



Engineering Standards/Specifications

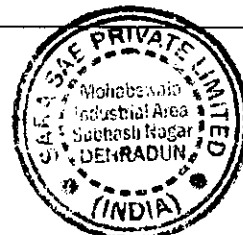
Procedure No.

SES 26-713

Title

MATERIAL SPECS, STAINLESS AND HEAT RESISTING STEEL BARS
AND SHAPES, ASTM A-276, GRADE 304L AND GRADE 316L

V.P. of Manufacturing	V.P. of Engineering	V.P. of QA/QC	V.P. of Sales/ Marketing	Revision Description	Release Date	Rev. Ltr
Written By		Revised By				



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1.0 SCOPE

- 1.1 This specification covers austenitic stainless steel bars and shapes made to low carbon chemistry, intended for welding to other components that may be PWHT.

2.0 APPLICABLE SPECIFICATIONS

- 2.1 ASTM A-276 (UNS S 30403)
2.2 ASTM A-276 (UNS S 31603)

3.0 BASIS OF PURCHASE

- 3.1 Orders for material under this specification shall include the following information, as required, to describe the required material adequately:
- 3.1.1 ASTM specification number, date of issue, and grade.
 - 3.1.2 Exception to the specification or special requirements.
 - 3.1.3 Name of material.
 - 3.1.4 Finish: Material to this specification is furnished in the hot finished or cold finished condition.
 - 3.1.5 Dimensions.
 - 3.1.6 Ladle analysis or test report.

4.0 CHEMISTRY

- 4.1 The steel shall conform to the chemical composition specified in ASTM A-276 for Grade 304L or Grade 316L.

5.0 MECHANICAL PROPERTIES

- 5.1 The steel shall meet the following minimum tensile requirements in the annealed condition:



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	<u>HOT FINISHED</u>	<u>COLD FINISHED</u>	
	<u>ALL</u>	<u>UP TO</u> <u>1/2" Incl.</u>	<u>OVER</u> <u>1/2"</u>
Tensile Strength, psi	70,000	90,000	75,000
Yield Strength, psi	25,000	45,000	30,000
Elongation, 2" gauge, length	40	30	30
Reduction in Area, %	50	40	40

6.0 MARKINGS AND SHIPPINGS

6.1 In addition to the markings prescribed in ASTM A-276, the markings shall include, by steel stamping, the SARA SAE P/O number, the ASTM specification, and the mill heat number.

7.0 INSPECTION

7.1 The inspection requirements of ASTM A-276 shall apply to this specification.

8.0 SPECIAL REQUIREMENTS

8.1 The stainless steel shall be manufactured by the electric furnace melting process, in which molten metal may be AOD treated prior to pouring.

9.0 CERTIFICATION

9.1 A certification shall be provided to SARA SAE with each shipment. In addition, the original and a copy will be provided to the SARA SAE Purchasing Department.

9.2 The following information is required:

9.2.1 Mill chemical analysis.

9.2.2 Tensile Properties

9.2.3 SARA SAE Purchase Order Number

