
	DOCUMENT NO FSD-1-1	REVISION A2	PAGE 1 of 2
Materials	TITLE:	SPECIFICATION FOR MATERIALS SUPPLIED TO SA 182	

1. Scope
 - 1.1. The specification describes the requirements of materials supplied to SA 182.
2. Reference Documents
 - 2.1. SA 182/SA 182(M)
 - 2.2. FSD-1-2 Supplemental testing for forged bar.
3. General
 - 3.1. Equivalent ASTM Specification(s)
 - 3.1.1. Equivalent ASTM acceptable specifications with year dates are ASTM A182-87a thru 04a.
 - 3.2. Additional Requirements
 - 3.2.1. Certified mill test report required together with copies of base material certificates and heat treatment charts identified to material cast numbers.
4. Flanges/Fittings
 - 4.1. Inspection Requirements
 - 4.1.1. Material certificates to EN10204 3.1b are required.
 - 4.2. Marking
 - 4.2.1. All marking must include the following:
 - 4.2.1.1. Manufacturer's name or symbol
 - 4.2.1.2. Heat Number
 - 4.2.1.3. Service rating (e.g. 300LB)
 - 4.2.1.4. Designation F1, F2 etc.
 - 4.2.1.5. Specification Number ASME B16
 - 4.2.1.6. Grade of material
 - 4.2.1.7. Size
 - 4.2.1.8. Schedule
5. Bar Material.
 - 5.1. All bar must be forged, rolled bar will not be accepted. All bar with an outside diameter greater than 114.3mm (4 1/2") must have the additional testing described in FSD-1-2
 - 5.2. Material Marking
 - 5.2.1. Manufacturers Name
 - 5.2.2. Purchasers Name
 - 5.2.3. Purchase O/No.
 - 5.2.4. Heat No.
 - 5.2.5. Specification No
 - 5.2.6. Material Grade

	DOCUMENT NO FSD-1-1	REVISION A2	PAGE 2 of 2
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5.3. Certification Requirements

- 5.3.1. Chemical Analysis
- 5.3.2. Tensile Properties
- 5.3.3. Hardness
- 5.3.4. Heat Treatment to Table 1
- 5.3.5. Grain Size
- 5.3.6. Supplementary Testing
- 5.3.7. Elongation must show a gauge length of either 2" or 4D
- 5.3.8. The standard must be specified as either of the following showing year date and revision letter in every instance:
 - 5.3.8.1. The latest edition of SA 182/182M or,
 - 5.3.8.2. An equivalent ASTM specification as mentioned in 3.1.

6. Approvals

Prepared By: G. Lowndes Title: Senior Design Engineer Date: 11 January 2008

Reviewed By: A. Hay Title: Works Manager Date: 11 January 2008

Approved By: A. Hay Title: Works Manager Date: 11 January 2008