



429-002/A

BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)
 HIGH PRESSURE BOILER PLANT
 PURCHASE DEPARTMENT - FOSSIL BOILERS
 THIRUCHIRAPALLI - 620014
 TAMILNADU (INDIA)

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PHONE :2577629
 GRAMS : BHARATELEC
 FAX NO: 2520719
 E-mail: srchandran@bheltry.co.in
 Web:

Enquiry No	Enquiry Date	Due Date for Quotation
2611500092 - 29	22.10.2015	04.12.2015
Please quote Enquiry No, Date and due date in all correspondences. This is only a request for quotation and not an order. Bid should be submitted in two parts. 1.Techno-commercial bid (Part-I) and 2.Price bid(Part-II) in a separate sealed cover and both covers must be placed in a third cover and sealed. Our Enquiry No., Enq. date & Enq. Due date must be written on all three covers.		

Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
10	ERNiCrCoMo-1 GTAW Filler Rod 1.6mm ERNiCrCoMo-1 GTAW Filler Rod as per ASME SEC IIC SFA 5.14 Dia.1.6 x 900-1000 mm length with embossing/imprinting on atleast one end for positive identification Chemical composition, Mechanical properties, finish and uniformity, method of manufacture, tolerance, identification, packaging, marking of packages, all tests and acceptance criteria shall be as per ASME SEC IIC SFA 5.14. The rods are intended for use in high pressure boiler tubes and pipes with 100% Argon shielding. Lot classification:S1, Schedule of testing:5 or J. The weld using this consumable shall exhibit radiographic soundness with 100% Argon shielding and shall flow freely uniformly without any defects. Three copies of original test certificate in English signed by manufacturer is required.	KG	250.000	250.00	12.02.16
20	ERNiCrCoMo-1 GTAW Filler Rod 2.4mm ERNiCrCoMo-1 GTAW Filler Rod as per ASME SEC IIC SFA 5.14 Dia.2.4 x 900-1000 mm length with embossing/imprinting on atleast one end for positive identificationboth sides for positive identification. Chemical composition, Mechanical properties, finish and uniformity, method of manufacture, tolerance, identification, packaging, marking of packages, all tests and acceptance criteria shall be as per ASME SEC IIC SFA 5.14. The rods are intended for use in high pressure boiler tubes and pipes with 100% Argon shielding. Lot classification:S1, Schedule of testing:5 or J. The weld using this consumable shall exhibit radiographic soundness with	KG	200.000	200.00	12.02.16

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 The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening.Late and delayed offers are liable to be rejected.

VIGILANCE AWARENESS WEEK**26 th OCT to 31st OCT 2015****FOR VIGILANCE RELATED COMPLAINTS,****CONTACT DGM/VIGILANCE & SM/VIGILANCE****PHONE:0431-2577552,2577636**

Yours faithfully,
 For **BHARAT HEAVY ELECTRICALS LIMITED**

MANAGER / PURCHASE
 (FOSSIL BOILERS)
 Yours faithfully,



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100% Argon shielding and shall flow freely uniformly without any defects. Three copies of original test certificate in English signed by manufacturer is required.					
30	ERNiCrCoMo-1 GMAW Wire	KG	400.000	400.00	12.02.16
0.8/1.0mm ERNiCrCoMo-1 GMAW wire as per ASME SEC IIC SFA 5.14 Dia.0.8/1.0 mm Precision layer wound Spools on S300 spool with weight 10-15Kg. Chemical composition, Mechanical properties, finish and uniformity, method of manufacture, tolerance, identification, packaging, marking of packages, cast and helix, all tests and acceptance criteria shall be as per ASME SEC IIC SFA 5.14. The wires are intended for use in high pressure boiler tube welding with 100% Argon shielding. Precision layer and level winding are essential. Lot classification:S1, Schedule of testing:5 or J. The weld using this consumable shall exhibit radiographic soundness with 100% Argon shielding. Three copies of original test certificate in English signed by manufacturer is required.					
40	ERNiCrCoMo-1 GMAW Wire	KG	100.000	100.00	12.02.16
0.8/1.0mm ERNiCrCoMo-1 GMAW wire as per ASME SEC IIC SFA 5.14 Dia.0.8/1.0 mm precision layer wound Spools on S200 spool with 5 kg. Chemical composition, Mechanical properties, finish and uniformity, method of manufacture, tolerance, identification, packaging, marking of packages, cast and helix, all tests and acceptance criteria shall be as per ASME SEC IIC SFA 5.14. The wires are intended for use in high pressure boiler tube welding with 100% Argon shielding. Precision layer and level winding are essential. Lot classification:S1, Schedule of testing:5 or J. The weld using this consumable shall exhibit radiographic soundness with 100% Argon shielding. Three copies of original test certificate in English signed by manufacturer is required.					
50	ERNiCrCoMo-1 GMAW Wire	KG	100.000	100.00	12.02.16
0.8/1.0mm ERNiCrCoMo-1 GMAW wire as per ASME SEC IIC SFA 5.14 Dia.0.8/1.0 mm					

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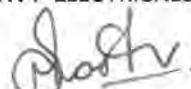
26 th OCT to 31st OCT 2015

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precision layer wound Spools on S100 spool with 700-1000g weight.
 Chemical composition, Mechanical properties, finish and uniformity, method of manufacture, tolerance, identification, packaging, marking of packages, cast and helix, all tests and acceptance criteria shall be as per ASME SEC IIC SFA 5.14.
 The wires are intended for use in high pressure boiler tube welding with 100% Argon shielding.
 Precision layer and level winding are essential.
 Lot classification:S1, Schedule of testing:5 or J.
 The weld using this consumable shall exhibit radiographic soundness with 100% Argon shielding.
 Three copies of original test certificate in English signed by manufacturer is required.

60	ERNiCrCoMo-1 GMAW Wire 1.2mm	KG	150.000	150.00	12.02.16
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ERNiCrCoMo-1 GMAW wire as per ASME SEC IIC SFA 5.14 Dia.1.2mm precision layer wound Spools on S300 spool with 10-15Kg weight.
 Chemical composition, Mechanical properties, finish and uniformity, method of manufacture, tolerance, identification, packaging, marking of packages, cast and helix, all tests and acceptance criteria shall be as per ASME SEC IIC SFA 5.14.
 The wires are intended for use in high pressure boiler tube welding with 100% Argon shielding.
 Precision layer and level winding are essential.
 Lot classification:S1, Schedule of testing:5 or J.
 The weld using this consumable shall exhibit radiographic soundness with 100% Argon shielding.
 Three copies of original test certificate in English signed by manufacturer is required.

70	ERNiCrCoMo-1 GMAW Wire 1.2mm	KG	50.000	50.00	12.02.16
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ERNiCrCoMo-1 GMAW wire as per ASME SEC IIC SFA 5.14 Dia.1.2mm precision layer wound Spools on S200 spool with 5Kg weight.
 Chemical composition, Mechanical properties, finish and uniformity, method of manufacture, tolerance, identification, packaging, marking of packages, cast and helix, all tests and acceptance criteria shall be as per ASME SEC IIC SFA 5.14.
 The wires are intended for use in high pressure boiler tube welding with 100% Argon shielding.
 Precision layer and level winding are essential.

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 The weld using this consumable shall exhibit
 radiographic soundness with
 100% Argon shielding.
 Three copies of original test certificate in
 English signed by
 manufacturer is required.

80 ER90S-G GMAW Wire for T23 1.2mm KG 2800.000 2,800.00 12.02.16

ER90S-G GMAW Wire 1.2mm
 Diameter 1.2mm, Weight 10/12.5/15Kg spool
 The chemical composition of wire shall be as
 follows:

Carbon 0.15% maximum, Silicon 0.60%
 maximum, Manganese 0.10 to 1.60%,
 Phosphorus 0.020% maximum, Sulphur 0.010%
 maximum, Copper 0.40% maximum,
 Nickel 0.01-1.20%, Chromium 1.90-2.60%,
 Molybdenum 0.05-0.85%, Vanadium
 0.15-0.30%, Aluminium 0.03% maximum,
 Niobium 0.01-0.08%, Tungsten
 1.00-2.00%, Boron 0.01 % maximum, Nitrogen
 0.03% maximum.

Tensile Strength of deposited weld metal using
 this wire shall be 621
 MPa minimum. Post weld heat treatment
 condition is 745 +/- 15 degree
 celsius

Finish and uniformity:Clause 4.2 of SFA 5.02,
 ASME SEC IIC

Tolerance:As per SFA 5.02, ASME SEC IIC
 Identification:4.5.2 and 4.5.5 of SFA

5.02,ASME SEC IIC

Packaging: Moisture proof packing with no
 deterioration in electrode
 quality

Marking of packages:Clause 4.6 of SFA 5.02,
 ASME SEC IIC

Form: ISO 644 BS300/B300/S300 and meet
 clause 4.3.4 of SFA 5.02, ASME
 SEC IIC.

The wire is intended to be used in high
 pressure boiler tube SA213T23 to
 SA387Gr22 fin welding with 85-95% Argon
 and 5-15% CO2 shielding.

Lot classification: S1, Schedule of testing: K.

The weld using this consumable shall exhibit
 radiographic soundness with
 85-95% Argon and 5-15% CO2 shielding and
 shall meet radiographic
 soundness requirements as per SFA 5.28,
 ASME SEC IIC and shall flow
 freely uniformly without any defects.

Three copies of original test certificate in
 English signed by
 manufacturer is required and shall contain the
 following:

a)Welding parameters (voltage, current, speed,
 heat input, preheat
 temperature, interpass temperature, thickness of
 pad plate) used for

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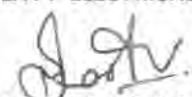
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- preparation of weld pads.
- b)Heat treatment details of test weld pads
- c)Chemical composition of weld metal
- d)Charpy V-Notch impact test
- e)Hardness test
- f)Dimensional checks of filler wires being supplied
- g)Radiographic soundness test
- h)Mechanical properties of weld metal to be reported
- i)Chemical composition of wire

90	ER90S-G GTAW Filler Rod for T23	KG	100.000	100.00	12.02.16
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1.6mm
 ER90S-G GTAW Filler Rod
 Diameter 1.6mm, Length 1000mm
 The chemical composition of filler rod shall be as follows:
 Carbon 0.15% maximum, Silicon 0.60% maximum, Manganese 0.10 to 1.60%, Phosphorus 0.020% maximum, Sulphur 0.010% maximum, Copper 0.40% maximum, Chromium 1.90-2.60%, Molybdenum 0.05-0.85%, Vanadium 0.15-0.40%, Aluminium 0.03% maximum, Niobium 0.01-0.08%, Tungsten 1.00-2.00%, Boron 0.01 % maximum, Nitrogen 0.03% maximum.
 Tensile Strength of deposited weld metal using this wire shall be 552 MPa minimum. Post weld heat treatment condition is 745 +/- 15 degree celsius
 Finish and uniformity: Clause 4.2 of SFA 5.02, ASME SEC IIC
 Tolerance: Length: 1000mm +15/-0, Diameter: As per SFA 5.02,ASME SEC IIC
 Identification: Embossing/Imprinting shall be done on both sides for positive identification
 Packaging: Moisture proof packing with no deterioration in electrode quality
 Marking of packages: Clause 4.6 of SFA 5.02, ASME SEC IIC
 The rod is intended to be used in welding of high pressure boiler tube
 SA213T23 butt joint with 100% Argon shielding.
 Lot classification: S1, Schedule of testing: K.
 The weld using this consumable shall exhibit radiographic soundness with 100% Argon shielding and shall meet radiographic soundness requirements as per SFA 5.28, ASME SEC IIC and shall flow freely uniformly without any defects.
 Three copies of original test certificate in English signed by manufacturer is required.
 a)Welding parameters (voltage, current, speed,

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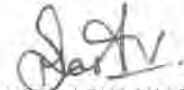
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	heat input,preheat temperature, interpass temperature, thickness of pad plate) used for preparation of weld pads. b)Heat treatment details of test weld pads c)Chemical composition of weld metal d)Charpy V-Notch impact test e)Hardness test f)Dimensional checks of filler wires being supplied g)Radiographic soundness test h)Mechanical properties of weld metal to be reported i)Chemical composition of filler rod				
100	E 9015-B91 SMAW ELECTRODE 2.5/2.6MM E9015-B91 SMAW Welding electrode diameter 2.5/2.6mm as per Annexure-1	KG	200.000	200.00	12.02.16
110	E 9015-B91 SMAW ELECTRODE DIA 3.2 MM E9015-B91 SMAW Welding electrode diameter 3.2mm as per Annexure-1	KG	300.000	300.00	12.02.16
120	E 9015-B91 SMAW ELECTRODE DIA 4.00MM E9015-B91 SMAW Welding electrode diameter 4.0mm as per Annexure-1	KG	500.000	500.00	12.02.16
130	ER 90S-B9 GTAW FILLER ROD DIA2.40MM ER90S-B9 GTAW Filler ROD Diameter 2.40mm and Length 900-1000mm as per Annexure-2	KG	100.000	100.00	12.02.16
140	ER90S-B9 GMAW WIRE DIA.1.2MM ER90S-B9 GMAW Wire Diameter 1.2mm and 10/12.5/15Kg weight as per Annexure-3	KG	7800.000	7,800.00	12.02.16
150	ER 90S-B9 GTAW FILLER ROD DIA1.60MM ER90S-B9 GTAW Filler ROD Diameter 1.60mm and Length 900-1000mm as per Annexure-2	KG	100.000	100.00	12.02.16

General Note:

The Enquiry is governed by terms and conditions as mentioned in Annexure-A and no modifications / alterations are allowed in any case. If any modification / alteration is proposed or any other condition advanced by the bidder, it shall be ignored and the bidder will be bound by the terms of Enquiry notwithstanding any modification / alteration etc. proposed by them.

Annexures :**Pre Qualification Criteria**

Annexure-1 : Technical Specifications for Item No. 100,110 & 120.

Annexure-2 : Technical Specifications for Item No. 130 & 150

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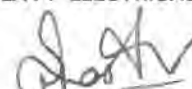
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Annexure-3 : Technical Specifications for Item No. 140
Annexure-A : Terms and Conditions of the Enquiry
Annexure-B : BHEL Commercial Terms & Conditions
Annexure-C : Price Bid Format
Annexure-D : CA Certificate format for MSE bidder

All the tenders may be addressed to the following address:

**The Tender Opening Cell / MM
Room No: 26, Building 24, Ground Floor
Bharat Heavy Electricals Limited
TIRUCHIRAPALLI 620014**

In case personal delivery of the offer, it shall be dropped into the respective box kept in Room No: 26, after duly entering the data in the system.

Offers will be accepted only up to 14.00 Hrs on the due date. Therefore, vendors shall ensure to submit the offers well before this time. All due date extension requirements should be addressed to the respective Purchase mail IDs. All the due date extension requests from vendors will be considered only up to 48 hours before the due date and time.

Vendors are requested to avoid submission of offers through e mail / fax. In case of any unavoidable situation, offers shall be sent through e mail to the following mail ID only
tender_cell@bheltry.co.in.

As tenders are being opened by Common Tender Opening Cell, offer covers should be sealed with tenderer's distinctive seal and super scribed with correct Tender No. item of supply and due date of opening.

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The bidder along with its associate/ collaborators/ sub-contractors/ sub-vendors/ consultants/ service providers shall strictly adhere to BHEL fraud prevention policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL management about any fraud or suspected fraud as soon as it comes to their notice.

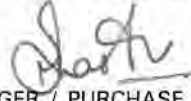
Enclosures:

"LD clause has to be confirmed without fail."

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ANNEXURE-1

WELDING CONSUMABLE PURCHASE INSTRUCTION FOR NON-SYNTHETIC

SMAW ELECTRODE AS PER AWS A 5.5 E9015-B91

1.0 SCOPE:

This purchase instruction prescribes the requirements of non-synthetic Shielded Metal Arc Welding (SMAW) electrode E9015-B91 as per AWS A 5.5 and in compliance with modified composition and properties mentioned in this purchase instruction for welding of modified 9Cr-1Mo steel pipes and tubes.

2.0 GENERAL:

- 2.1 Electrodes shall be supplied in size and quantity as specified in the purchase order.
- 2.2 The electrode shall comply with the requirements specified in AWS A 5.5, E9015-B91 (latest edition and addenda applicable on the date of issue of purchase order) as well as additional requirements referred in this document.
- 2.3 The electrode shall be suitable for radiographic quality butt joint welding of boiler pressure parts of SA387 Gr91-Plate, SA335P91-Pipe and SA213T91-Tube material for high temperature creep resistant service.
- 2.4 The weld metal deposited by this electrode shall meet minimum 30,000 hours creep rupture test at 600°C and 100MPa load without failure. The results of tests shall be furnished. Extrapolated creep properties for 100,000 hours at 600°C to be made available. Test shall be conducted at NABL approved lab.
- 2.5 The SMAW electrode shall be of non-synthetic type with alloyed core wire that nearly matches with weld metal chemistry.

3.0 CHEMICAL COMPOSITION:

The preferred chemical composition of the weld metal deposited using this electrode is as follows. The weld pad shall be as per clause 9.3 of AWS A5.5/2014

Element	Composition (Weight%)	Element	Composition (Weight%)	Element	Composition (Weight%)
C	0.08 – 0.13	Mn	1.20 maximum	S	0.01 maximum
Cr	8.0 – 10.5	Ni	0.8 maximum	P	0.01 maximum
Mo	0.85 – 1.20	Si	0.3 maximum	Cu	0.25 maximum
Nb	0.02 – 0.10	V	0.15 – 0.35	Co	To be reported
N	0.02 – 0.07	Al	0.04 maximum	As, Sb, Sn & Ti	To be reported

Note :

- (i) N / Al ratio shall be maintained at 4 and above
(ii) Ni + Mn shall be maintained as 1.0 maximum



S. NILA MAIDEEN
Senior Manager

Welding Technology Centre
BHEL, TRICHY - 620 014.

ANNEXURE-1

4.0 WELD PAD FOR RADIOGRAPHIC SOUNDNESS AND MECHANICAL PROPERTIES:

- 4.1 Groove weld test assembly using Grade 91 (modified 9Cr-1Mo steel) material shall be prepared as per figure 5 of AWS A 5.5/2014. Preheat temperature of 150–200°C and interpass temperature of 200–250°C shall be maintained.
- 4.2 Prior to post weld heat treatment (PWHT), the groove weld test assembly shall be cooled to below 90°C. The test assembly shall be subjected to PWHT at $760 \pm 15^\circ\text{C}$. However the preferred PWHT temperature range is 750 to 760°C. The heating rate and cooling rate shall be 150°C per hour maximum and the soaking time shall be 2 hours.

5.0 RADIOGRAPHIC SOUNDNESS:

The electrode shall deposit weld metal which meets radiographic soundness requirements specified in AWS A 5.5/2014. The electrode shall produce acceptable radiographic quality in pipe and tube butt welds in all positions.

6.0 MECHANICAL PROPERTIES:

After subjecting the groove weld test assembly to post weld heat treatment at $760^\circ\text{C} \pm 15^\circ\text{C}$, all-weld round tension test specimen shall be prepared and tests shall be carried out at ambient temperature as per ASTM E8. The tensile specimen shall have a nominal diameter of 12.5mm and a nominal gage length-to-diameter ratio of 4:1. The test results at ambient temperature shall meet the following requirements.

- a) Yield strength at 0.2% offset : 415 MPa (Minimum)
- b) Tensile strength : 620 MPa (Minimum)
- c) Elongation : 16% (Minimum)
- d) Five Charpy V-notch impact specimens of standard size (10 mm × 10 mm × 55 mm) shall be machined from the weld pad in PWHT condition. The five specimens shall be tested at 20°C in accordance with ASTM E23 or equivalent, and the Charpy V-notch impact energy values shall be reported.
- e) The Vicker's hardness (at 1 Kg load) of weld metal in as-welded and post weld heat treated condition shall be measured and reported.

7.0 FILLET WELD TEST:

Fillet weld test done using the electrode shall meet requirements specified in AWS A 5.5/2014.

8.0 MOISTURE CONTENT OF COVERING:

Moisture content of the electrode covering shall not exceed the limit specified in AWS A 5.5/2014.E9015-B91.

9.0 SIZE, COVERING, ARC END, GRIP END AND IDENTIFICATION:

9.1 SIZE:

Electrodes shall be supplied in diameter and length as specified in the purchase order.


12/01/20

ANNEXURE-1

9.2 COVERING:

The core wire and covering shall be free of defects and should ensure uniform deposition of weld metal. Coating shall be uniform and concentric around the wire and no taper burning is permitted.

9.3 ARC END AND GRIP END:

The arc end of each electrode shall be sufficiently bare and covering sufficiently tapered enough to permit easy arc striking. The grip end shall be bare for a length that is sufficient to provide electrical contact with the electrode holder.

9.4 IDENTIFICATION:

All electrodes shall be identified by providing at least one imprint of the electrode classification near the grip end. The numbers and letters of the imprint shall be of bold block type and large enough to be read. The ink used for imprint shall provide sufficient contrast with the electrode coating so that the imprint shall remain legible even after drying and welding.

10.0 PACKING AND MARKING OF PACKAGES:

10.1 PACKAGING:

A standard quantity of electrodes shall be packed in hermetically sealed containers or moisture proof cardboard-polythene encapsulated packets. Electrode packets shall be shipped in wooden crates lined with waterproof material. Net weight of each crate shall not exceed 1000Kg. The product shall have information as per clause 3.5 of SFA 5.02.

10.2 MARKING OF PACKAGES:

The marking of packages shall meet the requirements of clause 3.6 of SFA 5.02.

11.0 CERTIFICATION AND TESTING:

11.1 Batch/Lot classification shall be Class C1 as per Section 5.3.1 of SFA-5.01 filler metal procurement guidelines of ASME Sec.II. Part C.

11.2 The level of testing shall be Schedule K as per Section 6.7 of SFA 5.01 Filler metal procurement guidelines of ASME Sec.II. Part -C.

11.3 Three copies of Original Test certificates in English signed by manufacturer with details of following tests done in compliance with this purchase instruction and AWS A-5.5/2014, E9015-B9 shall be submitted.

- a) Welding parameters (voltage, current, speed, heat input, preheat temperature, interpass temperature, thickness of pad plate, etc) used for preparation of weld pads.
- b) Heat treatment details of test weld pads
- c) Chemical composition of weld metal
- d) All weld metal tension test at room temperature
- e) Charpy V-Notch impact test
- f) Hardness test
- g) Dimensional checks of filler wires being supplied
- h) Radiographic Soundness Test


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ANNEXURE-1

- 11.4 In addition, test certificate shall contain purchase order number, quantity supplied in particular batch, customer name.
- 11.5 The testing authority shall certify that supplies made against the batch conforms to the requirements of both AWS A 5.5/2014, E9015-B91 (latest edition and addenda applicable on the date of issue of purchase order) and this purchase instruction.
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ANNEXURE-2

WELDING CONSUMABLE PURCHASE INSTRUCTION FOR ER90S-B9 **GTAW FILLER ROD AS PER ASME SEC.II.C, SFA 5.28**

1.0 SCOPE:

This purchase instruction prescribes the requirements of Gas Tungsten Arc Welding (GTAW) filler rod ER90S-B9 in accordance with ASME SEC IIC, SFA 5.28 and in compliance with modified composition and properties mentioned in this purchase instruction for welding of modified 9Cr-1Mo steel pipes and tubes.

2.0 GENERAL:

2.1 GTAW filler rods shall be supplied in size and quantity as specified in the purchase order.

2.2 The filler rod shall comply with the requirements specified in ASME Sec II C, SFA 5.28, ER90S-B9 (latest edition and addenda applicable on the date of issue of purchase order) as well as additional requirements referred in this document.

2.3 The filler rod shall be suitable for radiographic quality butt joint welding of boiler pressure parts of SA387 Gr91-Plate, SA335 P91-Pipe and SA213 T91-Tube material for high temperature creep resistant service.

2.4 The weld metal deposited by this electrode shall meet minimum 30,000 hours creep rupture test at 600°C and 100MPa load without failure. The results of the tests shall be furnished. Extrapolated creep properties for 100,000 hours at 600°C to be made available. Test shall be conducted at any Government lab or NABL approved lab.

2.5 The filler rod is intended for use with 100% Argon shielding.

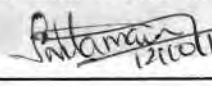
3.0 CHEMICAL COMPOSITION:

The chemical composition of the weld metal deposited using this filler rod shall be as below.

Element	Composition (Weight%)	Element	Composition (Weight%)	Element	Composition (Weight%)
C	0.08 – 0.12	Mn	0.5 – 1.0	S	0.01 maximum
Cr	8.5 – 9.5	Ni	0.5 – 0.7	P	0.015 maximum
Mo	0.85 – 1.2	Si	0.2 – 0.4	Ni + Mn	1.00 maximum
Nb	0.02 – 0.10	V	0.15 – 0.25	N/Al Ratio	4 and above
N	0.04 – 0.07	Al	0.02 maximum	As, Sb, Sn, Ti	To be reported

4.0 WELD PAD FOR RADIOGRAPHIC SOUNDNESS AND MECHANICAL PROPERTIES:

4.1 Test weld pad using Grade 91 (modified 9Cr-1Mo steel) material shall be prepared as per ASME SEC IIC, SFA 5.28, ER90S-B9. Preheat temperature of 150–200°C and interpass temperature of 200–250°C shall be maintained.

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- 4.2 Prior to post weld heat treatment (PWHT), the weld pad shall be cooled to below 90°C. The test weld pad shall be subjected to PWHT at 760°C $\pm$ 10°C. The heating rate and cooling rate shall be 150°C per hour maximum and the soaking time shall be 2 hours.

5.0 RADIOGRAPHIC SOUNDNESS:

The filler rod shall deposit weld metal which meets radiographic soundness requirements specified in SFA-5.28 ER90S-B9 as per ASME SEC IIC. The filler rod shall produce acceptable radiographic quality pipe and tube butt welds in all positions.

6.0 MECHANICAL PROPERTIES:

After subjecting the weld pad to post weld heat treatment at 760°C $\pm$ 10°C, all-weld round tension test specimen shall be prepared and tests shall be carried out at ambient temperature as per ASTM E8. The tensile specimen shall have a nominal diameter of 12.5mm and a nominal gage length-to-diameter ration of 4:1. The test results at ambient temperature shall meet the following requirements.

- a) Yield strength at 0.2% offset : 415 MPa (Minimum)
- b) Tensile strength : 620 MPa (Minimum)
- c) Elongation : 16% (Minimum)

- d) Five Charpy V-notch impact specimens of standard size (10 mm $\times$ 10 mm $\times$ 55 mm) shall be machined from the weld pad in PWHT condition. The five specimens shall be tested at 20°C in accordance with ASTM E23 or equivalent, and the Charpy V-notch impact energy values shall be reported.

- e) The Vicker's hardness (at 1 Kg load) of weld metal in as-welded and post weld heat treated condition shall be measured and reported.

7.0 FORM AND SIZE:

The filler rod shall be supplied in diameter as specified in the purchase order with tolerance as specified in ASME SEC IIC, SFA 5.02. The length shall be 1000mm with tolerance +15mm and -0mm.

8.0 FINISH AND UNIFORMITY:

The rods shall meet the requirements of clause 17.1 of SFA 5.28. The rods shall be brightly finished and chemically cleaned with no copper coating.

9.0 IDENTIFICATION:

Each rod shall have "ER90S-B9", brand or trade name embossed or imprinted on both sides for identification.

10.0 PACKAGING:

Rods of the same size and batch or lot shall be packed in water resistant plastic tube shaped cartons. Each tube carton shall weigh not more than 10 Kg. The cartons shall be provided with watertight lid to ensure waterproof during transit and storage. Tube cartons shall be packed in waterproof boxes with crates to ensure no damage during

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shipment and under normal storage conditions. Weight of each crate shall not exceed 1000kg. The product shall have information as per clause 4.6 of SFA 5.02.

11.0 MARKING OF PACKAGES:

The marking of packages shall meet the requirements of clause 4.6 of SFA 5.02.

12.0 CERTIFICATION AND TESTING:

12.1 Batch or Lot classification shall be Class S1 as per Section 5.1.1 of SFA-5.01 filler metal procurement guidelines of ASME Sec.II. Part C.

12.2 The level of testing shall be Schedule K as per Section 6.7 of SFA 5.01 Filler metal procurement guidelines of ASME Sec.II. Part -C.

12.3 Three copies of original test certificates in English signed by manufacturer with details of following tests done in compliance with this purchase instruction and ASME Sec.II.C, SFA-5.28, ER90S-B9 shall be submitted.

- a) Welding parameters (voltage, current, speed, heat input, preheat temperature, interpass temperature, thickness of pad plate, etc) used for preparation of weld pads.
- b) Heat treatment details of test weld pads
- c) Chemical composition of weld metal
- d) All weld metal tension test at room temperature
- e) Charpy V-Notch impact test
- f) Hardness test
- g) Dimensional checks of filler wires being supplied
- h) Radiographic soundness test

12.4 In addition, test certificate shall contain purchase order number, quantity supplied in particular batch, customer name.

12.5 The testing authority shall certify that supplies made against the batch conforms to the requirements of both ASME Sec II C, SFA 5.28, ER90S-B9 (latest edition and addenda applicable on the date of issue of purchase order) and this purchase instruction.



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ANNEXURE-3

WELDING CONSUMABLE PURCHASE INSTRUCTION FOR ER90S-B9 GMAW WIRE AS PER ASME SEC.II.C, SFA 5.28

1.0 SCOPE:

This purchase instruction prescribes the requirements of Gas Metal Arc Welding (GMAW) wire ER90S-B9 in accordance with ASME SEC IIC, SFA 5.28 and in compliance with modified composition and properties mentioned in this purchase instruction for welding of modified 9Cr-1Mo steel pipes and tubes.

2.0 GENERAL:

- 2.1 GMAW wire shall be supplied in size and quantity as specified in the purchase order.
- 2.2 The wire shall comply with the requirements specified in ASME Sec II C, SFA 5.28, ER90S-B9 (latest edition and addenda applicable on the date of issue of purchase order) as well as additional requirements referred in this document.
- 2.3 The wire shall be suitable for radiographic quality butt joint welding of boiler pressure parts of SA387 Gr91-Plate, SA335 P91-Pipe and SA213 T91-Tube material for high temperature creep resistant service.
- 2.4 The weld metal deposited by this electrode shall meet minimum 30,000 hours creep rupture test at 600°C and 100MPa load without failure. The results of the tests shall be furnished. Extrapolated creep properties for 100,000 hours at 600°C to be made available. Test shall be conducted at any Government lab or NABL approved lab.
- 2.5 The wire is intended for use with a gas combination 90-95% Argon and 5-10% CO₂.

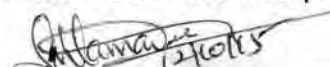
3.0 CHEMICAL COMPOSITION:

The chemical composition of the weld metal deposited using this wire shall be as below.

Element	Composition (Weight%)	Element	Composition (Weight%)	Element	Composition (Weight%)
C	0.08 – 0.12	Mn	0.5 – 1.0	S	0.01 maximum
Cr	8.5 – 9.5	Ni	0.5 – 0.7	P	0.015 maximum
Mo	0.85 – 1.2	Si	0.2 – 0.4	Ni + Mn	1.00 maximum
Nb	0.02 – 0.10	V	0.15 – 0.25	N/Al Ratio	4 and above
N	0.04 – 0.07	Al	0.02 maximum	As, Sb, Sn, Ti	To be reported

4.0 WELD PAD FOR RADIOGRAPHIC SOUNDNESS AND MECHANICAL PROPERTIES:

- 4.1 Test weld pad using Grade 91 (modified 9Cr-1Mo steel) material shall be prepared as per ASME SEC IIC, SFA 5.28, ER90S-B9. Preheat temperature of 150–200°C and interpass temperature of 200–250°C shall be maintained.



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- 4.2 Prior to post weld heat treatment (PWHT), the weld pad shall be cooled to below 90°C. The test weld pad shall be subjected to PWHT at 760°C $\pm$ 10°C. The heating rate and cooling rate shall be 150°C per hour maximum and the soaking time shall be 2 hours.

5.0 RADIOGRAPHIC SOUNDNESS:

The wire shall deposit weld metal which meets radiographic soundness requirements specified in SFA-5.28 ER90S-B9 as per ASME SEC IIC. The wire shall produce acceptable radiographic quality pipe and tube butt welds in all positions.

6.0 MECHANICAL PROPERTIES:

After subjecting the weld pad to post weld heat treatment at 760°C $\pm$ 10°C, all-weld round tension test specimen shall be prepared and tests shall be carried out at ambient temperature as per ASTM E8. The tensile specimen shall have a nominal diameter of 12.5mm and a nominal gage length-to-diameter ration of 4:1. The test results at ambient temperature shall meet the following requirements.

- a) Yield strength at 0.2% offset : 415 MPa (Minimum)
- b) Tensile strength : 620 MPa (Minimum)
- c) Elongation : 16% (Minimum)
- d) Five Charpy V-notch impact specimens of standard size (10 mm $\times$ 10 mm $\times$ 55 mm) shall be machined from the weld pad in PWHT condition. The five specimens shall be tested at 20°C in accordance with ASTM E23 or equivalent, and the Charpy V-notch impact energy values shall be reported.
- e) The Vicker's hardness (at 1 Kg load) of weld metal in as-welded and post weld heat treated condition shall be measured and reported.

7.0 FORM AND WEIGHT:

The wire shall be supplied in diameter as specified in the purchase order with tolerance as specified in ASME SEC IIC, SFA 5.02. The wire shall be precision layer wound on S300 spool. The spools shall meet the clause 4.3.4 of SFA 5.02.

8.0 FINISH AND UNIFORMITY:

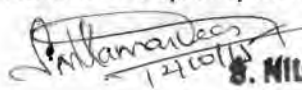
The wire shall meet the requirements of clause 4.2 of SFA 5.02.

9.0 WINDING:

The winding requirements shall meet the clause 4.4 of SFA 5.02.

10.0 PACKAGING:

- 10.1 The wire shall be completely devoid of moisture or any other foreign material with adequate sealing in suitable cartons to ensure no deterioration in the wire quality during transportation by sea or long duration storage.


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10.2 The cartons shall be packed in waterproof boxes with crates so as to protect them from damage during shipment and storage under normal conditions. Weight of each crate shall not exceed 1000kg. The cartons shall have product information as per clause 4.6 of SFA-5.02.

11.0 MARKING OF PACKAGES AND IDENTIFICATION:

The marking of packages shall meet the requirements of clause 4.6 of SFA 5.02. Identification requirements shall meet the requirements of clause 4.5.2 and 4.5.5 of SFA 5.02.

12.0 CERTIFICATION AND TESTING:

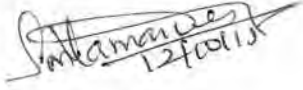
12.1 Batch/Lot classification shall be Class S1 as per Section 5.1.1 of SFA-5.01 filler metal procurement guidelines of ASME Sec.II. Part C.

12.2 The level of testing shall be Schedule K as per Section 6.7 of SFA 5.01 Filler metal procurement guidelines of ASME Sec.II. Part -C.

12.3 Three copies of original test certificates in English signed by manufacturer with details of following tests done in compliance with this purchase instruction and ASME Sec.II.C, SFA-5.28, ER90S-B9 shall be submitted.

- Welding parameters (voltage, current, speed, heat input, preheat temperature, interpass temperature, thickness of pad plate, etc) used for preparation of weld pads.
- Heat treatment details of test weld pads
- Chemical composition of weld metal
- All weld metal tension test at room temperature
- Charpy V-Notch impact test
- Hardness test
- Dimensional checks of filler wires being supplied
- In addition, test certificate shall contain purchase order number, quantity supplied in particular batch, customer name.

12.4 The testing authority shall certify that supplies made against the batch conforms to the requirements of both ASME Sec II C, SFA 5.28, ER90S-B9 (latest edition and addenda applicable on the date of issue of purchase order) and this purchase instruction.


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Pre Qualification Criteria

1. The technical specifications mentioned in the Enquiry shall be confirmed point wise.
2. Three Copies of Original Test Certificate signed by manufacturer is to be submitted before dispatch of material. The dispatch shall be effected only after acceptance of Test Certificate by BHEL.

Note : Bidder shall confirm and submit a signed copy of this Pre-Qualification Criteria for Technical Qualification.

TERMS AND CONDITIONS OF THE ENQUIRY

(A) SCOPE OF SUPPLY :

- Supply shall be made strictly as per the technical specifications mentioned in the Enquiry and Pre-Qualification criteria.

(B) TWO PART BID SYSTEM :

- The Bidders shall submit the offer in Two Part Bid System i.e. (i) Techno-Commercial Bid and (ii) Price Bid.
- Techno-Commercial Bid should contain the following details:
Technical specifications and product datasheet
Confirmation to Pre-Qualification Criteria
Duly Filled Annexure-B

Techno-Commercial bid shall be put in a cover (1) and super scribed as "Techno-Commercial Bid" for Enquiry No:Dt:Due Dt:

- Price Bid: Containing the price details as per ANNEXURE –C shall be put in a separate cover (2) and superscribed as "Price Bid" for Enquiry No:Dt:Due Dt: (submitted in your company letter head).
- You are requested to put the above two envelopes (Techno-Commercial Bid & Price Bid) inside a separate larger sealed envelope and this envelope shall be super scribed as "Techno-Commercial Bid and Price Bid" for Enquiry No:Dt:Due Dt: Bidder's name and address shall be mentioned clearly on this envelope.
- Tenders should be free from CORRECTION AND ERASURES. Corrections if any must be attested; all amounts shall be indicated both in words as well as in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall only be considered.
- Please submit point wise compliance to our specifications, terms and conditions as per Annexure-B. Otherwise it will be presumed that you are accepting BHEL's terms and conditions. Please Ensure That All Terms & Conditions Should Be Indicated in The Un-Priced Bid To Be Attached With The Techno-Commercial Bid Positively.

(C) SUBMISSION OF OFFER :

- Your Offers should be sent to the following address only :
The Tender Opening Cell / MM
Room No. 26, Building 24, Ground Floor,
Bharat Heavy Electricals Limited
Tiruchirapalli – 620014
Tamilnadu, India
- In case personal delivery of the offer, it shall be dropped into the respective tender box after duly entering the data in the system kept in room no. 26
- Vendors are requested to avoid submission of offers through Email/Fax. In case of any unavoidable situation, offers shall be sent through E-mail to the following ID only :

tender_cell@bheltry.co.in

The Enquiry No. shall be clearly mentioned in the subject of E-mail.
- Offers received after due date and time: 02:00 pm will not be considered under any circumstances. Therefore Vendors shall ensure to submit the offers before this time.

(D) OFFER VALIDITY :

- Validity of offer should be minimum 120 days from the date of Tender opening. The quoted / finalized prices shall be Firm till completion of the supplies

(E) DELIVERY TERMS :

- **For Indian Bidders :**
 - The prices are to be quoted on F.O.R. BHEL Stores basis (Inclusive of Packing & Forwarding Charges). Freight and Insurance Charges shall be quoted extra in %. All the items should be supplied at BHEL Stores at your own cost. Offers with any other delivery conditions will be rejected

TERMS AND CONDITIONS OF THE ENQUIRY

- Delivery condition like Ex-works / Ex - godown / Transportation of materials through transport carriers from your works up to the transport carrier's office and taking delivery of goods by BHEL from such office of transport carriers is not acceptable to us.
- **For Foreign Bidders :**
 - Bidders should submit their offer for CiR Chennai with freight and insurance break up details. FOB rate will be arrived by subtracting the corresponding freight & insurance break up from the CIF rate. Port of Loading should be indicated without fail. BHEL reserves the right to order on FOB or CIF basis. Mode of shipment will by Sea.
- 1. CIF incoterms:**
 - a) For CFR terms, moved through CONTAINERS (Suppliers should clearly specify this in their offer) it would be presumed by BHEL that the freight charges quoted is on LILLO (LINER IN LINER OUT) basis including extra charges, if any, like Container Imbalance Charges, Trade Imbalance charges or any other charges payable to the Liner. No other charges other than the quoted Freight rate will be paid by BHEL excepting applicable Terminal Handling Charges, Container cleaning Charges, DO charges to Shipping Liner at Discharge Port. If any deviation is taken by Tenderer, a loading of 22% on the freight rate per MT shall be considered by BHEL for arriving at the Total landed Cost.
 - b) For CFR terms, moved through BREAK BULK BASIS (Suppliers should clearly specify this in their offer) it would be presume by BHEL that the freight charges quoted is on LILLO (LINER IN LINER OUT) basis.
 - c) In case of shipment through Containers on CFR basis, the BL should bear the endorsement that "14 free days for Container Detention is applicable".
- 2. FOB incoterms:**
 - a) The available load ports for FCL (Full Container Load) Cargo in Freight Contract are Antwerp, Hamburg, Genoa, Rotterdam, Bilbao, Gothenberg, Felixstowe, St.Petersberg, Busan, Dalian, Shanghai, Kobe, Osaka, Yokohama.
 - b) The available load ports for LCL (Less than Container Load) Cargo in Freight Contract are Antwerp, Hamburg, Genoa, Rotterdam, Bilbao, Gothenberg, Felixstowe, Thamesport, Tilbury, Le Harve, St.Petersberg, Busan, Masan, Dalian, Shanghai, Tianjin, Kobe, Osaka, Yokohama, Singapore, Durban.
 - c) The available load ports for BB (Break Bulk) Cargo in Freight Contract are Antwerp, Hamburg, Genoa.

(F) PAYMENT TERMS :

- **For Indian Bidders :**
 - Payment term is "100% direct EFT payment after 45 days from the date of receipt and acceptance of materials at BHEL Stores".
 - The duplicate copy of the invoice meant for the transporters should accompany the material as stipulated under C.E. rules 52a and 173c (or) 57gg. A Photostat copy of the above invoice for each Delivery Chelan should be submitted along with the original bills routed through bank or submitted directly to BHEL finance department.
 - Any deviation in the above payment term will attract loading as mentioned below. "Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders.
 - Payment through bank is not preferred. In case of payment through bank is opted by supplier, BHEL prefers documents submission through bank with copy of LR and door delivery of goods to site/stores with consignee copy attached. In this case loading will be 3% on the offered value.
 - Offers of indigenous Suppliers with payment terms as LC / Advance Payment etc. will be rejected.
- **For Foreign Bidders :**

TERMS AND CONDITIONS OF THE ENQUIRY

- BHEL Payment term is 100% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account.
- Any deviation in the above payment term will attract loading as mentioned below :
"Base rate of SBI (as applicable on the date of bid opening. Techno Commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders.
- If the LC payment is insisted, TWO sets of original TCs to be submitted prior to dispatch and a certificate to that effect from BHEL should form a part of the documents to be negotiated. If this condition is not complied by the vendor, the offer is liable for rejection.
- In the case of Usance LCs the loading will be considered @ 1.5% on the offered Value.
- For LC at sight the loading will be considered @ 3.5% on the offered Value.
- Offers with payment terms as Advance payment, CAD at sight and Confirmed LCs will be rejected.

(G) LIQUIDITY DAMAGES / PENALTY :

- Liquidated damages shall be 0.5% of the total order value per week or part thereof subject to a maximum of 10% of the total order value
- For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part there of subject to a maximum of 10% of the total order value.
- Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value)

(H) RISK PURCHASE CLAUSE :

- Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitutes therefore. The supplier shall be liable for any loss, which the purchaser may sustain by reason of such risk purchases in addition to penalty at the rate mentioned in our LD clause.

(I) TENDER EVALUATION :

- Tender evaluation will be carried out on the basis of Technical Specifications and Commercial Terms and Conditions specified in the tender documents and changes thereof (if any) will be communicated to all bidders before Price Bid Opening.
- The Tender will be evaluated Item Wise.

(J) COST EVALUATION :

- Evaluation will be done on the basis of "Total landed cost to BHEL".
- For evaluation, the exchange rate (TT selling rate of SBI) on the date of Part-I bid opening shall be considered. If the relevant day happens to be a bank holiday, then the forex rate as on the previous working day shall be considered.
- BHEL will consider the ranking after the loading is applied as referred above, wherever deviations are observed
- Ranking (L-1, L-2 etc.) will be done only for the Techno-Commercially acceptable offers.
- BHEL reserves the right to place order for individual items with different vendors.
- In the event of more than one vendor becoming L-1 for any of the item / items, the enquiry quantity for those item / items will be shared equally among all the L1 vendors.

TERMS AND CONDITIONS OF THE ENQUIRY

- BHEL reserves the right to increase or decrease the tender quantity and split up the tender quantity among more than one vendor at the lowest acceptable price to BHEL and place order accordingly in any proportion at our own discretion.

(K) MSE CLAUSE :

- The bidder may also be a Micro and Small Enterprises (MSE) vendor registered as per MSE act as per the public procurement policy notified by the Central government.
- 20% of the tendered quantity is earmarked for MSE suppliers in this tender.
- Out of the 20% tendered quantity reserved for MSE suppliers, 4% shall be earmarked for procurement from MSE owned by SC / ST entrepreneurs.
- In case MSE vendor participating in the tender quotes within the price band of L1 + 15%, they will be allowed to supply the portion of the requirement subject to acceptance of L1 price by MSE vendor. In case of more than one such MSE, the supply shall be shared proportionately.
- MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM, II) OR valid NSIC certificate OR EM-II certificate along with attested copy of a CA certificate (Format enclosed at Annexure –F) where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (2014-15). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bid at par with other bidders. Documents should be notarized or attested by a Gazetted officer.
- Such Micro/Small Enterprises registered vendors must state the sub-category to which they belong and submit documentary proof for the same. The sub-categories:
 - (a) Enterprises owned by Scheduled Castes.
 - (b) Enterprises owned by Scheduled Tribes.
 - (c) Enterprises owned by other than above two categories

The enterprises under (a) & (b) means the proprietor in case of single owned firm and all partners in case of partnership firm and all directors in case of private/public limited must belong to SC/ST category

- To avail the intended benefits, all the relevant documents must be submitted along with other. Post tender submission of these information will not be considered.

(L) INDIAN AGENTS OF FOREIGN SUPPLIERS :

- BHEL shall deal directly with foreign vendors, wherever required, for procurement of goods. However, if the foreign principal desires to avail of the services of an Indian agent, then the foreign principal should ensure compliance to regulatory guidelines - which require mandatory submission of an Agency Agreement
- It shall be incumbent on the Indian agent and the foreign principal to adhere to the relevant guidelines of Government of India, issued from time to time.
- If the offer is submitted by Agents, duly signed agency agreement shall be submitted along with the offer in Techno-Commercial bid. The Agency Agreement should specify the precise relationship between the foreign OEM / foreign principal and their Indian agent and their mutual interest in the business. All services to be rendered by agent/ associate, whether of general nature or in relation to the particular contract, must be clearly stated by the foreign supplier/ Indian agent. Any payment, which the agent or associate receives in India or abroad from the OEM, whether as commission or as a general retainer fee should be brought on record in the Agreement and be made explicit in order to ensure compliance to laws of the country.
- Any agency commission to be paid by BHEL to the Indian agent shall be in Indian currency only.
- Tax deduction at source is applicable to the agency commission paid to the Indian agent as per the prevailing rules.
- In the absence of any agency agreement, BHEL shall not deal with any Indian agent (authorized representatives / associate / consultant, or by whatever name called) and

TERMS AND CONDITIONS OF THE ENQUIRY

shall deal directly with the foreign principal only for all correspondence and business purposes.

- The supply and execution of the Purchase Order (including indigenous supplies/ service) shall be in the scope of the OEM/ foreign principal. The OEM/ foreign principal should submit their offer inclusive of all indigenous supplies/ services and evaluation will be based on 'total cost to BHEL'. In case OEM/ foreign principal recommends placement of order(s) on Indian supplier(s)/ agent on their behalf, the credentials/ capacity/ capability of the Indian supplier(s)/ agent to make the supplies/ services will be checked by BHEL, before opening of price bids. It will be the responsibility of the OEM/ foreign principal to get acquainted with the evaluation requirements of Indian supplier/ agent as per SEARP available on www.bhel.com.
The responsibility for successful execution of the contract lies with the OEM/ foreign principal.
- Either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item in the same tender. If offer is received by both Indian agent and Principal/OEM, then the offer from Principal/OEM only will be considered.
- If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit bid on behalf of another Principal/OEM for the same item. If an agent submits bid on behalf of more than one Principal/OEM for a single item, his offer will be completely rejected for the concerned item.

(M) PACKING AND MARKING :

- The supplier shall arrange for securely protecting and packing the material to avoid loss or damages during transit.

(N) ARBITRATION :

- All disputes or differences whatsoever which may arise at any time during execution of the Contract shall be mutually settled by BHEL Trichy and Vendor as per provision of the Contract. However, in the event such disputes cannot be settled mutually, such disputes shall be settled as per the Arbitration and reconciliation Act, 1996 of the Govt. of India and its subsequent amendments. In case of disputes with the Central PSUs, the same shall be settled at Tiruchirapalli as per the Guidelines of the Govt. of India. However, during the period such disputes are settled either by mutual discussions between the parties or by legal means, Vendor shall continue to do the work as per terms & conditions of Contract.

(O) OTHER TERMS AND CONDITIONS :

- No revision of prices will be entertained at any circumstances after tenders are opened.
- On the due date of tender opening, only the Techno-commercial bids will be opened. Techno-commercial bids will be evaluated by us and clarifications required, if any, will be called from the bidders on technical and commercial points.
- If any difference is found in the terms in the Techno-commercial bid and price bid, the terms mentioned in the Techno-Commercial Bid will be considered.
- BHEL reserves the right to negotiate or refloat the tender opened, if L1 price is not the lowest acceptable price to BHEL due to inter-alia other reasons.
- The correspondence between the bidder and BHEL through Email is considered as valid document Legally though not signed. It is treated as valid confirmations made on behalf of the respective company and comes under the legal ambit of the business transaction and hence binding on both the parties.
- If The Due Date Of Tender Opening Happens to be a Holiday, those tenders Will Be Opened On Next Working Day.
- The quality of the supplies should strictly conform to Technical specifications applicable for the item. The offer should specifically confirm this.
- If any quality problem is pointed out by any BHEL unit w.r.t. supplied material, the same shall be settled and corrected immediately with the concerned BHEL unit, by the supplier.

ANNEXURE – A

TERMS AND CONDITIONS OF THE ENQUIRY

If there is any failure by the supplier to settle such quality problems, the matter will be considered very seriously and appropriate penal action may be initiated against the respective supplier.

- BHEL shall be at liberty to accept any tender, part or in full, at their discretion without giving any reason.
- For any clarifications, you may contact to the following Email IDs :
akumar@bheltry.co.in
shrivastava@bheltry.co.in

ANNEXURE – B

BHEL COMMERCIAL TERMS AND CONDITIONS

(a) TECHNICAL TERMS CONFIRMATION (TO BE SUBMITTED IN COVER NO: 1)

ENQ S. NO.	BHEL SPECIFICATIONS	VENDOR'S SPECIFICATION	unit	Quantity	Consignment weight against each item separately	whether quoted/ not quoted
10						
20						
30						
40						
50						
60						
70						
80						
90						
100						
110						
120						
130						
140						
150						

(b) COMMERCIAL TERMS CONFIRMATION (TO BE SUBMITTED IN COVER NO: 1)

SL NO	DESCRIPTION	BHEL REQUIREMENTS	SUPPLIER CONFIRMATION
1	VALIDITY	MINIMUM 120 Days from Date of tender opening	
2	PRICE QUOTED	As per Clause (E) of Annexure-A	
3	EXCISE DUTY WITH CESS (Whether inclusive (or) extra) Clearly mention the percentage	SUPPLIER TO QUOTE. ED Invoice to be submitted for availing CENVAT benefit.	
4	VAT % Clearly mention the percentage	SUPPLIER TO QUOTE	
5	CST % against form 'C' Clearly mention the percentage	SUPPLIER TO QUOTE	
6	FREIGHT & INSURANCE CHARGES FOR DELIVERY AT BHEL STORES – FOR INDIAN BIDDER	SUPPLIER TO QUOTE IN % OF BASIC PRICE ONLY	
7	FREIGHT & INSURANCE CHARGES FOR DELIVERY AT CHENNAI SEAPORT – FOR FOREIGN BIDDER	SUPPLIER TO QUOTE IN % OF BASIC PRICE ONLY	

ANNEXURE – B

BHEL COMMERCIAL TERMS AND CONDITIONS

7	DEIVERY SCHEDULE FROM THE DATE OF PURCHASE ORDER / LETTER OF INTENT	SUPPLIER TO QUOTE IN NO. OF DAYS / WEEKS	
8	PAYMENT TERMS	As per Clause (F) of Annexure-A	
9	LIQUIDATED DAMAGES CLAUSE	As per Clause (G) of Annexure-A	
10	RISK PURCHASE CLAUSE	As per Clause (H) of Annexure-A	
11	TEST CERTIFICATE	As per Pre Qualification Criteria	
12	GUARANTEE CERTIFICATE	GUARANTEE CERTIFICATE TO BE SUBMITTED ALONG WITH SUPPLY OF MATERIAL	
13.	ORIGIN OF DISPATCH	SUPPLIER TO QUOTE	
14.	PORT OF LOADING – FOR FOREIGN BIDDER	SUPPLIER TO QUOTE	
15	CURRENCY – FOR FOREIGN BIDDER	SUPPLIER TO QUOTE	
16.	MSE VENDOR	YES / NO as per Clause (M) of Annexure-A.	
17.	DOCUMENTARY PROOF FOR MSE	Supplier to provide the list of documentary proofs	
18.	CONTACT PERSON DETAILS	NAME:	
		MOBILE NO:	
		LAND LINE NO:	
		EMAIL :	
		FAX:	

NOTE:

a). It is confirmed that all the terms and conditions stipulated in the Enquiry have been fully understood by us and all clarifications & details have been obtained.

b). No row shall be left blank. Please indicate NA, in case the item is "not applicable"

Full postal Address:

Signature & Office Seal of the vendor

ANNEXURE – C
PRICE BID FORMAT

ENQ SL NO	BHEL SPECIFICATIONS	VENDOR'S SPECIFICATION	unit	quantity	Rate Per Kg	Total Value
10						
20						
30						
40						
50						
60						
70						
80						
90						
100						
110						
120						
130						
140						
150						

NOTE :

**IF YOU HAVE NOT QUOTED FOR ANY ITEM, YOU SHOULD MENTION AS “NOT QUOTED”
AGAINST THAT ENQ SL NO. (SUBMITTED IN SEPARATE COVER NO: 2)**

Certificate by Chartered Accountant on letter head

This is to Certify that M/S
 (hereinafter referred to as 'company') having its registered office at
 is registered under MSMED Act 2006, (Entrepreneur
 Memorandum No (Part—II) dtd•.....
 Category:(Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the
 latest audited financial year as per MSMED Act 2006 is as follows:

- 1. For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006 :
 Rs.....Lacs
- 2. For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:
 Rs... ..Lacs

(Strike off whichever is not applicable)

The above investment of RsLacs is within permissible limit of
 Rs.Lacs forMicro / Small **(Strike off which is not applicable)**
 Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/ Small) **(Strike off which is not applicable)** and the date of graduation of such enterprise from its original category is
 (dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such enterprise from its original category as notified vide S.O. No. 3322(E) dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name -

Membership number –

Seal of chartered accountant