and test set forth in paragraph (b) of this section.
(b) The specimen joint must be:
(1) Visually examined during and after assembly or joining and found to have the same appearance as a joint or photographs of a joint that is acceptable under the procedure; and
(2) In the case of a heat fusion, solvent cement, or adhesive joint:
(i) Tested under any one of the test methods listed under §192.283(a) applicable to the type of joint and material being tested;
(ii) Examined by ultrasonic inspection and found not to contain flaws that would cause failure; or
(iii) Cut into at least 3 longitudinal straps, each of which is:
(A) Visually examined and found not to contain voids or discontinuities on the cut surfaces of the joint area; and
(B) Deformed by bending, torque, or impact, and if failure occurs, it must not initiate in the joint area.
(c) A person must be requalified under an applicable procedure, if during any 12-month period that person:
(1) Does not make any joints under that procedure; or
(2) Has 3 joints or 3 percent of the joints made, whichever is greater, under that procedure that are found unacceptable by testing under §192.513.
(d) Each operator shall establish a method to determine that each person making joints in plastic pipelines in the operator’s system is qualified in accordance with this section.

§ 192.309 Repair of steel pipe.
(a) Each imperfection or damage that impairs the serviceability of a length of steel pipe must be repaired or removed. If a repair is made by grinding, the remaining wall thickness must at least be equal to either:
(1) The minimum thickness required by the tolerances in the specification to which the pipe was manufactured; or
(2) The nominal wall thickness required for the design pressure of the pipeline.
(b) Each of the following dents must be removed from steel pipe to be operated at a pressure that produces a hoop stress of 20 percent, or more, of SMYS, unless the dent is repaired by a method that reliable engineering tests and analyses show can permanently restore the serviceability of the pipe:
(1) A dent that contains a stress concentrator such as a scratch, gouge, groove, or arc burn.
(2) A dent that affects the longitudinal weld or a circumferential weld.
(3) In pipe to be operated at a pressure that produces a hoop stress of 40
§ 192.311 Repair of plastic pipe.

Each imperfection or damage that would impair the serviceability of plastic pipe must be repaired or removed.  

[Amdt. 192–93, 68 FR 53000, Sept. 15, 2003]

§ 192.313 Bends and elbows.

(a) Each field bend in steel pipe, other than a wrinkle bend made in accordance with §192.315, must comply with the following:

(1) A bend must not impair the serviceability of the pipe.

[b]§ 192.315 Wrinkle bends in steel pipe.

(a) A wrinkle bend may not be made on steel pipe to be operated at a pressure that produces a hoop stress of 30 percent, or more, of SMYS.

(b) Each wrinkle bend on steel pipe must comply with the following:

(1) The bend must not have any sharp kinks.

(2) When measured along the crotch of the bend, the wrinkles must be a distance of at least one pipe diameter.

(3) On pipe 16 inches (406 millimeters) or larger in diameter, the bend may not have a deflection of more than 1½° for each wrinkle.

(4) On pipe containing a longitudinal weld the longitudinal seam must be as near as practicable to the neutral axis of the bend.

[Amdt. 192–85, 63 FR 37503, July 13, 1998]