

DEPARTMENT OF COMMERCE
BUREAU OF STANDARDS
WASHINGTON

Letter
Circular
LC 136

(December 5, 1924)

MEMORANDUM REGARDING
PREPARATION OF WIRE ROPE SPECIMENS
FOR TENSILE STRENGTH TESTS.

Various departments of the Government frequently send samples of wire rope to the laboratories of the Bureau of Standards to be tested for tensile strength. Before the tests can be undertaken the wires at the ends of each specimen must be separated and cleaned thoroughly and zinc cones of suitable dimensions must then be cast on the ends of the specimen. These zinc cones fit split taper sockets in the testing machine.

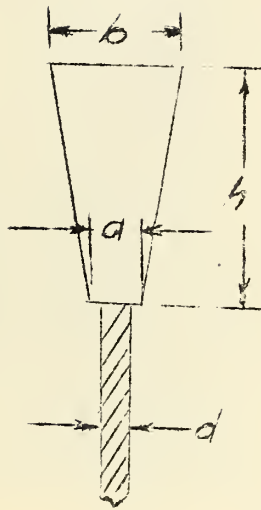
Owing to the congestion of work in our machine shop where the wire rope samples are ordinarily equipped with cones preparatory to testing, long delays may occur before the samples are ready for test. We therefore request other Government departments when purchasing wire rope on tensile strength specifications to specify that the manufacturer shall equip the test specimens with zinc cones before submitting the specimens for test. If the samples of wire rope are supplied with the zinc cones on the ends, they can usually be tested within a few days.

Cast iron moulds can be used for casting these cones. They must be split longitudinally to allow them to be removed from the specimen. A specimen should have a length of 5 feet between cones.

Dimensions of the cones for wire rope up to 2 inches in diameter are given in the following table. The taper specified has been in use at the Bureau for 15 years with satisfactory results.

TABLE I.

Sizes of Sockets for Wire Rope
Tensile Test Specimens.



Diam. of Wire Rope Inch	Small diam. of Cone Inch	Large diam. of Cone Inch	Height Inch
<u>d</u>	<u>a</u>	<u>b</u>	<u>h</u>
Up to 7/8"	1	2 7/8	5
1" - 1 3/4	1 7/8	3 3/4	5
1 13/16 - 2"	2 1/8	5 1/8	8

If the rope is over 2 inches in diameter, it will be socketed at the Bureau of Standards.

Your cooperation in this matter is earnestly requested.

