

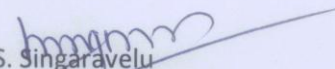







### Technical Specifications

SL. No	Description and Technical Specification of the item	QTY	UNIT	Delivery
1	EB91 SAW WIRE DIA 3.20 MM ASME SEC.II.C, SFA-5.23 EB91 BARE ALLOY STEEL SAW WIRE AS PER WCPI-010/05. Diameter of the wire = 3.20 MM/3.00 MM Weight of each spool = 25 KG	6,000.00	KG	60 DAYS
2	P-91 BASIC AGGLOMERATED SAW FLUX ASME SEC.II.C, SFA-5.23M F62PZ-EB91-B91 LOW HYDROGEN BASIC AGGLOMERATED SAW FLUX AS PER WCPI-413/04.	9,000.00	KG	60 DAYS

	<b>BHARAT HEAVY ELECTRICALS LIMITED</b> <b>TIRUCHIRAPALLI-620 014</b> <b>WELDING TECHNOLOGY CENTRE</b>	<b>WCPI – 010</b>
		<b>Revision No.: 05</b>
		<b>Date: 28.09.2015</b>
<b><u>WELDING CONSUMABLE PURCHASE INSTRUCTION FOR</u></b> <b><u>SAW WIRE AS PER ASME.SEC.II.C SFA-5.23, EB91</u></b>		
<b>1.0 GENERAL:</b>		
<p>1.1 The wire shall comply with requirements specified in the latest edition and addenda (applicable on the date of issue of purchase order) of ASME Sec.II.C.SFA-5.23, EB91. All tests, acceptance criteria shall be in accordance with this. Additional requirements specified in this document shall also be complied.</p>		
<p>1.2 The wire shall be supplied in size and quantity as specified in the purchase order.</p>		
<p>1.3 The wire is intended to be used in submerged arc welding of circumferential seam butt welds in high pressure super critical boiler headers and piping of SA335P91 material.</p>		
<b>2.0 CHEMICAL COMPOSITION:</b>		
<p>The chemical composition of the wire shall conform to ASME Sec II C SFA-5.23, EB91.</p>		
<b>3.0 SIZE:</b>		
<p>The wire shall be supplied in diameter as specified in the purchase order. The tolerance on diameter shall be as per ASME SEC IIC, SFA-5.02. Net weight of each coil shall be 25Kg or 30 Kg.</p>		
<b>4.0 FORM :</b>		
<p>The wire shall be appropriately wound in basket rim B450 as per SFA-5.02 as mentioned in the purchase order and shall meet the requirements of 4.3.4 of SFA-5.02.</p>		
<b>5.0 FINISH AND UNIFORMITY:</b>		
<p>The wire shall meet the requirements of clause 16.2 of SFA-5.23.</p>		
<b>6.0 WINDING REQUIREMENTS:</b>		
<p>The wires shall meet the requirements of clause 16.4 of SFA-5.23.</p>		
<b>7.0 IDENTIFICATION :</b>		
<p>The wires shall meet the requirements of clause 4.5.2, 4.5.4 and 4.5.5 of SFA-5.02.</p>		
Prepared:  Suraj N Engineer/WTC	Reviewed and approved:  S. Singaravelu SDGM / WTC	

	<b>Welding Consumable Purchase Instruction(WCPI)</b>	<b>Doc. Number: WCPI – 010</b>
		<b>Revision No.: 05</b>
<p><b>8.0 MARKING:</b> The wire shall meet the requirements of clause 4.6 of SFA-5.02.</p> <p><b>9.0 PACKAGING:</b></p> <p>9.1 The wire coils shall be completely devoid of moisture or any other foreign material that is adequately sealed in suitable cartons to ensure no deterioration in the wire quality during transportation through sea or long duration storage.</p> <p>9.2 The cartons shall be packed in waterproof boxes with crates to ensure no damage during shipment and normal storage conditions. Weight of each crate shall not exceed 1000kg.</p> <p>9.3 The cartons shall have product information as per clause 4.6 of SFA-5.02</p> <p><b>10.0 TESTING &amp; CERTIFICATION:</b></p> <p>10.1 Each consignment of wire supplied shall be from one batch only.</p> <p>10.2 Batch or lot classification shall be Class S1 as per SFA-5.01 Filler metal procurement guidelines of ASME Sec.II.C. (latest edition and addenda).</p> <p>10.3 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).</p> <p>10.4 Three copies of original test certificates in English countersigned by the manufacturer giving details of the tests in compliance with this purchase instruction and ASME Sec.II.C, SFA-5.23, EB91 shall be sent.</p> <p>10.5 The testing authority shall certify that supplies made against the batch conform to the requirements of the latest edition and addenda (applicable on the date of issue of purchase order) of ASME Sec IIC SFA-5.23, EB91.</p> <p style="text-align: center;">-----</p>		

	<b>BHARAT HEAVY ELECTRICALS LIMITED</b> <b>TIRUCHIRAPALLI-620 014</b> <b>WELDING TECHNOLOGY CENTRE</b>	<b>WCPI – 413</b>
		<b>Revision No.: 04</b>
		<b>Date:28.09.15</b>
<b><u>WELDING CONSUMABLE PURCHASE INSTRUCTION FOR LOW HYDROGEN BASIC AGGLOMERATED SUBMERGED ARC WELDING (SAW) FLUX AS PER ASME SEC IIC, SFA-5.23M F62PZ-EB9-B91</u></b>		
<b>1.0 GENERAL:</b>		
<p>1.1 This purchase instruction prescribes the requirements of low hydrogen basic agglomerated SAW flux for SA335P91 material that conforms to ASME Sec IIC. SFA 5.23M F62PZ-EB9-B91 (latest edition and addenda applicable on the date of issue of purchase order). Additional requirements specified in this document shall also be complied.</p>		
<p>1.2 The flux is intended to be used in combination with ASME Sec IIC SFA 5.23, EB91 SAW wire for welding of SA335P91 material in circumferential seam welds of high pressure boiler headers, vessels and power piping for high temperature creep resistant service.</p>		
<b>2.0 CHEMICAL COMPOSITION:</b>		
<p>2.1 The flux shall have appropriate chemical composition suitable for SA335P91 circumferential welding along with ASME Sec IIC SFA 5.23, EB91 SAW wire.</p>		
<p>2.2 The chemical composition of undiluted weld metal deposited using the flux in combination with ASME Sec IIC SFA 5.23 EB91 SAW wire with DCEP shall meet the requirements of ASME Sec IIC SFA 5.23, B91 with additional requirement of Mn+Ni <math>\leq</math> 1.2% and Nitrogen content <math>\geq</math> (0.5 x Aluminum content + 0.03)% minimum.</p>		
<p>2.3 The metallurgical behavior of the flux shall be neutral. Basicity index of the flux shall be between 2.6 and 2.9.</p>		
<b>3.0 MECHANICAL PROPERTIES:</b>		
<p>Mechanical properties of the weld metal shall conform to ASME SEC.II.C SFA-5.23M, F62PZ-EB9-B91. Additionally, Charpy impact energy shall be 27 Joules average minimum at +20°C with single values greater than 20 Joules. Hardness of weld metal as well as heat affected zone shall be 195 HV to 320 HV.</p>		
<b>4.0 RADIOGRAPHIC SOUNDNESS AND USABILITY:</b>		
<p>4.1 The flux when used with ASME Sec IIC SFA 5.23, EB91 SAW wire shall deposit weld metal that meets the radiographic soundness requirements of Clause 11 in ASME SEC IIC SFA 5.23.</p>		
<p>4.2 The flux shall permit production of uniform, well shaped beads that merge smoothly with each other and with the base metal side wall during welding. Flux shall have high current capacity suitable for welding up to 700A in both AC and DC. Flux shall exhibit excellent slag detachability allowing continuous welding of 120 mm thick circumferential butt welds.</p>		
Prepared:  Suraj N Engineer/WTC	Reviewed and approved:  S. Singaravelu SDGM / WTC	

 <b>Welding Consumable Purchase Instruction(WCPI)</b>	<b>Doc. Number: WCPI – 413</b>
	<b>Revision No.: 04</b>
<p>4.3 Diffusible hydrogen content of weld metal deposited using the flux with ASME Sec IIC SFA 5.23, EB91 SAW wire shall not exceed 4 ml per 100 grams.</p> <p><b>5.0 SIZE</b>                  Flux shall be granular in form and shall flow freely through the flux feeding tubes, valves and nozzles of SAW equipment. Grain size of the flux shall be as per EN 760 2-20. Bulk density shall be suitable for proper feeding. The particle size distribution shall be uniform and consistent in all the packages.</p> <p><b>6.0 MARKING:</b>                  The package shall be marked clearly with trade name, classification, lot number, manufacturer name, net weight, health and safety warnings.</p> <p><b>7.0 PACKAGING:</b></p> <p>7.1 Flux shall be suitably sealed in moisture resistant bag or container. The packing shall ensure no ingress of moisture during transportation through sea or long duration storage.</p> <p>7.2 The weight of each unit package shall be 50 Kg maximum.</p> <p>7.3 The bags or containers shall be placed in moisture proof crates to ensure no ingress of moisture or damage to bags or containers. Net weight of each crate shall not exceed 1000Kg.</p> <p><b>8.0 TESTING AND CERTIFICATION:</b></p> <p>8.1 Each consignment of flux supplied shall be from one batch only.</p> <p>8.2 Batch or lot classification shall be Class F1 as per SFA-5.01 filler metal procurement guidelines of ASME Sec.II.C (latest edition and addenda).</p> <p>8.3 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).</p> <p>8.4 Three copies of original test certificate in English counter signed by inspecting authority (latest approved by IBR for the country of origin giving details of the tests done in compliance with this purchase instruction and ASME Sec.IIC, SFA-5.23 M F62PZ-EB9-B91 shall be sent. Additionally chemical composition of flux shall be reported.</p> <p>8.5 The testing authority shall certify that supplies made against the batch conform to the requirements of the latest edition and addenda (applicable on the date of issue of purchase order) of ASME Sec.IIC, SFA-5.23M F62PZ-EB9-B91.</p> <p style="text-align: center;">=====</p>	

(PR 0134426716)

Sl. No.	Pre- Qualification Criteria	Bidder remark
1	Quoted SAW Wire Brand Name	
2	Quoted SAW Wire catalogue	
3	Quoted SAW Flux Brand Name	
4	Quoted SAW Flux Catalogue	
5	Mill (Manufacturing plant ) address	
6	Shall confirm to Technical Specifications as per the WCPI- 413 Revision No.: 04 for Flux Specification.	
7	Shall confirm to Technical Specifications as per the WCPI- 010 Revision No.: 05 for Wire Specification.	
8	Bidder/Manufacturer 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.	
9	Bidder shall be a manufacturer of the Quoted "Submerged Arc Welding Wire and Flux " or an authorized dealer of the same. If the offer is quoted by agent , letter of authorization and agreement duly signed by the manufacturer is required to consider the offer	
10	Manufacturing (Principle Supplier ) shall have capacity to meet tender requirement for both SAW Wire and SAW flux.	

SEAL AND SIGN OF AUTHORIZED PERSON

  
ADITYA KUMAR  
Deputy Manager  
Welding Technology Centre  
BHEL, Trichy - 620014.

(PR 0134426716)

Sl. No.	Pre- Qualification Criteria	Bidder remark
11	<p>Testing and Certification (Clause 8.4 ) of WCPI- 413 Revision No.: 04 Means: Valid IBR approval certificate for the brand being supplied /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 ( Latest Edition and Addenda , Applicable on the date of issue of Purchase Order) ASME Sec.II.C..SFA-5.23M F62PZ-EB91-B91 , shall be sent along with every consignment.</p>	
12	<p>The Testing Authority shall certify that supplies made against the batch conform to the requirements of the Latest Edition &amp; Addenda (Applicable on the date of issue of Purchase Order) of ASME Sec.II.C.SFA-5.23, B91.</p>	
13	<p>The Testing Authority shall certify that supplies made against the batch conform to the requirements of the Latest Edition and Addenda (Applicable on the date of issue of Purchase Order) of ASME Sec.II.C..SFA-5.23M F62PZ-EB91-B91.</p>	
14	<p>Bidder should give confirmation to BHEL's Technical Specification. Any deviation from the Specification are to be mentioned in the "Bidder remark Space". If There is no deviation vendor should indicate "No Deviation".</p>	
15	<p>SAW Wire :  Diameter details and each spool weight details</p>	

  
**ADITYA KUMAR**  
Deputy Manager  
Welding Technology Centre  
BHEL, Trichy - 620014.

**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)