



PRODUCT STANDARD
WATER TURBINE MANUFACTURING

WTM 0001

Rev. 00

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GENERAL REQUIREMENTS OF
1.5 % NICKEL – CHROMIUM – MOLYBDENUM STEEL BARS
HARDENED AND TEMPERED AS PER AA 19358 Rev. 08

1.0 MATERIAL SPECIFICATION :

These requirements are in addition to those included in BHEL corporate purchase specification AA 19358 rev. 08 and are applicable for dia. ranging from 110 to 200 mm (both dia. inclusive)

2.0 CONDITION OF DELIVERY :

It is allowed to supply Hot rolled / Forged ; Hardened and tempered.

3.0 FOR HOT ROLLED BAR :

- 3.1 Bars to be supplied as Hot rolled, hardened & tempered condition. Rough machining is not required.
- 3.2 Rolled bars to be supplied in lengths of 3 – 6 meter.
- 3.3 Out of straightness allowed is 3 mm / meter.
- 3.4 Tolerance on diameter to be + 2.5 % & - 0.0 % of diameter required.
- 3.5 Each Rolled bar shall be tested ultrasonically in accordance with BHEL standard AA0850118 rev. 01 to ensure freedom from internal defects. The norms of acceptance shall be as per category 2 of the above standard.
- 3.6 All the mechanical properties, chemical composition and any other requirement not mentioned above shall be as per BHEL corporate specification AA 19358 rev. 08
- 3.7 Quantity variation ± 10 % acceptable.

4.0 FOR FORGED BAR :

- 4.1 Bars to be supplied as Forged, hardened & tempered condition. Rough machining is to be done.
- 4.2 Forged bars to be supplied in lengths of 3 – 6 meter.

Rev. No.	Date of Rev.	Remarks			
00	12.05.18	-	R. Choudhary AGM (HOD) - WTM		
			Prepared Mahendra Soni Dy. Manager - WTM	Checked Jitendra Singh Manager - WTM	Date of issue (Rev 00) 12.05.18

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4.3 Out of straightness allowed is 3 mm / meter.

4.4 Tolerance on diameter to be + 2.5 % & - 0.0 % of diameter required.

4.5 Each Forged bar shall be tested ultrasonically in accordance with BHEL standard AA0850118 rev. 01 to ensure freedom from internal defects. The norms of acceptance shall be as per category 2 of the above standard.

4.6 All the mechanical properties, chemical composition and any other requirement not mentioned above shall be as per BHEL corporate specification AA 19358 rev. 08

4.7 Quantity variation ± 10 % acceptable.

Note :

The requirement given in the document overrules the requirement given in BHEL specification AA19358 rev. 08

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00	12.05.18	-			
			Prepared	Checked	Date of issue
			Mahendra Soni	Jitendra Singh	(Rev 00)
			Dy. Manager - WTM	Manager - WTM	12.05.18