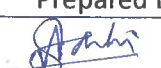
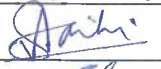
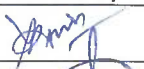
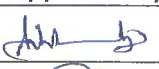
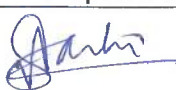


MATERIAL CODE EL8379010035	 1800-01 Rev. 00 EPD		PURCHASE SPECIFICATION FOR AIR CURTAIN			ISSUE NO : 06 DOC.NO: SPV-UT-005 REV : 00 JUL-2019	
	Page 1 of 3						
COPY RIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company.	Brief Description: BHEL is going to set up a 300 MW SPV Module manufacturing plant with advanced automations, and for this, clean environment is to be maintained inside the shop floor. As a part of the clean room, Air curtains need to be installed at various entry points. Specifications are detailed below:						
	Sl No	Parameters		Requirement of BHEL			
	1	MAKE & MODEL		To be indicated			
	2	QUANTITY		12 Nos			
	3	USE		INDUSTRIAL PURPOSE To be used in Solar PV module manufacturing shop floor			
	4	SIZE		5 Feet width			
	5	STANDARD HEIGHT OF CURTAIN		7-9 ft			
	6	MAXIMUM AIR VELOCITY AT NOZZLE		Min 21 m/sec			
	7	NOISE LEVEL AT A DISTANCE OF 10 ft FROM THE CURTAIN		Max 75 dB (A) measured from a distance of 1 m under free field condition			
	8	AIR FLOW		> 6000 m ³ /hr			
	9	SHEET THICKNESS		MS Casing Minimum 1mm thick SS impeller thickness Minimum 24 G			
	10	BODY MATERIAL		MILD STEEL with anti-corrosive powder coating			
	11	IMPELLER MATERIAL		Metallic			
	12	BEARING		SKF/FAG/TIMKEN			
	13	POWER SUPPLY		3 PHASE/ 440 v/ 50 Hz			
	14	MOTOR		Make: Siemens/ABB/ALSTOM/CGL/Bharat Bijlee Motor power to be indicated			
	15	CATALOGUE		To be submitted			
	16	INSTALLATION & COMMISSIONING		Scope of supplier			
17	TESTING & ACCEPTANCE		BHEL may go for Pre Dispatch inspection to verify the mutually agreed specification. QAP to be submitted by vendor. Test certificates shall be provided by vendor at the time of inspection. Final acceptance shall be after installation and commissioning of the complete system at BHEL by the vendor subjected to full compliance to set specifications and parameters.				
	Rev.00: 1 st Issue	Issued By SPV PROD GROUP	Prepared By 	Checked By 	Approved By 	Date 09.07.19	

MATERIAL CODE EL8379010035	 EPD		1800-01 Rev. 00			PURCHASE SPECIFICATION FOR AIR CURTAIN		ISSUE NO : 06	
							DOC.NO: SPV-UT-005		
						REV : 00		JUL-2019	
								Page 2 of 3	
COPY RIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in anyway detrimental to the interest of the company.		SI No	Parameters	Requirement of BHEL					
		18	DELIVERY	3 Months from the date of issue of Purchase Order					
		19	WARRANTY	a. 12 Months from the date of commissioning or 18 months from the date of dispatch whichever is earlier b. Supplier to indicate replacement parts and consumables for 2 years continuous operation (24 hours/ day basis). During the period of warranty, these spares and consumables are the scope of supplier c. List of spares and consumables to be provided along with techno-commercial offer					
		20	AFTER SALES SERVICE	Reliable after sales service should be available. Vendor to provide necessary details					
		21	QUALIFICATION CRITERIA	a. Bidder should be Original Equipment Manufacturer (OEM) or Authorized Dealer for the Item quoted. Bidder to give necessary OEM certificate or Dealership Certificate. b. Vendor should have installed Minimum of 10 installation in Solar PV shops or Electrical / Electronic industry in the last three years. Necessary Installation certificate to be provided. c. Offer shall be for new equipment and not for any refurbished or used equipment d. BHEL reserves the right for independent verification of the compliance to PQR					
Rev.00:		Issued By	Prepared By	Checked By	Approved By	Date			
1 st Issue		SPV PROD GROUP				09.07.19			
									

MATERIAL CODE EL8379010035	 1800-01 Rev. 00		PURCHASE SPECIFICATION FOR AIR CURTAIN			ISSUE NO : 06		
						DOC.NO: SPV-UT-005		
						REV : 00	JUL-2019	
						Page 3 of 3		
<u>SPECIFICATION REVIEWED AND APPROVED</u>								
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	AMARJYOTI SAIKIA							
	Y. RAU							
	S. ARUNACHALAM							
	MOHAN . J							
	RAJESH KUMAR SINGH							
	G.N. PURUSHOTHAM							
	Rev 00:	Issued By	Prepared By	Checked By	Approved By	Date		
	1 st Issue	SPV PROD GROUP				09/07/19		

BHARAT HEAVY ELECTRICALS LTD.,
ELECTRIC & PHOTOVOLTAIC DIVISION, IISC POST, BENGALURU - 560012
DEPARTMENT : SPV & WEX - Projects

Ref : PR No. 5000324
Date: 09.07.2019

LIST OF LINE ITEMS / BILL OF MATERIALS

Sl No.	Item / Description	Unit	Quantity	Rate	Amount	Remarks
1	AIR CURTAIN/ 300 MW SPV SHOP FLOOR	NO	12			The Air Curtains as per Purchase Specification No. SPV-UT-005 Complete inclusive of the following units / components and not limited to: a. Air curtain (5 feet width, 7-9 ft air curtain capacity) inclusive of all electrical connection and control - 1 No b. Protection / Safety systems as required - 1 Lot c. Additional / Associated equipment : Other accessories as required - 1 Lot
2	Installation and Commissioning of the system at BHEL - EPD	Set	12			
3	Training of BHEL Staff on Operation and Maintenance					
4	Technical Documentation, Software and other associated information					
5	Consumables for a period of 2 years	Set	12			Bidder to indicate and provide details
6	Spare Parts package for a period of 2 years	Set	12			Bidder to indicate and provide details