

Technical Specifications

SL. No	Description and Technical Specification of the item	QTY	UNIT	Delivery
1	<p>ER90S-B91 GTAW WIRE DIA 0.8 MM</p> <p>ASME SEC.II.C.SFA-5.28, ER90S-B91 Low alloy Steel BARE SOILD WIRE FOR GTAW Process AS PER WCPI-161/11.</p> <p>DIAMETER.0.80 mm AND 700 to 1000 grams weight with precision layer wounded plastic spools (S100 plastic spools)</p> <p>Each Spool Weight =700-1000 Grams Diameter = 0.8 MM.</p>	2500.00	KG	120 DAYS



BHARATH HEAVY ELECTRICALS LIMITED
TIRUCHIRAPALLI-620 014
WELDING TECHNOLOGY CENTRE

Doc. Number: WCPI – 161

Revision No.: 11

Date: 26/11/2021

**WELDING CONSUMABLE PURCHASE INSTRUCTION FOR
LAS WIRE ASME.SEC.II.C SFA-5.28, ER90S-B91**

1.0 GENERAL:

1.1 The wire shall comply with the requirements specified in the latest edition and addenda (applicable on the date of issue of purchase order) of ASME Sec.II.C.SFA-5.28, ER90S-B91. All tests, acceptance criteria shall be in accordance with this. Additional requirements specified in this document shall also be complied.

1.2 The wires shall be supplied in sizes and quantities as specified in the purchase order.

1.3 The wires are intended for use as a welding electrode for butt-welding of tubes in pulsed GMAW process with Argon plus 5% to 20% CO₂ gas shielding in automatic straight tube butt welding machine and orbital TIG welding machine with 100 % Argon shielding for radiographic quality high pressure boiler components.

2.0 CHEMICAL COMPOSITION:

The chemical composition of the wire shall conform to ASME SEC.II.C SFA-5.28, ER90S-B91 and additionally Mn+Ni ≤ 1.2% maximum and Nitrogen content ≥ (0.5xAl+0.03%) minimum.

3.0 MECHANICAL PROPERTIES:

Mechanical properties of the wire shall conform to ASME SEC.II.C SFA-5.28, ER90S-B91 with 95% argon + 5% CO₂ Gas shielding. Hardness of weld metal & HAZ shall be 195 HV to 320 HV.

4.0 RADIOGRAPHIC SOUNDNESS & USABILITY:

4.1 The wire when used as an electrode in GMAW with Argon plus 5% to 20% CO₂ or orbital welding with 100% Argon shall deposit a weld metal that flows freely, uniformly without sputtering or other defects and shall exhibit excellent wetting characteristics.

4.2 The resultant weld metal shall be smooth, uniform with no visible evidence of cracks, porosity or other defects and shall meet the radiographic soundness requirements as per ASME SEC.II.C SFA 5.28 ER90S-B91.

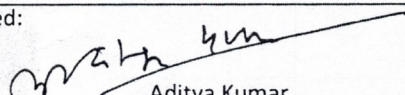
5.0 SIZE:

The wire shall be supplied in diameter 0.8/0.9/1.0 mm as specified in the purchase order. The tolerance on diameter shall be as per SFA-5.02.

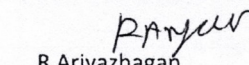
6.0 FORM & WEIGHT:

The wire shall be precision layer wound in S300 and/or S100 plastic spools as mentioned in the purchase order and the net weight of the wire shall be 10/12.5/15Kg and 700-1000g respectively. The spools shall meet the clause 4.3.4 of SFA-5.02.

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Reviewed and Approved.


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Sr. Manager /WTC

7.0 FINISH & UNIFORMITY:

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

8.0 WINDING REQUIREMENTS:

The wire shall meet the requirements of clause 4.4 of SFA-5.02.

9.0 IDENTIFICATION :

The wire shall meet the requirements of clause 4.5.2 & 4.5.5 of SFA-5.02.

10.0 MARKING:

The wire shall meet the requirements of clause 4.6 of SFA-5.02.

11.0 PACKAGING:

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

11.2 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

12.0 TESTING & CERTIFICATION:

12.1 Each consignment of electrodes supplied shall preferably be from one batch only.

12.2 Batch /lot classification shall be Class S1 as per SFA-5.01 filler metal procurement guidelines of ASME Sec.II.C. (Latest edition and addenda).

12.3 The level of testing shall be Schedule K as per SFA-5.01 filler metal procurement guidelines of ASME Sec.II.C (Latest edition and addenda).

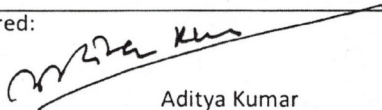
12.4 Three copies of original certified material test report in English signed by the manufacturer giving details of tests done in compliance with this WCPI and ASME Sec.II.C.SFA-5.28, ER90S-B91 shall be sent.

12.5 A copy of valid IBR approval certificate for the brand being supplied shall be sent along with every consignment or Original certified material test report in English countersigned by Inspecting Authority (Latest) approved by IBR for country of origin giving details of tests done for compliance to this Purchase instruction and ASME Sec.II.C.SFA-5.28, ER90S-B91.

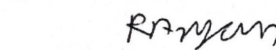
12.6 The testing authority shall certify that supplies made against the batch conform to the requirements of the latest edition & addenda (applicable on the date of issue of purchase order) of ASME Sec.II.C.SFA-5.28, ER90S-B91.

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Sl. No.	Pre –Qualification Criteria - PR 0136803475	Bidder remark
1	If Bidder is a manufacturer, Confirm “Yes or, No” in bidder remark.	
2	<p>Bidder shall be a manufacturer of the Quoted items or an authorized dealer of the same.</p> <p>If the offer is quoted by agent, letter of authorization or agreement duly signed by the manufacturer is required to consider the offer.</p> <p>Tender Enquiry details must available on Letter of authorization or agreement to consider the offer.</p>	
3	Quoted Welding Consumables Brand Name/Product Name	
4	Quoted Product Catalogue	
5	Manufacturing Plant Address / Mill Address	
6	Manufacturer/Bidder shall submit manufacturing process flow chart (Raw material to finished product) along with offer for Quoted Item.	

Seal and Sign of Authorized Person

Sl. No.	Pre –Qualification Criteria – PR 0136803475	Bidder remark
7	Manufacturer/Bidder shall submit a valid ISO 9001 certificate or Quality management system certificate or Written down procedure for ISO 9001 or A valid ISO 45001 certificate or Written down procedure for Quality inspection of GTAW Rod/ GMAW Wire.	
8	Manufacturing Plant capacity for Quoted Item.	
9	Any deviation from the Specification are to be mentioned in the “Bidder remark Space”. If There is no deviation vendor should indicate “No Deviation”.	
10	Quoted items - Diameter details	
11	Quoted items – Each spool weight.	
12	Seal and sign on technical specification for acceptance.	
13	Valid IBR certificate status to be provided for Quoted material.	
14	<p>Manufacturer/Bidder shall have successful experience for supplying of ER 70S-A1 or, ER 80S-B2 or, ER 80S-G or, ER 90S-B3 or, ER 90S-G or GMAW Spool or GTAW Spool or GTAW Rod or SMAW Electrode to any govt. Organizations/ PSUs/ Public Ltd./ Company/Reputed Industries etc.</p> <p>Purchase orders copies/ related documents to be submitted along with offer to consider the offer.</p> <p>Note: Successful experience means – supplied and accepted.</p>	

Seal and Sign of Authorized Person

Annexure – A- Additional Terms and Conditions for GeM Enquiry

The terms and condition mentioned in this document are applicable in addition to the GeM General Terms and Conditions. Bidders shall furnish pointwise confirmation/details.

<u>To be filled by bidder</u>		
Description of the Equipment:		
GeM Tender No. & Date		
Name of the firm (Bidder)		:
Address		:
<u>Contact person 1</u> Name: Designation: Office Phone: Mobile: e-mail:		<u>Contact person 2</u> Name: Designation: Office Phone: Mobile: e-mail:
Offer/Quotation reference with date		:
Sl	Terms and conditions	Vendor's confirmation
1.	Inspection by BHEL/as per Technical specification(if any).	
2.	Payment terms: <ol style="list-style-type: none"> 1. Payment terms for Non MSME Suppliers: 90 days from the Vehicle entry date (Against submission of GST invoice, GeM invoice, LR copy, Last Movement e-Way Bill, UD). 2. Payment terms for Micro & Small Enterprises (MSEs): 45 days from the Vehicle entry date (Against submission of GST invoice, GeM invoice, LR copy, Last Movement e-Way Bill, UD). The supplier should upload UDYAM Registration Certificate in proof of MSE. 3. Payment terms for Medium Enterprises: 60 days from the Vehicle entry date (Against submission of GST invoice, GeM invoice, LR copy, Last Movement e-Way Bill, UD). The supplier should upload UDYAM Registration Certificate in proof of Medium Enterprises. Note: Deviation in above payment terms is not acceptable.	
3.	Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration number which should clearly mentioned in the offer. Indicate the GST registration number. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.	GST Registration No. _____
4.	EMD / Performance Security:	Not Applicable
5.	Kindly Indicate the HSN Code for all items	HSN CODE : ____
6.	Rate quoted in GeM portal should be on FOR destination basis inclusive of all taxes, P&F, freight etc. Transit Insurance is under Supplier scope. Please indicate how much GST percentage is included in quoted price.	GST in %: ____

Vendor's Seal & Signature

/ On Bidder's office letter pad /

Self-Declaration

Enquiry No.	
Enquiry Date	

In line with Government public procurement order Number P-45021/2/2017-B.E-II dated 15.06.2017, and further modified order dt. 28.05.2018, 29.05.2019 & order 04.06.2020 issued by DPIIT

I / We hereby declare that I / We are a "Local Supplier" meeting the requirement of minimum local content (..... %) defined in the above government notification for the goods against above mentioned enquiry Number.

Details of location at which local value addition will be made is as follows:

Door No.	
Street / Address 1	
Street / Address 2	
District	
State	
Country	
PIN Code	

We also understand that the false declarations will be in breach of the code of Integrity under rule 175(1)(i)(h) of the General financial rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

For Company Name:

Seal:

Signature:

Date:

Place:

Note:

" Local Content "means the amount of value added in India which shall ,unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured(excluding net domestic indirect taxes) minus the value of imported content in the item(including all customs duties) as a proportion of the total value, in percent. "Local Supplier "means a supplier or service provider whose product or service offered for procurement meets the minimum local content.

The above declaration shall be submitted mandatorily along with the offer in company letter head with seal & signature.

(Please fill all the yellow color field)