

		BHARAT HEAVY ELECTRICAL LIMITED BHOPAL ,MADHYA PRADESH		
Annexure-I to P.I.821194023				
SPECIFICATION CUM COMPLIANCE CERTIFICATE OF CONVENTIONAL TUBE EXPANDER				
NOTE:-				
1. Vendor must submit complete information from clause No.1 to 8.0, The offer meeting this clause would only be processed				
2. The offer and all documents enclosed with offer should be in English language only.				
3. The information provided by vendor in specification cum compliance certificate will supersede any other information provided by vendor .				
NAME & ADDRESS OF THE SUPPLIER :				
E-MAIL ADDRESS :				
SCOPE: SUPPLY OF CONVENTIONAL TUBE EXPANDER				
Sl. NO	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / CONFIRMED BY	VENDOR'S OFFER	REMARKS
1	PURPOSE: Supply of Tube expander thrust bearing, three roller adjustable type suitable for tube size 12.60+0.13-0.00 mm OD x 1.0+0.115-0.00 mm tk for incoloy-800 tube material (grade. Sb 163 uns 8800). 2-3 mm effective expansion length on tube sheet face, cage and roller length should be as possible as short. preferably ball contact type.Detail drawing attached.	Vendor to Confirm		
1.1	PURPOSE: Supply of TUBE EXPANDER THRUST BEARING, THREE ROLLER ADJUSTABLE TYPE SUITABLE FOR TUBE SIZE 12.60+0.13-0.00 MM ODX 1.0+0.115-0.00 MM TK FOR INCOLOY-800 TUBE MATERIAL (Grade. SB 163 UNS 8800). EFFECTIVE EXPANSION LENGTH AFTER LEAVING 12.0 MM FROM TUBE SHEET FACE, CAGE LENGTH SHOULD BE 130.00 MM,260.0 MM AND 320.0 MM REACH & ROLLER LENGTH SHOULD BE MIN. 39.00 MM.DETAIL DRAWING ATTACHED.	Vendor to Confirm		
1.2	Tube material: Incoloy-800 tube material (grade. Sb 163 uns 8800)	Vendor to note		
TECHNICAL DETAIL :				
2	Specification of roll contact expander (Item no.1):			
2.1	Tube expander length	: As per manufacturer's standard	Vendor to confirm	
2.2	Effective rolling length length (max.)	: 3.00 mm	Vendor to confirm	

3	Specification of roll contact expander (Item no. 2):				
3.1	Tube expander length	: As per manufacturer's standard	Vendor to confirm		
3.2	Tube expander effective reach length (min)	: 130.00 mm	Vendor to confirm		
3.3	Tube expander roller length (min)	: 39.00 mm	Vendor to confirm		
3.4	Expander collar adjustable thread length (min)	: 80.00 mm	Vendor to confirm		
3.5	Cage material should be	:EN19 or better	Vendor to confirm		
3.6	Cage hardness should be (within)	:44-47 HRC	Vendor to confirm		
3.7	Rolls & mendrel material should be	:EN31 or better	Vendor to confirm		
3.8	Rolls & mendrel hardness should be (within)	:58-60 HRC	Vendor to confirm		
3.9	Expander thrust collar	: Suitable for flushed tube	Vendor to confirm		
4	Specification of roll contact expander (Item no. 3):				
4.1	Tube expander length	: As per manufacturer's standard	Vendor to confirm		
4.2	Tube expander effective reach length (min)	: 260.00 mm	Vendor to confirm		
4.3	Tube expander roller length (min)	: 39.00 mm	Vendor to confirm		
4.4	Expander collar adjustable thread length (min)	: 100.00 mm	Vendor to confirm		
4.5	Cage material should be	:EN19 or better	Vendor to confirm		
4.6	Cage hardness should be (within)	:44-47 HRC	Vendor to confirm		
4.7	Rolls & mendrel material should be	:EN31 or better	Vendor to confirm		
4.8	Rolls & mendrel hardness should be (within)	:58-60 HRC	Vendor to confirm		
4.9	Expander thrust collar	: Suitable for flushed tube	Vendor to confirm		
5	Specification of roll contact expander (Item no. 4):				
5.1	Tube expander length	: As per manufacturer's standard	Vendor to confirm		
5.2	Tube expander effective reach length (min)	: 320.00 mm	Vendor to confirm		
5.3	Tube expander roller length (min)	: 39.00 mm	Vendor to confirm		
5.4	Expander collar adjustable thread length (min)	: 100.00 mm	Vendor to confirm		
5.5	Cage material should be	:EN19 or better	Vendor to confirm		
5.6	Cage hardness should be (within)	:44-47 HRC	Vendor to confirm		
5.7	Rolls & mendrel material should be	:EN31 or better	Vendor to confirm		
5.8	Rolls & mendrel hardness should be (within)	:58-60 HRC	Vendor to confirm		
5.9	Expander thrust collar	: Suitable for flushed tube	Vendor to confirm		
5.1.1	All Standard accessories/items (If Any) shall be in the scope of vendor enable us ready to use the tube expander .		Vendor to confirm		

6	SCOPE OF SUPPLY:-				
6.1	Tube expander	: As per enquiry	Vendor to confirm		
6.2	Hardness test certificate of cage,rolls & mendrel (Shall be submitted along with delivery)	:2 No	Vendor to confirm		
6.3	Material test certificate of cage,rolls & mendrel (Shall be submitted along with delivery)	:2 No	Vendor to confirm		
6.4	Test & Guarantee Certificates	:2 No	Vendor to confirm		
7	FEATURES:				
7.1	Self feeding: The cage shall be closely machined with consistent and correct self-feeding angle. The rolls are held at correct angle to mendrel for proper rate of feed and quick easy release of mendrel.		Vendor to confirm		
7.2	Parallel rolling: The mendrel and rolls shall be precision ground after heat treating,assures unform diameter throughout entire expanded portion of the tubes.		Vendor to confirm		
7.3	Roll nose: Shall be gradually tapered to provide smoother transition between rolled and unrolled inner tube surface.		Vendor to confirm		
7.4	Material: All parts shall be manufactured from high quality deep hardening alloy steel . Mendrel and rolls should be carefully heat treated and precision ground to withstand severe operating conditions.		Vendor to confirm		
8	BHEL reserves the right to verify information provided by vendor. In case the information provided by vendor is found to be false/incorrect, the offer shall be rejected.		Vendor to note		