

**Document Title: Procedure for Manufacture (Machining) of Forged Fittings & Flanges**

<p><b>1.0 SCOPE</b></p>	<p>This procedure outlines the process to Machine &amp; Drill (as applicable), 'As-Forged' Fittings &amp; Flanges and ensure that all the manufactured fittings comply with stated requirements and are manufactured under controlled conditions.</p>	<p style="text-align: center;"><small>Types of Flanges</small></p>
<p><b>2.0 POLICY</b></p>	<p>These methods are used in cases where in-house forgings are not practical / available.</p>	
<p><b>3.0 METHOD</b></p>	<p><b>MANUFACTURING:</b> Forgings are purchased in the "As-Forged" condition, with Test Coupons (to be used for Product Testing). These As-Forged items are received along with the following, 1) Manufacturer's Test Certificate 2) Heat Treatment Charts</p>	
<p><b>FINAL PROCESSES:</b></p>	<p>After Internal Inspection, these are then forwarded to the Cutting / Machine Shop / NDT Section / Shot Blasting Section / Rust Preventive application Section / Paint Section, as applicable, for further processing.</p> <p><b>TESTING</b> (refer separate procedures for details): Samples are drawn for Laboratory Testing (Chemical, Mechanical, Hardness, as applicable, as per stated Material Standard).</p>	
<p><b>FINAL INSPECTION</b> (refer separate procedures for details):</p>	<p>Final Visual and Dimensional Inspections shall be completed by QC Engineer after Final Machining and Finishing Operations, as per the Standard QAP. Tolerances shall be as per the stated Dimensional Standards.</p>	
<p><b>4.0 PROCESS VALIDATION</b></p>	<p>Visual and Dimensional Inspections have resulted in compliances with the Standards. Material Testing (Chemical, Mechanical [Transverse / Longitudinal], Metallurgical, etc) have resulted in compliances with the Standards.</p>	
<p><b>5.0 RESPONSIBILITY</b></p>	<p>This procedure is the responsibility of the QC Engineer and Production Engineer.</p>	
<p><b>6.0 REFERENCES</b></p>	<p>Dimensional Standards – ASME, MSS SP Material Standards – ASME, ASTM, IS, DIN, EN</p>	



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