





TD-106-1 Rev No. 5	Form No.		PROJECT ENGINEERING & SYSTEMS DIVISION BHEL RC PURAM, HYDERABAD –32		Doc.No: PY60063
					Rev No.: 00
					Page 1 of 4
<div data-bbox="108 584 209 1668" data-label="Text"> <p style="writing-mode: vertical-rl; transform: rotate(180deg);"> COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company. </p> </div> <div data-bbox="300 824 1382 1052" data-label="Section-Header"> <h2 style="text-align: center;"> <u>TECHNICAL SPECIFICATION</u> <u>FOR SUPPLY OF FASTENERS FOR</u> <u>MODULE MOUNTING STRUCTURE (MMS) O&M</u> </h2> </div> <div data-bbox="284 1317 1382 1357" data-label="Text"> <p> <u>PROJECT</u> : <u>1X50 MWp SPV POWER PLANT,NTPC,MANDSAUR,MP</u> </p> </div> <div data-bbox="284 1417 1398 1458" data-label="Text"> <p> <u>CUSTOMER</u> : <u>NATIONAL THERMAL POWER CORPORATION LIMITED</u> </p> </div>					
Ref. Doc.	Prepared By: SYAMALA RAO K	Checked By : VENU GOPAL P	Approved By : ESHAN CHANDRA	Date : 07.03.19	

TD-106-2 Rev No. 5 Form No.		PROJECT ENGINEERING & SYSTEMS DIVISION BHEL RCPURAM, HYDERABAD –32		Doc.No: PY60063																										
				Rev No.: 00																										
				Page 2 of 4																										
<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED . It must not be used directly or indirectly in any way detrimental to the interest of the company . </div> <div> <p>A. INTRODUCTION</p> <p>National Thermal Power Corporation Ltd (NTPC), a premier Maharatna public sector undertaking in the field of power generation, having a 250 MWp solar PV power plant, primarily at two villages Runija & Gujerkhedi (Tehsil Suwasra), Mandsaur Dist., Madhya Pradesh state.</p> <p>The entire 250 MWp solar PV power plant comprises of five nos. blocks of capacity 50 MWp each. BHEL having a set up in P4 block of 50 MWp capacity.</p> <table border="1"> <tr><td>Plant Location</td><td>:</td><td>Mandsaur District</td></tr> <tr><td>State</td><td>:</td><td>Madhya Pradesh</td></tr> <tr><td>Nearest Important Town</td><td>:</td><td>Suwasra (Tehsil)</td></tr> <tr><td>Nearest Railway Station</td><td>:</td><td>Suwasra</td></tr> <tr><td>Nearest Airport</td><td>:</td><td>Udaipur</td></tr> <tr><td>Nearest National Highway:</td><td></td><td>NH-14</td></tr> </table> <p>The PV modules shall be mounted on metallic structures called Module Mounting Structures (MMS). This document describes the technical specification for fasteners required for MMS during O & M.</p> <p>B. SCOPE</p> <p>This specification covers the supply of MMS fasteners for O&M (refer annexure-1) as detailed below:</p> <table border="1"> <thead> <tr> <th>Variant No.</th> <th>Scope of Supply</th> <th>BHEL Material Code</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>01</td> <td>Supply of Fasteners of MMS for O&M- 1 Set comprise M12X90 - 450Nos., M12X30 - 450Nos., M10X25 - 5709Nos.</td> <td>PY9760063018</td> <td>SS304 and Class A2-70. Each fastener consists of one bolt, one nut, two plain washers and one spring washer.</td> </tr> </tbody> </table> <p>C. CONNECTIONS</p> <p>All fasteners (nuts, bolts and washers) shall be of Stainless Steel (SS304) and Class A2-70 as per IS: 1367. All bolts shall be tighten with designed torque mechanically. List of fasteners is shown in Annexure-1.</p> <p>D. INSPECTION AND TESTING</p> <p>A typical sample of MQP is enclosed along with this tender. Vendor shall use this document as reference for preparation and submission of test reports. Refer Annexure-2.</p> </div> </div>					Plant Location	:	Mandsaur District	State	:	Madhya Pradesh	Nearest Important Town	:	Suwasra (Tehsil)	Nearest Railway Station	:	Suwasra	Nearest Airport	:	Udaipur	Nearest National Highway:		NH-14	Variant No.	Scope of Supply	BHEL Material Code	Remarks	01	Supply of Fasteners of MMS for O&M- 1 Set comprise M12X90 - 450Nos., M12X30 - 450Nos., M10X25 - 5709Nos.	PY9760063018	SS304 and Class A2-70. Each fastener consists of one bolt, one nut, two plain washers and one spring washer.
Plant Location	:	Mandsaur District																												
State	:	Madhya Pradesh																												
Nearest Important Town	:	Suwasra (Tehsil)																												
Nearest Railway Station	:	Suwasra																												
Nearest Airport	:	Udaipur																												
Nearest National Highway:		NH-14																												
Variant No.	Scope of Supply	BHEL Material Code	Remarks																											
01	Supply of Fasteners of MMS for O&M- 1 Set comprise M12X90 - 450Nos., M12X30 - 450Nos., M10X25 - 5709Nos.	PY9760063018	SS304 and Class A2-70. Each fastener consists of one bolt, one nut, two plain washers and one spring washer.																											
Ref. Doc.																														

TD-106-2 Rev No. 5	Form No.		<div> PROJECT ENGINEERING & SYSTEMS DIVISION </div> <div> BHEL RCPURAM, HYDERABAD –32 </div>	<div> Doc.No: PY60063 </div> <div> Rev No.: 00 </div> <div> Page 3 of 4 </div>																												
<div> COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED . It must not be used directly or indirectly in any way detrimental to the interest of the company . </div>		<div> E. PACKING INSTRUCTIONS Hardware shall be supplied in plastic wrapped hessian cartons/plastic wrapped thick cardboard cartons to avoid bursting and spillage of contents during transport and storage at site. Each carton shall be clearly identified with the type of hardware packed in it and its quantity. Cartons shall be in weight not exceeding 30 kg for easy handling and storage at site. </div> <div> F. NOTES TO BIDDER a) Bidders are advised to contact BHEL for essential technical queries in writing during pre-bid stage. In case no such clarifications are sought during pre-bid stage, it will be assumed that bidder has no comments or observations on BHEL's specification and no deviations from the specifications are taken by the bidder. b) BHEL reserves the rights to carry out surveillance visits at the works of vendor to check/monitor the manufacturing processes as and when required. c) Offers with incomplete information will not be considered for evaluation, and are likely to be rejected outright without any further interaction with the Bidder. d) In the event of any conflict between these specifications, drawings, related standards, codes etc. the vendor shall refer the matter to the purchaser for clarifications during pre-bid stage. e) PO/LOA date considered as manufacturing clearance date. </div> <div> G. DELIVERY SCHEDULE The schedule for delivery of items at site shall be as follows: a) <u>For Supply of Fasteners (BHEL Material Code: PY9760063018)</u> <table border="1" data-bbox="459 1391 1086 1464"> <thead> <tr> <th>Schedule of Delivery</th> <th>% Quantity</th> </tr> </thead> <tbody> <tr> <td>04 weeks from PO date</td> <td>100</td> </tr> </tbody> </table> </div> <div> H. LIST OF ANNEXURES Following input documents and specifications are enclosed to facilitate the bidder to furnish the offer: <table border="1" data-bbox="320 1673 1489 1960"> <thead> <tr> <th>Annexure No.</th> <th>Document/ Drawing Title</th> <th>Doc. No.</th> <th>Rev</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>List of fasteners</td> <td>ANNEXURE-1</td> <td>00</td> </tr> <tr> <td>2</td> <td>QAP Guidelines and Format</td> <td>ANNEXURE-2</td> <td>00</td> </tr> <tr> <td>3</td> <td>Pre-Bid Queries format</td> <td>ANNEXURE-3</td> <td>00</td> </tr> <tr> <td>4</td> <td>No deviation format</td> <td>ANNEXURE-4</td> <td>00</td> </tr> <tr> <td>5</td> <td>Price bid format</td> <td>ANNEXURE-5</td> <td>00</td> </tr> </tbody> </table> </div>			Schedule of Delivery	% Quantity	04 weeks from PO date	100	Annexure No.	Document/ Drawing Title	Doc. No.	Rev	1	List of fasteners	ANNEXURE-1	00	2	QAP Guidelines and Format	ANNEXURE-2	00	3	Pre-Bid Queries format	ANNEXURE-3	00	4	No deviation format	ANNEXURE-4	00	5	Price bid format	ANNEXURE-5	00
Schedule of Delivery	% Quantity																															
04 weeks from PO date	100																															
Annexure No.	Document/ Drawing Title	Doc. No.	Rev																													
1	List of fasteners	ANNEXURE-1	00																													
2	QAP Guidelines and Format	ANNEXURE-2	00																													
3	Pre-Bid Queries format	ANNEXURE-3	00																													
4	No deviation format	ANNEXURE-4	00																													
5	Price bid format	ANNEXURE-5	00																													
Ref. Doc	Notes: Incase if bidder found any document/annexure no. listed in the technical specification and is missing from the attachment, it is bidder's responsibility to highlight the missing attachment.																															

TD-106-3 Rev No. 5		Form No.		PROJECT ENGINEERING & SYSTEM DIVISION BHEL, HYDERABAD –32.		Doc.No.: PY60063	
Rev No. 00							
Page 4 of 4							
		RECORD OF REVISIONS					
		Rev. No.	Date	Revision Details	Prepared by	Approved By	
		Ref. Doc.					