



CORPORATE PURCHASING SPECIFICATION

AA12352

Rev No.03

PREFACE SHEET

ALUMINIUM ALLOY INGOTS, Gr: 4600

FOR INTERNAL USE ONLY

REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS

Comparable Standards:

1) INDIAN : IS 617-1994, Gr:4600

User Plant References:

- 1) CFFP, HARIDWAR :
- 2) BHOPAL :
- 3) HYDERABAD :

Revisions:
BS reference removed from preface sheet

APPROVED:
INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(FN)

Rev No.03	Amd No.01	Reaffirmed	Prepared	Issued	Dt. of 1 st Issue
Dt:19-03-2014	Dt:21-10-2017	Year:	CFFP, Haridwar	Corp.R&D	01-10-1977

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ALUMINIUM ALLOY INGOTS, Gr: 4600					
1.0 GENERAL: This specification governs the quality requirements of Aluminium Alloy Ingots of Gr.:4600. 2.0 APPLICATION: Used as raw material for the production of aluminium alloy castings. 3.0 CONDITION OF DELIVERY: As cast. 4.0 COMPLIANCE WITH NATIONAL STANDARDS: The material shall comply, in general, with the requirements of the following national standard and also meet the requirements of this specification. IS 617–1994, Gr: 4600: Aluminium & Aluminium Alloy Ingots and Castings for General Engineering Purpose 5.0 SIZE AND SHAPE: The material shall be supplied in the form of notched ingots each weighing maximum of 10 kg. 6.0 MANUFACTURE: Ingots shall be produced from primary metal producers only. 7.0 FREEDOM FROM DEFECTS: The ingots shall be clean and free from harmful defects like dross, slag and other oxide inclusions. 8.0 TEST SAMPLES: One test sample shall be selected from each melt for chemical analysis. Care shall be taken to discard the first drillings till a clear oxide-free surface is reached.					
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9.0 CHEMICAL COMPOSITION:

The chemical composition of the material, when analysed in accordance with IS 504 (Methods of chemical analysis of aluminium and its alloys) shall be as specified below:

Constituent	Requirement	
	Percent, Min.	Percent, Max.
*Copper	-	0.1
*Magnesium	-	0.1
Silicon	10.00	13.0
Iron	-	0.6
Manganese	-	0.5
Nickel	-	0.1
*Zinc	-	0.1
*Lead	-	0.1
*Tin	-	0.05
*Titanium	-	0.2
Aluminium	Reminder	

* These elements need not be determined. However, the supplier shall ensure that the composition of the material lies within the limits specified above.

10.0 INSPECTION AT SUPPLIER'S WORKS:

- 10.1 BHEL reserves the right to witness the testing of the material at supplier works and therefore the supplier shall notify the readiness of the material in advance.
- 10.2 BHEL may also opt for third party inspection. If so, BHEL may either specify a third party or else give a list of third party inspection agencies, out of which supplier may select one of his choice.
- 10.3 The supplier shall offer BHEL's representative all reasonable facilities, without charge to satisfy the latter that the material is being furnished in accordance with this specification. The supplier shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities are not available at his works, the supplier shall make necessary arrangements for carrying out the prescribed tests elsewhere.
- 10.4 BHEL may, at its discretion, test the material after receipt and acceptance of the material will be based on the BHEL's test results.
- 10.5 Supplier shall ensure that the material is free from extraneous material. The material shall be rejected if it is not free from extraneous material.
- 10.6 For result of analysis and properties of material the decision of BHEL shall be final and binding on the supplier.
- 10.7 If the material received is not found suitable according to the requirements, it shall be replaced free of cost by the supplier.
- 10.8 For any deviation, demanded by the supplier from the specification, prior approval of BHEL must be obtained.



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11.0 TEST CERTIFICATES:

Unless and otherwise stated, one original and three copies of certificates from the original manufacturer shall be supplied along with each consignment giving the following information.

In addition the supplier shall ensure to enclose one copy of test certificate along with the despatch documents to facilitate quick clearance of the material.

Manufacturer supplying material directly to BHEL should include BHEL PO No. in the Test Certificate. Any other supplier should provide a covering letter along with original manufacturer Test Certificate as above mentioning BHEL PO No.

The test certificate shall bear the following information:

BHEL order No

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Supplier's reference and name

Melt No.:

Results of Chemical analysis.

12.0 PACKING AND MARKING:

The material shall be suitably packed to prevent damage during transit.

Each package shall be legibly identified by colour coding as per IS: 2479 and marked with the following information.

AA12352: ALUMINIUM ALLOY INGOTS, Gr: 4600

BHEL Order No.

Melt No.

Quantity supplied.

Supplier's Name and reference, trade mark if any.

13.0 Referred Standards (Latest publications including amendments):

1) IS 504

2) IS 2479