a*) Military production of the free world, and direct support for the expansion or improvement thereof.

(*b*) Promotion of increased supplies of all materials essential to strengthening the free world, and in particular the production and acquisition of those materials required for the current mobilization effort of the United States (including military reserves and immediately necessary additions to stockpiles) and for similar mobilization efforts of nations actively associated with the United States in the defense of the free world.

(*c*) Maintenance and necessary expansion of essential services and production facilities, and maintenance of minimum essential civilian consumption requirements, in the free nations and in areas which they control.

(*d*) Direct progress toward reduced future dependence upon military and economic assistance from the United States.

(*e*) Lessened dependence of the free nations upon supplies from areas or countries within the Soviet bloc.

(*f*) Prevention of political deterioration in nations or areas essential to the combined strength of the free world.

In view of NPA regulation M–41, as amended, representatives of the State Department Office of International Trade Economic Cooperation Administration, and National Production Authority have held discussions in an attempt to establish criteria for testing the essentiality of all currently unfilled export orders. Progress has been made as indicated from the following memorandum following one of these meetings:

STANDARDS TO BE USED IN DECISIONS ON PRIORITY ASSISTANCE FOR EXPORT ORDERS FOR MACHINE TOOLS

An informal meeting was held in connection with the revision of M–41 (machine tools) on October 24, 1951.

The subject of the meeting was the exploration of guiding principles and standards to be used in approving or disapproving defense order ratings for export of machine tools. The urgency of this question results from the decision to prohibit the delivery of metalworking equipment without a rating after January 31.

It was agreed that many cases are likely to be complex and that, although a first judgment as to acceptability of the request might be made on the basis of relation to defense projects or other clear evidence of important end use, the question of the other demands for short supply items might call for withholding DO's in special cases. Similarly, border-line cases might be supported on the basis of prior commitments or politically explosive situations, which might otherwise receive less favorable treatment. The first and more fundamental tests could be applied, however, prior to the submission of the requests to NPA, and prevent unnecessary delay or an excessive load of cases.

The main considerations discussed were—

1. Direct defense end use.

(*a*) MDAP-financed (approved by Munitions Board). These are assumed to have been adequately screened.

(*b*) Defense projects not financed by MDAP (approved by MB). These may have been carefully screened. There might be other defense projects and activities adequately sponsored.

2. Defense supporting.

(*a*) DMA serialized mines.

(*b*) Petroleum projects and requests supported by PAD.

(*c*) Raw materials production supported by adequate evidence of significance for defense.

3. Strategic-material production.

4. Replacement of worn-out equipment. Request for replacement in defense-supporting or basic civilian production.

5. Bottleneck equipment. Requests for machine tools needed to keep a large project in operation.

6. Partially defense supporting in a number of fields such as—

(*a*) Power.

(*b*) Transportation.

(*c*) Roads.

7. Commitments to be met. In some cases Government agencies or high officials have made commitments. If at all feasible, these would be the basis for DO's. These might be connected with—

(*a*) ECA.

(*b*) Point IV.

(*c*) Other international commitments.

8. Political questions calling for aid. Where delicate political situations, serious unemployment, or Communist pressure might be increased by production difficulties, efforts might be made to give DO's to requests not otherwise related to defense.

9. Equipment for other machine-tool builders. Other producers of machine tools should be given aid as far as possible to increase eventual availabilities.

10. The support of the basic economy. The importance of fundamental economic activities both as a part of the political and economic defense has never been questioned. Action on particular requests for DO's, however, would normally be subjected to more specific tests.

The group discussed the above standards and considerations to be used in determining priority assistance. They recognized the fact that, even in cases which might otherwise receive favorable treatment under headings 1 through 10, above, certain circumstances might indicate the need for refusal. It would be relevant, for instance, to know—

(*a*) What substitute equipment or alternative procedure could be used to achieve the desired result without export of equipment in short supply.

(*b*) Whether there was any likelihood that either the equipment or production resulting therefrom might flow to the Soviet orbit.

(*c*) In cases where the consideration was indirectly in support to defense, or to maintain the basic civilian economy, would the equipment result in an expansion of consumer goods and civilian items which would not be consistent with the aim to speed up defense?

(*d*) Other technical or political reasons for withholding favorable action at a given time, including the nonavailability of items requested.

In discussing foreign requirements, for both ECA and NATO, with the responsible Government agencies, it is your committee's opinion that a realistic balance must be maintained in the allocation of machine tools between our own defense programs and those for essential foreign demands.

Basic Industry Problems

REASONS FOR SLOW EXPANSION

The outbreak in Korea should have been the signal for the machine-tool industry to start an all-out drive toward capacity operation. Instead, the industry did little in that direction for several months. Of course, there were some exceptions, but the total monthly output remained practically the same as the pre-Korea rate even until early 1951, while new orders were pouring in daily.

Obviously, there were several factors which tended to hold the industry back. One was due to the uncertainty of the times; another was the vivid recollection of the "boom and bust" experience the industry had just passed through as a result of their World War II expansion. A major obstacle was the financial condition which the industry had suffered due to declining demand for its products. This situation had been further aggravated by the sales of thousands of Government-owned surplus tools.

These are some of the factors that made management less eager to rush into an expansion program when orders began to deluge them. The industry wanted to find out first what plans the Government had to avoid a recurrence of the situation that developed after World War II.

In this regard, the tool builders received little or no assurances from any Government agency for some months. In fact, it was not until early 1951 that NPA finally made it clear what the machine-tool industry had to do if our military and defense-supporting programs were to be achieved. Then it required weeks and actually months for the Government agencies to work out some of the special policies, regulations, and Government aids that industry claimed it needed before it could go ahead.

Many of the corrective measures undertaken by the agencies are discussed later in our report. Therefore, at this time, we shall only attempt to point out a few of the major obstacles with which NPA, and later DPA, were faced in dealing with the machine-tool industry in 1950 and early 1951.

1. Insufficient capital to finance larger inventories and increase facilities

The industry claimed that the Price Adjustment Board had shown little understanding of (1) the cyclical characteristics inherent in the tool business; (2) the serious economic problems the industry was called upon to face after World War II. It felt that the Government's renegotiation policy had been ill-conceived for their industry because it had placed a heavy drain on the earnings of the industry at a time when it was facing a postwar depression era with little opportunity to maintain an adequate financial structure.

2. Lack of proper Government financial aid

Since the Comptroller General of the United States had ruled that proceeds of a Government contract assigned to commercial banks as security for loans to machine-tool builders were subordinate to any claims against the builder by the United States, commercial banks were reluctant to accept assignment of such proceeds as security. Therefore, the availability of Government-guaranteed borrowings under regulation V of the Board of Governors of the Federal Reserve System was of little value in solving the builders' financing problems. This situation was relieved through the passage of Public Law 30, Eighty-second Congress, approved May 15, 1951, amending the Assignment of Claims Act of 1940. Thereafter, the banks looked more favorably upon such loans. In August 1951, direct Government cash advances on pool orders for working capital were made available to the industry. In September 1951, simplified procedures for processing applications for Government guaranty of V-loan borrowings were adopted.

3. Possibility of overexpansion

Most builders had seen their plants stand idle, in whole or in part, for many months during recent years, while other industries were soaring to new production peaks. Therefore, they felt justified in insisting on literal tax write-offs for any expansion expenditures during the emergency.

4. Unfilled civilian orders

In July 1950 the industry averaged 5 months' backlog, which was normal at their current operating level. Many of these were unrated orders from basic industries such as automotive plants. About 20 percent were foreign orders, mainly for Western Europe. It was not until NPA Order M–41 was issued on February 28, 1951, that restrictions were placed on civilian deliveries. Until then most manufacturers were protecting their regular customers.

5. Delays in approving certificates of necessity

Long delays were experienced in obtaining approvals of certificates of necessity. As late as April 1951, NPA advised the industry that a study was being made to determine the relative essentiality of the machine-tool industry. It was midsummer 1951 before very many certificates were issued. Machine tools now are first on the priority list for certificates.

6. Unsatisfactory price regulations

The general price freeze on January 26, 1950, resulted in gross inequities within the industry. Although steps were taken by OPS to correct the situation in May 1951, it was not until August 21, 1951, that an adjustment was made which was satisfactory to the industry.

7. Shortage in skilled manpower

Due to operating for 2 to 3 years at low level, increased manpower was one of the first requisites of most builders following Korea. Rehiring was slow because strong competition was encountered from expanding civilian-goods industries and other newly starting defense plants. Frequently other industries pirated skilled operators at 50 to 100 percent higher wage rates.

8. Revisions requested in pool order contracts

To cover—

(*a*) Price escalator clause;

(*b*) Progress payments in case of termination claims;

(*c*) Elimination of 7½ percent charge where Government sells the tool;

(*d*) Extended coverage until date of delivery;

(*e*) Profit margin allowed on work in process at termination.

Some of these requested revisions were incorporated in the new GSA August 28, 1951, contract; others are still under consideration.

9. Material shortages

The growing shortages that began to develop in many of the basic materials so essential to the making of machine tools created a multiplicity of material problems right from the start. Because of their scope and effect even now on the over-all operation of the industry, we have devoted the next section to a review of the over-all material situation as it affected the machine-tool industry.

MATERIAL SHORTAGES

One of the vital things the machine-tool builder needed shortly after Korea was material. For 4 years he had been depleting his inventory because of declining demand and because of the highly competitive conditions within the industry. As a consequence in-

dustry leaders appealed to the NPA for relief as early as October 2, 1950. In response to their appeal for assistance, they were told that Priority Regulation No. 2, which was about to be issued, would amply meet the needs of their industry. In that, NPA was mistaken.

Under a delegation of authority pursuant to the Defense Production Act of 1950 and Executive Order 10161 issued contemporaneously with the issuance of Priority Regulation No. 2, the Defense Department and the Atomic Energy Commission could authorize the use of a DO (defense order) rating and their contractors could also extend that rating to procure production materials. The order did provide that, with the permission of the contracting officer, the contractor or subcontractor might apply this rating to machine tools but only when the machine tool threatened to become the real bottleneck of a defense contract. The use of the DO was further restricted to a certain maximum dollar value of purchases covering the over-all program. Frequently this dollar limitation was quickly exhausted by the services and their prime contractors. As a consequence many orders placed by the subcontractors for machine tools were unrated, although they were for the defense program.

In addition the builders had civilian unrated orders which had to be completed because they were already in the process of manufacture. It also had a rapidly growing number of rated defense orders, and according to the regulations it could buy material with a rating only for that part of its production.

At various meetings over several weeks' period the industry repeatedly pointed out to NPA that Regulation No. 2 would not work in a machine-tool plant. A machine-tool builder, for the most part, buys his material from a steel warehouse and fabricates it in the best quantities for production efficiency. He does not know on whose machine tool a portion of a steel bar will eventually be used. Besides, he could not go to a steel warehouse with a request for a ton of steel, 60 percent rated and 40 percent unrated, and expect to get it.

The industry made several suggestions to NPA, including the request that builders be given a blanket priority for the purchase of critical materials as they were for the defense program that preceded World War II. Actually, such a blanket priority was made available to the machine-tool industry in September 1940, over a year before Pearl Harbor.

During the last quarter of 1950 it was the policy of the NPA that every industry should share and share alike in any materials available after the DO requirements had been met. This policy was established to avoid creating a labor situation which could not be absorbed in other defense work. Besides, it was the expressed feeling of top NPA officials that, with the thousands of tools in Government reserves and double the 1940 units installed in American plants, it would be a long time before machine tools would be a problem.

It is significant to note that in early 1951 the machine-tool industry used only about two-tenths of 1 percent of the Nation's steel production, a little over 1 percent of the antifriction bearing production, and even smaller portions of other scarce materials. Giving the industry priority assistance at that time would not only have materially changed the picture today but would have had little visible effect on the Nation's materials shortages.

In October 1950 NPA appointed a Machine Tool Industry Advisory Committee and requested it to submit a report on the condition of the industry. This committee submitted a formal report on November 8 and had further meetings with officials of the NPA on October 20, December 13, and December 28.

From the industry's point of view, the only outcome of these discussions was the decision on NPA's part to reinstate Government pool orders similar to the plan used during World War II. The pool-order plan carried with it the authority to extend DO ratings for materials. This program is discussed later in this report, but it was August 1951 before it was made satisfactory to industry.

In an effort to bring about a clearer understanding of the urgency of the situation, industry leaders met with the Director of Defense Mobilization on February 22, 1951. In this meeting the industry was told that the machine-tool industry was only one of about 7,000 having trouble.

The industry also made a report to the Chairman of the Munitions Board. The industry learned that the Munitions Board, too, felt that since the Nation had twice the tools in use that it had in 1940, it was primarily a question of finding sufficient materials to keep the existing tools working.

During this period, however, the Metalworking Equipment Division in NPA was kept busy rendering emergency assistance to tool builders in securing critical materials and scarce components. These requests grew rapidly as the larger industries received DO orders and became severe competition to the builder for the scarce materials.

Under the spot assistance plan, if a particular grade or type of steel was required, the tool producer could apply to NPA for assistance if material was unavailable in the market. NPA would either find the material or order it produced by a steel mill. Although this served to lessen the builder's problem, the time involved frequently caused serious production delays.

In some instances builders held upward of a dozen otherwise finished tools on their assembly floors waiting for a limit switch, hydraulic pump, or steel guards, etc.

It is interesting to note that the Tool Steel Industry Advisory Committee, at its first meeting on March 7, asked NPA to issue a specific tool-steel order that would provide the necessary raw materials, particularly the alloying agents, to meet the needs of the machine-tool builder.

This request was made, Committee members said, because of many problems peculiar to the production of high-speed and tool steels used in machine tools that are not applicable to provisions of general steel production and existing NPA orders. Such steels require substantial quantities of tungsten and molybdenum as hardening agents. The matter was referred by the Metalworking Equipment Division to the Tool Steel Section in NPA, and special consideration was extended in the more urgent cases.

Again, as late as November 1, 1951, the same Tool Steel Advisory Committee recommended to NPA that all carbon tool steels be separated from commercial carbon and alloy steels for allotments under the controlled materials plan. This time the industry was told that schedule 1 of CMP Regulation 1 was being revised to place tool steels

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in a separate product classification. This has now been done. However, these two cases are cited to show how sound the machine-tool industry had been in appealing for help from NPA months ahead.

At subsequent meetings of the Machine Tool Industry Advisory Committee, industry representatives continued to present their requirements to NPA, but it was late May 1951 before the industry was given special assistance. This is discussed under Special Priority Assistance.

PART II

Actions Taken To Overcome Bottlenecks

DISTRIBUTION RESTRICTIONS

By the end of February 1951 the situation had reached a point where it was obvious that steps had to be taken to increase the output of machine tools. Already the shortage of tools was being seriously felt in certain of our preparedness programs. The general magnitude of the growing problem is indicated by the fact that even at that time the industry had an 18-month backlog.

It was fully realized by NPA that many of these orders were for civilian production, that old customers were being favored, and that delivery promises for highly essential projects were not being met.

The Metalworking Equipment Division took corrective action through the issuance of NPA Order No. M–41 on February 28, 1951. This order regulated the monthly delivery of machine tools. It required each manufacturer to schedule 70 percent of his monthly production to the service contractors, with the remaining 30 percent to be used first to fill rated orders from other purchasers and then, if any balance remained, to fill unrated orders.

To further insure that the separate services received balanced deliveries, the manufacturer was instructed how to divide the 70 percent among them each month.

The regulation also gave NPA the authority to freeze the manufacturers' production schedules for a 3-month period, to transfer orders when desired from one producer to another, and to divert deliveries from one customer to another to avoid serious production delays.

While this regulation resulted in satisfactorily distributing production 70 percent to the military services and 30 percent to others, including AEC, NATO, and other foreign shipments, it still left open in some plants the opportunity to accept and ship unrated orders. As time progressed the necessity for the industry to concentrate its entire efforts on the production of critical tools took on greater importance. By October 1951 the unfilled backlogs had increased to 24 months in spite of the substantial jump in monthly deliveries. Therefore, on November 8, 1951, NPA revised order M–41, as amended, and also issued another regulation M–41A. Both of these are designed to channel virtually all the machine tools into direct military- and defense-supporting production, including subcontractors.

Order M–41, as amended, places a freeze on all machine-tool shipments for unrated orders after February 1, 1952, and does not permit acceptance of any new unrated orders during the interim.

There are certain exceptions to this limitation. The most important of these is the case of a machine-tool manufacturer whose production on rated orders is below 70 percent of his average production

during the first 6 months of 1950. It is not felt that very many builders will qualify for this exception.

Regulation M–41A further clamps down on the distribution of tools by limiting the use of priority ratings for specific needs. Only companies operating at a Government-authorized production rate higher than they were in the first quarter of 1951 are eligible for priority ratings to purchase machine tools. There are also exceptions to this order, including one which permits applications from any company which needs to replace a worn-out machine tool.

It is hoped that this restriction will have the effect of causing some producers of machine tools, which are not in critical demand at this time, to subcontract part of their productive capacity toward the making of those tools which are in most critical demand.

Everyone realizes that these recent regulations will place a severe handicap on industries whose output has been reduced because of the more urgent needs of the mobilization program. Manufacturers of automobiles, for example, will be ineligible to obtain machine tools to make model changes, under M–41 and M–41A.

While auto producers and similar groups will be handicapped by these orders, your committee does not believe they will be severely hurt. Machine tools may still be ordered for necessary replacement. Present production models can be continued. As soon as needs of the mobilization program are met, prompt consideration will be given to the relaxation of the order.

SCHEDULING AND FREEZING PRODUCTION

The Metalworking Equipment Division in NPA has been requesting and receiving order boards from machine tools manufacturers since April 1951. This authority is vested in section 14 of NPA Order M–41, as amended. These order boards show both rated and nonrated orders, the purchasers' name, the type of tool and its end use. These schedules are submitted monthly covering the ensuing 12 months. Each month the complete board is automatically frozen for a 3-month period unless changed by a directive from NPA.

From these order boards NPA can determine whether the manufacturer is meeting the delivery schedule, is ahead of schedule, or slipping behind. It is also known whether shipments for the month were made on the required basis of 70 percent to prime and subcontractors of the Department of Defense, with 30 percent to other rated orders ahead of any nonrated orders.

With these monthly order boards, NPA has the necessary information to divert deliveries to the most essential defense program or to another tool builder who urgently needs the tool for an expansion of his facilities.

In addition, these order boards permit NPA to make a constant check on the progress each producer is making in reassigning the tools on his GSA pool order to other purchasers. This is important from two angles. First, in that the Government is obligated to buy any tools on the pool order which the builder does not sell to private industry; and secondly, as a check on the necessity of keeping a particular pool order at the originally contracted volume.

A most effective scheduling step is presently being developed by DPA, NPA, and the Department of Defense. Its objective is to insure that critical machine tools are made available to the many high

priority programs on the basis of relative essentiality. To do this the Munitions Board has collaborated with DPA in compiling the relative essentiality of the major military programs under the jurisdiction of each of the three services.

In order to meet the target dates for these military items the services are requesting their contractors to compile complete information on the status of the tools needed for each project. Included in this data will be the required delivery dates on all tools not yet in place, that have been ordered by each contractor, as well as the subcontractors. The services expect to complete this study early in January 1952 and turn it over to NPA to work out production schedules that will meet the target dates.

Your committee feels that this program is to be commended, although it is a step that should have been taken months earlier. It is the type of long-range planning which will speed up our military production by breaking potential bottlenecks before they become bottlenecks.

POOL ORDERS

Further on in this report a comprehensive story is given on the financing and operation of the pool order program from its inception. However, it is important to mention it briefly at this point because of its far-reaching effect in overcoming two of the principal stumblingblocks toward getting the industry to increase its output through its own facility, expansions, and subcontracting.

The pool-order program initiated the first general priority assistance extended to tool builders by NPA. It came in the form of order M–40, issued on February 28, 1951 (superseded by order M–41, as amended, issued November 8, 1951). This order authorized the Government to place pool orders with machine-tool builders. It also provided that such orders should carry a DO rating which might be extended. This placed the industry on a priority status with other essential defense programs.

The industry hailed this move as a first step toward obtaining priority relief. A similar priority plan had worked effectively during World War II.

However, the industry did not anticipate that it would require several weeks to work out the details, to establish the policies, to prepare the contract, and to make up the production schedules. Neither did they anticipate that the contract would fail to incorporate many of the provisions that the industry felt were necessary to meet their current situation.

It is significant to mention here that during the first 6 months of operation only 18 tool builders out of 48 firms which were offered pool contracts were willing to accept them because of contractual provisions. The 18 contracts were valued at $50 million.

But when a new contract incorporating the revised provisions was offered by GSA on August 28, 1951, the situation changed decidedly. In 4 months' time 61 more companies had accepted contracts containing production schedules totaling 51,139 more machines, valued at $806 million. In addition, a total of 32 other contracts are presently being processed or negotiated. These involve about 15,000 more tools valued at $246 million.

The Metalworking Equipment Division of NPA is the initiating source for the placement of pool orders. The schedules of types, sizes,

and delivery dates are worked out between NPA, the services, and the builder. NPA then recommends to GSA that a pool contract be tendered to the builder for his acceptance.

The machine-tool-pool contract is used for two purposes. The principal purpose for which the tool-pool contract is used today is to guarantee machine-tool builders whose order boards show substantial backlogs against loss on work in process in connection with production covered by firm orders from users in the event of sudden termination of defense orders or cancellation of a particular program. In addition to this guaranty, another principal advantage to the manufacturer is the availability of a 30-percent cash advance for working capital. The other purpose for which the machine-tool-pool contract is used is to encourage producers to undertake production of machine tools in advance of the receipt of firm orders. This type of contract is issued on the basis of future planning by NPA and the Munitions Board as to specific tools that will be needed later to tool-up a definite defense program so that the machine tools will be available when the program gets under way.

The use of the pool orders for both purposes has played an important part in stimulating machine-tool producers to double the 1952 output by expanding their own facilities and subcontracting to others.

DPA RECOMMENDATIONS

Within a short time after DPA was established early in 1951, its attention was focused on the need for increasing the flow of machine tools to adequately support the mobilization program.

In order that the Congress may better evaluate their actions we are listing in more or less chronological form the course DPA has traveled since March 1951 in attempting to solve the many problems involved.

After extended informal inter- and intra-agency discussion, the subject of machine tools was first considered by the Production Executive Committee, DPA, on March 15, 1951. The following basic problems were disclosed:

(*a*) A growing reluctance on the industry's part to accept machine-tool pool orders without (1) the 30-percent advance payment made during World War II for similar orders and (2) relief from the then impending price rollback regulation; and

(*b*) Reluctance of the industry to expand under existing Government financing terms.

At the subsequent committee meetings of April 12, April 24, May 10, May 24, and June 14 various aspects of the problem were discussed. Remedial action was taken looking toward insuring an adequate supply of materials, allocating the industry's output, and expediting production in specific critical cases. The questions of financing and pricing were also considered, but no satisfactory solution could be reached.

In late June, partial relief for the pricing situation was provided when the Office of Price Stabilization issued a revised regulation. This permitted the industry to include such increased costs as overtime, multiple-shift operations, and subcontracting activities. Left unresolved however was the question of a price-basing period that was satisfactory to the industry. This is discussed under price regulations and adjustments.

Late in May, the Director of ODM, realizing the critical bottleneck developing designated a member of his staff to investigate the machine-tool situation and work in close liaison with the Production Executive Committee of DPA.

On June 28, 1951, at a combined meeting of the Production Executive Committee and the DPA Aircraft Production Board, the group felt it imperative that the following actions be taken at the earliest practical date:

(*a*) Establish a pricing formula, including the designation of an appropriate price-basing period, sufficient to provide a production incentive;

(*b*) Revise the present policy on advance payments;

(*c*) Establish an adequate fund for pool orders when the final amount required therefor has been determined; and

(*d*) Establish firm requirements, both military and civilian, for at least the next 18 months.

On July 9, 1951, the Director, ODM, issued ODM Document No. 7 to all interested Government agencies including the Department of Defense and the Atomic Energy Commission on metalworking tools. This directive set forth a positive program for dealing with the situation.

Under ODM Document 7, periodic progress reports on the situation were issued by DPA. No such report has been issued by DPA since September, as responsibility for the program has been vested in the Chairman, Production Executive Committee, who is a Deputy Administrator, DPA. For certain special-purpose tools required for aircraft production, this responsibility is shared with the Chairman, Aircraft Production Board, who is also a Deputy Administrator, DPA.

Concurrently with the action of the Production Executive Committee, the Office of Program and Requirements, DPA, prepared an extended staff study of machine tools which was compiled June 14, 1951, under the title "Machine Tool Survey." While primarily intended as an examination to discover a basis for computing requirements and establishing an over-all program for machine tools, the study showed conclusions similar to those arrived at by the Production Executive Committee and suggested certain remedial measures paralleling those adopted by the Committee.

Since the meeting of June 28, 1951, machine tools have been a continuing concern of the Production Executive Committee and the participating agencies. Under the over-all guidance of the Committee, a comprehensive program, designed to alleviate the situation with maximum speed and minimum disturbance to the many conflicting interests involved, has been vigorously pursued along the following lines:

(*a*) Encouragement of subcontracting by the machine-tool industry. This program comprehends the subcontracting of items ranging from complete machine tools, down through subassemblies, to individual components so that over-all production may be substantially increased. Ultimately, it is estimated that about 35 percent of all prime contracts to the industry can be accomplished on a subcontract basis.

(*b*) Allied with subcontracting is the utilization of many production facilities, such as those of the food packaging machinery industry, similar to those of the machine-tool industry.

(*c*) Allocation of all shipments of new machine tools.

(*d*) The establishment of military production preference lists to be used as a guide in determining the allocation of new machine tools.

(*e*) The maximum utilization of the machine tools in the military reserves.

(*f*) The coordination of the scheduled delivery of specific machine tools with the production requirements of selected major military programs.

(*g*) The utilization of normal standby foundry and machining facilities in military establishments such as shipyards and arsenals for producing parts and components for machine tools.

(*h*) Establishing a procedure for utilizing Government-owned or sponsored machine tools now in the possession of nonprofit educational institutions.

(*i*) Insuring the availability of materials adequate to support the machine-tool industry.

(*j*) Expediting the delivery of individual machine tools critical for the accomplishment of specific military production.

(*k*) Expeditious handling of all applications for accelerated tax amortization and loans involving the machine-tool industry.

Indicative of the results obtained to date is the fact that deliveries of new machine tools, which averaged about $45 million a month for the 6 months ending June 30, 1951, increased to $56 million in September and to $65.2 million in October. The present target consists of deliveries of $115 million a month by July 1, 1952.

Your committee finds that DPA has assembled some of the best people obtainable in the field who are, among other things (1) screening the machine-tool orders to squeeze out unessential frills in design; (2) assisting the tool builder in spreading the area of subcontracting to increase output; and (3) arranging schedules in order to satisfy requirements most efficiently to increase the manufacture of machine tools wherever possible.

ODM DIRECTIVE

The real action came on July 9 when the following directive was issued by the Director of Defense Mobilization. It directed that immediate steps be taken to enable metalworking tool builders to devote their entire energies to production, to provide them with genuine incentives for all-out production, and to channel their production to meet defense requirements for ourselves and our allies.

OFFICE OF DEFENSE MOBILIZATION,
July 9, 1951.

To: Economic Stabilization Agency.
General Services Administration.
Defense Production Administration—National Production Authority.
Department of Defense, Army, Navy, Air Secretaries, and Munitions Board.
Atomic Energy Commission.

Re Metalworking Tools (MWT) Machine Tools by Definition of CPR 30.

1. With the progress of the defense effort we can see the road ahead more clearly. Great advances have been made in the design of new weapons and in methods of fabrication. Our production capacity, in its relation to the mobilization program, has been reviewed in the light of these developments. It is now evident the supply of metalworking tools, which are basic to achieving our production goals, is inadequate. Military, MDAP, basic industrial expansion, and defense-supporting programs will be further delayed, therefore, immediate steps should be taken to enable metalworking tool builders to devote their entire

energies to production, to provide them with genuine incentives for all-out production, and to channel their production best to meet defense requirements for ourselves and our allies.

2. Exact requirements for metalworking tools are not available and probably cannot be categorically established. Nevertheless, the nature of the problem, its general magnitude, and its underlying importance are sufficiently clear to indicate the necessity for prompt and vigorous action. Requirements for military production, after careful screening, indicate demand substantially in excess of supply. The Munitions Board advises funds are available in excess of $4,000,000,000 for production equipment, of which $2,900,000,000 are estimated to be required for metalworking tools by the end of fiscal 1952. The metalworking tool industry is currently operating at an annual rate of $675,000,000. The cost of the delays waiting for machine tools will far exceed the cost of the tools.

3. In addition to the reports and information furnished by NPA, special surveys have been made by DPA, and the Bureau of the Budget on the metalworking tool industry. The Production Executive Committee of DPA has conducted a combined meeting of interested parties to consider the facts disclosed by these reports.

4. Adjustments in OPS price rulings are necessary in order to assure maximum production. The industry since World War II has been in the class of a depressed industry which was contrary to the situation at the beginning of World War II, when the metalworking tool industry was rolling at high speed at good prices on large French and British orders. At the beginning of our present defense effort, the metalworking tool industry had just suffered several poor years. It had been renegotiated. It found itself with overcapacity for peacetime, meeting the competition of a large volume of the tools it produced during the war which had been declared surplus.

5. Metalworking tool production must be increased. The necessary measures are:

(*a*) The Office of Price Stabilization shall modify price controls on new metalworking tools to give metalworking tool builders the stimulus to expand their production for essential needs.

(*b*) The DPA shall initiate steps with NPA, GSA, the Department of Defense, and the Bureau of the Budget within their authority to—

(1) Increase the amount available for pool orders to the extent necessary to meet the needs of the defense program for metalworking tools.

(2) Issue pool orders where necessary to direct production and encourage extensive subcontracting.

(3) Make advance payments not to exceed 30 percent on pool order contracts for metalworking tools to the extent recommended by NPA.

(4) Concentrate under NPA the administration of pool orders and all other bulk or aggregate orders for metalworking tools by Government agencies.

(*c*) NPA shall—

(1) Provide necessary assistance to metalworking tool producers to obtain facilities, materials, and components to increase production as required.

(2) Encourage metalworking tool subcontracting with particular emphasis on using areas where a shift from civilian to defense production has caused some dislocation, such as the consumer durable goods production centers.

(3) Analyze order boards for metalworking tool builders to assure distribution of tools in accordance with the most urgent needs of the defense program, essential civilian requirements and to further limit nonessential deliveries.

(4) Encourage the utilization of used and idle tools to limit the demand on new tools.

(*d*) Every effort will be made to assure adequate manpower for producers of metalworking tools by the appropriate agencies under policies approved by ODM.

(*e*) The Department of Defense shall—

(1) Continuously review military production programs in relation to needs for metalworking tools and keep NPA informed of estimates of unusual requirements.

(2) Utilize metalworking tools in service reserves to relieve the demand for new tools, and make reviews of the use of such reserves as may be prescribed.

(3) Encourage prime and subcontractors to utilize second-hand tools and idle tool capacity wherever practical.

(4) Provide NPA with information indicating relative urgency of projects requiring metalworking tools.

6. The first monthly report showing the progress on accomplishing the above objectives shall be furnished this office on July 20.

CHARLES E. WILSON.

In a letter dated July 20, 1951, the Chairman of the Munitions Board outlined the actions already taken to implement this directive.

JULY 20, 1951.

Hon. CHARLES E. WILSON,
Director, Office of Defense Mobilization.

DEAR MR. WILSON: This in reply to your letter of July 9, 1951, regarding the situation of the machine-tool industry and your instructions as to what actions will be taken to solve this condition.

In paragraph (*e*) of your letter you have assigned certain responsibilities to the Department of Defense for carrying out this program. The following is a summary of actions that have been taken by this office to accomplish the results which you desire:

(*e*) The Department of Defense shall—

"(1) Continuously review military production programs in relation to needs for metalworking tools and keep NPA informed of estimates of unusual requirements."

A directive has been prepared for issuance to the military departments for obtaining the types and quantities of machine tools and metal-forming equipment which they will procure from funds that are requested in fiscal year 1952 budget and from prior appropriations. To obtain the most factual data, it will be necessary that the Departments obtain information from their contractors regarding machine tools and metal-forming equipment they will procure with Department of Defense funds. As soon as the Bureau of the Budget has given approval under the Federal Report Act of 1942 for requesting such information, this directive will be forwarded to the Departments. The deadline for obtaining this information has been established as September 30, 1951. On receipt of this information it will be consolidated and forwarded to the National Production Authority for its guidance in placing a pool order and for expansion of production of the machine-tool industry in those categories which need such action. In the meantime, we will inform National Production Authority, immediately, of any unusual requirements which may develop.

"(2) Utilize metalworking tools in service reserves to relieve the demand for new tools, and make reviews of the use of such reserves as may be prescribed."

On June 14, 1951, the Munitions Board approved a policy directing maximum utilization of the departmental industrial equipment reserves. To establish a more rapid utilization of this reserve, the Board has further approved the establishment of a central inventory of the items in the reserves. This will allow greater efficiency in screening by the three Departments of those items which are available for current production and held in the reserve.

"(3) Encourage prime and subcontractors to utilize second-hand tools and idle tool capacity wherever practical."

Each of the military departments has been directed to encourage subcontracting by its prime and subcontractors to obtain maximum utilization of idle capacity and to assist in meeting production schedules. They have also been advised that second-hand equipment in machinery dealers' inventories should be used to the greatest extent possible.

"(4) Provide NPA with information indicating relative urgency of projects requiring metalworking tools."

A procedure for establishing the relative military urgency of major hard-goods items is being developed by the Department of Defense. This system will, in turn, make possible the arranging of machine-tool deliveries in such a way as to insure preference for the most urgent military items. The system will provide for periodic review as programs change. The urgency procedure is tentatively scheduled for operation September 1, 1951.

It is believed that the actions described above will comply with your instructions as they pertain to the Department of Defense. We intend to follow this matter closely to do all we can to improve the machine-tool situation.

Sincerely yours,

J. D. SMALL, *Chairman.*

Prompt action was taken by the Government agencies affected by the directive. This is clearly indicated by the following excerpts from letters advising the Director of Defense Mobilization of the progress made.

The Economic Stabilization Agency advised in part on July 15, 1951:

I wish to report that the Office of Price Stabilization has prepared General Overriding Regulation 15—Adjustment of Ceiling Prices of Machine Tools, in conformity with that part of your directive addressed to Economic Stabilization Agency. This regulation will be filed with the Federal Register on July 16. In substance the regulation provides that any producer of machine tools or attachments may, if he chooses, make an adjustment of his ceiling prices based upon estimations of future operations which will return to him 80 percent of his average rate of return on total business assets for the years 1938–48, inclusive. Machine-tool producers without experience during any of these 11 years may use the industry average rate of return of 21 percent.

The regulation further provides that any producer of machine tools or attachments may make an adjustment on any specific product or products which will return total cost with a margin thereon of 5.5 percent. This product adjustment also is figured on the basis of estimates.

The United States Atomic Energy Commission replied in part, on August 3, 1951:

The Atomic Energy Commission is pleased to cooperate with your office in achieving the desired objectives. AEC's operating policies and procedures now in effect encourage maximum use of available Government-owned machine tools prior to procurement of such tools from commercial sources; subcontracting fabrication work to available commercial shop and plant facilities, where practicable; and the transfer to other Government agencies, particularly the Department of Defense, of any machine tools which may be excess to AEC's requirements.

The Defense Production Administration replied in part on July 20, 1951:

The National Production Authority has requested the Defense Production Administration to certify an additional $200 million for use in placing pool orders for machine tools. This increase, which will be certified Monday, will make a total of $340 million available from fiscal year 1951 funds for this purpose.

The General Services Administration is today notifying the machine-tool manufacturers who have contracts for pool-order equipment or those who are considering pool-order contracts, that where private financing is not available, a 30-percent advance payment carrying interest at the rate of 4 percent will be made at the manufacturer's request. Such payment will be subject to reasonable conditions designed to protect the interest of the Government.

It is understood that the National Production Authority has made substantial progress in preparing recommendations to the General Services Administration for further pool orders when the additional $200 million now being certified by the DPA is actually made available.

The National Production Authority replied in part on July 20, 1951:

A section has been organized in the Metalworking Equipment Division to assemble information on used and available tools. We are developing an NPA order on used tools calling for an inventory of used tools in the hands of dealers and providing for distribution to meet urgent defense programs. This order is patterned after the one in effect during World War II on this subject.

The National Production Authority wrote in part again on August 20, 1951:

Allocations of material for the fourth quarter, as submitted by metalworking tool builders on CMP 4–B applications, were prepared before there had been a satisfactory resolution of the problems of machine-tool pricing. Therefore, they had been prepared on a basis which was lower than would have been expected

had the price situation been resolved. Accordingly, their applications are being processed for the fourth quarter on the basis of 125 percent of their requests, with particular emphasis being given to producers of those tools which are in most urgent demand.

We continue to encourage machine-tool builders to subcontract. Industry members of the Office of Price Stabilization's Machine Tool Industry Committee have assured us that the new pricing regulations will act as a real stimulus to increase subcontracting.

A meeting with the automotive industry advisory committee was devoted in substantial part to discussion of making available tool room capacities in the automobile producers' plants, as well as capacities in the plants of their parts suppliers, for the production of either complete machine tools, subassemblies, or components. Mr. Reuther has offered the cooperation of the UAW-CIO in assisting in this effort. Negotiations have been entered into with General Motors Corp., Fisher Body, to subcontract Bullard Machines and a pool order is presently under negotiation in this connection. The Aircraft Production Board of DPA, the Metalworking Equipment Division and the Motor Vehicle Division of NPA have been collaborating closely.

New pool order lists have been submitted to machine-tool builders, totaling to date, approximately $660 million. As promptly as these are returned by the machine-tool builders with their prices, the recommended pool orders will be forwarded to General Services Administration for issuance. There is a reluctance on the part of manufacturers to accept pool orders and the reasons given are the 4-percent interest on the 30-percent advance and the requirement that the company receiving the advance has been unable to obtain financing elsewhere. We are currently negotiating with General Services Administration on these two items and other provisions of the contract. Delay in reaching a satisfactory solution to this problem will impede the pool order program.

Under the program for making maximum utilization of used and available tools, the Federal Security Agency issued on August 2, 1951, a policy and procedure for releasing machine tools held by colleges and State institutions. A section has been established in the Metalworking Equipment Division of NPA with the function of obtaining the considerable number of tools available from this source for the benefit of the mobilization program.

The National Production Authority reported in part on September 20, 1951:

The Machine Tool Industry Advisory Committee met on September 6. They reported that "the remaining major obstacle to increased production of machine tools is the difficulty in obtaining materials, principally alloy steel. Due to relatively small-lot purchases, the machine-tool industry usually buys from warehouses. Warehouses do not have adequate stocks to meet all requirements and the machine-tool builders do not have any preferred position. Eventually, the controlled materials plan may correct the situation but not in the period of critical machine-tool demand. The committee recommended special action for relief in materials supply. The members indicated satisfaction with price relief and the new pool order program."

The pool order lists submitted to machine-tool builders for comment and pricing are receiving a more favorable response due to the new price regulations (OPS order effective August 27) and to the better contract terms arranged by the GSA. The pool order contracts executed now total $113 million of which $58 million are under the revised contract. In addition, new recommendations totaling $346 million have been sent to GSA for processing.

In conformity with a decision made by NPA, about 50 machine tools were diverted to machine-tool builders. These and other diversions which will be requested should help alleviate production bottlenecks in machine-tool plants and stimulate production of machine tools.

The reduction in quantities of materials available for nondefense industries should open up capacities suitable for subcontracting machine tools. Quite a number of the facilities that are available for subcontracting do not have complete complements of production equipment such as drills, planers, boring machines, etc., to permit them to produce complete machines. These shops obviously can produce only components and parts, and for the machine-tool industry to utilize them to any great extent requires manpower to follow up, supervise, and inspect the work that might be done. Progress is being made in locating and utilizing such facilities.

On October 20, the National Production Authority reported in part:

Facilities, primarily installation of additional machine tools, are progressing satisfactorily. Diversions of early machine-tool deliveries are being made to meet machine-tool builders' requirements. Similarly, through industry divisions of NPA, deliveries of components are being expedited to machine-tool builders.

With respect to subcontracting the report stated:

This is being done with contacts made with textile-machinery builders, printing-press machinery, paper-mill and packaging-machinery manufacturers. We have had meetings with representatives of the advisory committees of the above industries. We have circulated lists of the various manufacturers in the above industries to encourage machine-tool manufacturers to make contacts on subcontracting.

At the request of the Munitions Board. the Metalworking Equipment Division, NPA, is making a detailed analysis of all firm-rated orders on the books of the machine-tool industry whereby distribution quotas to service claimants can be refined to assure a more balanced supply of tools and further to detect situations where the demand is disproportionate among the several qualified producers.

Orders are under preparation to control the distribution of used and imported machine tools. This program will be assisted by the recently promulgated OPS price ceilings on used and rebuilt tools. Surveys indicate large numbers of urgently required tools in the hands of educational institutions. At the present time administrative technicalities are preventing the sale or disposal by schools of these tools. NPA is discussing with the FSA measures to facilitate release of these idle tools to defense producers.

CEILING PRICE REGULATIONS

On May 4, 1951, Ceiling Price Regulation 30, "Machinery and Related Manufactured Goods," was issued which applied to machine tools and other manufactured products. It established the ceiling price at the highest price in effect during the period April 1 through June 24, 1950, or any previous calendar quarter from July 1, 1949, through June 24, 1950, plus certain labor and material cost increases from the end of the particular base period selected by the manufacturer. All direct labor and material cost increases and certain indirect labor and material cost increases were allowed. Labor cost increases were limited to March 15, 1951. Some materials cost increases were allowed to March 15, 1951, and others only to December 31, 1950.

Any increases in administrative overhead or general operating costs were prohibited. For example, among others, the following increases in cost were not included: (1) Duplication of jigs, fixtures, and patterns in order to increase output; (2) multiple shift operations; (3) overtime premiums; (4) shift premiums; (5) training new help; (6) higher costs resulting from subcontracting; (7) increased clerical help, except as included in factory labor.

While this regulation failed to go far enough, it was certainly in the right direction because the December 19, 1950, through January 25, 1951, prices (GCPR base period) did not reflect historical cost-price relationships in the machine-tool industry. This is further shown by the fact that between June 25, 1950, and January 25, 1951, some machine-tool manufacturers raised their prices from 10 to 42 percent. Accordingly, the continued use of any ceiling prices based on the December-January period would have rewarded those machine-tool manufacturers who made price increases far in excess of their needs, while it would have penalized those manufacturers who were delivering against old quotations or attempting to hold their price increases to a minimum.

By this time, it had become crystal clear that the machine-tool industry would be required to do a large amount of subcontracting and use a great amount of overtime and shift premium in order to expand its production sufficiently to meet the needs of the defense program. The industry, through its Industry Advisory Committee, advised OPS that it was not in a position to absorb the increased costs which would result from these practices.

Accordingly, Supplementary Regulation 2 to Ceiling Price Regulation 30 was issued on June 27, 1951. This supplementary regulation permitted the industry to recover increased costs resulting from overtime, shift-premium hours, and increased subcontracting. It was conceded by the industry that this amendment provided a measure of relief; however, it was far from adequate to provide the necessary production incentive.

On June 30, 1951, the Congress, in extending the Defense Production Act of 1950 until July 31, 1951, banned roll-backs, and this legislative action indicated an intent that the status quo on June 30, 1951, be preserved. To meet this situation, General Overriding Regulation 13 was issued freezing ceiling-price provisions in effect on June 30, 1951, until further notice. Prior to this action, the machine-tool industry could price either under the General Ceiling Price Regulation or Ceiling Price Regulation 30 and Supplementary Regulation 2 thereunder.

The directive issued by the Office of Defense Mobilization on July 9, 1951, directed the Economic Stabilization Agency to increase price ceilings for manufacturers of machine tools to the extent necessary to give them stimulus to expand their production for essential needs.

With the June 30 suspension of Ceiling Price Regulation No. 30 and Supplementary Regulation No. 2, individual tool manufacturers felt that they did not have a sufficient profit incentive to incur the risks of an expansion program. Besides some expressed doubt as to their profit margins on normal production until the higher output was reached.

The first step toward meeting these obstacles was the issuance of General Overriding Regulation 15 on July 16, 1951. This permits tool manufacturers to adjust ceiling prices on an over-all production basis or for a particular tool or attachment, without regard to other OPS regulations. The over-all adjustment is allowed if the manufacturer can show that present ceiling prices cause, or threaten to cause, a profit return, before income and excess-profits taxes, that is, less than 80 percent of average rate of return for years 1938 through 1948.

The regulation also allows an adjustment on ceilings for a particular tool, or when the ceiling price is less than 105.5 percent of total unit costs for that tool thus assuring the builder a minimum 5.5 percent profit on every single tool.

It must be emphasized, however, that the use of GOR 15 is optional and that there is no requirement that any machine-tool manufacturer determine his ceiling prices in accordance with its provisions. In fact, during the discussions with the Machine Tool Industry Advisory Committee prior to its issuance, some of the members stated that their current ceiling prices were higher than they would receive under GOR 15. The experience to date would seem to bear this out. Only about 30 applications have been received by OPS with 25 of these dealing with a particular tool in the manufacturer's line.

The next action taken by the Office of Price Stabilization in the implementation of the Wilson directive was received with open arms by the tool industry. This was a revision of Supplementary Regulation No. 2 to CPR 30, issued on August 21, 1951.

This regulation was tailored particularly to cure the machine-tool problem. In brief, this revised regulation permitted the machine-tool manufacturers to increase their base-period price by 12 percent before making further adjustments for increased cost of labor and material. This 12-percent adjustment was granted on the premise that an investigation indicated that the cost-price relationship in the machine-tool industry was not the normal relationship during the base period stipulated in CPR–30. This supplementary regulation further permitted the machine-tool manufacturers to adjust their ceiling prices for increased cost resulting from increased overtime, shift premium hours, and increased subcontracting, and provided that the material- and labor-cost adjustments may be computed on the basis of a September 9, 1951, date rather than the dates provided in CPR–30.

Under date of November 9, 1951, OPS issued revisions of CPR–30 and SR–4 in conformance with the provisions of the so-called Capehart amendment of the Defense Production Act of 1951, as amended. While these revised regulations provide for all increases in costs of labor and material, including administrative overhead prior to July 26, 1951, it is not expected that many machine-tool manufacturers will wish to revise their prices under these regulations, but rather will elect to maintain the ceilings established under Supplementary Regulation No. 2 (revised) to CPR–30. Under the latter the builder has the advantage of a 12-percent increase in the base-period price, all increases in material and labor costs between July 26 and September 9, 1951, as well as all increases in costs subsequent to July 26 resulting from overtime, shift premium hours, and subcontracting. Moreover, it is believed that many builders might find that a decrease in unit overhead as a result of substantially higher volume would necessitate lowering the ceiling price under the Capehart amendment.

There are still some marginal distress cases in the new machine-tool pricing set-up. This comes about by the interpretation of what is and what is not a machine tool. Some machine-tool producers build two kinds of equipment in the same shop, with the same men, tools, and accounting system; one kind of equipment being classified as a machine tool, the other not. This narrow interpretation is not agreeable with the machine-tool builder.

The optical comparator built by one company is a case in point. Because this machine is built under the same conditions as their machine tools, it is impractical to make the separate computations required by the two different price regulations.

Some indication of the machine-tool industry's general feeling toward the present ceiling prices can be gained from the speech made before the fiftieth annual meeting of the National Machine Tool Builders Association at Hot Springs, Va., on November 8, 1951, by Mr. M. A. Hollengreen, president of the Landis Tool Co. Mr. Hollengreen commented as follows:

> In the field of price control we have a regulation which, though complex, and which undoubtedly has cost you a great many man-hours in computing the permissible increases in your base-period prices, does seem to give us a price ceiling under which we can operate in a satisfactory way and which makes subcontracting possible.

While the regulations now in effect are a far cry from the simple recommendations which your Industry Advisory Committee made to the OPS, a great deal of credit should go to those machine-tool executives who met with the officials of the OPS week after week for a period of something like 6 months in a resolute endeavor to work out something that could be successfully applied in the machine-tool industry.

SPECIAL PRIORITY ASSISTANCE

In a time of national mobilization, it is generally impossible to tool up production on a wide number of defense contracts at the same time. For this reason it is important that every effort be lent toward getting the most vital ones going first. To do this systematically, a good priority or urgency rating system is usually necessary.

There were three kinds of priority assistance that became a "must" in early 1951 to speed up the delivery of tools. One was needed to direct the particular tool to the defense plant of highest urgency; another was needed to see that the tool builder obtained the tools necessary to expand his own facilities. The third priority was necessary to obtain the critical materials with which to build the tools. NPA has taken definite action to meet these situations.

To meet the first problem, the NPA acted on June 21, 1951, to advance the delivery of tools to defense contractors when top-rated programs were being endangered.

To be eligible for such assistance the contractor must (1) be engaged in direct military or defense-supporting production, (2) have purchase orders for machine tools on file with a specific supplier, and (3) have no idle capacity or equivalent production equipment.

After investigating the validity of the request, the Metalworking Equipment Division, NPA, issues a directive to a machine-tool builder to give priority to that particular defense plant.

To solve the second problem, NPA decided on August 13, 1951, that the scarcity of tools should not be permitted to curtail the needed expansion in the machine-tool industry itself.

When a specific tool is urgently needed, NPA reviews the various order boards and diverts the tool from the intended customer to the tool builder who needs it for an expansion of his facilities.

Thus machine-tool builders are now being given first call on the output of their own industry. Previously builders had to obtain DO priority ratings, which then were filled in the order in which the DO-rated orders were received by the tool producer.

In announcing this new policy, the Administrator of the National Production Authority said:

Vigorous action must be taken by the Government and by industry itself if machine-tool output is not to become the limiting factor in the whole defense expansion program. We in NPA will do everything within our power to assist the machine-tool industry in its efforts to expand the capacity of their own plants.

In regard to priority assistance for materials, NPA issued a special priority order, regulation M–61 on May 14, 1951, which gave machine-tool builders the right to use a special rating, DO–75, to obtain materials during the third quarter only. They were permitted also to obtain 140 percent of their first quarter of 1951 use of steel and similar high percentages of copper and aluminum for their third-quarter production needs. This greatly helped the tool industry in the procurement of materials before the CMP plan became fully effective.

Further assistance was extended to the tool industry in the fourth quarter when NPA increased the material allotments by 25 percent over what the industry received in the third quarter.

The tool industry has repeatedly requested a superpriority from NPA. Their claim has been that because of competition from other higher ranking priorities, tool builders were unable to obtain their allotment of needed materials and components. The industry contended that DO ratings rank third in priority status and therefore afforded only limited chances of getting allotments filled on schedule.

In view of this situation NPA finally decided that the industry would have to be given a more preferential rating if its productive capacity was to be rapidly increased. Therefore, effective December 11, 1951, the tool producers were granted a top priority status and assigned a new program symbol, Z–2. This symbol has the same urgency status as the present top-flight defense and atomic energy programs using A, B, C, and E symbols. The new Z–2 symbol also applies to all related products such as metalworking machinery, presses, jigs, fixtures, dies, gages, precision measuring tools, attachments, and accessories.

These new procedures authorize the machine-tool builder to substitute the symbol Z–2 on all new and existing orders for steel, copper, and aluminum, as well as on purchase orders for component parts such as motors, bearings, castings, etc.

A steel mill or other supplier of controlled materials or components, on receipt of an authorized order bearing the symbol Z–2, is required to give it the same priority as is now given the A to E coded orders "unless his order books for a particular product are filled for that product for a particular month."

The new program symbol does not grant any authority to a manufacturer to exceed his authorized controlled materials allotment. The new symbol is simply intended to assist the machine-tool industry, which is expanding its production by 400 percent greater than its pre-Korea base.

In announcing the new actions, Mr. Swan Bergstrom, Director of NPA's Metalworking Machinery Division, said:

> The machine-tool industry has experienced considerable difficulty in placing orders for controlled materials and components particularly because production is being expanded rapidly and builders are placing more orders and larger ones. Without a historical pattern of business with the supplier, some builders are finding it very difficult to get their fully authorized material needs.
>
> Today's amendments will enable machine-tool builders to obtain the same preferential status as direct military orders. This action gives full recognition to the fact that the machine-tool program is the key factor in the entire defense expansion effort.

CONTROLLED MATERIAL ALLOTMENTS

The Division allotment of materials for a given quarter are determined by the Program Requirements Committee of the DPA and are based on the quarterly material requirements presented by the industry.

Because of the July 9, 1951, directive from the Director of the Office of Defense Mobilization, machine tools are being given preferential allocations of material each quarter so that the industry will be able to expand production double the current rate in 1952. This expansion will be reflected in the requirements presented by various manufacturers in the industry for the coming quarters.

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For the first quarter of 1952 the CMP requirements have been processed at practically the screened requirement level in all materials except in nonmilitary alloy steel and aluminum. The nonmilitary requirements for alloy steel and aluminum were processed at 80 percent of screened requirements.

The following allocations of controlled materials by particular forms were made to the machine-tool industry for the first quarter of 1952:

Machine tools

	Requested	Allotted
	Tons	*Tons*
Carbon steel (including wrought iron)	51,452	49,232
Bar (including bar shapes)	9,843	9,418
Sheet, strip (uncoated and coated)	23,630	22,610
Structural shapes (heavy), piling	1,228	1,175
Plate	12,523	11,983
Pipe, tubing	880	842
Wire, wire products (nails, bale ties, etc.)	213	204
Other mill forms and products	453	434
Castings (do not include cast or malleable iron)	2,681	2,566
Alloy steel (except stainless)	20,522	19,560
Bar (including bar shapes)	16,989	16,192
Sheet, strip	839	800
Plate	260	248
Pipe, tubing	140	133
Wire	39	37
Other mill forms and products	1,669	1,591
Castings	586	559
	Pounds	*Pounds*
Stainless steel	169,699	161,886
Seamless tubing	22,333	21,304
Other mill forms and products	140,923	134,430
Castings	6,443	6,152
Copper and copper-base alloy brass mill products	941,643	900,238
Copper (unalloyed):		
Bar, rod, shapes, wire (except electrical)	121,567	116,221
Sheet, strip, plate, rolls	27,214	26,017
Pipe, tubing	105,842	101,187
Copper-base alloy:		
Bar, rod, shapes, wire	507,454	485,138
Sheet, strip, plate, rolls	47,553	45,462
Pipe, tubing	132,013	126,213
Copper-wire mill products: Copper wire and cable for electrical conduction only (report copper content only)	686,756	653,645
Copper and copper-base alloy foundry products and powder: Castings, powder	2,746,869	2,627,662
Aluminum	1,671,263	1,532,879
Rolled bar, rod, wire, structural shapes	92,667	84,922
Extruded bar, rod, shapes, tubing	93,091	85,381
Sheet, strip, plate, foil	58,663	53,804
Powder (atomized or flake, including paste)	9,192	8,431
Pig or ingot, granular or shot	1,417,650	1,300,341

The industry has been experiencing difficuty in placement of its authorized allotments with warehouses and mills, particularly for plate, which is in very short supply. However, NPA is familiar with this problem and is taking steps to improve the situation. The Iron and Steel Division has, in some instances, issued directives to cure important bottlenecks, and proposes to do so in the future.

In the first quarter of 1952 steel warehouse distributors are scheduled to receive a minimum of 100 percent of base period instead of the 85 percent heretofore. This should result in an increased flow of steel products through warehouses to serve the machine tool industry.

ACCELERATED TAX AMORTIZATION

One of the strongest instruments Congress has provided to encourage the expansion of our industrial capacity, is the accelerated tax-amortization authority in section 124–A of the Internal Revenue Code.

The far-reaching effect of this authority in accomplishing the objectives of the Defense Production Act was recognized as early as October 1950 when regulations were issued by the Chairman of the National Security Resources Board and approved by the President. Later, when DPA was established, the administrative responsibility for processing the certificates of necessity was transferred to this agency.

Accelerated amortization operates to encourage expansion by permitting concentration of depreciation allowances in the first few years after construction or acquisition of the facility. It is designed also to help the taxpayer to finance expansion by telescoping much of the process of capital adjustment into the years immediately ahead when the chances for high income and full use of the new facilities seem good.

Prior to passage of section 124–A of the Internal Revenue Code, the period permitted for depreciation of new facilities by the Bureau of Internal Revenue varied up to 25 years depending on the normal life expectancy of the facility. Under the statute, this period may be shortened to 5 years for such portion of the new investment as DPA may determine.

The percentage authorized for amortization depends primarily on the need for increased productive capacity in the industry to meet defense needs. Other factors taken into consideration are the type of facility, the probable usefulness of the plant for other than defense purposes after the emergency, and the degree of financial aid deemed necessary to encourage the expansion. In the case of machine tools the percentage varies from 50 to 85 percent with an average of 70 percent for all cases approved to date. The industry has never felt this percentage adequate. It has repeatedly requested 100 percent amortization on the premise that no machine-tool builder needs to expand his present plant to handle the business he will have when the defense program is terminated.

In view of their general situation, a tax amortization plan was the type of financial aid the machine-tool builders needed from the Government if they were going to expand their production. As early as November 1950 tool builders began to send their applications to Washington. The machinery had not been set up to properly review and handle applications and naturally they began to pile up. Even the claimant agencies, who are the point of first reference, were not staffed with personnel properly trained to review and pass judgment as to whether—

a particular facility was necessary for defense, and if so, what percentage of the investment thereof was entitled to accelerated depreciation.

In all fairness to NPA and particularly DPA, these applications began to arrive long before an organization could be created in the new agencies to establish the criteria, policies, and regulations necessary to see that no tax advantage be granted other than that intended

by the Congress. All this required time and it was nearly March before an adequate staff and criteria were developed.

In fact, the first certificate of necessity approved for a machine-tool builder was February 26, 1951. Of course, there had been other certifications made prior to that date for what NPA considered to be more essential projects. The early emphasis was for the expansion of such basic and critical materials as steel, copper, aluminum, and other strategic minerals. Also such vital defense-supporting industries as transportation, power plants, and petroleum industries.

Even in March 1951 there was some question in the minds of most Government officials as to the essential necessity for enlarged tool facilities in view of the number of machine tools already in use and the quantities available in Government reserves.

Because of the many complaints received by your committee, Mr. William H. Harrison, DPA Administrator, appeared before the Joint Committee on Defense Production on April 12, 1951, to review this situation in detail. Mr. Harrison frankly admitted that mistakes had been made and unfortunate delays had occurred due to DPA's limited staff but assured your committee that those responsible were proceeding with meticulous care in a determined effort to safeguard the public interest.

There was still a big question in his mind, however, as to the relative priority that should be given machine tools. As late as April, NPA advised the industry that a survey was being made as a basis for decision. By this time, however, the backlog of unfilled tool orders had reached a point where something had to be done to stimulate greater productive capacity.

In the period from February to June 30, 1951, DPA approved only 36 applications from tool builders out of better than 250 received up to that time.

Following the Wilson directive of July 9, a campaign was undertaken to review the more essential machine-tool and metalworking equipment expansion projects which were pending. A total of 29 more were certified from early July to August 18 when the 60-day general moratorium declared by ODM and DPA on the granting of certificates of necessity became effective. Of course, many of the others were in process of being reviewed by the interested claimants including NPA divisions and DPA.

The general moratorium never really affected machine tools. Because of the need for wider expansion in the industry, DPA made an exception of the machine-tool cases and processed 25 more during the 60-day period.

When the general moratorium was lifted on October 18, ODM and DPA placed machine tools at the top of the essentiality list to be given first priority over all other applications. In the ensuing weeks all claimants including NPA have earnestly tried to clear the remaining cases that could be identified as machine tools.

The real problem that faced DPA was that of identifying many of the firms which were engaging for the first time in the production of machine tools. In many instances it was not possible for DPA to identify such firms by name and therefore during the initial drive large groups of pending cases were missed.

To meet this situation NPA was requested to compile a complete tabulation of all applications received to date covering manufacturers of machine tools and related products, broken down into the various product classifications. This analysis has proven to be quite a job and as this report is being written, it is still in process of completion. However, some classifications, including the machine tools and the metalworking equipment were completed early in December 1951. These have been turned over to DPA to determine the current status of each case still pending.

DPA has instructed its staff to give top priority to every newly identified application on the tabulation and to take whatever action is necessary to expedite those applications now in the hands of claimant agencies.

The foregoing explains to some degree the reason for the long delay on the part of Government agencies in acting on many of the cases listed as pending in the tabulations included in the appendix on pages 90, 91, and 94. A complete list of the machine tools and metalworking equipment applications that have been approved are also shown in the appendix on pages 86 through 93.

DPA has assured your committee that they expect to complete the newly identified applications before the end of the year. The following tabulations show the status of this job as of December 11, 1951.

Status of applications for tax amortization, machine tools only [1]

	Number	Proposed investment	Amount of tax amortization allowed	Tax amortization allowed as a percent of proposed investment
		Thousands	*Thousands*	
Issued	[2] 137	$78,191	$53,162	69.7
Denied	24	3,787		
Pending	80	23,505		
Total	241	105,483	53,162	69.7

Tax amortization approvals, machine tools only [1]

	Number	Proposed investment	Amount of tax amortization allowed	Tax amortization allowed as a percent of proposed investment
		Thousands	*Thousands*	
Nov. 15, 1950, to Jan. 1, 1951	0	0	0	0
Jan. 1 to June 30, 1951	28	$28,895	$22,200	76.2
June 30 to Aug. 17, 1951	25	18,885	14,194	75.1
Aug. 18 to Oct. 18, 1951 [3]	[2] 27	10,397	6,014	70.6
Oct. 19 to Dec. 11, 1951	57	20,014	10,754	53.7
Total	137	78,191	53,162	69.7

[1] Data as of Dec. 11, 1951.
[2] Includes an additional 8 applications which were approved during this period for a total proposed investment of $1,879,000, but the amount of amortization to be allowed has not been determined.
[3] Moratorium period.

Status of applications for tax amortization, metalworking machinery [1]

	Number	Proposed investment	Amount of tax amortization allowed	Tax amortization allowed as a percent of proposed investment
		Thousands	*Thousands*	
Issued	[2] 37	$9,806	$5,896	68.4
Denied	15	1,858		
Pending	20	9,822		
Total filed	72	21,486	5,896	68.4

Tax amortization approvals, metalworking machinery [1]

	Number	Proposed investment	Amount of tax amortization allowed	Tax amortization allowed as a percent of proposed investment
		Thousands	*Thousands*	
Nov. 15, 1950 to Jan. 1, 1951	0	0	0	0
Jan. 1 to June 30, 1951	8	$2,872	$2,220	77.3
July 1 to Aug. 17, 1951	4	1,383	973	70.3
Aug. 18 to Oct. 18, 1951 [3]	[2] 10	2,391	723	60.3
Oct. 19 to Dec. 11, 1951	15	3,160	1,980	62.6
Total	37	9,806	5,896	68.4

[1] Data as of Dec. 11, 1951. Includes metalworking machinery not elsewhere classified and all metalworking presses except forging presses.
[2] Includes an additional 4 applications which were approved during this period for a total proposed investment of $1,193,000, but for which the amount of amortization has not been determined.
[3] Moratorium period.

ASSISTING SMALL BUSINESS

The Office of Small Business of NPA has also been working on a program to assist small tool manufacturers. In cooperation with the NPA Metalworking Equipment Division, this office has been very helpful in assisting small concerns with special material problems. Expeditious attention is given all such requests for help.

We are advised that recently there has been a noticeably increased flow of most forms and shapes of steel to warehouse distributors who normally served machine-tool manufacturers. This is of special benefit to small tool firms who normally draw on warehouses rather than mills for their needs. Under the NPA Steel Distribution Orders (M–6, M–6A) steel distributors have been assured a minimum of 85 percent of their base-period purchases from the mills. Starting in January 1952, such minimum shipments from the mills will be increased to 100 percent of the base period. While these are minimums, mills actually shipped over 110 percent of the base period to warehouses during the third quarter of 1951. This greatly helped many concerns who were just starting in to subcontract tools.

In view of the preferential Z–2 rating assigned machine-tool builders on December 11, 1951, NPA is considering the issuance of a regulation to assure that warehouses obtain the particular kind of materials required by the machine-tool builders.

The Office of Small Business, NPA, has instigated the appointing of small-business committees by many State governors. They are being utilized to deal with sectional geographic problems relating to defense production, including the production of machine tools. The State committees are also helpful in providing information regarding the availability of subcontractors for essential machine-tool manufacturing, and lists of firms that are capable of converting to the manufacture of machine tools.

Government Reserves and Leasing Program

At the start of World War II, our Government needed thousands of direct military items and needed them quickly. To obtain them meant building hundreds of plants and arranging for the expansion of thousands of others. These all required machine tools—thousands of them—and the only way to get huge production was for our Government to buy the tools to equip these plants. By 1945, the United States owned many thousands of highly specialized and precision machines along with thousands of other general-purpose tools.

After this memorable experience, it was the part of wisdom and foresightedness that made the Congress pass the Surplus Property Act, October 3, 1944 (58 Stat. 765), authorizing the Department of Defense and the National Industrial Reserve Act of 1948, Public Law 883, Eightieth Congress, authorizing GSA to retain in storage such machine tools and related production equipment as was felt would be required to augment our country's industrial production capacity in time of a national emergency. Under these two laws reserves of such tools and equipment were established. The one by the GSA was designated the "National Industrial Equipment Reserve." The several reserves set up by the Army, Navy, and Air Force were grouped under the general heading of "Departmental Industrial Equipment Reserve." The GSA reserve was considered as a further insurance over and above the military reserve. Under both the acts the Department of Defense had the responsibility of determining which excess of industrial property should become a part of this reserve. It was further understood that withdrawals from the GSA reserve would be authorized by the Munitions Board when the tools were required by any service for use in a national industrial reserve plant for military items.

Representatives of the three services selected over 136,000 machine tools and related production items to be held in the Government reserves. Each branch picked the type and quantity it considered the greatest protection against any future production emergency. Storage centers in various sections of the United States were established and the items selected were forwarded to these centers for processing and storage.

LEASING TO SERVICE CONTRACTORS

Beginning with our present mobilization program, tools and production equipment have been leased constantly from the service reserves to expand the facilities of those plants awarded defense contracts. (See appendix 3, p. 92.) Such leases were made under the authority of the act of August 5, 1947 (61 Stat. 774), which provided for the lease of real or personal property by the services and for other

purposes. Many of these tools have also been shipped to Government reserve plants which are being reactivated. Thus in many instances months of precious time have been saved in supplying much-needed military equipment of all kinds to our fighting forces in Korea. The lease agreement is the only obligation placed upon the contractor and the annual rental is based on a percentage of the value of the tool, payable quarterly. Some idea of the number of all kinds of machine tools and related production items placed into use since Korea can be gained from the following figures showing:

Total industrial equipment reserves, including machine tools, metalworking equipment, and related production equipment

	Balance in reserve		
	June 30, 1950	June 30, 1951	Oct. 30, 1951
Defense Department reserves:			
Army	28,195	18,620	12,572
Navy	40,592	35,362	28,915
Air Force	36,014	19,681	6,305
Total	104,801	73,663	47,792
GSA reserve	31,550	27,555	27,070
Total reserve	136,351	101,218	74,862
MACHINE TOOLS ONLY			
Defense Department reserves:			
Army	(1)	(1)	7,410
Navy	(1)	(1)	17,745
Air Force	(1)	(1)	3,969
Total	(1)	(1)	29,124
GSA reserve	3,789	1,391	1,331
Total reserve (machine tools only)	(1)	(1)	30,455

[1] Not available.

On the basis of these figures over 80 percent of the Air Forces reserves and over half of the Army reserve in storage at the time of Korea have been released for defense production. This is not true of the Navy Department which, according to the figures, disposed of less than 30 percent of their reserve stock. The point is, however, that these figures do not give the full story. Any new acquisitions that have been added to these reserves during the interim should be taken into consideration. A breakdown of such additions is not available but it is not believed that they would materially alter the over-all relationship. There are, however, several reasons for the Navy's slower movement of tools out of their various reserves.

In the first place the Air Force and Army started at an earlier date to award contracts in sizable numbers. Their contractors got a head start on expanding their facilities and the services made the tools available.

However, the Navy Department worked under a somewhat different policy. It has seen fit to adhere more closely to the policy which reads:

> Replacement of withdrawn equipment shall be confined to those items for which there is a foreseeable additional need. Required delivery dates for such replacements shall be scheduled as far in advance as possible. The full withdrawal policy is set forth in the Department of Defense Directive No. 350.04–2 dated June 25, 1951.

DEPARTMENT OF DEFENSE DIRECTIVE

Washington 25, D. C.

Title: 350—Production and Requirements.
Subtitle: 04—Production Equipment.
Number: 350.04-2.

I. PURPOSE

It is the purpose of this directive to revise the Policy for Withdrawal of Industrial Machinery and Equipment from the Departmental and National Industrial Equipment Reserves to conform to current conditions.

II. APPLICABILITY

The Munitions Board at its meeting No. 158, 14 June 1951, approved the Policy for Withdrawal of Industrial Machinery and Equipment from the Departmental and National Industrial Equipment Reserves. The policy applies to the Department of Defense only.

III. POLICY

Attached.

IV. REPORTING COMPLIANCE

Copies of the implementing procedures issued by the Military Departments to their operating levels will be forwarded to the Office of Production Equipment, Munitions Board.

POLICY FOR WITHDRAWAL OF INDUSTRIAL MACHINERY AND EQUIPMENT FROM THE DEPARTMENTAL AND NATIONAL INDUSTRIAL EQUIPMENT RESERVES

1. Definitions

a. *Departmental Industrial Equipment Reserve.*—Is the industrial machinery and equipment held in storage by the Departments for augmentation of their required industrial production capacity in time of a national emergency, or in anticipation thereof. Departmental Industrial Equipment Reserve does not include industrial machinery and equipment while utilized by active Departmental establishments or retained as integral units of the Departmental Industrial Plant Reserve, contractors' plants, pilot lines, other active installations, on lease or loan, or in plants covered by the National Security Clause.

b. *National Industrial Equipment Reserve (Public Law 883, 80th Congress).*—Is the industrial machinery and equipment held by the General Services Administration for storage and maintenance for augmentation of production capacity, or for production capacity beyond the scope of the Departmental Industrial Equipment Reserve in time of a national emergency or in anticipation thereof. The National Industrial Equipment Reserve does not include industrial machinery and equipment retained as integral units in plants covered by the National Security Clause.

2. Withdrawals From the National Industrial Equipment Reserve

a. Withdrawal of industrial machinery and equipment will be authorized by the Munitions Board when required by the Departments or the General Services Administration for use in National Industrial Reserve Plants for current military production. Withdrawn items will be installed and in operation thirty days after arrival at the point of use. In appropriate cases, leases of equipment to industry will be authorized by the Munitions Board.

b. Disposition of withdrawn equipment:

(1) There will be a complete and final transfer of equipment withdrawn from the National Industrial Equipment Reserve for a Department or the General Services Administration.

3. Withdrawals from the departmental industrial equipment reserves

a. Industrial machinery and equipment held in storage by the owning Department will be withdrawn as required—

(1) For current use in preference to procurement of new equipment.

(2) To meet current production requirements, in lieu of transfer to stand-by facilities which will not be required to meet current production schedules.

(3) For transfer to another department when not required for current production by the owning Department. The requesting department must certify that such item is not available in its own reserve and that the item is required to meet current production schedules. Conflicts between the owning and requesting departments will be referred to the Munitions Board in the normal procedure for decision on the basis of relative military urgency.

b. Provisions for reimbursement of withdrawn equipment will be accomplished by agreement between requesting and owning departments. Replacement of withdrawn equipment shall be confined to those items for which there is a foreseeable additional need. Required delivery dates for such replacements shall be scheduled as far in advance as possible.

c. Each Military Department will establish one central location where requests for withdrawal will be expeditiously handled.

d. Industrial machinery and equipment which has become unserviceable should be withdrawn and disposed of in accordance with established procedures.

e. The Munitions Board will determine the length of time during which each Military Department will continue to retain operational control of that portion of its reserve of industrial machinery and equipment which has not been returned to active use.

FRANCIS H. GRISWOLD,
Major General, USAF,
Military Director, Munitions Board.

While the Navy has not insisted that all withdrawn or leased equipment must be replaced, by and large, this has been the practice. Since service contractors have not been willing to purchase a replacement unit, the Navy reserves were not generally available for overcoming bottlenecks even for the direct military requirements.

There is no question that in some instances the Navy has acted in the best interest of our national security by holding to their policy. However, Navy inventories were particularly distinguished by quantities of heavy production mills, horizontal boring and milling machines, planer type mills, etc., all of which are of long-cycle manufacture, and are types of machines most difficult to secure through diversion possibilities. We are not including in this consideration the "in-place" equipment in Navy stand-by facilities and equipment required for advance bases.

It is in regard to the Navy warehouse reserves that your committee feels a more flexible policy, similar to that pursued by the other two services, would have done much to aid in the critical production situations without involving an unnecessary gamble over future contingencies. Besides, in many cases the type of tools required for the new armament programs are likely to be highly selective because of more complex design.

LEASING TO MACHINE TOOL BUILDERS

It was originally contemplated that critical tools urgently required by the tool producer would be made available from the service reserve in the same manner as for the service contractors. However, the plan has never worked this way.

The Munitions Board for several months refused to lease tools to other than service contractors. The contention was that it was the intent of Congress in setting up the reserves that the tools should not only be maintained in good usable condition but the services were required to hold the tools in reserve for military production.

Several vital weeks were lost before the Munitions Board changed this policy. Then, in most instances, they insisted that the builder

must place an order for a replacement tool and return the leased machine in good condition. This the tool builder refused to do on the premise that at the termination of the emergency, the tool would be in excess of his production needs.

NPA continued its efforts to solve this bottleneck. Following several conferences GSA agreed to cooperate by purchasing the machine tool from the manufacturer and leasing it to the tool builder. The authority for doing this is provided in section 303 (e) of the Defense Production Act of 1950, as amended. In this way NPA was able to furnish the Munitions Board with a certificate of purchase and arrange for the lease of tools, if in reserve stock, to a tool builder.

When the NPA feels that leased tools will materially aid in the expansion of machine-tool production, it recommends to the GSA that a lease agreement be made. This agreement covers installation of Government-owned machine tools and patterns, special tools, jigs, and fixtures, and make-ready equipment. NPA advises GSA whether the tools have to be newly purchased or can be leased, at least temporarily, from one of the reserves. The Munitions Board has to concur in this action.

A formal lease agreement covering these installations, patterned after the form of agreement used for the same purpose by the Defense Plants Corporation during World War II, is being drafted at the present time. In the meantime, in the interests of speeding up the actual installations, the agreements are currently being carried forward on a letter-of-intent basis.

As of December 31, 43 recommendations for installation of Government-owned tools in privately owned plants have been made by NPA. These cover equipment valued at $22 million. Of the total 37 covering 1,163 tools valued at $19 million, have been made the subject of letter agreements tendered to producers by GSA. Thirty-two of these, covering 1,117 tools valued at $17 million, have been accepted by the producers, and the balance are pending. Letters of intent on the remaining 5 cases, covering 46 machine tools valued at $2 million currently are in the process of preparation or negotiation with the particular producers.

CENTRALIZED INVENTORY CONTROL

The need for having a centralized inventory control of all reserve tool stocks and one over-all policy for distribution has been apparent to all interested agencies for several months. Your committee is pleased to report that the Munitions Board has just established the Production Equipment Central Inventory Group to do this job. It will be the function of this group to maintain a complete description and the current location of every available machine tool not presently in use, which is being held in any of the Government reserves, including the GSA reserve. It is expected that other idle tools, such as those owned by the Maritime Commission, will be incorporated as soon as a complete survey is completed.

The Department of Defense Directive No. 350.04–7 dated October 11, 1951, indicates the procedure that is being followed in reporting this equipment.

DEPARTMENT OF DEFENSE DIRECTIVE

Washington 25, D. C.

Title: 350 Production and Requirements.
Subtitle: 04 Production Equipment.
Number: 350.04–7.

REPORTING OF IDLE PRODUCTION EQUIPMENT (DD–MB–447)

1. In order to comply with the provisions of Department of Defense Directive No. 350.04–4 and the implementing Department of Defense Directive No. 350.04–6, dated 17 August 1951, it is essential that each Military Department furnish the Central Inventory Group with an up-to-date inventory of idle production equipment owned by the individual department. It is also essential that procedures be developed to maintain the central inventory current on a day-to-day basis.

2. For the purpose of this directive, the term "production equipment" means those classes of machine tools, metal-forming equipment, and metal-joining equipment listed in Exhibit B to National Production Authority Order M–41. Further, the term "idle," as applied to production equipment, includes:

a. Those items remaining in the Departmental Industrial Equipment Reserves—i. e., those items for which final commitments to immediate production use have not been made.

b. Those items of production equipment in military owned and operated industrial establishments which are not in constant or intermittent use.

c. Those items of production equipment which are located in inactive departmental reserve plants and which are surplus to the planned mobilization use of such plants.

d. Those items of production equipment that are a part of complete facilities that are to be put into immediate use on M-Day. (Note that Directive No. 350.04–4 requires reporting of such equipment as "package plant tools.")

3. The Central Inventory Group will make use of electric accounting machine (IBM) punched cards as basic data for the establishment of the central inventory. Accordingly, each Military Department will forward to the Central Inventory Group on or before 1 November 1951 a set of such cards covering all production equipment of those classes listed in Exhibit B to National Production Authority Order M–41, which is on hand in the Departmental Industrial Equipment Reserves. These cards will be punched in accordance with the instructions contained in the Munitions Board "Manual of Procedures for Recording Inventories of Industrial Equipment in Military Reserves" (Volume A), dated 1 November 1948.

4. In addition to the production equipment in the Departmental Industrial Equipment Reserves, other idle Government-owned production equipment will also be included in the central inventory. The method of reporting such equipment to the Central Inventory Group may be by submission of an electric accounting machine card in accordance with paragraph 2 above, by submission of duplicates of Departmental records, or by submission of inventoried listings, whichever is most convenient. However, data submitted in accordance with this paragraph will include, as a minimum, the following information for each item:

a. Standard commercial description.
b. Standard Commodity Classification Code.
c. Government Tag Number.
d. Location.
e. Condition.
f. Owning service, bureau, or command.

5. Usefulness of the Production Equipment Central Inventory is completely dependent on the degree to which it is maintained on a current basis. Timely submission of additions to and deletions from the inventory are, therefore, mandatory. Notification of additions to the inventory may be made by any of the methods outlined in paragraph 4 above, but must include the minimum information therein specified plus the date of receipt. Such notification will be made at the time custody of the equipment is assumed. Deletions from the inventory will be made by simultaneous notice of disposition action based on shipping or

allocation instructions. Such notice must include the minimum information specified in paragraph 4 and also the date of the action, with the exception of "condition."

6. For the present, surveys for idle Government-owned equipment in the hands of private contractors and in reserve plants or portions thereof being operated by private contractors will not be made or reported to the Central Inventory Group. Instructions for the surveying and reallocation of such equipment will be issued at a later date, when the necessary reporting procedures have been approved by the Bureau of the Budget.

7. The semiannual tabulation and the quarterly tabulations of metalworking machinery and other production equipment, submitted under Reports Control Symbols DD–MB–280 for the Department of the Army and DD–MB–180R1 for the Departments of the Navy and Air Force, are hereby cancelled. The requirements for the establishment of a central inventory of industrial reserve equipment at the departmental level, as contained in paragraph 4 of Munitions Board memorandum, dated 1 March 1949, Subject: "Records of Metalworking Machinery and Other Production Equipment in Industrial Reserves," remain in effect.

8. Reports Control Symbol DD–MB–447 is assigned to the reporting requirements contained in this directive.

J. D. SMALL,
Chairman, Munitions Board.

Under this new plan when DPA and Munitions Board agree that an urgency exists for certain tools on the part of a service contractor or defense-supporting manufacturer, a check will be made to determine whether the tool is available in any one of the reserves. If so, the centralized inventory control group will authorize its allocation immediately and notify the owning service accordingly. In the future all distribution from any of the reserves will be handled through this control office.

During the first week of operation the centralized group received 11 lists approved by DPA and the Munitions Board for essentiality, totaling 1,324 machine tools. Ten of these lists were for service contractors and one for a machine-tool builder. In merely a few hours' time rather than days, the centralized records showed that 118 of the needed tools were available in one of the reserves. The owning service was notified of the assignment and the particular firm given 15 days to acknowledge acceptance. This new procedure will save weeks in costly delays previously experienced by contractors. Your committee feels that the Munitions Board is to be commended for consolidating this operation under a centralized control where uniform policies will do much to expedite the proper allocation of these much-needed tools.

MACHINE TOOLS IN GOVERNMENT-OWNED PLANTS

There are 442 manufacturing plants which were originally constructed by the Government for the production of various types of military items such as aircraft engines, aircraft frames, shells, and numerous other items. A number of these plants were stripped of machine tools after the close of World War II and in many instances these tools went into the reserves. In other plants the tools were preserved in place. It is estimated that nearly 400 of the total reserve plants are now being used or it is contemplated will be used in the present emergency.

The unused tools in all these plants are now being surveyed and will be carried as a part of the record maintained by the centralized inventory group.

MACHINE TOOLS IN EDUCATIONAL INSTITUTIONS

Another source of machine tools are schools and colleges throughout the country which under Surplus Property Act of 1944 (Public Law 457, 78th Cong., 2d sess.) received tools from Government surplus and reserve stocks for training purposes.

There is no estimate readily available as to the quantity involved but it runs into several thousand units. Some 2,000 have already been located. Through the combined efforts of the Metalworking Equipment Division and the services, steps are now being taken to appraise and reassign these units for industrial use.

In addition the centralized inventory group have under consideration a program whereby not only institutions but all present lessees would report whether any tool loaned or leased by the Government is currently idle and its present condition. Upon receipt of this data, arrangements will be made to reassign such idle tools for productive work.

There is one question, however, that remains to be answered. What is the potential production possibilities of the tools that remain as residue in each reserve? Naturally the better quality units have been selected first. It would seem desirable that a close examination of the remaining machines be made in their present location so that an intelligent appraised can be made before shipment to contractors.

Subcontracting

Until recently there has been little subcontracting. This has been due to two major factors. In the first place the early price regulations for the industry did not allow the additional cost of subcontracting to be added to the price. In the second place manufacturers of other products had little or no excess capacity available for subcontracting as long as the market for their product existed and the materials for manufacturing were available. Recent actions taken by the Government have tended to modify these situations.

One such action was price relief. There have been several amendments to the regulations for machine tools. These are the outcome of weeks of meetings between the industry and the Office of Price Stabilization. The problem was to develop a pricing formula that would permit manufacturers to recover the cost of jigs, fixtures, patterns, and other similar cost items incidental to subcontracting.

But it was not until June 27, 1951, that the regulation was amended to provide the necessary relief, and subcontracting really got under way. It was further stimulated on August 21, 1951, when OPS granted the tool builders an additional relief of 12-percent increase over their base period figures. The industry now considers the profit margin sufficient to aggressively look for subcontractors.

Evidence of the change in attitude on the part of builders since the price revision in June, is shown by the results of a survey just completed by the National Machine Tool Builders Association which would seem to be quite conclusive.

A questionnaire sent to the members of the association on October 25, 1951, on the extent of subcontracting in October 1951 and its effect on anticipated shipments through January 1952 brought replies from 125 builders of machine tools. Total production in October of the

companies reporting was $55.5 million, or 85 percent of the total tool industry output. The reports include the output for new machine tools and all parts and accessories shipped with the machines or separately. The report shows that about half the builders were not subcontracting in October, and did not anticipate subcontractors for any part of their production over the next 3 months. But 68 of the largest builders stated that they subcontracted 16 percent (dollar value) of their production in October and expect to raise this percentage to 19 percent by the end of January. The number of subcontractors employed per company ranges from 1 to over 40, but about half of the companies report between 1 and 10 each. Some are using over 20 subcontractors.

As nearly as can be estimated by the association, the 68 subcontracting companies make up about 60 percent of the total output of the tool industry. It is encouraging to note that this group estimate a $10 million, or 25 percent, increase in total production over the 4 months as a result of their subcontracting activities.

SURVEY OF ANTICIPATED PRODUCTION OF MACHINE TOOLS, PARTS, AND ACCESSORIES BY MACHINE-TOOL COMPANIES, NOV. 15, 1951

TABLE I.—*Machine-tool companies reporting use of subcontractors in October and number contemplated in following 3 months*

Date	Shipments	Expected increase over October	Amount subcontracted	Percent of total	Total number of subcontracts
		Percent		*Percent*	
October 1951	$40,254,000		$6,586,000	16	855
November (estimated)	46,312,000	15	7,011,000	15	894
December (estimated)	49,204,000	22	7,884,000	16	921
January 1952 (estimated)	50,844,000	26	9,489,000	19	943

TABLE II.—*Number of subcontractors employed per machine-tool company*

Number of subcontractors per company	Number of machine-tool companies			
	October 1951	November 1951	December 1951	January 1952
Less than 10	34	38	38	37
11 to 20	16	14	15	15
21 to 30	6	8	7	6
31 to 40	5	5	5	6
Over 40	2	3	3	3
Total number of companies	63	68	68	67

In this connection it is interesting to note the remarks of Mr. R. K. Le Bond, president of the National Machine Tool Builders Association, in addressing the association members at their annual meeting November 8, 1951. Mr. Le Bond is also president of the Le Bond Machine Tool Co., of Cincinnati, Ohio. In urging the industry to aggressively promote subcontracting he is quoted as saying:

> Subcontracting is the most practical method of boosting machine-tool production in the shortest period of time.
>
> There are two ways to boost machine-tool output. The first is maximum utilization of present facilities, involving hiring more people and going to multiple shifts. But only a fraction of the job can be done in this way because it takes too long to turn a green hand into a productive worker.

The second method is plant expansion. But starting from scratch today to build additional plants is going to take too much time. It also brings up questions of steel availability and of what to do with plants after the emergency is over.

In urging that tool builders turn to subcontracting, the machine-tool executive listed five advantages:

1. Subcontracting utilizes manpower where it is now employed. Men do not have to leave one company and go to work for another;
2. It eliminates the need for building new plants;
3. Costs are allowed for in the machine-tool price formula;
4. It is the fastest method of increasing total volume of output; and
5. It employs management and engineering groups already in existence and keeps them intact for postemergency production of their regular products.

I think every machine-tool company today should go prospecting for subcontractors. Only by spreading our skills, our technical knowledge, and our directive abilities over a broad enough field of performance, within a brief period of time, can the goal of expanding machine-tool production be reached—

Mr. Le Bond concluded:

Most commonly subcontracts go to small-job machine shops or companies whose primary products requires equipment similar to machine tools. Manufacturers of printing presses, paper machinery, automobiles, textile machinery, and office machinery usually have the type of facilities needed to produce machine tools and parts under subcontracts. Some of these firms, particularly printing-press producers, can manufacture a complete machine tool. Others are equipped to produce parts only.

An outstanding subcontract arrangement is the one the Bullard Machine Co., Bridgeport, Conn., has recently made with the Fisher Body Division of the General Motors Corp. They have agreed to build 757 42-inch vertical turret lathes. Initially Fisher's costs will run upward of 100 percent higher than Bullard's. But eventually the guess is that with Fisher's tremendous production facilities these costs will be under that of Bullard's.

Office of Small Business, NPA, and the field offices of the Department of Commerce are scouring the country for new facilities and putting these facilities and the tool builders together. Their approach has been quite effective along the following lines:

(*a*) Organizing the salesmen of the large machine-tool builders to seek out subcontract facilities among their customers;

(*b*) Getting the salesmen of some 140 machine-tool distributors to seek subcontract facilities among their customers for the builders whose tools they distribute;

(*c*) Following up the manufacturers of textile, canning, packaging, printing machinery, and related products to act as subcontractors for specific machine-tool builders needing additional facilities.

Other Sources

RECONDITIONED AND REBUILT TOOLS

There is another phase of the machine-tool industry that plays a very important part as a source of equipment for defense plants in time of an emergency shortage. This consists of the hundreds of used-machine dealers through whose hands and reconditioning shops pass many thousands of tools annually. It is a big business and one that currently needs Government help to resolve certain problems characteristic to that industry.

Historical background

There are three types of used-tool builders: 1, brokers who do not inventory machines; 2, dealers who maintain small inventories and generally sell machines "as is"; and 3, large machinery dealers who maintain extensive inventories and sell either "as is," "reconditioned," or "rebuilt guaranteed."

Roughly 20 percent of the dealers are in class 1, 70 percent in class 2, and about 10 percent in class 3. It is estimated that the total number of dealers, including brokers, would probably exceed 500, and under present-day conditions it might run over 1,000.

There is no estimate of the annual volume of business done by the used-machinery industry. Some estimate might be made by assuming a current turn-over of possibly 50,000 machines in 1951. This includes all classes of heavy and light tools along with Government reserve tools that were either reconditioned or rebuilt.

Buying and selling methods

1. Dealers buying and selling "as is" constitute a large proportion of the industry. These operators over a period of years may build up sizable inventories of machines of general-purpose type, buying them in periods of depression or from bankrupt firms at extremely low prices. In periods of intense industrial activity, used machine tools are difficult to secure and, as a consequence, the "as is" dealer might successfully obtain a mark-up of even 100 percent of his cost price.

2. Dealers selling on a reconditioned basis attempt to buy machine tools and build up their inventories on the same basis as does the "as is" buyer. The usual reconditioning job is of little consequence and is generally included in the total price of the machine. If done properly, reconditioning would mean a replacement of defective parts which would otherwise make operation of the machine impossible. It would mean cleaning the machine and, without dismantling, putting it into running condition to the tolerances of which the machine would be capable of producing. It would also include painting, etc.

3. Rebuilding machine tools means the dismantling of an "as is" machine, the replacement of all defective parts, the machining and grinding of all bearing surfaces and the reassembling of the machine, so that when put into operation, it is capable of producing tolerances equivalent to a new machine of the same type. A rebuilder may have one major company doing nothing but rebuilding, and he may have three or four other companies, housed in separate quarters, selling machine tools on an "as is" or on a "reconditioned" basis. These companies are usually amply financed and may be engaged in rebuilding as many as 500 machines at a time for either direct military service contractor or others engaged in defense work. Under normal conditions, rebuilding operations are secondary to activities under program 1 and 2 .

Effect of CPR No. 80

Until October 13, 1951, when the Office of Price Stabilization issued CPR 80 regulating the ceiling price of used machine tools and other metalworking machinery, the industry operated under the General Ceiling Price Regulation.

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From the issuance date general dissatisfaction was expressed by all classes of dealers over many of the provisions incorporated in CPR 80. An indication of the extent of this attitude can be noted from the following letter received by the Office of Price Stabilization.

NOVEMBER 10, 1951.

DEAR MR. LISK: With reference to our conference scheduled for next Friday in Washington (November 16, 2:30 p. m., the committee wishes to thank you for your cooperation in arranging and confirming the conference.

As mentioned during our telephone conversations, a series of two "emergency" meetings has just been concluded by an independent group of 66 firms dealing in used machine tools and metalworking machinery. The meetings were held on October 29 and November 5, at the Governor Clinton Hotel in New York, N. Y.

The 66 firms, large and small, represented every segment of the industry, and include dealers, auctioneers, and brokers; they are located geographically throughout the metropolitan New York area, New Jersey, Connecticut, Rhode Island, Massachusetts, Pennsylvania, and Maryland.

The subject of the meetings was Office of Price Stabilization Ceiling Price Regulation 80, which became effective October 13, 1951.

The "emergency" description of the meetings is caused by the fact that the regular business of our industry, consisting of the buying and selling of used machine tools and other metalworking machinery, has come to a virtual standstill since the regulation was issued. In addition to the fact that the regulation, as written, will have the effect of legislating many reputable and well-established firms and individuals out of business, it has caused, and will continue to cause, vitally needed used machine tools, which would otherwise come out into the "available" market, to be withheld, resulting not only in hardships to the dealers themselves, but also, we believe, in serious impairment of the entire defense effort, as the machines withheld will never reach their logical ultimate destination, namely, the thousands of manufacturing plants and shops engaged in defense work.

We can only add that we feel the conclusions we have reached are not peculiar to dealers in our area only, but the conditions compelling our conclusions exist equally throughout the country. Many of the dealers present at the meetings maintain almost daily contact and business dealings with their fellow dealers in other sections of the United States, and they confirm the fact that our industry's normal operations have, in fact, virtually come to a halt.

Assuring you of the committee's sincere cooperation and concern over the problems posed by CPR 80, we remain,

Very truly yours,

A. ZEEVE, Jr., *Chairman.*

Other criticisms and suggested revisions were received by OPS from several other quarters, including the two principal trade associations. Obviously in an industry cutting across so many levels, it is too much to hope that a price regulation can be written which will be satisfactory to all types of dealers, but OPS has revisions under consideration which it feels will make the regulation satisfactory to the industry.

The Metalworking Equipment Division, NPA, has been vitally interested in this pricing problem and has suggested that—

1. Section 12 of the CPR 80 be revised and the retroactive feature be eliminated so that the regulation would in no way affect contracts entered into prior to October 8, 1951, the effective date of the regulation;

2. The selling price of individual tools be figured on the basis of a percentage of the machine-tool builder's current list price as determined under applicable price-ceiling regulations;

3. The percentage factors on reconditioning in the regulation be adjusted downward to not more than 10 percent from the "as is" price.

4. There be a further clarification of the method to be used in pricing a rebuilt used machine tool, and also for pricing a rebuilt machine tool which has been modernized and brought up to the equivalent of a present-day machine. There are certain old machine tools which could be modernized to the point where they might be made equivalent in production output to present-day machines of similar type.

The other major dealer problems can be summarized in this way:

The MRO procedure was originally fairly satisfactory. However, today it will not generally provide deliveries of critical materials within the time required by the rebuilder. NPA is aware of this problem and is considering corrective measures.

Rebuilders need priority help in expediting certain components—gears, bearings, and certain machine-tool parts—peculiar to the machine's being rebuilt. The Metalworking Equipment Division is endeavoring to work with rebuilders to the end that this type of assistance can be given in the same manner as it is being provided for new machinery manufacturers.

Also, some of the major rebuilders have had to develop additional facilities, buildings, etc., to carry on major rebuilding programs. Requests for certificates of necessity have been received from some rebuilders and are being approved in practically all instances.

IMPORTS

Your committee has heard strong criticisms because European countries are exporting certain types of machine tools to the United States while representatives from these countries demand that their defense orders on United States builders be given preference over our own defense programs.

Recent press headlines stating "Britain filling American orders for tools" and "United States places orders for Italian machine tools," are typical. Upon investigation, your committee has found that these are primarily promotional stories put out by foreign sales agents located in this country. This does not mean, however, that no tools are not being exported to the United States. In fact, tool shipments from European countries have increased materially over each 6-month period since Korea. The following tabulation shows what has happened.

Importation of machine tools and metalworking equipment

[Thousands of dollars]

Country	Jan. 1 to June 30, 1950	July 1 to Dec. 31, 1950	Jan. 1 to June 30, 1951
Germany	$58	$136	$761
Switzerland	469	768	1,710
Sweden	23	100	132
United Kingdom	157	284	767
Canada	110	122	126
France	7	41	164
All other	18	35	246
Total imports	842	1,448	3,706
		Percent	*Percent*
Increase over first 6 months of 1950		70	370
Increase over last 6 months of 1950			160

From the figures, it would appear that when American builders were being swamped with orders, shortly after Korea, United States firms looked to European tool producers for some relief. While there was a substantial rise in the flow of tools to this country in late 1950, it was during the first ehalf of 1951 that deliveries really got under way—about four and one-half times greater than the 6-month period just ahead of Korea. Even at that, the total imports will only be slightly more than 1 percent of our domestic output this year, and nearly half of these are from Switzerland.

The exports from both Switzerland and Sweden consist mainly of special tools which in some instances are difficult to duplicate even in this country. For example, the Swiss builders manufacture jig borers in their most accurate and versatile forms, and are the principal foreign source for such high-grade tools. In 1946 their exports of jig borers to the United States equaled in value about one-fifth of our total domestic production. Special Swiss watchmaking tools are another item that is in popular demand in this country.

On the other hand, the United Kingdom ships various sizes of lathes to the United States. In most instances these are general-purpose lathes produced by two of the largest lathe-producing companies in the world. These two firms supply large quantities for their own British plants and make heavy shipments to other NATO countries, thereby relieving the strain on United States production. However, these two British companies do not build all sizes of lathe or lathes for all kinds of applications. Therefore, England has had to place large orders in this country for special lathes. In turn, United States manufacturers, who can use these general-purpose British lathes for certain kinds of operation, help to relieve our tool-production problem by doing so.

In discussing this subject with ECA officials, your committee staff has been assured that constant vigilance is maintained by each of the several United States agencies in Europe to see that foreign-produced tools are first channeled into their own defense industries or shipped to other NATO countries for military and defense-supporting industries before being exported to the United States.

There is also an economic angle that has to be considered in any discussion of tools imported from Europe. Several of these countries are badly in need of American dollars to improve their foreign-trade position. Machine tools, particularly the type that they have been accustomed to sell American industry, offer them that opportunity.

Manpower Situation

Machine tools must be accurately built by men who possess the skill gained as a result of years of experience. When one builds a high-quality machine that has to maintain tolerances within one-tenth of the thickness of a human hair, he cannot risk using workmen untrained to their jobs.

That is what makes the shortage of manpower the most serious and complex of all the problems in the machine-tool industry today. Skilled men are not available in numbers; yet three out of eight jobs in the tool industry require highly skilled workers. The skills require a training period of from 2 to 3 years. For some routine operations a shorter period may be satisfactory, but not for many of

the specialized jobs. This is why it is so difficult to solve the problem by recruiting labor through the usual procedures and sources.

This explains to a degree the reason there has been so much pirating of skilled workers by other defense plants. As the mobilization program continues to expand, these attempts will increase.

Despite the generally balanced labor market for the country as a whole, the market is unusually tight in those highly industrialized areas where the machine-tool industry is concentrated. Competition with defense industries using the same type of labor prevented the rapid acquisition of production workers, particularly before payment of premium wages was allowed.

Since the middle of 1950, however, the number of production workers and the average weekly hours have been rising. The number increased from 38,000 in June 1950 to 60,000 in July 1951, a 58-percent rise. An additional rise of 50 percent will be required in the next year, exclusive of subcontracting.

During the past year average weekly hours have advanced 12 percent, from 42.3 hours to 47.4. This is the highest weekly average for any manufacturing industry.

The industry is generally operating on a two-shift basis because of the shortage of labor and supervisory personnel. Each of the two shifts tends to be 9 hours for 5½ to 6 days. This method of operation raises labor costs due to premium pay, but reduces the immediate need for supervisory personnel and simplifies the recruitment of workers.

ODM DIRECTIVE

In order that a far-reaching program might be implemented throughout the Nation, the Director of Defense Mobilization issued the following directive on August 2, 1951, calling for a manpower program for the machine-tool industry.

EXECUTIVE OFFICE OF THE PRESIDENT—OFFICE OF DEFENSE MOBILIZATION

Subject: Manpower program for the machine-tool industry

Objective of the policy

Metalworking tool production must be increased. This requires adequate manpower with the right skills at the right places at the right time. The purpose of this policy statement is to achieve that objective.

Implementation of the policy

By virtue of the authority vested in me by Executive Order 10193 and to carry out the policy set forth above, it is hereby ordered:

1. The Department of Labor's Defense Manpower Administration shall consult with the representatives of labor and management in the machine-tool industry relating to the manpower problems of that industry and shall in consultation with the appropriate regional and area labor-management committees:

(*a*) Determine what additional measures can be taken to meet the industry's manpower requirements by further job breakdown, up-grading of trained men, job standardization, on-the-job training, and programs to reduce absenteeism and turn-over.

(*b*) Conduct intensive recruitment programs, both intra-area and inter-area, to meet the manpower requirements of the industry.

(*c*) Determine training requirements of the industry in the skills needed by the industry in each area and certify the need for such training to appropriate Government agencies.

(*d*) Take action to identify and solve community problems affecting manpower supply for the industry. Attention will be given to such matters as housing, transportation, and voluntary transfer of workers from activities not related to defense, defense supporting, or the national health, safety, and interest.

2. Regional defense mobilization committees shall bring the facilities of all appropriate Government agencies to bear on the solution of manpower problems of the machine-tool industry.

3. The Department of Labor's Defense Manpower Administration, the Selective Service System, and the Department of Defense shall develop policies applicable to the induction and deferment of apprentices which can be applied to the machine-tool industry.

4. The Selective Service System shall alert its local draft boards to the urgent manpower requirements of the machine-tool industry in order that induction of skilled machine operators for whom replacements are not available may be minimized.

5. The Federal Security Agency shall develop, and, through appropriate channels, conduct training to meet the requirements certified by the Department of Labor's Defense Manpower Administration to meet the manpower requirements of the machine-tool industry.

6. The Wage Stabilization Board shall, within the limits of its authority, give immediate consideration of the question whether wage adjustments are necessary to meet the manpower requirements of the machine-tool industry.

7. The Department of Defense shall within existing policy give special consideration to the skilled manpower needs of the machine-tool industry in calling up for active duty members of the civilian Reserve components.

8. This statement shall take effect on August 2, 1951.

OFFICE OF DEFENSE MOBILIZATION,
CHARLES E. WILSON, *Director*.

The United States Department of Labor's Defense Manpower Administration implemented this directive by holding a 2-day conference with management and labor representatives in Washington, D. C., on August 1 and 2 to explain thoroughly the major manpower phases of the machine-tool industry to determine what measures should be undertaken.

The next step taken by the Department of Labor was to issue a complete plan of operation for all the State employment security agencies to pursue in an attempt to break this bottleneck.

These two courses of direct action are outlined in the following excerpts from the letter of August 24, 1951, by Mr. Robert C. Goodwin, Director, Department of Labor's Defense Manpower Administration:

UNITED STATES DEPARTMENT OF LABOR

BUREAU OF EMPLOYMENT SECURITY

WASHINGTON 25, D. C.

EMPLOYMENT SERVICE PROGRAM LETTER NO. 331, AUGUST 24, 1951

To: All State employment security agencies.
Subject: Manpower program for the machine-tool industry.

The Director of the Office of Defense Mobilization has stated that machine-tool production is the No. 1 bottleneck in the Nation's defense production program and that metalworking tool production must be increased.

Recognizing the manpower problems confronting the machine-tool industry, the Department of Labor's Defense Manpower Administration held conferences with management and labor representatives in Washington, D. C., on August 1 and 2, respectively. Secretary of Labor Maurice J. Tobin stated that the purpose of these conferences was to explore thoroughly the major manpower phases of the machine-tool bottleneck and to determine, in consultation with labor and management of the industry, what manpower measure must be undertaken to meet increased defense production goals.

As a result of these conferences, the Defense Manpower Administration is preparing an action program designed to meet the increased manpower needs of the machine-tool industry. This program is being developed and will be carried out in full consultation with labor and management of the industry and in collaboration with all Federal and State agencies which can assist in solving manpower and related problems of machine-tool plants which are producing items for required defense and essential activities.

This program was developed by the Department of Labor in consultation with other government agencies. It was approved by the ODM Manpower Policy Committee and by the National Labor-Management Committee, and released by the Office of Defense Mobilization as Defense Manpower Policy Statement No. 2, dated August 2, 1951. This policy will serve as a guide to the bureaus of the Department of Labor which have responsibility for certain parts of this program.

All State agencies are requested to emphasize the importance of this program to all local offices so that they will give special attention to manpower problems of this industry, thereby making available every possible assistance in carrying out this program. Local offices should take at least the following steps:

1. *Identifying manpower problems.*—Contracts should be made with each of the machine-tool plants located within their respective areas at the earliest possible date to determine specific manpower problems and requirements.

2. *Recruitment.*—Intensive recruitment programs, both intra-area and inter-area, should be developed to meet specific manpower requirements of machine-tool plants.

3. *Testing programs.*—Immediate attention should be given to the utilization of all applicable USES tests and the development of norms for additional occupations, where needed, for the selection and allocation of workers and trainees for machine-tool plants.

4. *Manpower use and productivity.*—The tight labor market facing the industry today emphasizes the need for more effective use of manpower. Management should make every effort to assure that all employees are fully engaged in jobs which make maximum utilization of their skills, knowledges, and abilities.

5. *Training programs.*—Whenever local offices detect any particular training needs in their contacts with machine-tool plants, immediate arrangements should be made with the appropriate training agencies for the provision of the specific training assistance required.

Testing and counseling should be used to channel the most suitable applicants into the training programs, particularly those for learners and apprentices in the skilled trades.

Area labor-management committees should be established in areas in which area labor market conditions warrant. These committees should collaborate with the State employment security agencies to identify and solve community problems affecting the manpower supply for the machine-tool industry. Attention will be given to such matters as housing, transportation, and voluntary transfer of workers from activities which are not defense-connected and which are not included in the "List of Essential Activities." A subcommittee representing the machine-tool industry should be set up by each area labor-management committee, where necessary. The committee should be invited to consider particularly ways and means of acquainting the public with the importance of this industry's production in the defense mobilization program.

The subject "Manpower Program for the Machine-Tool Industry" should be included on the agenda for the next meetings of area labor-management committees.

It is requested that the State agencies advise the Bureau as to the steps taken and progress made by each local office concerned in developing and carrying out a comprehensive action program designed to meet the increased manpower needs of the machine-tool industry. The first letter should be sent so as to reach the regional office by September 12, 1951, and additional letters should be sent at such frequency as may be warranted by significant developments in this connection in the areas concerned.

Sincerely yours,

ROBERT C. GOODWIN, *Director.*

As a result of the reports collected by the local offices of State employment security agencies, the United States Department of Labor's Defense Manpower Administration has cooperated by furnishing your committee with the pertinent data relating to the current situation in the highly concentrated machine-tool areas.

REQUIREMENTS SURVEY

Despite indications of widespread stringencies of certain skilled and semiskilled occupations, particularly of milling machine operators, engine lathe operators, tool and die makers, floor molders, coremakers,

and machine assemblers, machinery employment increased by almost a third between September 1950 and September 1951. Reports collected for the month of September from 376 metalworking machinery establishments including machine-tool accessories, indicate that employment increased roughly 2 percent since July 1951 and 30 percent since September 1950. In the machine-tool industry the increase was 33 percent. In metalworking machinery industry the rise was much less—roughly 18 percent.

The machine-tool industry estimates its additional requirements as 5,800 by January plus another 100 by March. Employers in the metalworking machinery industry anticipate an employment expansion of 1,200 by January and an additional 400 by March.

The following table shows the labor market areas in which the majority of the additional machine-tool workers are required. Of the 16 areas shown, 11 are classified as areas of balanced supply, and 1 as labor shortage. Three areas are classified as having moderate labor surplus and one as having substantial labor surplus.

Machine-tool industry only

	Employment		Additional workers required by January
	September 1950	September 1951	
GROUP I—AREAS OF LABOR SHORTAGE			
Hartford, Conn	3,308	5,123	330
GROUP II—AREAS OF BALANCED SUPPLY			
Bridgeport, Conn	2,619	4,048	307
New Britain-Bristol, Conn	1,780	1,845	65
Chicago, Ill	769	1,040	90
Rockford, Ill	4,820	5,690	295
Indiana [1]	442	546	79
Baltimore, Md	130	185	115
Cincinnati, Ohio	7,307	9,808	827
Cleveland, Ohio	7,521	10,070	1,070
Springfield, Ohio	352	527	183
Madison, Wis	1,331	1,674	126
GROUP III—AREAS OF MODERATE LABOR SURPLUS			
Boston, Mass	839	1,073	104
Springfield-Mount Holyoke, Mass	1,001	1,522	298
Worcester, Mass	2,172	3,870	699
Detroit, Mich	5,729	6,966	888
GROUP IV—AREAS OF SUBSTANTIAL LABOR SURPLUS			
Providence, R. I	874	1,472	91
Grand total	40,994	55,459	5,567

[1] Grouped to avoid identity.

RECRUITING PROGRAM

Scarcity of skilled and semiskilled metalworking machinery workers was widespread during September. Major needs were for milling-machine operators, coremakers, engine-lathe operators, tool-and-die makers, floor molders, and machine assemblers.

In an effort to obtain the needed skilled and semiskilled workers, employers have resorted to every known recruitment channel, including the use of public employment office local and clearance facilities,

radio and newspaper advertising, and appeals to former employees. There is little reason to believe, however, that these methods will be too successful in view of the national shortages in the occupational skills needed and the lengthy training period required for such skills, from 2 to 3 years for top skills. There was, therefore, special emphasis upon such measures as the relaxation of physical and age specifications, the employment of additional numbers of women and nonwhites, in-plant transfers, job dilution, and on-the-job training.

Because of reports that production schedules have been impeded because of manpower shortage, the Bureau requested its regional offices to obtain detailed information from machine-tool establishments in November. A summary of this information will be issued as a separate report early in January 1952.

Labor turn-over

Quits comprised by far the majority of all separations in reporting metalworking plants during September.

Accession and separation rates, September 1951

Type of establishment	Total separation	Quit	Lay-off	Total accession
Machine tool	3.9	3.2	0.01	4.6
Metalworking (other than machine tool)	3.4	2.3	.7	3.5
All durable goods (BLS data)	5.1	3.2	1.1	4.5

Wages and hours

The overwhelming majority of firms within the metalworking machinery industry offered men entry wages of $1 to $1.25 per hour during September, with only a small proportion of all entry wages less than $1. Entry rates for women were somewhat lower with a concentration in the bracket of $0.90 to $1.17. However, a substantial number of firms offered women the same entry wages as men. Average weekly earnings (BLS data) within the metalworking machinery industry of $87.80 in September represented a substantial increase over the September 1950 average of $73.42. Average weekly earnings for all durable goods during September of this year were $70.84, as against $65.14 for September 1950.

Only a negligible number of metalworking machinery plants were on a scheduled workweek of less than 40 hours during September. Roughly 37 percent were scheduling 40 to 48 hours and nearly half were working more than 48 hours per week. According to BLS data, average weekly hours in the industry had increased from 43.7 in September 1950 to 46.8 in September 1951. Metalworking machinery establishments were generally on a two-shift basis during the month of September.

Analysis by areas and cities

As a result of the local contact program whereby the local employment office calls on each machine-tool plant in the area, the Department of Labor has reports on over 400 metalworking companies of all classes. From these reports the Department of Labor compiles statistical data showing the companies, number and types of open jobs, the local manpower situation and the extent of defense production in each plant. This information is made available to all

interested officials and field offices for administrative purposes in helping to further resolve this manpower bottleneck.

Manpower losses to Armed Forces

From an analysis made among more than 200 machine-tool companies earlier this year, it was found that manpower losses to the Armed Forces up to that time had totaled about 12 percent of total employment in the industry.

In view of the extreme shortage of skilled operators, the Chairman of the Manpower Policy Committee in ODM has been working closely with the Defense Department and the Selective Service System on this problem. We are advised that both the Defense Department and the Selective Service System have issued instructions that when calling up reservists or when local draft boards are selecting draftees, special consideration should be given to supervisors, skilled operators, and apprentices in the industry. Your committee feels that this is a very necessary policy in view of the critical circumstances.

Your committee also wants to compliment the Chairman of the Manpower Policy Committee in the Office of Defense Mobilization, officials in the Department of Labor, Defense Manpower Administration, the Directors, State employment security agencies, and others who have assisted in developing and implementing this special manpower program.

Your committee has been assured that every effort is being directed on all fronts to meet the manpower requirements of the machine tool industry and that there is good evidence that a good job is being done.

PART III

General Services Administration Functions

The role of the General Services Administration in the machine-tool program is purely administrative.

The responsibility for promoting, developing, coordinating, and carrying out the machine-tool program, rests with the National Production Authority, except to the extent that General Services Administration performs certain administrative functions under an agreement with NPA.

This part of the report has been prepared in three parts and deals with the historical background of the program and its present status with respect to—

A. Machine-tool pool contracts.
B. Leasing Government-owned machine tools.
C. Financial assistance available to the machine-tool industry.
D. Financing the machine-tool program.

Discussions that led to GSA's present role in the program were started early in January 1951. By letter of February 28, 1951, from the Administrator of the National Production Authority, countersigned, March 2, 1951, by the Administrator of General Services, the working relationships between NPA and GSA were formalized.

Department of Commerce,
National Production Authority,
Office of Administrator,
Washington 25, February 28, 1951.

Re: Metalworking-machine pool orders

Mr. Jess Larson,
Administrator, General Services Administration,
Washington 25, D. C.

Dear Mr. Larson: We write to confirm our conversations with you concerning the above matter.

1. We have issued two orders relating to machine tools. Such orders were issued in the form of exhibits A and B hereto annexed.

2. From time to time we will transmit to you, in accordance with exhibit A, recommendations for pool orders for metalworking machines. Such recommendations will be in the form of exhibit C hereto annexed. We understand that you will place firm orders with the various producers of metal-working machines in accordance with such recommendations, and in substantially the form of exhibit D hereto annexed.

3. Each of the above-mentioned recommendations will be accompanied by a certificate in the form of certificate hereto annexed as exhibit E. This certificate will be issued to authorize the use of DO ratings in connection with said pool orders. The digits to be used with said ratings will be 98.

4. Each of the recommendations from time to time transmitted to you as aforesaid, will contain a statement of the total estimated dollar amount of orders. We understand that you undertake, upon receipt of recommendations from us, to enter into firm pool orders up to a total dollar amount of $350,000,000.

5. Except to the extent that production and delivery of machine tools is controlled by exhibits A and B hereto, responsibility for administration of the machine-tool pool contract (the firm order) is that of the General Services Administration.

If this letter, together with the attached exhibits, sets forth the understanding and working arrangement between us, will you kindly so indicate by signing the acceptance at the foot of the carbon copy hereof.

Sincerely yours,

MANLY FLEISCHMANN, *Administrator.*

The foregoing letter correctly sets forth the understanding and working arrangement between National Production Authority and us.

JESS LARSON,
Administrator, General Services Administration.

MARCH 2, 1951.

POOL ORDER CONTRACTS

In the beginning the machine-tool program was implemented largely through the placing of contracts with producers of machine tools which, in effect, underwrote the production of machine tools, thus encouraging expansion of the industry. These contracts are known as machine-tool pool contracts. The program is similar to one carried on for the same purpose by Defense Plants Corporation during World War II.

In designing a pool contract for the current program, GSA availed itself of the experience of DPC as well as subsequent planning of a standby nature done by the National Security Resources Board under the National Security Act of 1947. Machine tool pool contracts originally tendered to machine-tool producers by GSA were patterned after the so-called phantom order designed by the National Security Resources Board as a part of their standby planning. Its use required modification to fit it into then current contracting authority vested in GSA. Also, the first standard form of machine-tool pool contract used was drafted in the light of comments and recommendations made by the industry itself.

Under the terms of the machine-tool pool contract, any machine tool not ordered by a user at time of completion can be delivered to GSA for storage at 82½ percent of the producer's list price representing the producer's manufacturing cost. Thereafter, the stored tools may be sold by the producer and delivered to others from storage, whereupon the producer refunds the 82½ percent payment received from GSA. The pool contract also vests in GSA the right to remove tools from storage and install them in Government-owned plants or in privately-owned plants under a lease arrangement between GSA and the owner of the private plant. In the event of such removal from storage by GSA, the producer receives an additional payment of 7½ percent of the list price, thus bringing the total GSA payment for tools so installed to 90 percent of the list price. In the event of termination, the contract obligates GSA to pay to the producer all manufacturing costs attributable to machine tools not covered by a firm order at date of termination.

The original pool contracts were executed under a combination of authority contained in the Federal Property and Administrative Services Act of 1949 (63 Stat. 377), the Defense Production Act of 1950, Public Law 774, 81st Congress, approved September 8, 1950, and Executive Orders 10161 and 10200 issued under the latter statute. It was felt that the Defense Production Act alone did not constitute adequate authority to negotiate the contracts. Therefore, it was necessary for the Administrator of General Services to make the findings and determinations required by section 302 (c) (1) of the Federal

Property and Administrative Services Act of 1949, above, in order to negotiate the machine-tool pool contracts.

Pursuant to the working arrangement with the NPA and in accordance with certificate of necessity dated January 19, 1951 (see below), from the NPA Administrator (in whom such certifying authority was then vested by the provisions of Executive Order 10161 since Executive Order 10200 had not yet issued). Machine-tool pool contracts are entered into by GSA. NPA makes the recommendations as to the delivery requirements, prices, size, type, and quantity of items to be ordered from each producer.

DEPARTMENT OF COMMERCE,
NATIONAL PRODUCTION AUTHORITY,
Washington 25, January 19, 1951.

Hon. JESS LARSON
Administrator, General Services Administration, Washington 25, D. C.

DEAR MR. LARSON: The estimated near-future requirements for machine tools for defense production indicate that the current production rate of the machine-tool industry should be approximately doubled within the next 12 months. To accomplish this, I propose three major actions: First, pool orders to be placed by the Government with machine-tool producers; second, the National Production Authority will provide assistance to such producers in obtaining materials and components for the pool orders and other rated orders; and third, the machines produced on this schedule will be allocated if necessary, to military contractors and to direct Government procurement.

In order that a supply of machine tools will be available, when needed for defense production, I deem it necessary for the Government to underwrite an increased production of this type of equipment. The chairman, Mr. John D. Small, informs me that the Munitions Board is not in a position to place pool orders with machine-tool producers. I, therefore, recommend that your Administration execute appropriate contracts with qualified producers for the production of machine tools, cutting tools and gages, such contracts not to exceed a total value of $440,000,000, of which $90,000,000 will represent cutting tools and gages. The National Production Authority will supply you with recommendations on the size, type, and quantity of items to be ordered from each producer.

Messrs. McCoy, Smith, and Houser of my staff have conferred with you on this proposal. They and others of my staff are available for consultation with your staff to work out details and mutually satisfactory arrangements for carrying out this program.

I shall be happy to discuss any phase of this matter with you personally.

Sincerely,

W. H. HARRISON, *Administrator.*

During the period March 22, 1951, until August 20, 1951, 48 contracts for machine tools, valued at $167,385,728, had been tendered to producers. Of the 48 contracts tendered, 18 contracts, covering 4,357 machine tools valued at $49,584,847, were accepted by the producers.

Several factors were developed during the above period which made producers reluctant to accept the tendered contracts. Remedial measures were adopted and all producers who had not accepted contracts by August 20, 1951, were requested to return the unaccepted contracts.

Some of these factors were: (*a*) dissatisfaction on the part of the industry with the type of Government financial assistance available; (*b*) disagreement on the part of the industry with certain of the basic provisions of the machine-tool pool contract; and (*c*) the need on the part of the industry for Government assistance above and beyond the underwriting pool contract. However, it soon became apparent that the real retarding factor was the ceiling price situation with respect to machine tools as it then existed under the General Ceiling Price Regulation dated January 26, 1951, Ceiling Price Regulation 30, dated May 4, 1951, and supplements and revisions to these two regulations.

Wilson directive

Under date of July 9, 1951, the Director of Defense Mobilization issued a directive in which he set forth certain measures determined to be necessary to increase production of machine tools. Among such measures were modification of the ceiling price regulation by the OPS and the making of advance payments by GSA not exceeding 30 percent on machine-tool pool contracts.

Other measures set forth in the directive with respect to which GSA has a responsibility, involving principally facilities assistance to machine-tool producers, will be treated upon later in this report.

GSA, again in cooperation with the NPA and with the advice of the machine-tool industry, revised its form of machine-tool-pool contract. The new contracts were tendered to machine-tool producers beginning August 28, 1951. (See appendix, p. 100.) Among the principal changes in the contract designed to stimulate production of machine tools were: (a) A provision precluding set-off against moneys due under the contract in the event of assignment, as authorized by Public Law 30, Eighty-second Congress, approved May 15, 1951, amending the Assignment of Claims Act of 1940; (b) a provision for advancing funds for working capital not exceeding 30 percent of the contract price at 4 percent interest per annum; (c) a provision extending the coverage of the pool contract until date of delivery of tools to a user as distinguished from the date of a receipt of a firm order as was the case in the original pool contract; and (d) a revision of the termination provisions of the contract designed to give the producer better protection in the event of termination.

It is significant to note that while the machine-tool industry previously had pointed to the nonavailability of advance payments as one of the principal retarding factors in the program, statistics furnished later in this report reflect that only a relatively small percentage of the total production contracted for to date has been made the subject of an application for such advance payments.

As a further measure designed to stimulate expansion of machine-tool production, GSA in cooperation with the NPA and the Board of Governors of the Federal Reserve System worked out simplified arrangements for guaranteeing loans under regulation V. These arrangements will be treated upon in more detail later in this report.

Status of contracts

As of December 31 a total of 127 machine-tool-pool contracts has been tendered to machine-tool producers covering 74,295 machine tools valued at $1,165 million. Of the total contracts tendered, 79 covering 55,496 machine tools valued at $855 million have been accepted by the producers; 16 contracts covering 3,726 machine tools valued at $64 million have been rejected by the producer, and 32 contracts covering 15,072 machine tools valued at $246 million, are pending acceptance by the producers. With respect to the pending 32 contracts, many are the subject of current negotiations with the producers for revision of the coverage of the contract or for modification of particular provisions of the contract to fit more adequately the needs of a particular contractor. There is every reason to believe that agreement will be reached and the tendered contracts accepted by the producers in the near future. The 16 contracts which have been rejected by the pro-

ducers either are or have been the subject of discussion between GSA and the NPA and will be made the subject of individual discussions in the near future with the individual producers with a view toward coming to agreements enabling acceptance of the contracts by the producers.

All recommendations for the execution of contracts received by GSA have been made the subject of contracts tendered to the producers.

Contractors who have accepted machine-tool-pool contracts are required to submit to GSA one monthly report (GSA Form No. 616) summarizing their performance during the month under the contract. The report is used administratively by GSA and NPA to follow the progress of the contract from the standpoint of machines produced and their disposition.

Contract revisions

Negotiations to date with the various producers have resulted in numerous modifications and supplements to the standard form contract in order to arrive at agreement and acceptance of the contract by the producer. Some such modifications and supplements have been necessitated by circumstances unique to a particular producer. Others have been necessitated to afford the producers more equitable price escalation and progress payment of termination claims.

A further revision of the standard form of pool contract currently is in progress to incorporate the provisions developed as stated above and to effect certain other minor revisions for greater clarification of the rights and liabilities of the parties. Again, as in the case of the original contract and the first revision, this current revision is being made in cooperation with the NPA and with the advice of the industry. In addition, informal liaison has been established with the departments of the Department of Defense for the purpose of assuring uniformity of any contract provisions which are common to the GSA pool contract and the Department of Defense direct procurement contract. The common provisions relate, principally, to (*a*) price escalation; (*b*) advance payments; and (*c*) termination.

There are only two major areas with respect to the machine-tool-pool contract in which some disagreement still exists between GSA and the industry. First, the matter of profit on termination in which GSA thus far has declined to agree to pay profit on uncompleted work in the event of termination, their theory being that the contract is an underwriting contract which guarantees the producer against loss and consequently there exists no justification for also guaranteeing the producer a profit on production which, in the final analysis, will not be required for national defense purposes.

The contractors, on the other hand, contend that they should receive the same profit in the event of termination of the pool contract as is provided for under the direct purchase contracts entered into by the Department of Defense. This question is under current discussion between GSA and NPA.

Your committee feels that the contractor has a right to expect the same consideration with respect to profit protection in similar types of items from one agency of the Government as from another.

The second area where disagreement exists between the GSA and the industry relates to the matter of interest on advance payments. Because of the nature of the contractual relation with the industry, GSA feels that there is no justification for making working capital advances on an interest-free basis. In fact, GSA feels that they have no alternative in view of the intent of Congress as expressed in the Defense Production Act of 1950, as amended, section 302, which reads in part as follows:

> Such loans may be made without regard to the limitations of existing law and on such terms and conditions as the President deems necessary, except that financial assistance may be extended only to the extent that it is not otherwise available on reasonable terms.

It is GSA's position that since the powers conferred by the act to promote the national defense are required to be used within the framework, as far as possible, of the American system of private enterprise, that GSA is not authorized to extend financial assistance on better terms than are available from private sources.

While it is true that no interest was charged on the 30-percent cash advance with machine-tool-pool orders placed in World War II and therefore, that industry is opposed to an interest charge made on advances under the current program, it should be noted that the aforementioned congressional mandate was not a part of the statutory authorization under which the World War II program was conducted.

It should be noted that by virtue of the Defense Production Act amendments in 1951, Public Law 96, Eighty-second Congress, approved July 31, 1951 (see sec. 103 (a) amending sec. 303 (a) of the Defense Production Act of 1950) the machine tool pool contract is now executed entirely under authority of the Defense Production Act of 1950, as amended.

LEASING GOVERNMENT-OWNED TOOLS

In accordance with the directive of the Director of Defense Mobilization of July 9, 1951 (referred to previously in this report), and in cooperation with the NPA, GSA enters into lease with machine-tool producers upon the recommendation of NPA.

The manner in which GSA carries on this procedure and the details relating to the contracts tendered through December 31, have been described at length under "Leasing to Machine Tool Builders." on page 52.

For the purpose of this phase of the report we are repeating here the total dollars for which the Government is committed as a result of these transactions.

As of December 31, 43 recommendations for installation of Government-owned tools in privately owned plants have been received by General Services Administration from the National Production Authority covering equipment valued at $22 million. Of the total recommendations received, 37 covering 1,163 tools valued at $19 million have been made the subject of letter agreements tendered to producers, of which 32 covering 1,117 tools valued at $17 million have been accepted by the producers and the balance are pending. Letters of intent on the remaining 5 cases, covering 46 machine tools, valued at $2 million, currently are in the process of preparation of negotiation with the particular producers.

FINANCIAL AIDS AVAILABLE FROM GOVERNMENT

The original standard form of machine-tool pool contract did not make provision for direct Government financing of the pool contract through 30 percent cash advance to the producer as was the case in World War II but GSA was prepared to guarantee loans under the V-loan program (regulation V, as revised effective September 27, 1950, of the Board of Governors of the Federal Reserve System), if such financing was necessary.

From the inception of the program until October 1951, no formal requests for V-loan financing were received. The original provisions were not satisfactory to industry.

30 percent cash advance

Because Government-guaranteed borrowing often is not a satisfactory method of financing production, a simplified procedure was established on August 24, 1951, to provide for cash advances to manufacturers who hold Government machine-tool pool orders up to 30 percent of the amount of the order. The manufacturer repays the advances as tools are sold. Interest is charged at the rate of 4 percent per annum on the unpaid balance.

Where the Government makes a 30 percent advance on a pool contract, there is no requirement that the proceeds of a specific contract be assigned to the Government as a security for repayment. The obligation is represented by a note, secured by a lien on production materials, and repayment is accomplished as tools are sold.

Since offering the 30 percent advances for working-capital purposes under certain terms and conditions, 17 applications for advances have been filed as against a total of 79 pool contracts signed as of December 31, 1951. In addition, six contractors have requested V-loans in lieu of an advance. Of these 23 applications, 16 have been approved for advances and 3 for V-loans, the other 4 are awaiting completion of negotiations on contract terms. When the information submitted by the contractor is complete, a disbursement of the advance requested is usually made within a week. To date, no application for advances or guaranteed loans has been rejected.

The 17 advances requested total $42 million, and the 16 approved aggregate $32 million. The three approved V-loans in the amount of $11 million are in the nature of a revolving fund credit designed to provide working capital. The three pending V-loans total $8.5 million.

Although there have been discussions with several manufacturers, no formal applications for plant expansion V-loans have been received by the Administration, and we are advised that a few applications are in the process of development.

RFC loans

If a manufacturer desires to expand his facilities and does not have adequate capital of his own, or cannot obtain a V-loan for such purpose, a loan application can be filed with the Reconstruction Finance Corporation under section 302 of the Defense Production Act. The RFC processes these in its customary manner, but relies on other

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agencies of the Government to determine and to certify the essentiality of the loans for plant expansion. With respect to the machine-tool pool program the responsibility for making the certifications has been delegated to the Defense Materials Procurement Agency by the Defense Production Administration. Two applications for facilities loans to machine-tool manufacturers were recently received and decision in both cases will be forthcoming shortly.

V loans

After consultation with representatives of the Metalworking Equipment Division and the Board of Governors of the Federal Reserve System, the GSA announced on September 26, 1951, that it would make funds available for plant expansion, in addition to working capital requirements, through the V-loan program.

Such loans are available to machine-tool manufacturers, their subcontractors and suppliers. Those manufacturers whose production is substantially earmarked, either directly or indirectly, for national defense are considered eligible for V-loans to finance their current operation. Inasmuch as substantially all tool production is now or shortly will be for defense contractors, defense-supporting industries, or foreign governments under mutual assistance programs, the borrowing formula will not limit borrowing on the basis of defense contracts only. Present civilian orders may be included. Besides the manufacturer need not have a direct pool contract with the Government in order to qualify for such a loan as long as NPA approves.

A manufacturer in borrowing from his bank, whether or not the bank credit is guaranteed by the Government, must give effect to advances which he has received against production contracts. The lending agreement is normally based upon a borrowing formula which allows a manufacturer to draw a certain percentage against accounts receivable, inventory, work in process, etc. In requesting the bank to make a disbursement against a credit agreement, the borrower must give effect to advances outstanding. In other words, his bank credit is limited to the extent that he has already received payment through advances from either the Government or his private customers.

The broadened "no set-off" clause in contracts, pursuant to the amended Assignment of Claims Act of 1940 (Public Law 30, 82d Cong.), facilitates the use of defense contracts as a base for bank borrowings. The Government in making payment to the assignee is prohibited from setting off amounts which may be due the Government on account of any liability of the contractor-assignor to the United States which arises independently of the contract. In addition, the Government may not "set off" certain liabilities which arise after the assignment by reason of renegotiation fines, penalties, taxes, social-security contributions, etc., whether arising from or independently of assigned contracts.

FINANCING THE MACHINE-TOOL PROGRAM

On January 19, 1951, NPA certified to GSA the essentiality of the machine-tool program, and authorized for this purpose borrowing from the United States Treasury under section 304 (b) of the Defense Production Act of 1950 in the amount of $440 million. Under the 1950 act prior to its amendment, the Bureau of the Budget established

a policy requiring the maximum possible liability of the Government to be covered by borrowing authority, although the contingency that the gross amount of orders placed would require the use of a like amount of funds was obviously remote.

Assuming the worst possible condition that no market would exist for any machines produced under the pool orders, the Government would be obligated under the terms of the contract to accept the machines at 82½ percent of the full price. Adding to that one-half percent to cover incidental expenses, or a total of 83 percent, it became possible to place pool orders having a gross value of $530 million, being the amount certified divided by 83 percent.

Subsequent amendments to the original certification were issued by DPA on March 9, 1951, reducing the borrowing authority to $100 million; on June 20, 1951, increasing it to $140 million; and on July 23, 1951, again increasing it to $340 million, all within the policy of maximum funding established under the 1950 act. The 1951 amendment to the Defense Production Act overturned the maximum funding policy and section 304 (b) provided for the authorization of borrowing authority on the basis of probable ultimate net cost to the Government.

Pursuant to the amendment, on August 30, 1951, DPA issued to GSA a revised certificate providing for $180 million of borrowing authority to cover $1.2 billion of orders during the fiscal year 1952. It was estimated that not more than $600 million of orders would be outstanding at any one time, the borrowing authority to be 30 percent of this amount to cover cash advances. The probable ultimate net cost was estimated to be absorbed within the 30 percent.

This certificate was amended on October 10, 1951, providing for $260 million of borrowing authority. This amount is estimated to permit the placing of $2 billion of pool orders and the installation of facilities in contractors' plants up to $50 million in value. Working capital requirements total $206 million for pool order advances and $15 million for installation of facilities, while the probable ultimate net cost is presumed to be $39 million. The working capital together with the probable ultimate net cost is the borrowing authority, or $260 million. The same certification includes $125 million in additional borrowing authority, reserved for use by Reconstruction Finance Corporation for loans under section 302 of the act.

The probable ultimate net cost of $39 million is based on World War II experience when the total unsold machine tools amounted to 1.6 percent of the total contracts made. Rounding this figure up to 2 percent to cover possible credit losses would mean a $4 million net cost figure. The probable ultimate net cost for the $50 million program for installation of facilities in contractors' plants is set at $35 million or 70 percent on the basis that 30 percent is recoverable on sale of the items. Thus, the total probable ultimate net cost is estimated at $39 million.

Monthly report, GSA Form No. 616, in addition to serving the purpose set forth on page 73 of this report, also serves a financial interest in that the contingent liability of the Government is reduced by the value of machines produced and marketed by reason of the contract provision for their elimination from the pool order.

The following letter addressed to Mr. Jess Larson, Administrator, Defense Materials Procurement Agency, from Mr. Byron D. Woodside, Acting Deputy Administrator, Office of Resources Expansion, summarizes the latest DPA certificate.

DEFENSE PRODUCTION ADMINISTRATION,
OFFICE OF ADMINISTRATOR,
Washington 25, October 10, 1951.

Hon. JESS LARSON,
Administrator, Defense Materials Procurment Agency,
Washington 25, D. C.

DEAR MR. LARSON: Reference is made to the program for the expansion of machine tools covered by certificate number CS–55–21–DPA–60 which was documented on September 27, 1951, by your office to reflect borrowing authority requirements under the revised provisions of section 304 of the Defense Production Act, as amended.

The program submitted by you provides for a major expansion in scope, performance, and financing as compared to the program previously certified. Specifically, the pool order phase of the program is increased from $1,200,000,000 in gross orders by June 30, 1952, to $2,000,000,000 and a facilities expansion phase has been added which contemplates installations of equipment in industrial facilities estimated at $50,000,0000, and direct loans estimated at $125,000,000.

Pursuant to the provisions of Executive Order No. 10281, I certify that the program of expansion referred to above and restated in the attachment to your letter of September 27, 1951, is essential to national defense.

The borrowing authority requirements are as follows:

1. Gross transactions:		
Pool orders	$2,000,000,000	
Equipment installations	50,000,000	
Direct loans	125,000,000	
Total		$2,175,000,000
2. Estimated net cost:		
Pool orders	$4,000,000	
Equipment installations	35,000,000	
Total		39,000,000
3. Working capital:		
Pool orders	$210,000,000	
Equipment installations	50,000,000	
Subtotal	260,000,000	
Offset by estimated net cost	39,000,000	
Subtotal	221,000,000	
Direct loans	125,000,000	
Total		346,000,000
4. Total borrowing authority requirements		385,000,000
Less reserve for direct loans RFC		125,000,000
Net authorization for DMPA		260,000,000

Accordingly, the borrowing authority requirements to finance this program are hereby adjusted from $180,000,000 previously authorized to $260,000,000. Henceforth, this program shall be identified by the number of this certificate.

Sincerely,

BYRON D. WOODSIDE,
Acting Deputy Administrator, Office of Resources Expansion.

PART IV

Summary and Conclusions

In summarizing some of the problems facing the machine-tool industry in the months immediately ahead, your committee wishes to call the attention of the Congress to the fundamental principles originally established as the basis of our defense mobilization program. These principles have been discussed frequently by your committee and by Congress and have been agreed upon by our ranking military, Government, and civilian authorities as the course America should pursue in the best interest of the Nation.

The Director of Defense Mobilization reemphasized these fundamentals again in his recent address before the National Press Club of Washington on December 13, 1951. We quote him, in part, as follows:

> The first principle was that we would produce the weapons and equipment needed for ourselves and our allies in about 3 years. It was then estimated that this program would cost about $150 billions. We deliberately chose this plan in preference to an almost vertical ascent in about a year or a year and a half. Why? Because of the tremendous designing necessary before going into all-out production almost on the scale of all-out war; and because of the shattering effects this would have had on our economy.
>
> The second principle was that our program would embrace not only the production of planes and tanks and guns. In addition, it would include the installation of additional military production capacity so that we could swing into all-out production in the event of all-out war—which God forbid.
>
> The third principle was that the program would include the expansion of our production of the basic metals like steel and aluminum, of electric power, of petroleum, of transportation, of agriculture, and the like. This expansion was based on a forward look, to enable America to meet the demands of fuller mobilization or to provide, as we hope, for a more abundant economy in the period beyond our mobilization build-up.
>
> The fourth principle, closely associated with all the others, was that we would do our utmost to maintain as strong a civilian economy as the reasonable accomplishment of our other objectives would permit.

Mr. Wilson also added:

> One year has now passed, and this program has come under attack from two sides, 180 degrees apart. One side says we are going too slow, that we should have all-out mobilization—that we should go pell-mell for the production of mountains of planes and tanks and guns—and to heck with the civilian economy, with additional production lines, with expanded basic production, with concern for new designs. The other side says we are going too fast and should cut down the program or stretch it out.
>
> I say to you today that I have given this program long and careful thought: I have discussed it recently with the President and with the Defense Mobilization Board, which includes six Cabinet officers and the heads of the defense agencies; and we have come to the unanimous conclusion that the program is sound and must be continued. We shall neither be stampeded into hasty action nor lulled by complacency into soft action.

Obviously these determinations reflect the fact that ours is a partial defense-mobilization program—not an all-out war program. If it were, the ground rules would be vastly different.

Your committee does not question the basic policies on which our defense program has been projected. Instead, your committee fully endorses the program as sound and practical for our national economy

It is important, however, that these issues be kept fully in mind in any consideration of the machine-tool situation because of their direct bearing upon the type of program necessary to overcome this serious bottleneck at the earliest possible date.

There is one other observation which your committee wants to make. Even if civilian production had been cut back far more severely and, even if larger quantities of critical materials had been made available, many of the special machine tools required for such top priority programs as the guided missiles, jet engines, and new type of aircraft, tanks, and electronics products could not have been built until the designing and production planning stages of these defense programs were completed.

This doesn't mean that there were no delays. It does not mean that valuable time was not lost in effecting remedial measures and it does not mean that mistakes were not made. Unfortunately, all of these things did occur.

It is true that late 1950 and early 1951 were devoted to a large degree to letting contracts, drawing specifications, designing and training manpower. Because these preliminaries are a necessary requisite in determining the thousands of tools required for special defense programs, the Munitions Board estimates that Service contractors will need about $2.5 billion additional tools during the year 1952. This is the primary reason why the machine-tool industry, even by doubling its output again in 1952, cannot hope to catch up on its unfilled orders before late 1953.

After careful appraisal, your committee believes that the industry is now working at a level as high as can be reasonably expected under the circumstances. Deliveries in 1951 will reach about $629 millions—double the previous year—and are expected to double again to $1.3 billion in 1952. The two major limiting factors will be materials and manpower and both of these have now been given top priority status by the Director of Defense Mobilization.

Today machine tools are classed as the No. 1 bottleneck. Except for the fact that we are not engaged in a global war, the machine-tool situation is as acute now as during the hottest days of World War II. Some of the causes for finding ourselves in this unfortunate situation were due to the inherent conditions in the industry at the time of Korea. These can be summarized briefly as follows: Machine tools are extremely sensitive to cyclical fluctuations—it is a "feast or famine" type of business. The industry is made up primarily of a large number of small companies and many have only limited working capital.

At the time of Pearl Harbor the situation was different. The industry was off to a running start because of earlier British and French orders. During World War II the industry hit an all-time peak in production. After the war, while American industry, generally, was breaking all production records, machine-tool orders fell way off. Government disposal of large stocks of surplus tools further depressed sales so that when the present emergency began, the industry was in the doldrums. Therefore, tool builders were not in condition to expand their own output when the impact of defense orders hit.

The industry needed special priorities to build up its inventories; it needed financial help to expand its facilities and provide adequate working capital; it needed help in securing skilled manpower and

special considerations for those subject to military service and it needed to know what quantity of tools would be required and the target dates. The industry pointed out these situations to NPA shortly after the NPA Administrator was appointed in October 1950, but direct action along these lines was not taken until some months later.

At that time American industry was tooled-up to capacity as a result of World War II and in addition the Government was holding over 100,000 tools in reserve, ready for any emergency. NPA officials did not single out the problems of the machine-tool industry at that early period, as being so exceptionally critical to the defense program to warrant preferential consideration over and beyond that extended to other American industries. As backlogs continued to rise at a rapid rate month after month, the agencies continued to wait.

In fact, it is now admitted that in spite of the military's claim that it was not possible to estimate future requirements, Government officials, including the Department of Defense, should have shown a far greater appreciation for the growing urgency for whatever action was necessary to substantially increase production of machine tools and cut down the heavy backlog.

The issuance of NPA regulations M–40 and M–41 on February 28, 1951, was the first positive action taken by NPA to meet the impending problems. These orders restricted the distribution of unrated orders and set up a DO priority system for tool builders to ease their problems in obtaining materials for military and other DO-rated orders. The Order M–41 also required the manufacturers to set aside 70 percent of their production to take care of the orders from the military contractors. Another feature of these regulations was that M–40 made provisions for GSA to enter into pool-order contracts with the tool builders. This plan had proven extremely successful in World War II and had been requested by the industry as early as November 1950. In effect such pool orders guaranteed the producer against loss due to termination of the emergency or any sudden shift in military programs adversely affecting machine-tool orders already placed.

It was not until the Defense Production Administration was established in January 1951, that real attention was focused on machine-tool problems. This was particularly true when machine tools started to cause delays in the jet-engine program.

It was March 15, 1951, when DPA Production Executive Committee began to intensively study the over-all tool situation. Subsequent meetings were held about every 2 weeks until on June 28, the committee forwarded a memorandum to the Director of Defense Mobilization recommending, among other things, that the immediate actions be taken in regard to the following:

1. Establish a price formula sufficient to provide a productive incentive.
2. Extend 30-percent cash advance payments with pool-contract orders.
3. Establish an adequate fund to provide pool orders for all manufacturers interested.
4. Establish firm requirements for both the military and civilian for at least 18 months ahead.

Following this action by DPA things began to happen. The Director of Defense Mobilization issued what is now known as the action-producing July 9 machine-tool directive. It was directed to DPA, NPA, OPS, GSA, the Department of Defense, Atomic Energy Com-

mission, and the Manpower Mobilization Committee and set forth a positive program of action with respect to every problem that had any bearing on the critical tool situation.

By August the various agencies had given the machine-tool industry most of the stimuli it had to have to really get started in expanding its own facilities and subcontracting to others. The major impetus came as a result of OPS adjusting the price ceiling; GSA offering 30 percent cash advance with pool-order contracts; NPA extending special priorities on both materials and machine tools needed by builders for expanding their own facilities; DPA giving top priority to certificates of necessity; the Department of Labor setting up special Nation-wide manpower programs; and the armed services authorizing that special consideration be extended to skilled operators.

In a few weeks time, a big change had occurred in the industry. Hundreds of subcontracts were let—some firms subcontracting as much as 35 percent of their total production. Shipments began to climb each month until October deliveries were greater than new orders for the first time since 1949. Indications are that the industry has already accepted the challenge to do some bottleneck breaking of its own.

The machine-tool shortage is by no means over but the major bottlenecks are now virtually broken. Industry has the necessary aids to expand their production month after month until machine tools are no longer a critical bottleneck.

There are, however, a few other steps that your committee feels might be taken by the responsible Government agencies to remove some of the remaining objections of the machine-tool industry. For instance, it is suggested that consideration be given to:

1. Modifying the 4 percent interest rate now charged on the 30 percent advance payments extended under the pool-order contracts either through elimination of the charge or modification of the price regulation to permit this interest as an element of cost.
2. Extending the same margin of profit on uncompleted tools in event of termination as applies on completed tools under the pool-order contracts.
3. Establishing a renegotiation policy for the machine-tool industry.
4. Finding ways to prevent defense plants from pirating skilled operators from machine-tool companies because of higher wages authorized for certain defense plants.

Your committee is of the opinion that many of the remedial measures which have been made effective by the different agencies could only have been accomplished through unusual teamwork on the part of the top officials in DPA, NPA, GSA, OPS, the Munitions Board, and the Department of Labor.

Your committee has also been assured by several industry leaders that the NPA and GSA personnel, charged with administrating the machine-tool program in these respective agencies, enjoy the confidence and respect of the industry and can count on the industry's full cooperation in striving to accomplish an all-out production program in 1952.

The committee also wants to express its appreciation to the members of the NPA Metalworking Equipment Division, DPA, Munitions Board, GSA, and other agencies for their cooperative assistance in the preparation of this report.

APPENDIXES

Appendix 1

Summary, certificates of necessity, machine tools only

	Number	Amount requested	Amount eligible for certification	Amount of tax amortization
Issued	[1] 137	$78,191,000	$70,020,000	$53,162,000
Denied	24	3,787,000		
Pending	80	23,505,000		
Total	[1] 241	105,483,000	70,020,000	53,162,000

[1] Includes 8 where interim certificates were requesting a total of $1,879,000 were approved but amount of amortization to be allowed has not been determined.

Source: Defense Production Administration, Defense Expansion Division, Dec. 11, 1951.

List of necessity certificates issued for machine-tool manufacturers (machine tools only) (Dec. 11, 1951)

[Thousands of dollars]

TA No.	Applicant and location of facilities	Date filed	Amount requested	Amount eligible for certification	Date certified (1951)	Percent tax amortization allowed	Amount of tax amortization
	California:						
391	El Segundo: Hufford Machine Works	Dec. 4, 1950	227	204	Feb. 26	75	$153
3213	San Francisco: General Metals, Inc	Feb. 21, 1951	196	193	Sept. 21	50	97
	Connecticut:						
	Bridgeport:						
3062	Bridgeport Machines, Inc	Feb. 16, 1951	707	460	June 29	80	368
6831	Bullard Co	Mar. 23, 1951	881	881	Sept. 15	75	661
12345	do	June 19, 1951	474	474	Nov. 30	65	308
7330	Moore Special Tool Co	Mar. 26, 1951	39	26	Nov. 16	80	30
7390	do	do	39	38	Sept. 21	80	30
7226	Forestville: Bristol Machine Tool Co	Mar. 23, 1951	48	(1)	Sept. 22	85	(1)
	West Hartford:						
3260	Niles, Bement, Pond	Feb. 23, 1951	1,938	1,830	Aug. 17	75	1,373
10910	do	June 14, 1951	279	226	Sept. 15	75	170
10741	Yalesville: Packer Machine Co	do	378	356	Dec. 4	70	249
	Illinois:						
	Chicago:						
13106	Boyar-Schultz Corp	July 23, 1951	95	94	Dec. 3	80	75
13107	do	do	35	35	Nov. 9	70	25
13108	do	do	78	78	do	70	55
540	Onsrud Machine Works, Inc	Dec. 12, 1950	27	27	Mar. 8	90	24
12403	do	June 8, 1951	19	17	Nov. 30	80	14
5256	Franklin Park: Illinois Tool Works	Mar. 21, 1951	1,051	990	June 22	80	792
	Rockford:						
10013	Elkstrom, Carlson & Co	June 6, 1951	244	244	Nov. 8	70	171
6637	Mattison Machine Works	Mar. 23, 1951	216	(1)	Sept. 18	80	(1)
7021	Rockford Machine Tool Co	do	134	134	Nov. 16	75	101
2725	Sunstrand Machine Tool Co	Feb. 12, 1951	46	46	June 6	75	35
2412	Skokie: Abar, Inc	Feb. 6, 1951	276	122	Nov. 5	70	85
	Indiana:						
2170	Indianapolis: Union Carbide & Carbon Corp	Jan. 30, 1951	492	(1)	Sept. 17	65	(1)
5045	Richmond: National Automobile Tool Co	Mar. 21, 1951	426	426	July 27	80	341
	Kentucky: Covington:						
160	Avey Drilling Machine Co	Nov. 16, 1951	709	526	Apr. 12	75	395
11439	do	June 15, 1951	50	50	Nov. 9	65	33
15974	Maine: Dexter: Fayscott Corp	Nov. 19, 1951	200	200	Dec. 7	65	130
	Massachusetts:						
7556	Agawam: Carroll Manufacturing Co	Mar. 27, 1951	208	193	July 11	80	154
12160	Barre: Allen, Chas. G. Co	June 18, 1951	157	157	Nov. 30	70	110
10430	Cambridge: Blanchard Machine Co	June 10, 1951	515	339	Sept. 13	80	311
9100	Hatfield: Porter-McLeod Machine Tool Co	May 7, 1951	35	35	Nov. 6	75	26
8813	Holden: Reed Rolled Thread Die Co	May 2, 1951	350	117	Nov. 16	70	82

1014	Hudson: Lapointe Machine Tool Co	Dec. 29, 1950	1,399	1,399	Feb. 26	85	1,189
12683	Springfield: Baush Machine Tool Co	June 25, 1951	22	20	Nov. 30	80	16
	Worcester:						
2224	Heald Machine Co	Feb. 1, 1951	3,586	3,586	Apr. 11	75	2,650
4254	Norton Co	May 14, 1951	171	171	May 16	90	154
4255	do	do	5,771	5,771	do	75	4,328
8119	do	Apr. 12, 1951	550	521	Aug. 8	75	391
1759	Reed Prentice	Jan. 22, 1951	1,258	1,258	Apr. 12	80	1,006
11975	Reed Rolled Thread Die Co	June 13, 1951	118	118	Nov. 30	70	83
	Michigan:						
	Ann Arbor:						
4358	Buhr Machine Tool Co	Mar. 15, 1951	194	186	July 27	80	149
11983	do	June 13, 1951	135	135	Nov. 30	65	88
	Detroit:						
12180	Composite Forgings, Inc	June 15, 1951	472	435	Dec. 6	65	283
5966	Cross Co	Mar. 22, 1951	72	(1)	Sept. 19	80	(1)
8390	do	June 1, 1951	238	238	Nov. 9	75	179
14388	do	Sept. 10, 1951	977	325	Nov. 30	75	244
5160	Govro-Nelson Co	Mar. 21, 1951	24	(1)	Sept. 22	90	(1)
2397	Micromatic Home Corp	Feb. 6, 1951	390	368	July 12	80	294
3706	National Broach & Machine Co	Mar. 5, 1951	604	590	July 2	80	472
12829	Precision Boring Co	June 21, 1951	58	58	Nov. 30	75	44
12057	Superior Machine & Engineering Co	June 15, 1951	105	40	Nov. 16	70	28
10021	Ferndale: DeVlieg Machine Co	June 1, 1951	238	238	Nov. 9	75	179
6490	Grand Rapids: Gallmeyer & Livingston Co	Mar. 23, 1951	187	(1)	Sept. 22	75	(1)
4741	Highland Park: Ex-Cell-O Corp	Mar. 19, 1951	214	214	July 3	80	171
8083	Jackson: Index Machine & Tool Co	Apr. 11, 1951	43	35	Nov. 8	65	23
	Lansing:						
8479	Olefsson Tool & Die Co	Apr. 23, 1951	45	45	Nov. 16	80	36
12059	do	June 15, 1951	44	44	Dec. 6	80	35
12625	do	June 18, 1951	10	10	Nov. 16	80	8
4063	Oak Park: Cogsdill Machine	Mar. 12, 1951	76	76	June 9	75	57
63	Minnesota: Savage: Continental Machines, Inc	Nov. 8, 1950	262	262	Mar. 8	85	223
2236	Mississippi: Tupelo: Rockwell Manufacturing Co	Feb. 1, 1951	1,345	1,315	July 19	80	1,052
	Missouri:						
9260	Kansas City: Clipper Manufacturing Co	May 11, 1951	185	161	Nov. 30	60	97
	St. Louis:						
12060	Knight, W. B., Machinery	June 15, 1951	15	13	Nov. 9	65	
1356	Modart Co	June 9, 1951	530	530	Apr. 10	80	424
84	New Hampshire: Keene: Kingsbury Machine	Nov. 10, 1950	525	525	do	80	420
	New Jersey:						
12907	Harrison: Morey Machine Co., Inc	July 9, 1951	880	880	Nov. 21	70	616
3823	Passaic: Warner Machine Co., Inc	Mar. 7, 1951	16	16	May 25	90	14
5017	Paterson: Watson Flagg Machinery Co., Inc	Mar. 21, 1951	84	81	Sept. 21	75	61
8569	Plainfield: Kearney & Trecker Corp	Apr. 25, 1951	409	388	July 12	80	310
	New York:						
12907	Astoria, Long Island: Morey Machine Co., Inc (See Harrison, N. J.)						
5143	Brooklyn: American Machine & Foundry Co	Mar. 21, 1951	522	(1)	Sept. 15	75	(1)
	Buffalo:						
5144	American Machine & Foundry Co	do	318	(1)	do	75	(1)
361	Weisner-Rapp Co	Nov. 30, 1951	78	25	May 11	75	19

[1] Interim certificates issued, no amount available,

List of necessity certificates issued for machine-tool manufacturers (machine tools only) (Dec. 11, 1951)—Continued

[Thousands of dollars]

TA No.	Applicant and location of facilities	Date filed	Amount requested	Amount eligible for certification	Date certified (1951)	Percent tax amortization allowed	Amount of tax amortization
	New York—Continued						
	Elmira:						
2101	Hardinge Bros., Inc	Jan. 29, 1951	129	129	Mar. 28	85	110
10106	do	May 31, 1951	122	122	Nov. 9	75	92
3272	Geneva: McLean Manufacturing Co	Feb. 23, 1951	300	298	Sept. 15	80	238
10790	Pearl River: Dexter Folder	June 14, 1951	9	9	Nov. 9	80	7
	Rochester:						
9487	Consolidated Machine Tool Corp	May 23, 1951	156	156	Sept. 19	90	140
11935	Davenport Machine Tool Co	June 13, 1951	189	189	Nov. 30	65	123
4860	Gleason Works	Mar. 20, 1951	178	178	July 27	75	134
11216	do	June 13, 1951	8,090	5,411	Nov. 9	65	3,517
	Ohio:						
	Cincinnati:						
5261	American Steel Foundries	Mar. 21, 1951	91	91	July 2	90	32
11503	American Tool Works Co	June 4, 1951	25	25	Nov. 9	80	20
11789	Boye & Innes Tool Co., Hartwell	June 27, 1951	58	16	do	80	13
3453	Carlton Machine Tool Co	Feb. 28, 1951	693	693	June 29	80	554
12340	Cincinnati Gilbert Machine Tool Co	June 15, 1951	45	45	Nov. 23	70	32
8043	Cincinnati Lathe & Tool Co	Apr. 10, 1951	33	33	Nov. 8	70	23
1367	Cincinnati Milling Machine Co	Jan. 9, 1951	4,157	4,157	Feb. 26	85	3,533
368	Fosdick Machine	Dec. 1, 1950	306	112	June 25	80	90
6719	Gray, C. A. Co	Mar. 23, 1951	50	17	Sept. 10	85	14
9211	Lodge & Shipley Co	May 9, 1951	259	166	Aug. 17	80	133
9780	do	May 25, 1951	994	994	do	80	795
3671	United States Burke Machine	Mar. 5, 1951	238	200	Aug. 3	80	160
	Cleveland:						
6828	Bardons & Oliver, Inc	Mar. 23, 1951	78	78	Sept. 21	85	66
14569	Lucas Machine Division	Sept. 17, 1951	41	41	Dec. 7	80	33
6212	Motch & Merryweather Machine Co	Mar. 23, 1951	79	73	Aug. 16	85	62
9417	do	May 21, 1951	276	276	Aug. 17	80	221
2952	National Acme Co	Feb. 15, 1951	323	299	July 27	85	254
10730	do	June 14, 1951	305	305	Dec. 4	75	229
4808	Natlonal Tool Co	Mar. 20, 1951	251	251	Aug. 16	85	213
12450	Shepherd Special Machine & Die Co	June 26, 1951	10	10	Nov. 30	75	8
5694	Warner & Swasey Co	Mar. 22, 1951	778	702	Aug. 17	80	562
	Dayton:						
3493	Sheffield Corp	Feb. 28, 1951	1,674	1,658	Aug. 3	75	1,244
7411	South Park Tool & Mold Co	Mar. 26, 1951	9	9	Sept. 21	80	7
	Euclid:						
1679	Cleveland Bobbing Machine Co	Jan. 18, 1951	91	59	June 6	85	50
7968	do	Apr. 9, 1951	160	57	Nov. 9	65	37
9418	Motch & Merryweather Machine Co	May 21, 1951	669	669	Sept. 18	80	535

	Hamilton:						
11391	Baldwin-Lima-Hamilton Corp	June 15, 1951	180	180	Nov. 9	65	117
11392	do	do	243	239	do	65	155
12479	Hamilton Thomas Corp	June 25, 1951	25	25	Dec. 4	80	20
9699	Mosler Safe Co	May 28, 1951	279	279	Sept. 19	85	237
	New Philadelphia:						
5693	Warner & Swasey Co	Mar. 22, 1951	202	202	Aug. 31	75	152
15227	do	Oct. 24, 1951	2,255	2,250	Nov. 21	65	1,463
	Sidney:						
1987	Monarch Machine Tool Co	Jan. 26, 1951	1,248	1,224	May 16	80	979
10759	do	June 14, 1951	2,136	1,886	Sept. 21	75	1,415
1368	Wilmington: Cincinnati Milling Machine Co	Jan. 9, 1951	3,529	3,473	Feb. 26	80	2,823
	Pennsylvania:						
10806	Elwood City: Ryman Engine Co	June 14, 1951	118	115	Nov. 23	70	81
5154	Waynesboro: Landis Tool Co	Mar. 21, 1951	1,544	1,544	July 27	75	1,158
4298	West Allis: Kearney & Trecker	Mar. 15, 1951	1,263	1,229	June 15	75	922
1020	Philadelphia: Jennings Machine Corp	Jan. 2, 1951	56	56	Apr. 10	80	45
	Rhode Island:						
	Pawtucket:						
3261	Potter & Johnson	Feb. 23, 1951	847	782	Nov. 29	75	587
10909	do	June 14, 1951	40	38	Nov. 6	70	27
6162	Woonsocket: Taft-Pierce Manufacturing Co	Mar. 23, 1951	98	98	Aug. 16	85	83
	Wisconsin:						
2770	Appleton: Circle Machinery Co	Feb. 13, 1951	17	17	Nov. 27	80	14
2994	Beloit: Besly, C. H. & Co	Feb. 16, 1951	659	659	May 29	80	527
4939	Fond du Lac: Giddings & Lewis	Mar. 21, 1951	1,779	1,591	Sept. 6	75	1,193
4333	Kaukauna: Kaukauna Machine Corp	Mar. 16, 1951	592	578	Aug. 3	80	462
	Madison:						
1565	Gisholt Machine	Jan. 15, 1951	325	325	Apr. 18	85	276
11693	do	June 10, 1951	279	265	Dec. 6	75	199
12205	Green Bay: Cleereman Machine Tool Co	June 15, 1951	168	164	Nov. 23	80	131
7782	Milwaukee: Davis & Thompson Co	Apr. 2, 1951	404	404	Oct. 30	70	283
12258	Racine: Gorton, George, Machine Co	June 14, 1951	88	83	Dec. 4	80	66
4297	Wauwatosa: Kearney & Trecker	Mar. 15, 1951	1,263	1,229	June 15	75	922
	Vermont:						
[1] 6973	Springfield: Bryant Chucking Grinder Co	Mar. 23, 1951	33	30	Sept. 21	65	20
6389	Fellows Gear Shaper Co	do	327	327	Sept. 19	80	262
11485	do	May 31, 1951	39	39	Nov. 9	70	27
11227	Jones & Samson Machine Co	June 15, 1951	94	88	do	75	66
5853	Windsor: Cone Automatic Machine Co	Mar. 22, 1951	506	506	Sept. 16	80	405

[1] Interim certificates issued, no amount available.

List of applications for necessity certificates pending, machine tools (Dec. 11, 1951)

TA No.	Applicant and location of facilities	Date filed (1951)	Amount requested
	California:		
	Los Angeles:		
15898	Burg Tool Manufacturing Co., Inc	Nov. 7	$181,000
14003	Fibreform Machine Works	Aug. 20	24,000
7866	Technical Products Co	Apr. 4	153,000
7569	Lynwood: Elliott Engineering Co	Mar. 23	13,000
10007	Torrance: National Supply Co	June 6	449,000
	Connecticut:		
7332	Bridgeport: Moore, Richard F	Mar. 26	199,000
15728	Suffield: Townsend, H. P., Manufacturing Co	Nov. 8	151,000
15732	West Hartford: Niles-Bement-Pond Co	do	396,000
	Illinois:		
15533	Broadview: Boyer-Schultz Co	Nov. 1	550,000
14498	Chicago: Continental Can Co., Inc	Sept. 11	5,000
9787	Loves Park: Fenlind Engineering Co	May 21	92,000
	Rockford:		
13923	Rehaberg-Jacobson Manufacturing Co	Aug. 17	250,000
4469	South Water Corp	Mar. 16	3,000,000
	Indiana:		
15303	Lawrenceburg: Bardes Forge & Foundry Co	Oct. 24	305,000
3838	South Bend: Sibley Machine & Foundry	Mar. 7	1,070,000
15878	Kansas: Girard: Western Tool Manufacturing Co., Inc	Nov. 8	111,000
	Massachusetts:		
14163	Beverly: Reid Bros. Co	Aug. 24	105,000
13017	Greenfield: Production Machinery Co	July 16	8,000
15924	Hatfield: Porter-McLeod Machine Tool Co	Nov. 5	10,000
10637	Hopedale: Draper Corp	June 14	210,000
6430	Lee: Clark-Aiken	Mar. 23	2,077,000
	Springfield:		
14896	Van Norman Co	Oct. 5	322,000
12096	Varsity Manufacturing Co., Inc	June 15	68,000
15645	Winchester: Rex Machine & Tool Co., Inc	Nov. 1	26,000
15862	Worcester: Arter Grinding Machine Co	do	3,000
	Michigan:		
14002	Ann Arbor: American Broad & Machine Co	Aug. 20	89,000
16063	Bronson: Bronson Tool & Die Co., Inc	Nov. 13	9,000
	Detroit:		
15761	Cross Co	Nov. 14	115,000
13167	Michigan Drill Head Co	July 13	333,000
13189	Modern Industrial Engineering Co	July 16	19,000
10920	National Broach & Machine Co	June 14	76,000
12828	Precision Boring Co	June 21	32,000
12363	Hazel Park: Douglas Tool Co	June 15	90,000
	Jackson:		
15641	Crankshaft Machine Co	Oct. 31	73,000
11589	Tomkins-Johnson Co	June 4	45,000
8393	Muskegon: A. Harold Frauentlal, Inc	Apr. 20	104,000
	Saginaw:		
7114	Wickes Corp	Mar. 23	350,000
10594	do	May 28	1,352,000
15501	Traverse City: Machine Tool Co	Oct. 31	125,000
	Missouri: St. Louis:		
2330	Adams, S. G., Co	Feb. 2	1,070,000
14353	Lehman Machine Co	Sept. 4	10,000
	New Jersey:		
8630	Berkeley Heights: Hoglund Engineering & Manufacturing Co	Apr. 26	70,000
12260	Passaic: Waner Machine Co., Inc	June 15	30,000
14393	Plainfield: Wood Newspaper Machine Corp	Sept. 6	106,000
15202	Sussex: Hinens Engineering	Oct. 22	25,000
15560	New York: North Tonawanda: Wales Strippit Corp	Oct. 30	5,000
	Ohio:		
14530	Akron Portage Machine Co	Sept. 12	126,000
15200	Canton: Cleveland Tapping Machines	Oct. 22	135,000
	Cincinnati:		
15245	American Tool Works Co	Oct. 24	32,000
983[illegible]	Bock Machine	May 31	157,000
13577	Cincinnati Metalcrafts, Inc	July 24	117,000
10188	Day, J. H. Co., Inc	June 4	602,000
13392	Hoeltge Bros, Inc	July 27	14,000
15576	Le Blond, R. K. Machine Tool Co	Oct. 30	518,000
15918	Standard Electrical Tool Co	Nov. 6	32,000
	Cleveland:		
15312	Foote-Burt Co	Oct. 30	73,000
15985	do	Nov. 23	21,000
14877	Lucas Machine Division	Oct. 5	263,000
6202	Lawson & Sessions Co	Mar. 23	80,000
14532	Notch & Merryweather Machine Co	Sept. 17	724,000
15578	Oster Manufacturing Co	Nov. 2	479,000
13697	Columbiana: Enterprise Co	Aug. 8	43,000

List of applications for necessity certificates pending, machine tools (Dec. 11, 1951)—Continued

TA No.	Applicant and location of facilities	Date filed (1951)	Amount requested
	Ohio—Continued		
	Columbus:		
7224	Enterprise Co	Mar. 23	$30,000
15566	Miller-Glass Engineering Co	Oct. 30	99,000
15225	Galena: Kline Manufacturing Co	Oct. 24	294,000
	Hamilton:		
15404	Baldwin-Lima-Hamilton Corp	Oct. 31	635,000
15757	Cincinnati Shaper Co	Nov. 14	3,913,000
15865	Hamilton Tool Co	Oct. 31	61,000
15776	Mosler Safe Co	Nov. 15	511,000
14196	Kenton: Ohio Machine Tool Co	Aug. 27	236,000
14000	Rossmoyne: Schauer Manufacturing Co	Aug. 20	191,000
15446	Salem: Bliss, E. W	Oct. 31	11,000
15448	Toledo: Bliss, E. W	do	36,000
	Pennsylvania:		
9900	Braddock: Sommerfield Machinery Co	May 23	26,000
14178	Philadelphia: Hall Planetary Corp	Aug. 27	9,000
15803	Rhode Island: Woonsocket: Taft-Pierce Manufacturing Co	Nov. 1	65,000
12601	Texas: Wichita Falls: Wichita Engineering Co	June 18	20,000
	Vermont: Springfield:		
14299	Bryant Chucking Grinder Co	Sept. 4	64,000
14333	Fellows Gear Shaper Co	do	159,000
16290	Wisconsin: Butler: Davis & Thompson	Dec. 3	819,000

Appendix 2

Summary, certificates of necessity, metalworking machinery

	Number	Amount requested	Amount eligible for certification	Amount of tax amortization
Issued	[1] 37	$9,806,000	$8,269,000	$5,896,000
Denied	15	1,858,000		
Pending	20	9,822,000		
Total	72	21,486,000	8,269,000	5,896,000

[1] Includes 4 where interim certificates requesting a total of $1,193,000 were approved but amount of amortization to be allowed has not been determined.

Source: Defense Production Administration, Defense Expansion Division, Dec. 11, 1951.

List of necessity certificates issued for metalworking machinery manufacturers (Dec. 11, 1951)

[Thousands of dollars]

TA No.	Applicant and location of facilities	Date filed	Amount requested	Amount eligible for certification	Date certified (1951)	Percent tax amortization allowed	Amount of tax amortization
10548	California: El Segundo: Hufford Machine Works	May 28, 1951	111	111	Oct. 20	70	78
	Connecticut:						
5661	Hartford: Henry & Wright Division of Emhart Manufacturing Co	Mar. 22, 1951	875	875	Nov. 28	50	438
11942	Southington: Peck, Stow & Wilcox	June 13, 1951	20	20	Nov. 30	80	16
2709	Thomaston: Hallden Machine Co	Feb. 12, 1951	475	475	June 1	60	285
	Illinois:						
12322	Aurora: Pines Engineering Co., Inc	June 15, 1951	46	46	Nov. 30	75	35
	Chicago:						
6852	Clearing Machine Corp	Mar. 23, 1951	164	130	Sept. 21	65	85
12548	Dreis & Krump Manufacturing Co	June 18, 1951	533	533	Dec. 6	70	373
8327	Hannifen Corp	Apr. 18, 1951	528	528	Nov. 16	70	370
	Michigan:						
12252	Belleville: Detroit Drop Die Co	June 14, 1951	18	18	Dec. 4	80	14
	Detroit:						
4296	Vickers, Inc	Mar. 15, 1951	510	377	Aug. 3	80	302
10233	do	June 11, 1951	568	525	Nov. 16	65	341
9965	Ecorse: Modern Collet & Machine Co	May 23, 1951	98	98	Nov. 6	65	64
4295	Nebraska: Omaha: Omaha Production Co	Mar. 15, 1951	564	(1)	Sept. 21	60	(1)
512	New Jersey: Bridgeton: Ferracute Machine Co	Dec. 8, 1950	186	186	Mar. 7	85	158
	New York:						
6641	North Tonawanda: Wales-Strippet Corp	Mar. 23, 1951	28	(1)	Sept. 21	60	(1)
	Tonawanda:						
453	Lake Erie Engineering Corp	Dec. 5, 1950	272	272	Mar. 29	80	218
4573	do	Mar. 19, 1951	29	29	June 29	75	22
12045	do	June 14, 1951	18	18	Dec. 7	65	12
	Ohio:						
6112	Canton: Bliss, E. W., Co	Mar. 23, 1951	689	670	do	65	436
	Cleveland:						
8633	Bath, Cyril Co	Apr. 26, 1951	34	34	Dec. 6	80	27
11969	do	June 9, 1951	17	17	do	80	14
11970	do	June 12, 1951	13	13	do	80	10
6206	Lewis Machine Co	Mar. 23, 1951	29	13	Sept. 8	90	12
5123	Columbus: Denison Engineering Co	Mar. 21, 1951	39	38	do	70	27
	Mount Gilead:						
1850	Hydraulic Press	Jan. 23, 1951	187	187	June 26	85	159
2405	do	Feb. 6, 1951	378	378	May 18	80	302
3123	do	Feb. 19, 1951	488	488	Aug. 2	75	366
7143	do	Mar. 23, 1951	32	(1)	Sept. 8	75	(1)
11022	do	June 14, 1951	35	35	Dec. 7	65	23
2542	New Bremen: Strone Tool & Manufacturing Co	Feb. 8, 1951	245	245	June 29	80	196
8327	St. Marys: Hannifen Corp. (See Chicago, Ill.)						
6284	Tiffin: National Machine Co	Mar. 23, 1951	328	328	July 6	80	262

	Pennsylvania:						
7668	Erie: Erie Foundry	Mar. 29, 1951	245	169	Sept. 21	85	144
6339	Latrobe: Kennametal, Inc	Mar. 23, 1951	57	57	July 5	75	43
6117	Philadelphia: Stokes, F. J. Machine Co	do	569	(1)	Sept. 22	60	(1)
	Wisconsin:						
2039	Racine: Famco Machine Co	Jan. 29, 1951	246	235	Nov. 23	70	165
8515	Milwaukee: Oil Gear Co	Apr. 23, 1951	1,100	1,100	June 7	80	880
6563	Vermont: Springfield: Lovejoy Tool Co., Inc	Mar. 23, 1951	32	21	Sept. 13	90	19

[1] Interior certificates issued, no amount available.

List of applications for necessity certificates pending, metalworking machinery manufacturers (Dec. 11, 1951)

TA No.	Applicant and location of facilities	Date filed (1951)	Amount requested
	Illinois: Chicago:		
10469	Clearing Machine Corp	June 13	$848,000
15526	Miehle Printing Press Manufacturing Co	Nov. 1	139,000
12430	Michigan: Ferndale: Punch Press Repair Corp	June 18	262,000
	Minnesota:		
9542	Lake City: O'Neil Irwin Manufacturing	May 11	185,000
14230	Minneapolis: Rodgers Hydraulic, Inc	Aug. 30	46,000
12607	Missouri: St. Louis: Kearney, J. R	July 13	209,000
7871	New Jersey: Perth Amboy: Marine Fabricators Co	Apr. 4	9,000
	New York:		
	Buffalo:		
11873	Niagara Machine & Tool Works	June 12	37,000
14117	do	Aug. 22	135,000
12523	Farmingdale: Eton Machine Co., Inc	June 25	17,000
	North Tonawanda:		
8518	Wales-Strippit Corp	Apr. 29	135,000
12153	do	June 28	28,000
5662	Hudson: V & O Press Co (Division of Emhart Manufacturing Co.)	Mar. 22	152,000
	Ohio:		
	Cleveland:		
14873	Bath, Cyril Co	Oct. 4	555,000
8183	Columbia Vise & Manufacturing Co	Apr. 13	3,000
[1] 18749	Hamilton: Cincinnati Shaper Co	May 1	6,391,000
14572	New Bremen: Stanco, Inc	Sept. 19	25,000
13261	Tiffin: National Machinery Co	July 30	135,000
	Pennsylvania:		
13492	Alburtis: Loma Machine	Aug. 2	439,000
7909	Bellefonte: Sutton Engineering Co	Apr. 5	72,000

[1] Canceled Nov. 30, 1951. Replaced by TA No. 15757, the Cincinnati Shaper Co., Cincinnati, Ohio. Date filed, Nov. 14, 1951. Amount requested, $3,913,000.

Appendix 3

Contract No. ———

Approved by direction of the Secretary of the ——— in accordance with findings dated ———.

——— ———, *Chief, Procurement Division.*

Facilities Lease Agreement

Lessee:
Address:

The Commanding Officer, ——————————————————— will have over-all administrative responsibility for this lease.

The necessary Government property records in connection with this lease will be maintained by an industrial accountable property officer designated by the officer having over-all administrative responsibility.

This lease has been authorized under Public Law 364, Eightieth Congress.

Facilities Lease Agreement

This lease agreement, hereinafter sometimes referred to as "this contract" entered into as of the — day of ———, 1951, between the United States of America, Lessor, hereinafter called the "Government," represented by the Contracting Officer executing this contract, and ———, a Corporation organized and existing under the laws of the State of ——— and having its principal office in the City of ———, hereinafter called the "Lessee" or the "Contractor";

Witnesseth that:

Whereas it is desired to increase the capacity of the ——— industry of the Nation to meet the demand for ———; and

Whereas it has been determined that the property listed on "Schedule A" hereof is not surplus to the needs of the Department of the ——— and is not

presently required for public use and that the leasing thereof hereunder will promote the national defense;

Now, therefore, in consideration of the premises and mutual covenants and agreements herein contained the parties hereto agree as follows:

1. Leased facilities

(*a*) The Government hereby leases to the Lessee the facilities listed on "Schedule A" attached hereto and made a part hereof effective with respect to each item leased hereunder as of the date of receipt thereof by the Lessee. Such facilities are sometimes hereinafter referred to as the "leased facilities." These facilities will, to the extent not previously delivered to the Lessee, be delivered as soon as practicable after the date of approval hereof under the provisions of Clause 23 hereof to the Lessee's plant designated in "Schedule A," or, at the Government's option to the railroad siding nearest said plant.

(*b*) Subject to the provisions of clause 4 (c), the leased facilities are furnished without warranty, express or implied, on the part of the Government as to serviceability or fitness for use.

(*c*) The Lessee shall, subject to the provisions of the "Termination" clause hereof, bear the cost of installation of such facilities.

2. Use of leased facilities

The Lessee may use the leased facilities for all legal purposes, provided, however, subject to the provisions of any other applicable priority systems established by the Government, that the Lessee shall not use them for work which would interfere materially with the performance of Government contracts or subcontracts and provided further that priority shall be given, with due regard to existing commitments, to ——— contracts and subcontracts.

3. Rental and term of lease

(*a*) The Lessee shall pay rent for the leased facilities at the rate of —— percent per annum of the acquisition cost thereof as such cost is set forth on Schedule A hereof. Such rental shall commence upon the first of the month in which the operation of the leased facilities is commenced or upon the first of the ninth calendar month after receipt of the leased facilities at the Lessee's plant designated in Schedule A hereof whichever is earlier and shall be paid quarterly by calendar quarters during the term of this lease and shall be paid for each preceding quarter not later than ten days after the end of each such period. Said rent shall be paid by check payable to the Treasurer of the United States and shall be mailed or delivered to the Contracting Officer or such other person as may be designated by the Contracting Officer for transmittal to the Budget and Fiscal Division of Headquarters, ———, accompanied by a statement in triplicate explaining the amount of such payment. Such quarterly payments shall be equitably adjusted for any incomplete calendar quarters at the beginning or end of this lease, upon termination hereof, or upon beginning or end of abatement periods as hereinafter provided. Such rental payments shall be abated for all or part of the leased facilities during periods of three months or more during which no use is made thereof. Such abatements shall be effective upon advance written request by the Lessee to the Contracting Officer representing that no use of designated items of facilities during the following three months or longer is then contemplated. Such abatement periods shall be ended by a similar notice advising of intended resumption of use and shall end upon resumption of use. If such resumption of use occurs within three months after the commencement of any abatement period rental will be due for the entire period as if no abatement had occurred. Otherwise rental will recommence on the date of resumption of use. Notwithstanding the foregoing an abatement period cannot be activated by the Lessee in less than three months after the end of any preceding abatement period for the item of facilities involved. Said rental payments shall also be abated for all or part of the leased facilities during periods in which such item or items are rendered unusable by causes for which the Lessee is relieved of responsibility hereunder.

(*b*) The term of this lease shall commence upon the date of receipt by the Lessee of all or part of the leased facilities and shall, subject to prior termination, continue for five years thereafter and may be renewed for an additional five-year term at the option of the Lessee.

4. Maintenance of leased facilities

(*a*) The Lessee shall at its own expense perform all necessary maintenance and repair of the leased property other than as provided in subparagraph (*c*) hereof in accordance with the best industrial practice.

(*b*) As soon as practicable after the execution of this lease the Lessee shall submit to the Contracting Officer for approval a statement of the minimum maintenance program proposed to be maintained under the requirements of this clause. Upon approval thereof by the Contracting Officer such program shall not be changed or deviated from without the prior approval of the Contracting Officer.

(*c*) It is agreed that the Government will make or have made at its expense all initial repairs and initial parts replacements necessary to place the leased facilities in proper operating condition and will repair or have repaired at its expense any breakage or failure of the leased facilities caused by defective materials, or workmanship therein which may occur during the first year after receipt by the Lessee of the item of facilities involved.

5. Liability for leased facilities

The leased property shall be returned by the Lessee to the Government in as good condition as when delivered to Lessee or restored hereunder, whichever condition is the better, reasonable wear and tear and loss, damage or destruction for which the Lessee is hereinafter relieved of liability excepted. The Lessee shall not be liable for any loss, damage or destruction of the leased property except for loss, damage or destruction caused by its failure to exercise that degree of care with respect to such property which a normally prudent man would exercise under comparable circumstances with respect to his own property. In the event the Lessee is determined to be liable for loss, damage or destruction of any or all of the leased property under the foregoing provisions of this clause the Lessee shall pay to the Government as damages the amount necessary to place the leased property in as good condition as when delivered to the Lessee, or restored hereunder, reasonable wear and tear excepted, whichever condition is the better, or if any such property cannot be placed in such condition, Lessee shall pay an amount equivalent to the value of such property at the time of its loss, damage or destruction, less the scrap value of such property, provided that the Lessee may with the approval of the Contracting Officer itself repair or replace the lost, damaged, or destroyed property. The Lessee shall also take such specific measures including but not limited to the maintaining of insurance as may be directed by the Contracting Officer to protect the Government's interests in the leased property.

6. Responsibility for damages and injury

The Government shall not be responsible for any damage to property or injuries to persons arising out of the use of the leased property by the Lessee, and the Lessee shall indemnify and save the Government harmless from any and all claims for any such damages or injuries.

7. Marking and recording of leased facilities

The facilities leased hereunder shall be suitably marked by the Lessee with an identifying mark or symbol as directed by the Contracting Officer, indicating that they are the property of the Government and the Lessee shall furnish the Government with such records and data with respect to such facilities as may be requested by the Contracting Officer for industrial preparedness planning or other purposes.

8. Access

The Government shall at all times have access to the premises wherein any of the leased facilities are located, for the purpose of inspecting or inventorying the same or for the purpose of removing the same in the event of the expiration or termination of this lease.

9. Possession

Except as otherwise in this lease specifically provided, the Lessee shall not remove or otherwise part with the possession of any of the leased facilities. The Lessee shall not purport to pledge or assign or transfer title to any of such facilities in any manner to any third person, either directly or indirectly, nor

do or suffer anything to be done whereby any of such facilities shall or may be seized, taken in execution, attached, destroyed, or injured.

10. Termination

(*a*) This lease may be terminated in whole or, with respect to entire items of facilities as listed in "Schedule A," from time to time in part, as follows:

I. By the Government:

(i) Whenever the Lessee shall fail to comply with any of the terms of this lease and shall fail to cure such default within a period of thirty days (or such longer period as the Contracting Officer may allow) after receipt from the Contracting Officer of a notice specifying the default.

(ii) Without notice at any time during a National emergency including the existing emergency.

(iii) Upon nine months' notice for any other reason.

II. By the Contractor:

(i) Upon nine months' notice for any reason.

(*b*) Any termination hereunder shall be effected by delivery by the terminating party to the other party of a notice of termination specifying the extent of such termination, the effective date thereof and, if for default of the Contractor, the nature of the default.

(*c*) Upon expiration or total or partial termination of this lease the Lessee shall surrender possession of the terminated facilities in accordance with the provisions of the clause hereof entitled "Disposition of Facilities."

(*d*) In the event of a termination by the Government for other than default by the Lessee it is agreed that the Government will pay to the Lessee any then unamortized portion of the cost of installation of such terminated facilities and also the cost of placing and maintaining the facilities in stand-by condition and dismantling and preparing them for shipment under Clause 11 hereof; provided that the Government's obligation to pay installation costs hereunder shall be limited to the amount of such costs which would be unamortized at the time of such termination if such costs were amortized by the Lessee at a rate sufficient to complete such amortization over a period not in excess of the term of this lease. Such costs to be paid by the Government hereunder shall be determined in accordance with Part 2 of Section XV of the Armed Services Procurment Regulations.

11. Disposition of facilities

(*a*) Within thirty (30) days after the expiration or total or partial termination of this lease the Contracting Officer shall notify the Contractor in writing of the disposition of the facilities affected thereby. The Contractor shall, if required by written notice from the Contracting Officer (i) dismantle any or all of the facilities provided hereunder affected by such expiration or termination as are designated by the Contracting Officer and prepare the same for shipment within the shortest practicable time after the service of such written notice and in no event later than sixty (60) days thereafter (unless a longer time is allowed in writing by the Contracting Officer); or (ii) place any or all of the facilities provided hereunder affected by such expiration or termination as are designated by the Contracting Officer in stand-by condition and maintain them in such stand-by condition in the premises in which said facilities are then located for such period not to exceed ninety (90) days as may be designated by the Contracting Officer. During or at the end of such stand-by period the Contracting Officer may by written notice require the Lessee to dismantle and prepare for shipment as provided in Clause (i) hereof. If the Contractor has received no notification with respect to the disposition of the facilities within thirty (30) days after the expiration or total or partial termination of this contract or if written notice as to dismantling and removal of such facilities has not been received from the Contracting Officer within ten (10) days after expiration of the stand-by period, if such stand-by period was required, such facilities may be removed by the Contractor and placed in storage with such storage to be at the expense of and for the account of the Government.

(*b*) The manner of placing and maintaining in stand-by condition, dismantling and preparation for shipment and storage of the facilities provided hereunder shall be as directed by the Contracting Officer and the costs thereof shall be borne by the Lessee except as otherwise specifically provided in Clause 10 (d) or 11 (a) hereof.

12. Title

Title to all of the leased facilities is and will remain in the Government and said facilities shall be deemed personal property although they may be affixed to realty. Title to all modifications, changes, replacement parts and attachments forming an integral part of the facilities shall pass to the Government upon incorporation in or affixation to the facilities. No modification or changes shall be made in the facilities, however, without the prior approval of the Contracting Officer.

13. Records and books of account

(*a*) The Lessee agrees that its books and records relating to expenditures for which reimbursement is authorized under the provisions of this contract, shall at all reasonable times be subject to inspection and audit by any authorized representative of the Department.

(*b*) The Lessee shall cause a provision corresponding to that contained in paragraph (a) hereof to be included in all subcontracts hereunder.

14. Nondiscrimination in employment

In connection with the performance of work under this contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, or national origin; and further agrees to insert the foregoing provision in all subcontracts hereunder except subcontracts for standard commercial supplies or for raw materials.

15. Officials not to benefit

No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

16. Covenant against contingent fees

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon any agreement or understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul the contract without liability, or in its discretion, to require the Contractor to pay, in adidion to the contract price or consideration, the full amount of such commission, percentage, brokerage or contingent fee.

17. Eight-hour law of 1912

(*a*) This contract, to the extent that it is of a character specified in the Eight-Hour Law of 1912 as amended (40 U. S. Code 324–326) and is not covered by the Walsh-Healey Public Contracts Act (41 U. S. Code 35–45), is subject to the following provisions and exceptions of said Eight-Hour Law of 1912 as amended, and to all other provisions and exceptions of said Law:

(*b*) No laborer or mechanic doing any part of the work contemplated by this contract, in the employ of the Contractor or any subcontractor contracting for any part of the said work, shall be required or permitted to work more than eight hours in any one calendar day upon such work, except upon the condition that compensation is paid to such laborer or mechanic in accordance with the provisions of this clause. The wages of every such laborer and mechanic employed by the Contractor or any subcontractor engaged in the performance of this contract shall be computed on a basic day rate of eight hours per day; and work in excess of eight hours per day is permitted only upon the condition that every such laborer and mechanic shall be compensated for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay. For each violation of the requirements of this clause a penalty of five dollars shall be imposed upon the Contractor for each such laborer or mechanic for every calendar day in which such employee is required or permitted to labor more than eight hours upon said work without receiving compensation computed in accordance with this clause; and all penalties thus imposed shall be withheld for the use and benefit of the Government.

18. Convict labor

In connection with the performance of work under this contract, the Contractor agrees not to employ any person undergoing sentence of imprisonment at hard labor.

19. Taxes and utilities

(*a*) The Contractor agrees to pay to proper authority when and as the same become due and payable all taxes, assessments and similar charges which at any time are properly and legally taxed, assessed and imposed upon the Contractor's interest made or created pursuant to the provisions of this contract, with respect to part or all of the facilities provided hereunder or the use thereof.

(*b*) The Contractor agrees to pay all claims or charges for or on account of water, light, heat, power, and any other services or utilities furnished to or with respect to the facilities leased hereunder or any part thereof.

20. Disputes

Except as otherwise provided in this contract, any dispute concerning a question of fact arising under this contract, which is not disposed of by agreement, shall be decided by the Contracting Officer, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor. Within 30 days from the date of receipt of such copy, the Contractor may appeal by mailing or otherwise furnishing to the Contracting Officer a written appeal addressed to the Secretary, and the decision of the Secretary or his duly authorized representative for the hearing of such appeals shall be final and conclusive; provided that, if no such appeal is taken, the decision of the Contracting Officer shall be final and conclusive. In connection with any appeal proceeding under this clause, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the contract and in accordance with the Contracting Officer's decision.

21. Definitions

(*a*) The term "Secretary" as used herein shall include the Secretary of the ———— and the Under Secretary of the ————, and the term "his duly authorized representative" shall mean any person or board authorized by the Secretary of the ———— to act for him other than the Contracting Officer.

(*b*) Except for the original signing of this contract, and except as otherwise stated herein, the term "Contracting Officer" as used herein shall include his duly appointed successor or his authorized representative.

22. Effect on other contracts

Nothing contained herein shall be interpreted as prohibiting the Lessee from obtaining reimbursement under other contracts with the Government or suppliers of the Government through allocations of overhead or otherwise for costs incurred in the performance of obligations imposed hereunder and not made reimbursable hereunder.

23. Approval

This contract shall be subject to the written approval of the Secretary of the ——— or such individual as said Secretary may designate and shall not be binding until so approved.

In witness whereof, the parties hereto have executed this contract as of the day and year first above written.

THE UNITED STATES OF AMERICA,

By _____
(Contracting officer)

_____
(Contractor)

_____
(Signature of official with office held)

_____
(Business address)

Two witnesses:

_____

_____

SCHEDULE A TO FACILITIES LEASE AGREEMENT

Location of lessee's plant:

NOTE.—Upon completion of its new plant, Lessee will at its expense transfer the leased property to that plant.

Leased property:	*Acquisition cost*
One thirty-five-thousand-pound Erie Foundry Steam or Air Drop Hammer, Serial NA, AF No. 20277	--------
One sixteen-thousand MKG Schloemann Double Ram Hammer, Serial NA, AF No. 247737	--------
One five-thousand-pound Erie Foundry Steam Drop Hammer, Serial 2848, AF No. 110281	--------
One two-thousand-pound Erie Foundry Steam or Air Drop Hammer, Serial 3054, AF No. 20260	--------
One six-hundred M. T. Eumuco Forging Press, Serial NA, AF No. 247738	--------
One five-thousand M. T. Open-Rod Four-Column (Hydraulic) Forging Press, Serial NA, AF No. 247735	--------
One two-thousand M. T. Open-Rod Four-Column (Hydraulic) Forging Press, Serial NA, AF No. 247736	--------

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APPENDIX 4

GENERAL SERVICES ADMINISTRATION POOL-ORDER CONTRACT PROCEDURES

GENERAL SERVICES ADMINISTRATION,
Washington 25, D. C.

GENTLEMEN: The Defense Production Act of 1950, as amended, and Executive Orders 10161 and 10200 issued thereunder by the President impose upon this Administration responsibility for the installation of such additional equipment, facilities, processes, or improvements to plants, factories, and other industrial facilities owned by the United States Government and for the installation of such Government-owned equipment in plants, factories, and other industrial facilities owned by private persons as will aid the national defense.

The Director of Defense Mobilization has directed that the production of metal-working tools be increased and the Administrator of the Defense Production Administration has advised this Administration that he deems it necessary for the Government to undertake a program to increase production of machine tools in order that an augmented supply will be available when needed for defense production and recommended that the General Services Administration execute appropriate contracts with qualified producers for the production of machine tools.

Accordingly, there is enclosed herewith, in quadruplicate, a machine-tool pool contract. Annexed to and made a part of the contract is schedule A which lists the classes, types, kinds, descriptions, and quantities of machine tools which it is desired to have you manufacture and produce. The contract also sets forth the terms, conditions, and prices pursuant to which it is desired that these items be manufactured, produced, and delivered or stored. Your acceptance of the contract should be indicated on all four copies thereof in the space provided and three copies immediately returned to the undersigned.

In the event you are unable to obtain financing from private sources adequate to enable your prompt performance of the contract, the General Services Administration is prepared to guarantee in appropriate cases, under regulation V of the Board of Governors of the Federal Reserve System, loans made to you by private sources to the extent required by them.

Should private financing not be available even under a Government guaranty, an advance of funds for working capital not to exceed 30 percent of the amount of this order may be requested from this Administration. Such requests should be made in accordance with Instructions and Procedures Governing Advance of Funds Under Machine Tool Pool Contracts, dated August 24, 1951. Advances so made will bear interest at the rate of 4 percent per annum.

In the event of any substantial changes in your capacity affecting performance of this contract, you are requested to notify the undersigned.

Pursuant to section 3 of NPA Order M-40, dated February 28, 1951, the enclosed contract provides for the elimination of items from the contract to the extent that equivalent items manufactured by you are invoiced or shipped to others pursuant to purchase orders from others and in accordance with orders and directions of the National Production Authority. In connection with such sales of machine tools to others, your attention is invited to NPA Order M-41, dated February 28, 1951.

Sincerely yours,

IRVING GUMBEL,
Assistant Administrator for Defense Coordination.

GENERAL SERVICES ADMINISTRATION,
Washington 25, D. C., August 24, 1951.

INSTRUCTIONS AND PROCEDURES GOVERNING ADVANCE OF FUNDS UNDER MACHINE-TOOL POOL CONTRACTS

1. *General.*—Funds for working capital in amounts not exceeding, in total, thirty percent (30%) of the amount of the contract will be advanced by the General Services Administration to machine-tool pool contractors upon recommendation of the National Production Authority in accordance with the provisions of this issuance and upon compliance with the provisions hereof. Working capital advances will not be made if private financing is available on reasonable terms.

2. *Interest.*—Interest at the rate of four percent (4%) per annum will be charged monthly on unpaid balances of funds advanced under the contract.

3. *Requests for Advance of Funds.*—Any contractor requiring an advance of funds under a machine-tool pool contract should submit a letter application therefor to the Office of the Comptroller, General Services Administration, Washington 25, D. C.

4. *Prerequisites for Advances.*—All initial applications for an advance of funds must be accompanied by—

(*a*) A statement together with supporting facts that private financing is not feasible;

(*b*) A statement as to the dates that installments on the total advance requested will be required and the amounts of such installments accompanied by a schedule of production (dollarwise) demonstrating the necessity for the requested advances;

(*c*) A copy of the contractor's balance sheet and profit-and-loss statement, prepared by an independent auditor, as of the close of the most recent fiscal year. If the statement is more than four (4) months old, an up-to-date balance sheet and profit-and-loss statement also must be submitted;

(*d*) The name and address of the contractor's bank or banks; and the names and addresses of the contractor's' three (3) largest trade sources.

5. Individual request shall be made for each installment advance. Each such request shall be accompanied by current information as called for in Item 4 (b) reflecting any significant change since previous request.

6. *Processing of Applications.*—Upon receipt of an application supported as herein required, General Services Administration will request the recommendation of the National Production Authority and, in appropriate cases, will proceed with the action required to make the advance payment.

7. *Evidence of Indebtedness.*—Contractors receiving advance of funds will be required to execute interest bearing negotiable notes for the full amount of the advance, providing for repayment in accordance with the provisions of the machine-tool pool contract.

8. *Repayment of Advances.*—All monies advanced to machine-tool pool contractors will be repayable in accordance with the provisions of the machine-tool pool contract.

IRVING GUMBEL,
Assistant Administrator for Defense Coordination.

Contract No. GS-00-B(D)

MACHINE-TOOL POOL CONTRACT

THIS CONTRACT, entered into on the _____ day of _____, of 195_, by and between the United States of America, acting by and through the General Services Administration, hereinafter called the Underwriting Agency, and_____ _____ whose principal place of business is _____ _____ hereinafter called the Contractor, provides for the manufacture, production, and delivery or storage of machine tools required for defense production.

THIS CONTRACT is entered into pursuant to the provisions of the Defense Production Act of 1950, Public Law 774, 81st Congress, approved September 8, 1950, as amended by the Defense Production Act Amendments of 1951, Public Law 96, 82nd Congress, approved July 31, 1951; Executive Order 10161 and Executive Order 10200, issued pursuant to said Act; and certificate of necessity dated March 9, 1951, by the Administrator, Defense Production Administration, supplemented July 23, 1951.

NOW, THEREFORE, the parties hereto do mutually agree as follows:

ARTICLE I. The Contractor agrees to undertake, perform, and diligently pursue the manufacture, production, and delivery or storage of machine tools of the classes, kinds, types and description specified in Schedule A annexed hereto and made a part hereof, in the quantities specified, subject to the provisions, terms and conditions of this contract. Machine tools covered by this contract shall be completed on or before the date specified on Schedule A: *Provided, however*, that in the event that delays in completion occur arising out of causes beyond the control and without the fault or negligence of the Contractor, the completion date shall be extended for the period of such delay. Such causes include, but are not restricted to, acts of God, or of the public enemy, acts of the Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, and defaults of subcontractors due to any of such causes unless the Contracting Officer shall determine that the supplies or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the Contractor to meet the required delivery schedule.

ARTICLE II. No agreement or other understanding in any way modifying the provisions of this contract will be binding upon the Underwriting Agency unless made in writing and signed by an authorized representative of such Agency.

ARTICLE III. All machine tools covered by this contract which are completed by the Contractor and invoiced or shipped by the Contractor to others prior to delivery to the Underwriting Agency on and after September 1, 1951, or on and after the effective date of this contract, whichever is later, regardless of the date of receipt of orders for such tools, shall be eliminated from this contract, provided that delivery of such machine tools shall conform to the orders and regulations of the Governmental agency having jurisdiction over priority of deliveries; and the Contractor shall furnish monthly to the Underwriting Agency attached to report GSA Form 616 required by paragraph C of ARTICLE IV, one copy of each invoice or shipping document for such machine tools invoiced or deliveries; and the Contractor shall furnish monthly to the Underwriting Agency all amounts which the Underwriting Agency may have paid with respect to such machine tools under the provisions of ARTICLE IV, A (1) and ARTICLE IV, B, hereof. The Contractor agrees to make every reasonable effort, through its regular sales organizations or otherwise, to sell the machine tools covered by this contract, including all tools which have been stored for the account of the Underwriting Agency pursuant to ARTICLE IV, F, and invoiced to and paid for by the Underwriting Agency pursuant to ARTICLE IV, A (1) and ARTICLE IV, B. Tools so completed, stored, invoiced, and paid for may be sold by the Contractor at any time prior to cancellation or completion of this contract and prior to receipt of notice and remittance from the Underwriting Agency as provided in ARTICLE IV, A (4).

ARTICLE IV. All machine tools covered by this contract which are completed by the Contractor but not invoiced or shipped to others and eliminated from this contract pursuant to ARTICLE III will be purchased and paid for by the Under-

writing Agency in accordance with the provisions of this ARTICLE IV, which provisions, except as otherwise specifically provided, shall apply only to machine tools not so eliminated pursuant to said ARTICLE III.

A. (1) All tools not eliminated from this contract pursuant to ARTICLE III but completed or stored pursuant to ARTICLE IV, F, and invoiced pursuant to ARTICLE IV, B, shall be paid for by the Underwriting Agency in the amount specified on the attached Schedule A, less seventeen and one-half percent (17½%).

(2) The Contractor warrants that said price specified in Schedule A is (a) not in excess of the Contractor's net current market price of the machine tool to a user; and (b) not in excess of any existing ceiling price fixed by regulations or orders issued by the Governmental agency having jurisdiction over prices.

(3) In the event that the Governmental agency having jurisdiction over prices hereafter establishes a ceiling price for any machine tool covered by this contract, which price is at variance with the existing ceiling price for such machine tool, the price in Schedule A shall be revised upward or downward by an amount determined on the basis of the same ratio that the new ceiling price bears to the previously existing ceiling price, such new price to be applicable to items completed or stored on and after the effective date of the ceiling-price change.

(4) In the event that, prior to completion, cancellation, or termination of this contract, a machine tool invoiced pursuant to ARTICLE IV, B, and paid for pursuant to ARTICLE IV, A (1), is delivered, for use for the purpose intended and not for storage, to the Underwriting Agency or to others by such Agency or by the Contractor pursuant to instructions from such Agency, such Agency will immediately pay the Contractor an amount equal to seven and one-half percent (7½%) of the Schedule A price for such machine tool.

B. The Contractor shall furnish promptly to the Underwriting Agency four copies of invoices for machine tools completed or stored upon completion or storage, together with the original bills of lading if shipment is made, or advice that the machine tools are stored by the Contractor, or signed duplicates of storage receipts if the machine tools are stored by others.

C. The Contractor shall submit monthly to the Underwriting Agency "Machine Tool Pool Contract Monthly Report," GSA Form 616, in accordance with reporting procedures issued with the form by the Underwriting Agency.

D. The Underwriting Agency reserves the right to inspect and reject for noncompliance with the warranties contained in ARTICLE VII any machine tool stored under this contract at any time within thirty (30) days after the machine tool is removed from storage for use for the purpose intended or at any time within thirty (30) days after completion, cancellation, or termination of this contract, which ever is earlier. Upon rejection of machine tools for noncompliance with the warranties contained in ARTICLE VII, the Contractor promptly shall replace such rejected tools at the Contractor's expense, or, if the machine tool is rejected after completion, cancellation, or termination of this contract, the Underwriting Agency may deduct from any sums due by such Agency to the Contractor the amount which the Underwriting Agency otherwise would have had to pay for the rejected machine tool.

E. The Contractor shall hold and save the Underwriting Agency, its officers, agents, servants, and employees harmless from liability of any nature or kind, including costs and expenses, for or on account of any infringement upon any patented or unpatented invention, article, or appliance manufactured or used in the performance of the contract, including their use by the Government.

F. Unless otherwise instructed or mutually agreed upon, any machine tools which upon completion are not eliminated from the contract pursuant to ARTICLE III, shall be stored by the Contractor and furnished preservation and protection in accordance with standards prescribed by the Underwriting Agency. If the Contractor is unable to store completed machine tools on account of lack of available space or for other reasons, the Underwriting Agency shall be so notified upon or before completion of the machine tool, and, unless otherwise instructed, the Contractor shall arrange for the moving, suitable storage, preservation, and protection of the completed machine tools, preferably close to the place and town where the items are produced. Unless otherwise agreed upon, the Contractor's liability with respect to machine tools stored pursuant to this provision is limited to losses, costs, and expenses resulting from the negligence of the Contractor, the Contractor's agents, or employees.

G. At the request of the Underwriting Agency, the Contractor shall arrange for full insurance coverage in the name of such Agency covering the machine tools stored, preferably by endorsement or modification of the Contractor's present policies if this is practicable.

H. The Contractor shall keep the Underwriting Agency advised in reasonable detail with regard to the storage, moving, protection, preservation and insurance coverage, if obtained under the provisions of ARTICLE IV, G, hereof, of the items stored. The Underwriting Agency will pay, separately, in addition to the purchase price of the machine tools, for moving, storage, protection, preservation, and insurance. Charges for moving, storage, protection, preservation, and insurance shall be the direct costs thereof, plus the indirect costs properly allocable thereto. Invoices for such costs shall be submitted in quadruplicate monthly.

ARTICLE V—*Advance of Funds.* Working capital funds not exceeding thirty percent (30%) of the total price specified in Schedule A for all tools covered by this contract may be advanced by the Underwriting Agency against its obligations under the contract in accordance with "Instructions and Procedures Governing Advance of Funds Under Machine Tool Pool Contracts," dated August 24, 1951. Any monies so advanced to the Contractor shall be repaid in accordance with the following provisions of this contract:

A. Any monies advanced to the Contractor under this contract which have not been repaid upon cancellation or completion of this contract shall be repaid in accordance with ARTICLE X, A (5);

B. On the last day of each month during which a machine tool covered by this contract is shipped to a user or invoiced to other than the Underwriting Agency, the Contractor shall remit to the Underwriting Agency an amount equal to thirty percent (30%) of the price specified in Schedule A, covering all such machine tools so shipped or invoiced during that month;

C. Payment by the Underwriting Agency for all machine tools not eliminated from the contract pursuant to ARTICLE III, but completed or stored pursuant to ARTICLE IV, F, and invoiced to and paid for by the Underwriting Agency pursuant to the provisions of ARTICLE IV, A (1) and ARTICLE IV, B, in those instances where advance payments made to the Contractor pursuant to this ARTICLE V are outstanding, will be made in the amount specified in said ARTICLE IV, A (1) and ARTICLE IV, B, less an amount equal to thirty percent (30%) of the price specified in Schedule A;

D. On the last day of each month during which any advances were outstanding, with the exception of the month in which the first advance was made, the Contractor shall pay to the Underwriting Agency interest on such advances at the rate of four percent (4%) per annum. Such interest shall be calculated on the amount of advances outstanding as of the first day of the month, and shall be computed as one-twelfth ($1/12$) of the annual rate. If, on the first day of any month, there is due to the Contractor a payment for machine tools completed or stored and invoiced in the preceding month to the Underwriting Agency pursuant to ARTICLE IV, A (1) and ARTICLE IV, B, the amount of the advance to be repaid by deduction from such invoices shall be deducted from the amount of advances outstanding as of the first day of the month for purposes of computing interest;

E. The Contractor shall submit monthly, so long as advances are outstanding, to the Underwriting Agency "Machine Tool Pool Contract Monthly Report, Schedule A—Status of Advances," GSA Form 616A, in accordance with reporting procedures issued with the form by the Underwriting Agency;

F. The Contractor agrees that so long as any funds advanced to the Contractor by the Underwriting Agency remain due and unpaid, the Contractor shall submit to the Underwriting Agency reports and statements truly and accurately reflecting the financial status of the Contractor, in such form and at such periods (but in no event less frequently than annually) as are usually made by the Contractor in the normal course of business;

G. The Contractor agrees that so long as any funds advanced to the Contractor by the Underwriting Agency remain due and unpaid, all materials, supplies, components and equipment acquired by the Contractor or a subcontractor for or incident to the performance of this contract shall be impressed with a lien in favor of the Underwriting Agency in an amount equivalent to the amount of funds advanced and so remaining due and unpaid plus interest thereon at the rate of four percent (4%) per annum; said lien to be paramount with respect

to such materials, supplies, equipment, and components as against all other obligations and liabilities of the Contractor and the subcontractor of whatsoever nature: *Provided, however,* That upon fabrication or incorporation of said materials, supplies, components, and equipment into a completed tool called for by Schedule A of this contract and upon elimination of such completed tool from the contract as provided for in ARTICLE III, or upon completion or storage of such tool as provided for in ARTICLE IV, the materials, supplies, components, and equipment so fabricated or incorporated into such completed tools automatically shall be released from the lien created by this ARTICLE V, G. The Contractor agrees to incorporate into all subcontracts executed for or incident to the performance of this contract such provisions as are necessary to effectuate the provisions of this paragraph.

ARTICLE VI—*Assignment of Claims.* A. No monies due or to become due the Contractor from the Government under this contract may be assigned in the event an advance payment is made pursuant to ARTICLE V hereof.

B. Except as otherwise provided in ARTICLE VI, A, hereof, pursuant to the provisions of the Assignment of Claims Act of 1940, as amended (31 U. S. Code 203, 41 U. S. Code 15), if this contract provides for payments aggregating $1,000 or more, claims for monies due or to become due the Contractor from the Government under this contract may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency; and may thereafter be further assigned and reassigned to any such institution. Any such assignment or reassignment shall cover all amounts payable under this contract and not already paid, and shall not be made to more than one party, except that any such assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in such financing. Notwithstanding any other provision of this contract, payments to an assignee of any monies due or to become due under this contract shall not, to the extent provided in said Act, as amended, be subject to reduction or set-off.

C. In no event shall copies of this contract or any of the plans, specifications, or other similar documents relating to work under this contract, if marked "Top Secret," "Secret," "Confidential," or "Restricted," be furnished to any assignee of any claim arising under this contract or to any other person not entitled to receive the same: *Provided,* That a copy of any part or all of this contract so marked may be furnished, or any information contained therein may be disclosed to such assignee upon the prior written authorization of the Contracting Officer.

ARTICLE VII. The Contractor expressly warrants that all articles, materials, and work covered by this contract will be of good material and workmanship, free from defects therein, and will conform to any specifications, drawings, or other descriptions now published by the Contractor as applicable to the articles identified in Schedule A, or to any changes therein hereafter agreed upon by the Contractor and the Underwriting Agency, and that the articles will be fit for the usual purposes for which such machines are intended in the industry.

ARTICLE VIII. All items completed by the Contractor under this contract, upon completion thereof, will be subject to inspection at the Contractor's plant and rejection for non-compliance with the warranties contained in ARTICLE VII, and the Contractor shall notify the Underwriting Agency forthwith upon completion of the item that it is ready for inspection. Except as otherwise provided in ARTICLE IV, D, inspection shall be deemed waived unless it shall take place within ten (10) days after receipt of notice by the Underwriting Agency that the item is ready for inspection.

ARTICLE IX. The Contractor agrees to submit immediately confidential reports in reasonable detail if it has cause to believe that there is active danger of espionage or sabotage.

ARTICLE X. The Underwriting Agency may cancel this contract in whole or in part by written notice to the Contractor.

A. Upon receipt of notice of complete or partial cancellation, the Contractor shall:

(1) Complete all work on particular machine tools affected by the cancellation which, upon receipt of notice of complete or partial cancellation, are ninety percent (90%) or more complete;

(2) Unless otherwise authorized or directed, discontinue all work and the placing of all orders and subcontracts in connection with the contract if com-

pletely canceled or in connection with any machine tool or component part thereof which may have been rendered obsolete or unusable in the performance of the contract by partial cancellation, and cancel all existing orders and all subcontracts for materials, supplies, and complete items or parts entered into for the purpose of completing the cancelled contract or the obsolete or unusable machine tool or component part, in so far as such orders and subcontracts are cancellable without cost;

(3) Unless otherwise authorized or directed, cancel all existing orders and all subcontracts for materials, supplies, and completed items or parts, entered into for the purpose of completing the cancelled contract or the obsolete or unusable machine tool or component part which are not cancellable without cost and proceed to settle and discharge all obligations resulting from such cancellation upon terms and conditions most advantageous to the Underwriting Agency, securing to the Underwriting Agency the benefits of any remaining rights which the Contractor may have under such orders or subcontracts;

(4) Unless otherwise authorized or directed, transfer to the Underwriting Agency, by delivery or by such other means as may be directed, title to all completed items, all uncompleted items and all materials and supplies, in connection with the cancelled contract or obsolete or unusable machine tool or component part, except all defective or rejected items whether completed or uncompleted and all defective or rejected materials and supplies;

(5) Upon settlement and discharge of all obligations in accordance with ARTICLE X, A (3), and upon transfer of all completed items, all uncompleted items, and all materials and supplies in accordance with ARTICLE X, A (4), but in no event later than sixty (60) days subsequent to receipt of notice of complete or partial cancellation, the Contractor will repay to the Underwriting Agency the balance of all outstanding advances relating to the portion cancelled, plus interest thereon at the rate of four percent (4%) per annum calculated in accordance with ARTICLE V, D, less any amount payable to the Contractor by the Underwriting Agency in accordance with ARTICLE X, B.

B. The Underwriting Agency shall, in event of cancellation of the contract in whole or in part, compensate the Contractor as follows less the amount of all outstanding advances relating to the portion cancelled:

(1) By reimbursing the Contractor in accordance with ARTICLE IV for all work either completed in accordance with ARTICLE X, A (1) or which was completed on the date of receipt of notice of whole or partial cancellation;

(2) By reimbursing the Contractor for all actual expenditures for labor, materials and supplies made with respect to all uncompleted items and all materials and supplies transferred pursuant to ARTICLE X, A (4), and all other proper costs with respect thereto, including overhead and administrative expense, certified by the Contractor and approved by the Underwriting Agency;

(3) By reimbursing the Contractor for all proper expenditures made in settling or discharging his outstanding obligations under ARTICLE X, A (3).

ARTICLE XI. The Contractor agrees, upon demand, to assign to the Underwriting Agency all of the Contractor's rights and claims for damages or for other compensation due by reason of cancellation by a substituted purchaser of any contract between the Contractor and such substituted purchaser for the purchase of items which upon invoice or shipment to such purchasers would be eliminated from this contract under ARTICLE III hereof, and to deliver to the Underwriting Agency all such damages or other compensation received by the Contractor from the substituted purchaser because of such cancellation.

ARTICLE XII. The Contractor shall at all reasonable times furnish such reports as the Underwriting Agency or its duly authorized representatives may require, and permit such Agency to inspect and audit the Contractor's books and records with respect to the Contractor's performance hereunder.

ARTICLE XIII. In connection with the performance of work under this contract, the Contractor agrees not to employ any person undergoing sentence of imprisonment at hard labor.

ARTICLE XIV. If this contract is for the manufacture or furnishing of materials, supplies, articles, or equipment in an amount which exceeds or may exceed $10,000 and is otherwise subject to the Walsh-Healey Public Contracts Act as amended (41 U. S. Code 35–45), there are hereby incorporated by reference all representations and stipulations required by said Act and regulations issued thereunder by the Secretary of Labor, such representations and stipula-

tions being subject to all applicable rulings and interpretations of the Secretary of Labor which are now or may hereafter be in effect.

ARTICLE XV. In connection with the performance of work under this contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, or national origin; and further agrees to insert the foregoing provision in all subcontracts hereunder except subcontracts for standard commercial supplies or for raw materials.

ARTICLE XVI. No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE XVII. The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty the Underwriting Agency shall have the right to annul this contract without liability or in its discretion to deduct from the contract price or consideration the full amount of such commission, percentage, brokerage, or contingent fee. The Contractor represents that he ☐ has, ☐ has not, employed or retained a company or person (other than a full-time employee) to solicit or secure this contract, and agrees to furnish information relating thereto as requested by the Contracting Officer.

Executed, as of the day and year first written above, for the UNITED STATES OF AMERICA acting by and through the

GENERAL SERVICES ADMINISTRATION

By _____

_____

(Title)

Accepted, as of the day and year first written above, for

_____

(Full corporate or firm name)

By _____

(Signature and title)
(Officer or partner)

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