



PLANT PURCHASING SPECIFICATION

HEEP—HARDWAR

HW 10778

PAGE 1 OF 7

SIGN & DATE

SUPERSEDES
INVENTORY No.Base on
Rev 17440 1992

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SIGN & DATE

INVENTORY No.

P-2318

2-1-99

AUSTENITIC STAINLESS STEEL WIRE

1.0 GENERAL :

This specification governs the quality of stainless steel wire of grade X4CrNi18 12 (1.4303) as per DIN 17440.

2.0 APPLICATION :

Wires are used for fixing of sealing strips in interstage and rotor end's sealings of steam turbine.

3.0 CONDITION OF DELIVERY :

Wires shall be supplied in the cold rolled and solution annealed condition.

4.0 DIMENSION AND TOLERANCES :

The dimensions and tolerances of the wire shall be as per Annexure - 01 for square wire and Annexure - 02 for rectangular wire.

The required nominal dimensions A / or B shall be as specified on the purchase order.

5.0 MANUFACTURE :

The steel shall be made from basic electric furnace followed by ladle refining. Any other process of melting shall be subjected to mutual agreement between supplier and BHEL.

SUPERSEDES THE OLD SPECIFICATION
UNDER THE SAME NUMBER
CHANGE ADVISE NO. TSX-MTE-98-453
NAME A.K. SARKAR SIGN: [Signature] - DATE 2/1/99

			NAME			SIGN & DATE		
TSX			DRAWN					
RAY	T. Sankar	2-1-99	WORKED	A. K. SARKAR				2-1-99
STE	A. K.	2-1-99	CHECKED	J. P. MEENA				2-1-99
AGREED DEPT	NAME	SIGN & DATE	SUPERVISED	P. S. ARORA				2-1-99
REVISION :			APPROVED:			PLANT		
						STANDARDIZATION COMMITTEE		
			PREPARED			ISSUED:		
			MTE			STANDARDS		
						DIVISION		
						DATE		
						2-1-99		

1000

SUPERIZES THE OLD 500-SHEET
UNDER THE BRAND NAME 4404
CHANGE ADVANCE TRY-DATE-98-653
NAME-ARE BOON FILE DATE 10/79

WORKED BY	A. K. SARKAR	<i>[Signature]</i>	2.1.99
CHECKED BY	J. P. MEENA	<i>[Signature]</i>	2.1.99



PLANT PURCHASING SPECIFICATION

HEEP-HARDWAR

HW 10778

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SIGN & DATE

SUPERSEDES
NUMBER

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SIGN & DATE

INVENTORY NO

29/1/99

P-2318

9.0 MECHANICAL PROPERTIES:

The mechanical properties shall be as following (As per DIN 17440):

Tensile Strength :

SIZE	TS (N/mm ²)
> 0.1 to ≤ 0.5 mm	900 max
> 0.5 to ≤ 1.0 mm	850 max
> 1.0 to ≤ 2.0 mm	800 max
> 2.0 mm	490 - 690

Note: % Elongation to be reported for information only.

10.0 TEST CERTIFICATES:

The supplier shall supply four copies of test certificates unless otherwise stated on the order. The test certificates shall bear the following:

BHEL References :

Specification no. , Purchase order no.

SUPPLIER'S References :

Name, emblem , material designation, melt no, Heat-treatment batch no.

Result of Testing :

Melting process, Check analysis, Mechanical properties, Heat-treatment details dimensions.

SUPERSEDES THE OLD PRO SHEET
UNDER THE SAME NUMBER
CHANGE ADVISE NO TSK-MTE-98-403
NAME RES S-ONE DATE 2-1-99

REVISIONS:

WORKED BY	A.K. SARKAR	2-1-99
CHECKED BY	J.P. MOENA	2-1-99

INVENTORY NO. P-2318	SIGN & DATE 20/11/99	COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used without the written consent of the company.	SUPERSEDES INVENTOR No.	BOM & QAM		PLANT PURCHASING SPECIFICATION HEEP-HARDWAR	HW 10778 PAGE 4 OF 7
					11.0 CLEARANCE FOR DELIVERY : The total results of the tests carried out are the deciding factor for clearance for delivery. BHEL shall evaluate the total results taking into consideration the intended use of the material and examines accordingly the permissibility of deviation (if any) from the specified properties. The clearance, however does not relieve the supplier of his responsibility for the hidden non-permissible defects which are found later. 12.0 PACKING AND MARKING: The supply should be properly marked with dimension, material designation, suppliers name, melt no. and heat-treatment batch no. The above details are to be clearly punched and encircled by oil paint on metallic sheet tagged properly with the supply. The wire should be properly packed to protect against corrosion and to avoid damage of the wire during transit.		
REVISION :					SUPERSEDES THE OLD - 10778 UNDER THE SPEC NUMBER CHANGE AS PER TSY-MPC-98-459 NAME A.K. SARKAR DATE 2.1.99		
					WORKED BY A.K. SARKAR		2.1.99
					CHECKED BY J. MEENA		2.1.99



PLANT PURCHASING SPECIFICATION

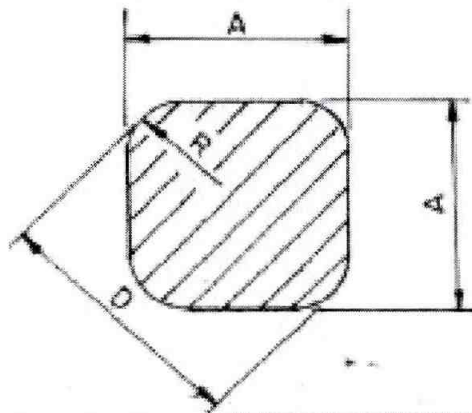
HEEP-HARDWAR

HW 10778

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ANNEXURE : 01

DIMENSIONS AND TOLERANCES OF SQUARE WIRE (IN MM)



PERMISSIBLE TOLERANCE		PERMISSIBLE TOLERANCE		PERMISSIBLE TOLERANCE		WEIGHT KG/M *
A	±	D	±	R	±	
0.5	± 0.025	0.56	- 0.1	0.3	- 0.05	0.002
0.6	± 0.025	0.67	- 0.1	0.4	- 0.05	0.003
1.0	± 0.030	1.12	- 0.1	0.6	- 0.05	0.008
1.2	± 0.030	1.35	- 0.1	0.7	- 0.05	0.011
1.6	± 0.030	1.79	- 0.1	0.9	- 0.05	0.020
2.0	± 0.030	2.25	- 0.1	1.2	- 0.05	0.031
2.6	± 0.030	3.2	- 0.1	1.6	- 0.05	0.053

- Weight is calculated with a density 7.85 g/cm^3

SUPERSEDES THE OLD SPECIFICATION
UNDER THE SAME NAME
CHANGE ADVISED TO THE USER
NAME: J. P. MEHRA DATE: 2.1.99

REVISION :

WORKED BY	A. M. SARKAR	2.1.99
CHECKED BY	J. P. MEHRA	2.1.99



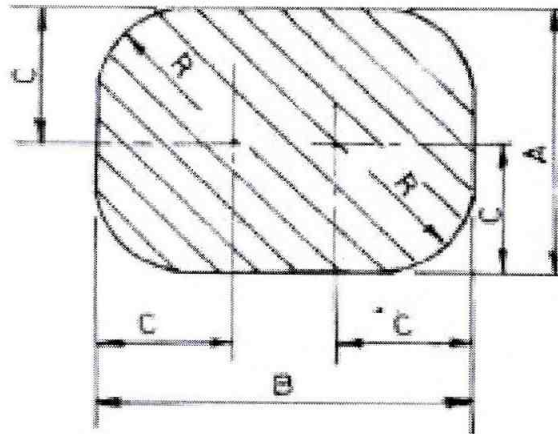
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ANNEXURE - 02

DIMENSION AND TOLERANCES OF RECTANGULAR WIRE (Dimensions in mm)

Nominal Dimensions				Permissible Tolerances				Weight Kg/m *
A	B	C	R	A	B	C	R	
1.4	1.7	0.8	0.9	± 0.03	± 0.03	± 0.03	- 0.05	0.018
1.75	2.15	0.8	0.9	± 0.03	± 0.03	± 0.03	- 0.05	0.026
1.6	2.2	0.8	0.9	± 0.03	± 0.03	± 0.03	- 0.05	0.028
1.75	2.7	0.8	0.9	± 0.03	± 0.03	± 0.03	- 0.05	0.034

- Weight is calculated with a density 7.85 g/cm^3

SUPERCEDES THE SPEC. NO. 10778
UNDER THE SPEC. NO. 10778
CHANGE NO. 10778-98-959
NAME A. K. SAKAR DATE 2.1.99

REVISION :

WORKED BY	A. K. SAKAR	DATE	2-1-99
CHECKED BY	J. P. MEENA	DATE	2-1-99

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REV CODE	NO OF CHGS	DOCU NO	SHEET NO	SIGN	DATE	REV CODE	NO OF CHGS	DOCU NO	SHEET NO	SIGN	DATE
J		TSX-MTE -18-453	SUPERLOPES OLD SPEC. UNDER THE SAME NO.	<i>[Signature]</i>	2.199						

SUPERLOPES OLD SPEC.
 UNDER THE SAME NO. IS
 CHARGE AT NO. 18-453
 NAME: *[Signature]* DATE: *[Signature]*

RECEIVED THE NEW YORK
MAY 2 1968
CHARGE OF RECORDS
MAY 2 1968

[illegible]