

PURCHASE DEPARTMENT - SUPPLIER DEVELOPMENT CELL

INVITATION FOR (EOI) – EXPRESSION OF INTEREST - SS WIRE 904L GR. MATERIAL

1	Name of Organization	BHARAT HEAVY ELECTRICALS LTD BOILER AUXILIARIES PLANT RANIPET - TAMIL NADU - INDIA
2	Type of Organization	Engineering & Manufacturing Company
3	Category	Public Sector Undertaking, Ministry of Heavy Industries
4	Sub-Category	Maharatna, Category – I CPSE
5	EOI Title	National Expression of Interest for Qualifying of potential suppliers for Supply of SS Wire 904L Gr. Materials as per our Technical Delivery Condition (TDC) and pre testing of samples as per our conditions laid down in the EOI.
6	Date of Announcement	10-02-2020
7	Last Date for Submission	14:00Hrs (IST) on 11/03/2020
8	Pre – Qualification Criteria	Capable and reputed manufacturers in India, having proven capability to manufacture Austenitic Stainless Steel Wire – 904L Grade material (UNS N 08904) - Cold drawn to 2.7mm dia as a final product.
9	<u>SAMPLE - 1</u> Pre-Testing of Samples in order to Qualify to participate in our Open Tender / Limited Tender as applicable	<p>a) Free Sample of SS Wire dia 2.7mm in a straight long pieces – 300 mm Long – 10 Nos to be submitted for Testing of Chemical & Mechanical Properties as per our TDC – Copy attached</p> <p>b) After making the bundle of 10 pieces, supplier to send it to BHEL Trichy Plant Lab. Thro' courier - Address & Contact details of Trichy Plant Lab;</p> <p style="text-align: center;">Shri. N Manoj Kumar Sr.Engr/ Quality Mechanical Testing Lab Plant Laboratory BHEL-Trichy – 620 014 Phone: 0431-2571134 / Mb. 94865 64255 Email ID: manojkumar.n@bhel.in</p> <p>c) Before sending sample SS wire to BHEL Trichy, get the details of lab charges for testing as per TDC requirements.</p> <p>d) At the time of sending samples for testing, ensure to pay the lab charges thro' NEFT to BHEL-Trichy's account.</p> <p>e) NOTE:- Only after successful test results cleared from BHEL Trichy Lab, supplier is eligible for Sample -2 Testing.</p>


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10	<p><u>SAMPLE – 2</u> Pre-Testing of Samples in order to Qualify to participate in our Open Tender / Limited Tender as applicable</p>	<p>a) Supplier(s) whose sample-1 has been tested and cleared by BHEL – Trichy Lab alone are eligible to go for SAMPLE – 2 testing.</p> <p>b) SS Wire with same Heat No / Melt No of Sample -1 is to be tested for Sample – 2 also.</p> <p>c) Free of Cost – Approximately 5 Kg of SS Wire 2.7mm dia – to be submitted to BAP-Ranipet for conducting actual coiling test / Spring Test / Spark Erosion test at our Lab.</p> <p>d) This 5kg bundle (Big Coil form) shall be sent to Ranipet thro' courier – Address & Contact details;</p> <p style="text-align: center;">Shri. K Jothi Arulanandam Manager / Purchase Supplier Development Cell BHEL – BAP – Ranipet – 632 406 Ph. 04172-241664 / 284474 Mb. 94425 05831 E-mail: jothi.arul@bhel.in</p> <p>e) Note: At BAP-Ranipet, there is NO charges for the above tests.</p>
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GENERAL POINTS:

1. SAMPLE – 2, HAS TO BE SENT TO BHEL-RANIPET ONLY AFTER SUCCESSFUL COMPLETION OF SAMPLE – 1, AT BHEL TRICHY. OTHERWISE NO NEED FOR SENDING SAMPLE – 2 TO RANIPET.
2. **NOTE:** BOTH SAMPLES (SAMPLE 1 & 2) MUST BE FROM SAME HEAT NO / MELT NO - IT IS A MANDATORY REQUIREMENT. HENCE, MAKE ARRANGEMENTS TO MEET THE ABOVE SAMPLE PREPARATION SUITABLY.
3. ALL THE ABOVE SAMPLES ARE TO BE PROVIDED FREE OF COST TO BHEL.
4. FOR ANY CLARIFICATION ON THE ABOVE, Please contact: Shri. K Jothi Arulanandam / Manager / Purchase / Supplier Development Cell / BHEL-BAP-Ranipet-632 406 / Phone: 04172-241664, 284474 Mb. 94425 05831.

	Technical Delivery Conditions For Cold drawn Stainless Steel wire for Emitting Electrodes	Doc.Ref.	TDC:RTE:259
		Rev.No.	06
		Date	30-Mar-07
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1.0SCOPE: This document specifies the requirements for the supply of cold drawn austenitic stainless steel wire (dia 2.7 mm) for the emitting (discharge) electrodes of Electrostatic precipitator.

2.0 The applicable specifications are

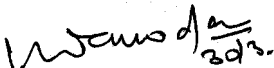
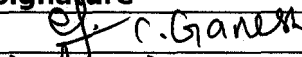

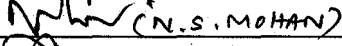

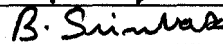

- 2 RK 66
- GARBA 904 L
- UNS N 08904

3.0 Requirements


3.1 The wires are to be supplied in half hard condition

3.2 **Tolerance on diameter** : ± 0.020 mm and on roundness : ± 0.010 mm

S.No	REQUIREMENT	QUANTUM OF CHECK
3.3	Chemistry: (In %) C:0.02MAX; Si:0.50MAX; Mn:2.0MAX; P:0.015MAX; S:0.015MAX; Cr:19 to 23 ; Ni:23 to 28 ; Mo:4 to 5 ; Cu:1 to 2	Each heat
3.4	Tensile strength: Ultimate tensile strength (UTS) of wire shall be 1050 N/Sq mm with a tolerance of ± 75 N/Sq mm.	Each coil.
3.5	Uniformity of coil : Coiling test to be done as per ASTM A 313	One coil per batch of 1000 Kg
3.6	Metallography: The microstructure shall consist of cold worked austenite without any detectable carbide precipitation in the grain boundaries. The material shall be free from slag inclusion which can cause a serious decrease of fatigue strength.	One longitudinal and one transverse micrograph (250 X) showing the austenite material structure, from each batch of 1000 kg of finished wire
3.7	Surface purity and finish: <ul style="list-style-type: none"> ▪ The wire is to be supplied with a cleaned and passivated surface. Maximum allowable content chloride ions is 0.2 mg/dm sq. ▪ The surface finish shall be inspected in unetched transverse micros. Maximum allowable surface imperfection is 20 microns. 	Each coil Each Coil

Prepared by	Reviewed by	Signature	Approved by
	Engg (AQCS)		 Head/QA
	MPL		
	Purchase		
	QC (Proc)		
	QA		

Issued By: Quality Assurance

 Ranipet	Technical Delivery Conditions For Cold drawn Stainless Steel wire for Emitting Electrodes	Doc.Ref.	TDC:RTE:259
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4.0 Packing :

4.1 The wire shall be supplied in bobbins weighing 300 kg approximately. Each individual bobbin shall be wrapped in water proof paper. The bobbins shall then be packed in a strong wooden boxes in such a way that no wear can occur between the coils.

4.2 Each coil shall be provided with labels, stating order no. , item, material grade, heat number, coil number, wire dimensions, UTS value . There shall be one label inside the paper wrapping of each bobbin giving following details : Heat No. and coil No.

5.0 Test certificate:

5.1 Detailed correlated test certificates in English according to EN 10204 -3.1 shall be submitted along with the supply for the following .

- Dimensional conformation
- Chemistry- heat wise .
- Ultimate tensile strength – coil wise.
- Coiling test result –one coil per batch of 1000 kg
- Micrograph in colour print (long and transverse-250X) - each batch of 1000 kg
- Chloride ion content - coil wise
- Surface finish - coil wise

6.0 BHEL reserves the right to carry out tests and to reject the items wherever non conformances to the contract noticed.

06	30 03 07	Revised to improve clarity
05	15 05 02	Totally reviewed and re issued
04	30 03 00	Material UHB 904 L deleted and material GARBA 904 L added
03	18 02 00	Material UNS N 08904 added
02	01 01 98	Coiling test added
01	25 05 96	Supply condition added
00	28 11 95	TDC:RTE:028 totally reviewed and reissued based on feedbacks.
Rev.No.	Date	Revision details

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