



**PLANT PURCHASING  
SPECIFICATION  
HYDERABAD**

**HY10783**

**Rev. No: 03**

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**FERRITIC STAINLESS STEEL SHEETS, PLATES AND STRIPS**  
**(ASTM A240 TYPE 409)**

**(ORDERING DESCRIPTION)**

**1.0 GENERAL:**

This specification covers the additional requirements of ferritic stainless steel sheets, plates and strips to be supplied as per ASTM A240 Type 409 (Latest version).

**2.0 APPLICATION :**

For applications in Gas Turbine hot gas path like exhaust plenum assemblies and exhaust ducting.

**3.0 CONDITION OF DELIVERY :**

No.1 Finish or No. 2D Finish for Sheets and No.1 Finish for plates. Sheets and Plates shall be supplied with sheared edges and strips with rotary sheared edges and in cut lengths. Any other condition for edges shall be mutually agreed upon.

**4.0 COMPLIANCE WITH NATIONAL / INTERNATIONAL STANDARDS:**

This specification is based on the following international standard ASTM A240 - TP409 - Cr & Cr-Ni stainless steel plate, sheet and strip for pressure vessels and for general applications.

Note: 1) The suppliers may quote their equivalent grades which shall be capable of meeting the requirements of ASTM A240 TP409 (Latest version) also.

2) In case, the suppliers quote their own equivalent grade, the complete details of the properties (Like chemical & mechanical) of their grade with further processing methods like welding, bending, heat treatment characteristics shall also be specified. The variations from ASTM A240 TP409 with their effects shall also be specified in their technical offer.

**Revisions :  
Changed to ordering description.**

**Issued :  
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**ENGG.**

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**5.0 DIMENSIONS AND TOLERANCES:**

**5.1 Sizes:** Material shall be supplied to the dimensions specified on the order.

**5.2 Tolerances:** The tolerances on material shall be as per ASTM A 480.

**6.0 FREEDOM FROM DEFECTS:**

The material shall be of uniform quality consistent with the good manufacturing and inspection practice. The steel shall have no defects of a nature or a degree that will be detrimental to the stamping, forming, machining or fabrication of finished parts.

**7.0 INSPECTION AT SUPPLIER'S WORKS:**

BHEL representative shall have free access at all times while the work on the contract is being performed, to all parts of the manufacturer's works. The manufacturer shall offer BHEL's representative all reasonable facilities without charge to satisfy the later that the material is being furnished in accordance with this specification. The manufacturer shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities do not exist at his works, the manufacturer shall make necessary arrangements for carrying out the prescribed tests elsewhere. The manufacturer shall notify BHEL in advance about the readiness of the material for inspection and testing.

BHEL reserves the right to test the material at BHEL's works and the final acceptance of the material shall be based on these test results.

**8.0 TEST CERTIFICATES:**

Three copies of test certificates shall be supplied unless otherwise stated on the order.

In addition, the supplier shall ensure to enclose one copy of test certificates alongwith their despatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information:

**BHEL References:**

HY 10783 Rev.No.03 / ASTM A240 TP409.

Order NO.

**Supplier's references**

Supplier's Name

Identification No.

Melt No.

Process of manufacture

Details of heat treatment.



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**Results of Tests:**

Results of dimensional inspection.  
Results of chemical analysis and mechanical tests.

**9.0 PACKING AND MARKING:**

Sheets shall be supplied in bundles or in packages each weighing upto a maximum of 3,000 kgs.

Sheets shall be securely packed in water-proof paper or hessian cloth and securely tied round with hoop iron and with wooden battens underneath to prevent the sheets from damage during transit.

For plates below 25mm thick, each pile (preferably of 16 plates) shall be marked with the supplier's identification mark, the melt number, ASTM A240 TP409 on the top plate.

Each plate of 25 mm thickness and above shall be stamped / painted with the supplier's identification mark the melt number and ASTM A240 TP409.

Plates shall be suitably packed to prevent damage during transit.

In addition, each bundle / package and each plate of 25 mm thickness and over shall bear the following information:

HY10783 (ASTM A240 TP409) : Ferritic Stainless Steel Sheets / Plates / Strips-Annealed.

BHEL Order No.

Consignment / Identification No.

Size and Weight.

Supplier's Name.

**10.0 REJECTION AND REPLACEMENT:**

If the material does not comply with the requirements of this specification during receipt inspection at BHEL or any defect found during the course of further processing, such material shall be rejected notwithstanding any previous certification of satisfactory testing and/or inspection.

The suppliers shall undertake to replace the rejected material at his own cost and the rejected material shall be taken back by the supplier after fulfilling the commercial terms and conditions.