



संस्थान क्रय विनिर्देश (हीप - हार्डवयर)

HW 12897

मुख पृष्ठ

PLANT PURCHASE SPECIFICATION
(HEEP - HARDWAR)

PREFACE
SHEET

SPECIAL TIN BASED ANTIFRICTION BEARING ALLOY

केवल आंतरिक प्रयोग हेतु
प्रदायक को देने से पूर्व इस मुखपृष्ठ को निकाल दें ।

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समतुल्य मानक/सूची आदि
COMPARABLE STANDARDS / CATALOGUES ETC. } :NIL

सुझाए/सम्भावित प्रदायक एवं श्रेणी
SUGGESTED / PROBABLE SUPPLIERS AND GRADES } :AS PER PMD

कोई अन्य जानकारी
ANY OTHER INFORMATIONS } : Based On TLV 9977/02 Nov' 2001

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अधिकृत करता है

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स्वत्वधिकार एवं गोपनीय
इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रत्यक्ष एवं
अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए ।

दिनांक एवं हस्ताक्षर
SIGN & DATE

सामग्री सूची संख्या
INVENTORY NO.

30/3/11
P-3061

Rev 05	APPROVED :	संस्थान मानक समिति PLANT STANDARDS COMMITTEE	Gp No. 2.65
At. 07.09.12	निर्माण PREPARED : MTE	जारी : मानक विभाग ISSUED : STANDARDS DIVISION	दिनांक : DATE : 19.08.88



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Special Tin Based Antifriction Bearing Alloy

1. General:

This specification governs the requirements of tin based antifriction bearing alloy.

2. Application:

For Babbitt lining of journal and thrust bearings on cast iron and cast/forged steel bearings shells.

3. Condition of Delivery: As cast ingots.

4. Dimension & Tolerances:

Weight of each ingot shall not be more than 3kg.

5. Freedom from Defects:

The ingots shall be homogeneous and free from non-metallic inclusions and shall have smooth appearance.

6. Manufacture:

The babbitt alloy shall be manufactured from virgin metals only. Return scrap shall not be used. The manufacturer shall take all precautions to ensure proper mixing of the alloying elements and the melt homogeneous.

7. Chemical Composition (weight %):

The chemical composition of the Babbitt when analysed in accordance with IS:1409 (methods of chemical analysis of antifriction bearing alloy) or by any other conventional / instrumental method shall be as follows:

Sn	Cd	Cu	Sb	Ni	As	Pb	Fe	Zn	Al
80.0 - 81.9	1.0 - 1.4	5.0 - 5.5	11.0 - 13.0	0.20 - 0.50	0.30 - 0.70	< 0.06	≤ 0.01	≤ 0.02	≤ 0.02

Alternatively, Babbitt as per below mentioned chemistry is also acceptable.

Sn	Sb	Cu	Ag	Cd	Ni	Bi	As	Pb	Fe	Zn	Al
Rest	11.0 - 13.0	5.5 - 6.5	0.05 - 0.15	< 0.03	< 0.06	< 0.06	< 0.06	< 0.06	< 0.03	0.5 - 0.7	< 0.01

TSX	R. VARMA		नाम	दिनांक एवं हस्ताक्षर
QAX	SUGANDH AGARWAL		NAME	SIGNATURE & DATE
IPSC	VK Chauhan		निर्माककर्ता	WORKED BY
STE	D K RAY		जांचकर्ता	CHECKED BY
सहमत विभाग	नाम	दिनांक एवं हस्ताक्षर	पर्यवेक्षणकर्ता	SUPERVISED BY
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स्वीकृति : संस्थान मानक समिति
APPROVED : PLANT STANDARDS COMMITTEE
Gp No. 2.65

Rev. No. 05
Dt. 07.09.2012
PREPARED : MTF
ISSUED : STANDARDS DIVISION
DATE : 19.08.88

सामग्री सूची संख्या को अधिकृत करता है
TLV 9977/02 Nov'01
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स्वत्वाधिकार एवं गोपनीय
इस दस्तावेज में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की संपत्ति है। इसका प्रयोग एवं आरक्षण रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए



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8. Fracture Test:

The fracture surfaces of the ingots when broken at notches shall not show segregation, dross, dirt, spots, overheated metal or any other type of non-metallic inclusions and shall show a fine grain structure.

9. Test Samples:

- Chemical analysis shall be reported on each heat basis.
- Per heat a minimum of two ingots shall be taken for fracture test.

10. Retest:

If any of the selected test samples fail to meet the specified requirement, two additional test samples shall be selected for re-testing without any further treatment and both of these samples should pass for acceptance. All tests shall be repeated at BHEL to verify manufacturer's test results.

11. Inspection at Supplier Works:

BHEL representative shall have all reasonable facilities afforded to him at any time by the supplier to satisfy himself that the material is being furnished in accordance with this specification. Cutting, marking and testing of test samples may be witnessed by BHEL representative/customer's representative at supplier's works.

12. Test Certificate:

The supplier shall be submit five copies of the test certificate giving the following information's:

- BHEL Order No.
- Purchase specification No.
- Supplier's reference and Name
- Results of chemical analysis
- Fracture Test Results
- Heat No.
- Consignment / identification No.

13.0 Marking:

Ingots shall be clearly marked with the Maker's brand either stamped or cast in with following details:

- BHEL order number
- Purchase specification number
- Supplier's reference and Name
- Results of chemical analysis
- Heat No.
- Weight
- Consignment / Identification No.

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हस्ताक्षर एवं दिनांक
SIGN & DATE

संयोजी सूची संख्या
INVENTORY NO.

Rev.No.05

निर्माणकर्ता
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Ranjan

28.03.11

जांचकर्ता
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Gopal
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28.03.11

Pr. 306 / 28/03/11



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14.0 Rejection & Replacement:

In the event of material proving defective in the course of melting and casting, such material shall stand rejected, notwithstanding any previous certification of satisfactory testing inspection. The supplier shall undertake to replace the materials free of charge without any delay and arrange to take back the rejected material as own cost.

15.0 Cross Referred Standard: IS: 1409

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हस्ताक्षर एवं दिनांक
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30/3/11

सामग्री सूची संख्या
INVENTORY NO.

P-306

Rev.No.05

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