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TITLE: TECHNICAL DATA SHEET

Description: Material Purchase Specification Date: See Signatures

Technical Data Sheet for the supply of: ASME SA-240M, Grade 316L, Austenitic Stainless-Steel Plate, with Plate Thicknesses above 5 mm and less than 16 mm as per ASME Code Section II, Part A

	Name	Signature	Date
Prepared	OL Siko Mechanical Engineer		2025/01/14
Reviewed	GJ v Heerden Mechanical Engineer		2025/01/14
Reviewed	TP Choou QC Manager		2025/01/15
Reviewed	CIK Corbitt QA Manager		2025/01/15
Approved	MD van Heerden MO Manager		2025/01/17
Approved ESKOM Representative			

REVISION HISTORY

Rev	Date	Description of changes
1.0	See signature block	First issue

1. SCOPE

- a. Supplying of stainless-steel plate material that shall conform to all the applicable requirements of:
 - i. SA-240M, Grade 316L, Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications, ref. [1];
 - ii. SA-480M, Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip, ref. [2];

2. APPLICABLE DOCUMENTS

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- [1]. ASME BPVC, Section II, Materials, Part A, SA-240M, 2007 Edition with 2009 Addenda.
- [2]. ASME BPVC, Section II, Materials, Part A, SA-480M, 2007 Edition with 2009 Addenda.
- [3]. DSG-310-406, Revision 0, Piping, Flanges and Fittings for ASME III NC and ND Installation
- [4]. EN 10204:2004- Inspection Documents for the Delivery of Metallic Products.

3. BASIC REQUIREMENTS

3.1. Ordering Information:

Material specification:	ASME SA-240M, ref. [1]
Type/UNS Designation:	Grade 316L/S31603, ref. [1]
Name of Material:	Austenitic Stainless Steel.
Quantity:	As per Purchase Order.
Condition:	Hot- or Cold-Rolled and Solution Annealed.
Finish:	No. 4, both surfaces (Section 7 of this TDS).
Form:	Plate.
Dimensions:	As per Purchase Order and par. 9 of SA-480M, ref. [2].
Additional Requirements:	Not Applicable
Restrictions:	Not Applicable.
Marking Requirements	As per Section 11 of this TDS.
Preparation for Delivery:	As per Section 12 of this TDS.
Magnetic Permeability Test	Not Applicable.

3.2. SI units of measurement shall be used.

3.3. All documents shall be provided in the English language.

3.4. Notification and Hold Points, if any, shall be as stated in the Purchase Order.

4. CHEMICAL COMPOSITION REQUIREMENTS

4.1. Chemical composition shall be as per par. 4 of SA-240M for UNS S31603 (Grade 316L), ref. [1].

4.2. An analysis of each heat is required as per par. 6 of SA-480M, ref. [2].

5. MECHANICAL PROPERTIES

5.1. Mechanical properties shall be as per par. 5 of SA-240M for UNS S31603 (Grade 316L), ref. [1].

5.2. Charpy impact tests are not required.

6. HEAT TREATMENT

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6.1. Solution annealing as per par. 15 of SA-480M, ref. [2].

7. WORKMANSHIP, FINISH AND APPEARANCE

7.1. Hot-rolled or Cold-rolled and solution annealed, with both surfaces cleaned and polished to a No. 4 finish, as described in par. 13 of SA-480M, ref. [2].

8. REPAIRS

8.1. Repair of surface defects on plates by welding is not permitted.

9. EXAMINATION AND TESTING REQUIREMENTS

9.1. All applicable examination and testing required by SA-240M, ref. [1], and SA-480M, ref. [2], shall be performed.

10. NON-CONFORMANCES

10.1. The Purchaser shall be notified by non-conformance reports of any condition that does not comply with specified requirements of this TDS, the Purchase Order, applicable Codes and Standards as listed in Section 2 of this document, during the delivery, or on the detection of any Counterfeit, Fraudulent or Suspect Items.

10.2. Disposition of the notified non-conformances require approval from the Purchaser.

11. IDENTIFICATION AND MARKING OF MATERIAL

11.1. In accordance with:

11.1.1. Paragraph 25.1 of SA-480M, ref. [2].

11.1.2. Requirements of this TDS.

11.2. Photos of the applied marking on the material shall be sent to the Purchaser for acceptance prior to packaging and shipping.

11.3. If material identification is done by stamping on the plates, it shall be done with low stress stamps.

11.4. When plates are cut, the markings shall be transferred to each piece before being cut. The transferred markings need not be witnessed by an Authorized Inspector.

12. HANDLING, PACKAGING AND DELIVERY

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12.1. The Supplier shall not dispatch material from its works until it has received the Purchaser's written acceptance of the Material certificates.

12.2. Methods of handling and preparation for shipment, final cleaning, packaging and protection arrangement for shipment shall be submitted to the Purchaser for approval.

12.3. All items shall be protected from damage and contamination (inside and outside).

12.4. The Material Supplier shall provide suitable means to clearly identify the following information on the outside of the packaging:

12.4.1. Purchaser's Purchase Order Number;

12.4.2. Material Specification, Class/Grade of Material;

12.4.3. Overall weight of Package;

12.5. Inspection and Release notes shall accompany all material for delivery. No material will be accepted without the abovementioned release notes.

12.6. It is important that the full complement of items in the Purchase Order is to be delivered as specified in the Purchase Order.

13. RIGHT OF ACCESS

13.1. Access to the Supplier's and its Sub tier Supplier's facilities shall be provided to the Purchaser, Authorized Inspector or others authorized by the Purchaser including his customer and end user for surveillance, inspection, or audit.

14. DOCUMENTATION TO BE PROVIDED BY THE SUPPLIER

14.1. The Material Supplier shall submit certified test reports and certificates as required by ref. [1] and ref. [2].

14.2. The Supplier shall furnish certified test reports and certificates as required by ref. [1], ref. [2] and this TDS in accordance with Type 3.1 of ref. [4] (As permitted in ref. [3]) to the Purchaser with the shipment of items. These shall include but not limited to:

14.2.1. Material Suppliers Quality System Certificate number and expiry date;

14.2.2. List of all certificates and expiry dates;

14.2.3. Description of Material;

14.2.4. Heat/Cast number;

14.2.5. Statement on method of manufacturing;

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- 14.2.6. Heat treatment type (if applicable);
- 14.2.7. Results of Chemical Analysis;
- 14.2.8. Results of Mechanical Property tests;
- 14.2.9. Results of and Compliance to all defined Supplemental/Additional Requirements;
- 14.2.10. Non-destructive Testing/Examination Reports, if applicable;
- 14.2.11. Sketches or drawings where applicable/asked for;
- 14.2.12. Photocopy/facsimile, rubbing or digital photo of Identification Markings;
- 14.2.13. Statement that weld repairs were not made;
- 14.2.14. Clear reference to the producing mill or factory.

- 15.3. Electronic copies of the original material certificates as per section 14.1, above, shall be submitted for acceptance by the Purchaser prior to shipping of the material.
- 15.4. Original Certificates from the Mill are required.
- 15.5. All material certificates and test reports shall be traceable to the heat number marked on the material
- 15.6. The results of the micro-structure examination.

16. **QUALITY ASSURANCE REQUIREMENTS**

- 16.1. All general and specific Quality Assurance requirements stated in this Technical Data Sheet, the Purchase Order and ref. [4] shall be met.
- 16.2. The material supplier shall as a minimum be ISO 9001:2015 accredited