

BHARAT HEAVY ELECTRICALS LIMITED, JHANSI			
DESIGN, MANUFACTURING, TESTING, SUPPLY INSTALLATION AND COMMISSIONING OF 11KV IN DOOR VACUUM CIRCUIT BREAKER			
NOTE :			
1	VENDOR must submit complete information against clause No.15.0 ( Qualifying condition). The offer meeting this clause would only be processed.		
2	The " offered" Column and where applicable, the " Deviations" Column of this format shall be filled in by the Vender and submitted along with the offer. Technical details also submitted with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specification / requirements shall be treated as non - compliance.		
3	The offer and all documents enclosed with offer should be in English language only.		
SCOPE :			
SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 11 KV VACUUM CIRCUIT BREAKER			
S.NO.	DESCRIPTION FOR BHEL REQUIREMENT	OFFERED	DEVIATIONS
1.0	SCOPE		
1.1	This specification governs the quality requirements of design, manufacturing, testing, packing at supplier works supply of 11KV , 3pole, 50HZ, vacuum circuit breaker complete in all respect.	VENDER TO CONFIRM	
2.0	REQUIREMENT		
2.1	Indoor metal clad switch board unit 630 Amp. bus bar comprising of one number 630 Amp. Vacuum circuit breaker for incoming feeder/ out going feeders. Switch unit shall be complete with air insulated 3 phase bus bar, earth bars, small wiring, terminal board, fuses, foundation bolt and sundries.	VENDER TO CONFIRM	
3.0	QUANTITY TOTAL - 7 Numbers	VENDER TO SPECIFY	
4.0	SPECIFICATION		
4.1	Type - Indoor	VENDER TO CONFIRM	
4.2	Type of interrupter - Vacuum	VENDER TO CONFIRM	
4.3	Rated voltage & Frequency - 11KV, 50 HZ, 3 Phase	VENDER TO CONFIRM	
4.4	Neutral earthing - Solidly earthed	VENDER TO CONFIRM	
4.5	Max. continuous voltage - 12 KV	VENDER TO CONFIRM	
4.6	Rated continuous current - 630 Amp.	VENDER TO CONFIRM	
4.7	Rated symmetrical short circuit breaking current (3 Seconds) in KA rms - 25KA	VENDER TO CONFIRM	
4.8	Rated symmetrical short circuit making current in KA (peak) 62.5 KA	VENDER TO CONFIRM	
4.9	Power frequency withstand voltage - 28 KV	VENDER TO CONFIRM	
4.10	Impulse withstand voltage - 75 KV	VENDER TO CONFIRM	
4.11	Type of closing mechanism - Spring charge		
4.12	Rating of the spring release coil (Voltage ) - 30 Volt DC	VENDER TO CONFIRM	
4.13	Rating of spring charge motor (Voltage) - 230 Volt AC	VENDER TO CONFIRM	
4.14	Rating of tripping coil (Voltage) - 30 Volt DC	VENDER TO CONFIRM	
4.15	Heaters & Indication supply voltage - 230 Volt AC	VENDER TO CONFIRM	
4.16	Mechanical ON/OFF and spring charged indication required	VENDER TO CONFIRM	
4.17	Mechanical trip/close required	VENDER TO CONFIRM	
4.18	Mechanical spring charging required	VENDER TO CONFIRM	
4.19	No. of auxilary contacts required 4 NO + 4 NC	VENDER TO CONFIRM	
4.20	Isolation type - Horizontal drawout	VENDER TO CONFIRM	

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 11 KV VACUUM CIRCUIT BREAKER			
S.NO.	DESCRIPTION FOR BHEL REQUIREMENT	OFFERED	DEVIATIONS
5.0	STANDARDS APPLICABLE		

<b>SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 11 KV VACUUM CIRCUIT BREAKER</b>			
<b>S.NO.</b>	<b>DESCRIPTION FOR BHEL REQUIREMENT</b>	<b>OFFERED</b>	<b>DEVIATIONS</b>
	Switchgear - IS 13118/IS 3427	VENDER TO CONFIRM	
	CT - IS 2705	VENDER TO CONFIRM	
	PT - IS 3156	VENDER TO CONFIRM	
	STATUTARY - Meets Indian Standards Rules	VENDER TO CONFIRM	
<b>6.0</b>	<b>FIXED PORTION</b>		
	1 Number - Metal clad sheet steel cubicle comprising:	VENDER TO CONFIRM	
6.1	Breaker chamber with automatic safety shutters and hinged door	VENDER TO CONFIRM	
6.2	Current transformer cum cable termination chamber	VENDER TO CONFIRM	
6.3	Busbar chamber	VENDER TO CONFIRM	
6.4	Instrument panel	VENDER TO CONFIRM	
6.5	Set of manually isolated multiway secondary sockets	VENDER TO CONFIRM	
6.6	Primary fixed isolating contacts	VENDER TO CONFIRM	
6.7	Lifting arrangement of panel for shipping	VENDER TO CONFIRM	
<b>7.0</b>	<b>MOVING PORTION</b>		
	1 Number - Horizontally drawout horizontally isolated truck with:	VENDER TO CONFIRM	
7.1	TRIPLE POLE VACUUM CIRCUIT	VENDER TO CONFIRM	
7.2	SET OF PRIMARY MOVING ISOLATING CONTACTS.	VENDER TO CONFIRM	
7.3	SET OF MULTIWAY SECONDARY PLUGS.	VENDER TO CONFIRM	
7.4	MOTOR/MANULLY CHARGED INDEPENDENT SPRING	VENDER TO CONFIRM	
7.5	Mechanical on/off & spring charged indicator, operation counter,	VENDER TO CONFIRM	
7.6	AUXILIARY SWITCH HAVING 4 NO+4NC CONTACTS.	VENDER TO CONFIRM	
7.7	SPRING RELEASE COIL.	VENDER TO CONFIRM	
7.8	SHUNT TRIP COIL.	VENDER TO CONFIRM	
7.9	PRING CHARGING MOTOR.	VENDER TO CONFIRM	
7.10	MECHANICAL INTERLOCKS	VENDER TO CONFIRM	
7.11	OPERATION COUNTER	VENDER TO CONFIRM	
<b>8.0</b>	<b>FOLLOWING STANDARD FITMENTS ON FIXED PORTION SHALL BE PROVIDED</b>		
8.1	Fuses and links, labels, terminal blocks	VENDER TO CONFIRM	
8.2	Terminal block for CT & PT circuits.	VENDER TO CONFIRM	
8.3	Small wiring	VENDER TO CONFIRM	
8.4	Illumination Lamp and Switch	VENDER TO CONFIRM	
8.5	Three pin (5/15 a, 240 vac) socket and switch	VENDER TO CONFIRM	
8.6	Mechanical inter lock with key (Kastle type)	VENDER TO CONFIRM	
8.7	Foundation bolts.	VENDER TO CONFIRM	
8.8	Set of earth bars.	VENDER TO CONFIRM	
8.9	Anti-condensation heaters rated 75 w, thermostats and switch.	VENDER TO CONFIRM	
8.10	Set of dust & vermin proofing.	VENDER TO CONFIRM	
<b>9.0</b>	<b>FOLLOWING STANDARD FITMENTS ON INCOMING / OUTGOING PORTION SHALL BE PROVIDED</b>		
9.1	Breaker panel with truck mounted VCB & feeder VT.	VENDER TO CONFIRM	
9.2	Arrangement for connecting extension VCB panel (incomer/ out going feeder)	VENDER TO CONFIRM	
9.3	Rear extension chamber with bus connections and arrangement for terminating 3 cosre 95 sq. mm XLPE power cable directly on bus bars.	VENDER TO CONFIRM	
9.4	set of CT'S( for metering and protection)	VENDER TO CONFIRM	

<b>SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 11 KV VACUUM CIRCUIT BREAKER</b>			
<b>S.NO.</b>	<b>DESCRIPTION FOR BHEL REQUIREMENT</b>	<b>OFFERED</b>	<b>DEVIATIONS</b>
9.4.1	Type of CT - Resin Cast	VENDER TO CONFIRM	
9.4.2	Rated insulation - 12/28/75 KV	VENDER TO CONFIRM	
9.4.3	Ratio:400-200/5-5A	VENDER TO CONFIRM	
	VA Burden and accuracy class for - 15 VA	VENDER TO CONFIRM	
	a) Core-1 -1	VENDER TO CONFIRM	
	b) Core -2 -SP10	VENDER TO CONFIRM	
9.8	Indicating lamps (red & green)	VENDER TO CONFIRM	
9.9	Trip/neutral/close	VENDER TO CONFIRM	
9.10	Local/remote selector switch.	VENDER TO CONFIRM	
9.11	Feeder connected VT (for metering and protection)	VENDER TO CONFIRM	
9.11.1	Type - Resin cast	VENDER TO CONFIRM	
9.11.2	Insulation level - 11/28/75KV	VENDER TO CONFIRM	
9.11.3	No. of phases - 3 Phase	VENDER TO CONFIRM	
9.11.4	Voltage ration -11000 v/110v, 100va/phase.	VENDER TO CONFIRM	
9.11.5	Number of secondary core - 1	VENDER TO CONFIRM	
9.11.6	VA Burden and accuracy class of each core - CL-1.0 100 VA	VENDER TO CONFIRM	
9.12	Ammeter (mi,96 sq mm) with ammeter selector switch	VENDER TO CONFIRM	
9.13	Voltmeter (mi,96 sq mm) with voltmeter selector switch	VENDER TO CONFIRM	
9.14	Electronic multifunction meter.	VENDER TO CONFIRM	
9.15	Numerical over current & earth faulty relay type.	VENDER TO CONFIRM	
<b>10.0</b>	<b>ACCESSORIES</b>		
10.1	1 No. spring charging handle	VENDER TO CONFIRM	
10.2	1 No. interlocking /racking and slow charging handle	VENDER TO CONFIRM	
<b>11.0</b>	<b>GENERAL</b>		
11.1	Breaker shall be used in sub-station as main incomer or out going feeder. Suitable arrangement shall be provided for the extension.	VENDER TO CONFIRM	
11.2	All the drawings including outline general arrangement shall be submitted to us in Triplicate for approval before commencement of work.	VENDER TO CONFIRM	
11.3	3 sets of operation/ maintenance manual shall be supplied.	VENDER TO CONFIRM	
11.4	At least 15 day advance information should be given to enable us to depute our representative for inspection/ testing. Dispatch shall be affected only after inspection.	VENDER TO CONFIRM	
11.5	Aluminum anodized name plate for outgoing circuit shall be screwed in front and back of the panel.	VENDER TO CONFIRM	
11.6	The equipment shall be guaranteed in respect of material construction and operation against any manufacturing and design defect for a period of 24 months after supply.	VENDER TO CONFIRM	
11.7	Offer shall be sent with complete literature and necessary details.	VENDER TO CONFIRM	
11.8	Not withstanding the details in the specification, if anything else is required for its function the same shall be brought out in notice and include in the offer and it should fulfill the standard.	VENDER TO CONFIRM	
<b>12.0</b>	<b>PAINTING</b>		
12.1	Paint - Enamel Light Grey, Shade no. 631 of IS : 5	Vender to confirm	

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 11 KV VACUUM CIRCUIT BREAKER			
S.NO.	DESCRIPTION FOR BHEL REQUIREMENT	OFFERED	DEVIATIONS
13.0	INSPECTION AND TESTING AT SUPPLIER WORKS		

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 11 KV VACUUM CIRCUIT BREAKER			
S.NO.	DESCRIPTION FOR BHEL REQUIREMENT	OFFERED	DEVIATIONS
13.1	<b>ROUTINE TESTS - As per IS</b>	Vender to confirm	
14.0	<b>DOCUMENTATION</b> : Four sets of following documents ( hard copies) in English language should be supplied along with the transformer	Vender to confirm	
14.1	Operating manual	Vender to confirm	
14.2	Detailed maintenance manual with all drawings	Vender to confirm	
14.3	Catalogues , O&M manuals of all bought out items including drawings where ever applicable in english language.	Vender to confirm	
15.0	<b>QUALIFYING CONDITIONS</b>		
15.1	Only those venders, who are in the line of panel manufacturing or authorized agents of panel manufacturer, shall quote. The following information's are to be submitted with the offer. This is required from venders for qualifications of their offers.	VENDER TO CONFIRM & SUBMIT	
10.2	Company profile of the manufacturer of the panel with test facilities available	VENDER TO SUBMIT	
16.0	<b>BHEL reserves the right to verify information submitted by vender. In case the information is found to be false/ incorrect, the offer shall be rejected.</b>	Vender to confirm	

S.J.Chakraborty Sr. DGM (WE&S)	Inder Mathur Sr. Manager (WE&S)	Sujeet Srivastava Dy. Manager (WE&S)