



Extent of Visual and Radiographic or Ultrasonic Examination as per fluid service.

	<u>Category D</u>	<u>Normal</u>	<u>Severe Cyclic / Category M</u>	<u>Elevated Temperature</u>
<p>Visual</p>	<p>No specific limit. Examiner shall be satisfied that components, materials and workmanship conform to the requirement of this code and engg design.</p>	<p>1.As minimum 5% (now 100 % as per B 31.3-2018) of fabrication. For welds, each welder's and welding operator's work shall be presented. 2.100 % of fabrication for longitudinal welds, except those in components made in accordance with listed specification. 3. Random examination of threaded, bolted and other joints including distortion, cold spring, alignment, supports check during erection of piping. When pneumatic testing is to be performed, all threaded, bolted and other mechanical joints shall be examined.</p>	<p>1. All fabrication shall be examined. 2. All threaded, bolted and other joints shall be examined. 3.All piping erection shall be examined to verify dimensions, alignment, supports, guides etc.</p>	<p>1.All fabrication shall be examined. 2. All threaded, bolted and other joints shall be examined. 3.All piping erection shall be examined to verify dimensions, alignment, supports, guides etc.</p>
<p>Radiography & Ultrasonic</p>	<p></p>	<p>1. Min. 5% of circumferential butt and miter groove welds shall be examined fully by random radiography or ultrasonic examination. The welds to be examined in each designated lot, shall include work product of each welder or welding operator whose welds are part of the lot. 2. Spot radiography for longitudinal groove welds having weld joint factor E_j of 0.90 of at least 300mm in 30m of weld for each welder or welding operator.</p>	<p>1. All circum. butt & mitre welds & all fabricated <u>branch connection welds</u> shall be 100% radiographed or 100% ultrasonic examination (if specified in the engineering design). 2. Socket and branch welds that are not radiographed shall be examined by magnetic particle or liquid penetrant methods.</p>	<p>The examination requirements for normal fluid service shall be applicable with the following exceptions: 1.100 % radiography or ultrasonic of fabrication for longitudinal and spiral (helical seam) welds in P.No. 4 and 5 materials, except those in components made in accordance with a listed specification. 2. Socket and branch welds in P.No 4 & 5 that are not radiographed or ultrasonically examined shall be examined by magnetic particle or liquid penetrant methods. 3. Autogenously welded, welded without filler material austenitic stainless steel and austenitic high nickel alloys shall receive NDT in accordance with the material specification.</p>