

**STAINLESS STEEL SHEETS AND PLATES - ANNEALED  
ASTM A 240, TYPE 410**

FOR INTERNAL USE ONLY  
REMOVE THIS PREFACE SHEET BEFORE ISSUE TO SUPPLIERS

**Comparable Standards:**

- |             |   |   |
|-------------|---|---|
| 1. AMERICAN | : | ASTM A 240<br>Type: 410, Annealed.                |
| 2. INDIAN   | : | IS : 6911 - 1992<br>Gr : X 12Cr 12, Annealed (A2) |
| 3. EUROPEAN | : | EN 10088-2, Gr:X12Cr13.                           |

**Suggested/Probable Suppliers And Grades:**

Refer Plant Vendors list

**User Plant References:**

- |                   |   |              |
|-------------------|---|--------------|
| 1. HEEP - HARDWAR | : | HW 021 02 99 |
|-------------------|---|--------------|

Revisions :  
CI 27.3 of MOM of MRC-S&GPS

APPROVED : Interplant Material  
Rationalization Committee-MRC (S&GPS)

Rev. No. 06	Amd.No.	Reaffirmed	Prepared HARDWAR	Issued Corp. R&D	Dt. of 1st Issue JUNE, 1978
Dt.:15.06.2005	Dt :	Year :			

**STAINLESS STEEL SHEETS AND PLATES - ANNEALED  
ASTM A 240, TYPE 410****ORDERING DESCRIPTION****1.0 GENERAL :**

The sheets and plates shall conform to the latest version of ASTM A 240, Type: 410 and comply with the following additional requirements.

**2.0 APPLICATION :**

For general engineering purposes, where corrosion resistance is essential.

**3.0 CONDITION OF DELIVERY:**

Hot, annealed and descaled (Finish No.1).

Cold rolled, annealed (2B / 2 D).

**4.0 DIMENSIONS AND TOLERANCES:**

Material shall be supplied to the dimensions specified in BHEL order.

**5.0 CHEMICAL COMPOSITION:**

As per ASTM A 240, Type 410.

**6.0 TEST CERTIFICATES :**

Three copies of test certificates shall be supplied along with the following information:

**BHEL References :**

AA 107 38 -Rev. No.06 / ASTM A 240, Type:410  
BHEL order No,

**Supplier's References :**

Name  
Identification No.  
Melt No.  
Process of manufacture  
Details of heat treatment.

**Result of Tests:**

Dimensional inspection.  
Results of chemical analysis, mechanical tests

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### 7.0 PACKING AND MARKING :

Sheets shall be supplied in bundles or in packages each weighing upto a maximum of 3000kg. Plates shall be suitably packed to prevent damage during transit.

For plates below 25 mm thick, each pile (preferably of 16 plates) shall be marked with suppliers identification mark, 'AA 107 38 / ASTM A 240, Type:410, melt No., BHEL order No., on the top plate.

Each plate of 25mm thickness and above shall be stamped/painted with the suppliers identification mark, 'AA 107 38 / ASTM A 240, Type:410 , melt No., BHEL order No., on the top plate.

### FOR INFORMATION ONLY

#### CHEMICAL COMPOSITION

C	Si	Mn	Ni	Cr	S	P	Al
0.08-0.15	≤ 1.0	≤ 1.0	≤ 0.75	11.5-13.5	≤ 0.030	≤ 0.040	-

#### MECHANICAL PROPERTIES

Hardness, max		0.2% PS min N/mm <sup>2</sup>	UTS, min N/mm <sup>2</sup>	% El min	Bend Test Dia.
BHN	HRB				
217	96	205	450	20	180 <sup>0</sup>