

### Technical Specifications

SL. No	Description and Technical Specification of the item	QTY	UNIT	Delivery
1	E 308-16 SMAW ELECTRODE DIA 2.4mm / 2.5mm ASME.SEC.II.C, SFA-5.4 E308-16 SMAW ELECTRODE AS PER WCPI-217/09, DIAMETER - 2.4mm/2.5 mm X 350 mm LONG.	10,000.00	NO	90 days
2	E 308-16 SMAW ELECTRODE DIA 3.15mm/3.2mm ASME.SEC.II.C, SFA-5.4 E308-16 SMAW ELECTRODE AS PER WCPI-217/09, DIAMETER - 3.15 mm /3.2 mm X 350 mm LONG.	20,000.00	NO	90 days



BHARAT HEAVY ELECTRICALS LIMITED  
TRICHY-620 014  
WELDING TECHNOLOGY CENTRE

WCPI - 217

Revision No.: 09

Date: 23.02.2016

**WELDING CONSUMABLE PURCHASE INSTRUCTION (WCPI)**  
**FOR ASME SEC.II.C, SFA-5.4 E308-16**

**1.0 SCOPE:**

- 1.1 The electrodes shall comply with requirements specified in the latest edition (applicable on the date of issue of purchase order) of ASME Sec.II.C.SFA-5.4, E308-16. All tests, acceptance criteria shall be in accordance with this. Additional requirements specified in this document shall also be complied.
- 1.2 The electrodes shall be supplied in quantities as specified in the purchase order. The brand of SMAW electrodes to be supplied shall be approved by the concerned IBR Authorities of the state. Every batch to be supplied should have been manufactured during the period when IBR approval for the brand was valid.

**2.0 CHEMICAL COMPOSITION:**

The chemical composition of the undiluted weld metal shall conform to ASME SECII.C SFA-5.4, E308-16 for each size of electrode supplied and the ferrite content of welds made using this electrode shall be controlled to be from 4FN to 8FN for each size of electrode supplied. (Ferrite content should be measured in accordance with procedure recommended in the latest edition of ASME Sec II C, SFA 5.4).

**3.0 MECHANICAL PROPERTIES:**

The mechanical properties of the weld metal deposited using this electrode shall meet the requirements of ASME SECII.C SFA-5.4, E308-16 for each size of electrode supplied.

**4.0 RADIOGRAPHIC SOUNDNESS:**

The radiographic test shall meet the requirements of ASME SECII.C SFA-5.4, E308-16 for each size of electrode supplied.

**5.0 FILLET WELD TEST:**

Fillet weld test done using this electrode shall meet the requirements specified in ASME SEC IIC SFA 5.4, E308-16 for each size of electrode supplied. The electrodes shall exhibit smooth running characteristics with soft and stable arc with ease of striking. The spatter level shall be negligible. Weld bead appearance shall be smooth with fine ripples and slag shall be self-peeling.

**6.0 SIZE:**

The electrodes shall be supplied in diameters and lengths as specified in the purchase order. The tolerance on diameter and length shall meet the requirements of SFA-5.4 for each size of electrode supplied.

**7.0 CORE WIRE, COVERING, EXPOSED CORE, IDENTIFICATION, METHOD OF MANUFACTURE:**

The electrodes shall meet the requirements of clause 3.2, 3.3, 3.4 of SFA-5.02 and clause 14 of SFA 5.4 for each size of electrode supplied.

Prepared:

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Reviewed and approved:

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### 8.0 PACKAGING:

- 8.1 Electrodes packed in standard quantity shall be wrapped tightly in a corrugated paper with moisture proof packing in polythene bags and sealed. These shall be further packed either in hermetically sealed containers or in cardboard packets and then packed with polythene bags and sealed. The number of electrodes per packet shall be such that the net weight of each packet does not exceed 5Kg. Packets shall be further packed in cardboard cartons each weighing not more than 25kg. The cartons shall be packed in waterproof boxes with crates so as to ensure no damage to electrodes during shipment and normal storage conditions.
- 8.2 Weight of each crate shall not exceed 1000kg.
- 8.3 Markings of packages shall be as per clause 3.6 of SFA-5.02.

### 9.0 TESTING AND CERTIFICATION:

- 9.1 Each consignment of electrodes supplied shall preferably be from one batch only.
- 9.2 Batch or lot classification shall be Class C1 as per SFA-5.01 filler metal procurement guidelines of ASME Sec IIC. (Latest edition)
- 9.3 The level of testing shall be Schedule K as per SFA-5.01 filler metal procurement guidelines of ASME Sec IIC. (Latest edition)
- 9.4 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-5.4, E308-16 shall be sent.
- 9.5 The manufacturer shall certify that supplies made against the batch conforms to the requirements of the latest edition (applicable on the date of issue of purchase order) of ASME Sec IIC SFA-5.4, E308-16.
- 9.6 A copy of valid IBR approval certificate for the brand being supplied shall be sent along with every consignment.
- 9.7 Every packet supplied shall be exhibited with details in the below mentioned format through a seal or securely affixed label.

**"Certified by -----**  
**(Mention the concerned IBR authority of the state)**  
**Under periodic check test dated: XX-XX-XXXX.**  
**Brand approval valid till : XX-XX-XXXX."**

Sl. No.	Pre –Qualification Criteria – PR 0134917384	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. Tender Enquiry details must available on Letter of authorization or agreement to consider the offer.</p>	
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 0134917384	Bidder remark
9	Bidder should confirm and full fill the WCPI-217/09. 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-217/09 for confirmation.	
11	Diameter details and length details	
12	Present IBR certificate status to be provided .	
13	<p>Manufacturer shall have successfully supplied E308-16/ E308-15/ E308-17 any govt. Organizations/ PSUs/ Public ltd. Company/Industries/company etc.</p> <p>Purchase orders copies/ related documents 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 for “successfully supplied and accepted by customer”.</p> <p>Self-declaration shall have following details.</p> <p>1- Supplied quantity. 2- PO /related document Reference 3- Brand Name. 4- Customer</p> <p>Note: internal PO between Manufacturer and authorized agent is not acceptable.</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.

<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