

Coded Note Number: **IC215**

Revision: **C012**

Date: **December 03, 2018**

Title: **MOD REQTS FOR CM-I STL FITTINGS/FLANGES**

Purchase Order (PO) items referencing this note shall meet the following requirements:

1. Material. Fittings/flanges shall be manufactured from forgings, where possible, or formed from seamless tubing. Pipe caps and spectacle flanges may be made from plate if they are formed seamless.

1.1. The use of welded starting material and weld repair is strictly prohibited.

1.2. The maximum carbon content for all starting material options shall be 0.30 percent.

2. Non-Destructive Test (NDT) Inspection.

2.1. A 100 percent Ultrasonic Test (UT) inspection in accordance with NAVSEA Technical Publication T9074-AS-GIB-010/271, with Change Notice 1, shall be performed on each fitting/flange 6 inch NPS and larger.

2.1.1. Shear wave UT shall be used for fittings. UT of the formed fitting is not required provided that shear wave UT in two opposite directions was performed on the starting material (pipe) in accordance with MIL-P-24691 requirements.

2.1.2. Flanges shall be inspected by longitudinal wave UT.

2.1.3. MIL-F-24339 Rev. C, Amend. 1, with IC. # 2, section 4.5.4.3.2, shall be used to interpret UT inspection results.

2.2. A Magnetic Particle (MT) inspection in accordance with NAVSEA Technical Publication T9074 AS-GIB-010/271, with Change Notice 1 shall be performed on each finished fitting/flange 6 inch NPS and larger.

2.2.1. MIL-F-24339 Rev. C, Amend. 1, with IC. # 2, section 4.5.4.2.2 with guidance from Table V, shall be used to interpret MT inspection results.

2.3. A Liquid Penetrant Test (PT) inspection shall be used in lieu of MT inspection only for those areas for which configuration or accessibility make MT impractical. Inspection shall be accomplished in accordance with NAVSEA Technical Publication T9074-AS-GIB-010/271, with Change Notice 1.

2.3.1. MIL-F-24339 Rev. C, Amend. 1, with IC. # 2, section 4.5.4.1.2 with guidance from Table V, shall be used to interpret PT inspection results.

2.4. All tees less than 6 inch NPS manufactured by cold-forming method(s) shall be PT or MT examined and evaluated in accordance with ASTM A234 requirements in way of the branch, after final heat treat. In lieu of performing MT or PT as specified in ASTM A234 on tees less than 6 inch NPS, MT or PT performed in accordance with 2.2 or 2.3 herein is permissible.

3. Hydrostatic Test. A Hydrostatic Test is invoked and shall be conducted for each fitting. Hydrostatic test pressures shall be in accordance with that required by the matching pipe specification, ASTM A530-99, except that the maximum hydrostatic pressure shall not exceed 110 percent of the calculated hydrostatic test pressure. $S = 21,000$ psi for hydrostatic pressure calculations. Test pressure shall be held for a minimum of 2 minutes without weeping, leaking, bulging or permanently deforming the fitting. (Flanges, Bosses, and Integrally Reinforced Branch Fittings are not required to be hydrostatically tested.)

4. Tension Test. A tension test shall be conducted for each lot of fittings/flanges.

Revision History Table		
Rev	Description	Revision Date
C012	<p><u>ADDED:</u></p> <p>1. Added verbiage reminding vendor of NDT requirements in ASTM A234 for cold formed tees and the allowance to perform the NDT on these tees in accordance with Tech Pub 271 in lieu of ASTM A234.</p> <p><u>REVISED:</u></p> <p>2. Title</p> <p>3. Paragraph letters changed to numbers to support new iDS Coded Note format.</p> <p>4. Re-ordered / Re-organized paragraphs for improved organization and clarity.</p> <p><u>REMOVED:</u></p> <p>5. Removed the verbiage on the use of bar stock material as starting material requirements within note already prohibit the use of bar stock.</p> <p>6. Removed every occurrence of previous revision control (<i>[Text deleted]</i> and bold text).</p>	12/03/2018

This revision history is provided for convenience and does not alleviate the supplier's responsibility with understanding and complying with the full coded note.