

**Enquiry items along with quantities:**

It. no	Size & Item description	Technical requirement	Quantity in kg
1	10 mm dia X 2500 mm – 4500 mm LG	Bright steel round bar to material specification AA10112 rev 07. Clear temporary rust preventive (TRP) shall be applied on the bars to avoid rust/corrosion. Original Material test certificate covering all the chemical and mechanical properties to be furnished along with supply. Inspection by third party or bhel shall be done as per attached QAP No. QAP/TSD/FMS/10112 Rev00. All other details as per spec. AA10112 rev 07.	6600
2	12 mm dia X 2500 mm – 4500 mm LG		5500
3	14 mm dia X 2500 mm – 4500 mm LG		7150
TOTAL			19250 kg

Quantity variation as per below:

**Item-1** Supplies quantity are to be restricted between 6600 kg & 5400 kg.

**Item-2** Supplies quantity are to be restricted between 5500 kg & 4500 kg.

**Item-3** Supplies quantity are to be restricted between 7150 kg & 5850 kg.

**Pre-qualification criteria:**

S. No.	Description of pre-qualification requirement	Vendor Response	
		Vendor's response Complied (YES/NO)	Supporting Documents required to accept compliance
1	Manufacturer or their authorized dealer/distributor of steel products like - round bar/square bar/flat.		Certificate of being manufacturer (for manufacturer).  Authorized dealer/ distributor have to submit valid authorization letter form original manufacturer.
2	Offers of those parties will be considered who or their Manufacturer has supplied " <b>Steel products like – Round bar/ Square bar/flat</b> " of minimum value <b>INR 4.73 lakh</b> (INR Four Lakh & Seventy Three Thousand only) during last 5 (five) years (ending last day of month previous to the one in which tender is published).		The relevant purchase order copies along with Proof of Supply (invoice copy with value /Completion certificate/TC etc.) to be submitted with technical offer.
3	Startups and Micro & Small Enterprises (Manufacturer of quoted item) are exempted for above clause of submission of PO and proof of supply of prior experience.		

Note:

1. BHEL has right to verify information / confirmation furnished by asking additional documents, proof etc.

**ALL THE ABOVE POINT WISE PRE-QUALIFICATION REQUIREMENT ARE TO BE NECESSARILY ACCEPTED BY THE BIDDERS FOR THEIR OFFERS TO BE CONSIDERED FAILING WHICH OFFERS SHALL BE REJECTED.**

**MAKE IN INDIA format (to be filled by OeMs of the participating bidders)**

**BHARAT HEAVY ELECTRICALS LIMITED, BHOPAL**

**MATERIAL MANAGEMENT – STEEL DIVISION**

*For this Procurement, Government of India Public Procurement (Preference to Make in India), Order 2017 with its amendments and subsequent Orders issued by the respective nodal ministries shall be applicable even if issued after issue of this NIT but before finalization of contract/PO/WO against this NIT.*

*As per the Provisions of this order, please submit **a self-certification complying with the conditions below on company letterhead duly signed by competent authority.***

I ....., hereby declare on behalf of M/s. .... that we are participating in the Enquiry No. .... floated by BHEL, Bhopal (MP), India and shall comply with following:

1. Public Procurement (Preference to Make in India), Order 2017 *with its amendments* and subsequent Orders issued by the respective nodal ministries shall be applicable even if issued after issue of this NIT but before finalization of contract/PO/WO against this NIT.

(a) A supplier will be treated as “**Class-I Local Suppliers**”, if the items quoted by bidder have local content equal to or more than 50%.

(b) ‘**Local Content**’ means the amount of value added in India, which shall be total value of item quoted (excluding net domestic indirect taxes) minus the value of imported content in the item (including all custom duties) as a proportion of the total value, **in percent**.

2. I hereby declare that our firm qualifies as “**Class-I Local Suppliers**”.

**a. The Local Content in the items quoted under this Enquiry is ..... Percent**

**b. Details of location(s) in India where this value addition shall be done, is/are as follows:**

- (a) .....
- (b) .....
- (c) .....

(.....)

For M/s. ....

(Seal & Sign)



# CORPORATE PURCHASING SPECIFICATION

AA10112

Rev No. 07

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## BRIGHT STEEL BARS AND SECTIONS (STANDARD QUALITY)

### 1 GENERAL:

This specification governs the quality requirements of Bright Steel Bars and Sections of standard quality, such as I-beams and equal angles required in very small sections.

### 2 APPLICATION:

Bars are used in the manufacture of threaded and machined components for general engineering purposes. Sections are used as stator spacer plate vents in generators.

### 3 CONDITION OF DELIVERY:

**3.1** Round Bars - Class 4, surface quality.

Up to 50 mm diameter - Cold drawn.

Above 50mm diameter - Cold drawn or Hot rolled, turned and polished

**3.2** Rectangular/Square/Hexagonal Bars - Class 3, surface quality.

All sizes - Cold drawn.

**3.3** Sections - Class 4, surface quality.

All sizes - Cold drawn

**3.4** Bars and sections shall be straight, with their ends sheared, square and true and shall have a smooth surface.

**3.5** The bars and sections shall be given a clear temporary rust preventive (TRP) coating to avoid corrosion during transit and storage.

Black TRP coating is not acceptable.

Clear TRP used shall be free from pungent smell.

The following clear TRP's are suggested:

- a) Servo RP 150 - M/s Indian Oil Corporation
- b) HE - 1612 - M/s. BHEL, Bhopal
- c) Rustilo DW-901 - M/s. Indrol Lubricants and Specialties Ltd.
- d) Rustpro Special - M/s. Tide water oil co.
- e) Any other clear TRP conforming to IS: 1154

### 4 COMPLIANCE WITH NATIONAL STANDARDS:

The material shall comply with the requirements of the following National standards and also meet the requirements of this specification.

IS: 9550-2001 : Bright steel bars

#### Revisions:

CI 27.2.d of MOM of MRC-S&GPS

#### APPROVED:

INTERPLANT MATERIAL RATIONALISATION  
COMMITTEE – MRC(S&GPS)

Rev No.07

Amd No.

Reaffirmed

Prepared

Issued

Dt. of 1<sup>st</sup> Issue

Dt:15-06-2005

Dt:

Year:2019

HEP, Bhopal

Corp.R&D

September 1976

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RA5302



## 5 DIMENSIONS AND TOLERANCES:

### 5.1 Sizes:

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

### 5.2 Tolerances:

#### 5.2.1 Rectangular/Square/Hexagonal/Flat Bars:

Unless otherwise specified, tolerances on dimensions shall be as follows:

For drawn round bars and turned bars h10 to table 2 of IS:9550

For hexagonal and square drawn bars upto and including 80mm h11 and above 80mm h12 according to table 2 of IS:9550

For drawn flats in accordance with table 3 and 4 of IS:9550

For ground products in accordance with table 1 and 2 of IS:9550

#### 5.2.2 Sections:

As specified in BHEL order/drawing.

### 5.3 Length:

Bar and sections shall be supplied in lengths of 2.5 to 4.5 meters with maximum 10% of shorts of not less than 1.5 meters.

### 5.4 Straightness:

Unless otherwise agreed to, the permissible deviation shall not exceed 1.5mm in any one meter length. Bars and sections shall be free from twists and bends.

## 6 MATERIAL:

The rolled bars used for purpose of producing the bright bars shall be such, so as to ensure freedom from segregation, piping and other harmful defects.

## 7 MANUFACTURE:

Steel shall be manufactured by the open-hearth, electric, basic oxygen or a combination of these processes.

## 8 FREEDOM FROM DEFECTS:

All finished steel bars and section shall be sound and free from internal and surface defects. They shall be bright and clean.

## 9 SURFACE CONDITION:

### 9.1 Round Bars and Sections:

Shall be entirely free from cracks and other surface defects.

### 9.2 Rectangular/Square/Hexagonal Bar-Type '3' Finish:

Shall comply with IS: 9550, Class 3 of table 5.

## 10 CHEMICAL COMPOSITION:

The melt analysis of steel and the permissible variation in the composition of the material from the melt analysis shall be as follows:



## CORPORATE PURCHASING SPECIFICATION

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Element	Melt analysis percent, max	Permissible variation percent
Carbon	0.25	± 0.02
Sulphur	0.040	+ 0.005
Phosphorus	0.040	+ 0.005

### 11 TEST SAMPLES:

One sample for chemical and tensile test shall be selected from finished steel for every 20,000 kg or part thereof, with a minimum one per heat.

### 12 MECHANICAL PROPERTIES:

When tested in accordance with IS:1608, the test pieces shall show the following properties:

#### 12.1 Rectangular/Square/Hexagonal/Section - Cold Drawn:

Tensile Strength : 440 N/mm<sup>2</sup>, min

Elongation on  $5.65\sqrt{S_0}$  gauge length : 8 – 20%

#### 12.2 Round Bars:

##### 12.2.1 Bars upto 50mm Diameter – Cold Drawn

Tensile Strength : 440 N/mm<sup>2</sup>, min

Elongation on  $5.65\sqrt{S_0}$  gauge length : 8 – 20%

##### 12.2.2 Bars above 50mm Diameter:

Cold drawn or hot rolled, turned and polished.

Property	Hot rolled, turned and polished	Cold drawn
Tensile strength, min.	: 410 N/mm <sup>2</sup>	440 N/mm <sup>2</sup>
Elongation on $5.65\sqrt{S_0}$ gauge length	: 23%, min	OR 8-20%

### 13 TEST CERTIFICATES:

Three copies of test certificates shall be supplied, unless otherwise stated on the order.

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

The test certificate shall bear the following information:

AA10112; Rev. No. 07 :

BHEL order No,

Supplier's Reference:

Name

Identification No.

Melt No.

Results of Tests:

Dimensional inspection.

Results of Chemical analysis and mechanical tests.

**14 PACKING AND MARKING**

The material shall be suitably packed in bundles – polythene wrapped to prevent sagging, corrosion and damage during transit. A suitable clear temporary rust preventive shall be applied all the bars as per clause 3.5 above and finally dispatched in wooden boxes.

Each bar over 50mm shall be stamped at one end with 'AA10112'. Bars 50mm and below shall be bundle together and tied with wire at 3 to 4 places along the length of the bar.

A metal label shall be securely attached to each bundle and shall bear the following information:

AA10112: BRIGHT STEEL BARS AND SECTIONS (STANDARD QUALITY)

BHEL Order No.

Consignment/Identification No.

Melt No.

Size and Weight.

Supplier's Name.

**15 REFERRED STANDARDS** (Latest Publications Including Amendments):

- 1) IS: 1154                      2) IS: 1608                      3) IS: 9550

## STANDARD QUALITY PLAN

QAP NO:		QAP/TSD/FMS/10112		REV.00	Date: 02/01/2018					
CUSTOMER:		BHEL BHOPAL			VENDOR NAME:					
DESCRIPTION MATERIALS:		BRIGHT STEEL BARS & SECTIONS								
SPECIFICATION		AA10112	Rev. No.	07						
P.I./ENQ.NO. /P.O. NO.			Date:							
Sr. No.	Characteristics	Class	Quantum of check	Reference Document	Acceptance Norm	Type of record	Inspection Agency			Remarks
							P	V	W	
01	Identification of test sample	Maj	Random sample selection (One sample/heat for every 20,000 kg or part thereof), cutting & hard punch identification shall be done in presence of TPIA/ BHEL.				2	1	1	
02	Chemical composition	Maj	*One sample/heat	AA 101 12	AA 101 12		2	1	1	* for every 20,000 kg or part thereof
03	Mechanical properties (tensile strength and percentage elongation)	Maj	*One sample/heat	AA 101 12	AA 101 12		2	1	1	
04	Surface Quality Class (Type '3' Finish)	Maj	10% of each lot	IS: 9550, Class 3 of table 5.	IS: 9550, Class 3 of table 5.		2	1	1	
05	Dimensional Inspection	Maj	10% of each lot	As per PO/ AA 101 12	As per PO/AA 101 12		2	1	1	
06	Visual inspection for Straightness and Smooth surface, free from crack and Clear TRP coating	Maj	10% of each lot	AA 101 12	AA 101 12		2	1	1	
07	Marking and Identification	Maj	100%	AA 101 12	AA 101 12		2	1	1	As per Spec AA10112 Rev.07
08	Packing : in bundles with hessian wrapped	Maj	100%	AA 101 12	AA 101 12		2	1	1	

Legends: Maj = Major, V= Verification, P=Perform, W=Witness, 1=BHEL/BHEL appointed TPIA, 2= Vendor/Sub/Vendor

Prepared By

*Shankar*

Approved By

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21/1/18  
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