

## Technical Specifications

SL. No	Description and Technical Specification of the item	QTY	UNIT
1	<p>E 71T-1C FCAW WIRE DIA1.6 MM</p> <p>ASME SEC.II.C,SFA-5.20 CARBON STEEL FCAW WIRE E71T-1C DIA.1.60 MM X 12.5/15 Kg SPOOLS as per WCPI-502/06. The wire is intended to be used in fillet welding of tube to fin and also butt welding applications. Fillet weld test as per ASME SEC IIC shall be performed and test results reported. Diffusible hydrogen content shall be less than 4ml/100 grams. The mechanical properties shall be reported after PWHT condition 610 degree celsius ± 10 degree celsius with soaking of 2.5 minutes per mm (minimum 30 minutes).</p> <p>Delivery schedule: 1st lot (3000 Kg): Within 60 days of PO 2nd lot (5000 Kg): Within 150 days of PO</p>	8,000.00	KG



BHARATH HEAVY ELECTRICALS LIMITED  
TIRUCHIRAPALLI-620 014  
WELDING TECHNOLOGY CENTRE

Doc. Number: WCPI – 502

Revision No.: 06

Date: 01.10.2013

**WELDING CONSUMABLE PURCHASE INSTRUCTION FOR  
FCAW WIRE AS PER ASME SEC II C SFA-5.20M E491T-1C**

**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-5.20M, E491T-1C. 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 welding carbon steel by FCAW process with 100% CO<sub>2</sub> with radiographic quality in high pressure boiler components in single & multi-pass welding .

**2.0 CHEMICAL COMPOSITION:**

The chemical composition of the weld metal deposited using wire with CO<sub>2</sub> shielding shall conform to ASME SEC.II.C SFA-5.20M, E491T-1C.

**3.0 MECHANICAL PROPERTIES:**

Mechanical properties of the wire shall conform to ASME SEC.II.C SFA-5.20M, E491T-1C with 100% CO<sub>2</sub> shielding.

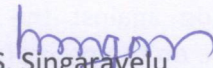
**4.0 RADIOGRAPHIC SOUNDNESS & USABILITY:**

- 4.1 The wire when used as an electrode in FCAW with 100% CO<sub>2</sub> shall deposit a weld metal that flows freely, produce notch free weld interface and posses good slag detachability. The wire shall produce a soft and stable arc, very low spatter and fumes.
- 4.2 The resultant weld metal shall be smooth, uniform, finely rippled with no visible evidence of cracks, porosity or other defects and shall meet the radiographic soundness requirements as per ASME SECIIC SFA- 5.20M, E491T-1C.
- 4.3 Diffusible hydrogen level in the weld metal deposited using the wire shall be ≤ 4 ml.

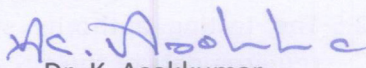
**5.0 SIZE:**

The wire shall be supplied in diameter 1.2mm or 1.6mm as specified in the purchase order. The tolerance on diameter shall be as per SFA-5.02.

Prepared:

  
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Reviewed & Approved:

  
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AGM/WTC



**6.0 FORM & WEIGHT:**

The wire shall be precision layer wound in ISO 644 : S300/BS300/B300 plastic spools as per SFA-5.02 and the net weight of wire shall be 10/12.5/15Kg. The spools shall meet the clause 4.3.4 of SFA-5.02.

**7.0 FINISH & UNIFORMITY:**

The wire shall meet the requirements of clause 4.2 of SFA-5.02. The wire as shipped shall be essentially free from lubricants, residue or rust that would cause buildup and stoppage in welding nozzles.

**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 wire 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 wires supplied shall be from one batch only.

12.2 Batch /lot classification shall be Class T1 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 J as per SFA-5.01 filler metal procurement guidelines of ASME Sec.II.C (Latest edition and addenda).

12.4 Three copies of original test certificates in English countersigned by inspecting authority (latest) approved by IBR of the country of origin giving details of the tests done in compliance with this purchase instruction and ASME SECIIC SFA- 5.20M, E491T-1C shall be sent. In addition, test certificate shall contain purchase order number, quantity and customer name.

12.5 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.IIC, SFA-5.20M, E491T-1C.

Sl. No.	Pre –Qualification Criteria – PR 0134885663	Bidder remark
1	If Bidder is a manufacturer, Confirm “Yes or, No” in bidder remark.	
2	Bidder shall be a manufacturer of the Quoted items or an authorized dealer of the same. If the offer is quoted by agent, letter of authorization or agreement duly signed by the manufacturer is required to consider the offer. Tender Enquiry details must available on Letter of authorization or agreement to consider the offer.	
3	Quoted Welding Consumables Brand 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.	
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 .	
8	Manufacturing Plant capacity for quoted material.	

Seal and Sign of Authorized Person

Sl. No.	Pre –Qualification Criteria – PR 0134885663	Bidder remark
9	Bidder should confirm and full fill the WCPI- 502 /06. 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	Seal and sign the WCPI- 502/06 for confirmation.	
11	WCPI- 502/06 (Diameter 1.6 mm & Spool Weight.: 15 Kg / 12.5 Kg) Diameter details and Spool Wt. details	
12	Present IBR certificate status to be provided .	
13	<p>Manufacturer shall have successfully supplied FCAW E71T-1C wire spools any govt. Organizations/ PSUs/ Public Ltd. Company/Reputed Industries/Company etc.</p> <p>Purchase orders copies/ related documents /Performance certificate to be submitted along with offer to consider the offer.</p> <p>Note: Successfully supplied means – supplied and accepted</p>	
14	<p>Self-declaration from Manufacturer Supplier (As per PQC 13) is required against PQC Sl. No. 14 for “successfully supplied and accepted by customer”.</p> <p>Self-Declaration shall have following details.</p> <ol style="list-style-type: none"> <li>1- Supplied quantity.</li> <li>2- PO /related document Reference</li> <li>3- Brand Name.</li> <li>4- Supplied Quantity.</li> <li>5- Manufacturer Name.</li> </ol>	

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.

<i>To be filled by bidder</i>		
<b>Description of the Equipment:</b>		
<b>GeM Tender No. &amp; Date</b>		
<b>Name of the firm (Bidder)</b>		:
<b>Address</b>		:
<b>Contact person 1</b>		<b>Contact person 2</b>
<b>Name:</b>		<b>Name:</b>
<b>Designation:</b>		<b>Designation:</b>
<b>Office Phone:</b>		<b>Office Phone:</b>
<b>Mobile:</b>		<b>Mobile:</b>
<b>e-mail:</b>		<b>e-mail:</b>
<b>Offer/Quotation reference with date</b>		:
Sl	Terms and conditions	Vendor's confirmation
1.	Inspection by BHEL/as per Technical specification(if any).	
2.	<p><b>Payment terms:</b></p> <ol style="list-style-type: none"> <li>1. Payment terms for Non MSME Suppliers: Within 90 days after CRAC</li> <li>2. Payment terms for Micro &amp; Small Enterprises (MSEs): Within 45 days after CRAC. The supplier should upload UDYAM Registration Certificate in proof of MSE.</li> <li>3. Payment terms for Medium Enterprises: Within 60 days after CRAC. The supplier should upload UDYAM Registration Certificate in proof of Medium Enterprises.</li> </ol> <p><b>Note:</b> Deviation in above payment terms is not acceptable. In case of Auto PRC/CRAC, Payment due date shall be calculated from CRAC date or material acceptance date by BHEL whichever is later.</p>	
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.	<b>Performance Bank Guarantee:</b> 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)