

TD-201 Rev No. 00	Form No.	 	PRODUCT STANDARD PROJECT ENGINEERING & SYSTEMS DIVISION, HYDERABAD	ANNEXURE-12 to PY55223
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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. ANNEXURE-12 TO PY55223 LIST OF SPARES, TOOLS AND TACKLES FOR LT SWITCHBOARDS PROJECT 40MW CDQ WASTE HEAT RECOVERY CO-GENERATION POWER PLANT CUSTOMER M/S TATA STEEL LIMITED, JAMSHEDPUR CONSULTANT TATA CONSULTING ENGINEERS, KOLKATA				

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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.		<u>NOTES</u> 1. This Document provides the list of Mandatory Spares, Commissioning Spares and Tools & Tackles to be supplied as part of the LT Switchgear Package. 2. The Mandatory Spares are included as separate line items for each Switchboard in Purchase Requisition Document. 3. The Commissioning Spares and Tools & Tackles are included as a separate single line item in Purchase Requisition Document. 4. The quantities of the various Spare items indicated in these lists are specified as <i>Absolute quantity or Percentage or Set</i>. Besides, <i>certain criteria for calculating the spares</i> are also specified against some of the items in the lists. These criteria include 'each type', 'each rating', 'each type and rating', 'minimum quantity' etc. 5. Notes for filling the "Total" field: a. This field is <i>to be filled by the Vendor only after order placement</i>. b. The Total field shall be filled for each line item as per the details specified in the Quantity section. c. Wherever the criterion calls for calculation of spares by grouping them under different heads (like type, rating, colour etc.), the Vendor shall fill the Total field for each group. <i>It is mandatory for the Vendor to clearly delineate every group (as required by the criterion) and mention the spare quantities against each of them.</i> <i>Cumulative values will not be accepted by BHEL.</i> d. Wherever spare calculation results in a fractional value, the result shall be rounded to the closest integer value not less than 1. e. The BOM for calculation of Total quantity of spares shall be based on the Code-1 approved Switchboard drawings. f. In case, certain items are not applicable as per the Final BOM (referred in Cl. 5.e) "NA" shall be filled in the "Total" field against such items. 6. The Vendor shall submit this document after filling up all the applicable fields (as mentioned in above Notes) for BHEL's approval. 7. Any change (addition/deletion) for Spares shall be considered solely on the basis of change in BOM of the Feeders in Feeder List (Annexure-7 of PY55109) from the enquiry stage to the Code-1 approval. 8. The approved copy of this Document shall be used: a. During Inspection at Vendor's Works b. Verification of the Packing Lists before processing of payments. 9. The <i>Packing Lists</i> shall clearly mention the Material Code, Sl. Number, Description and Quantity of all items within each Transportation Case (i.e. Boxes, Cartons etc.). A copy of the Packing List shall be pasted on the Transportation Case and another copy shall be placed within the Case.		

LIST OF MANDATORY SPARES

SL. NO.	ITEM	QUANTITY
1	Contactors	5% of each Type & rating. Minimum 1.
2	Contactor spare Kits	5% of each Type & rating. Minimum 1.
3	Contactor coils	5% of each Type & rating. Minimum 1.
4	Fuses/MCB's/MCCB's	5% of each Type & rating. Minimum 1.
5	EOCR	5% of each Type & rating. Minimum 1.
6	Push buttons	5% of each Type & rating. Minimum 1.
7	Ammeter selector switch	5% of each Type & rating. Minimum 1.
8	Voltmeter selector switch	5% of each Type & rating. Minimum 1.
9	3-Position Selector Switches	5% of each Type & rating. Minimum 1.
10	LOCAL-REMOTE selector switches	5% of each Type & rating. Minimum 1.
12	Ammeter	5% of each Type & rating. Minimum 1.
13	Voltmeter	5% of each Type & rating. Minimum 1.
14	Indicating lamps with resistors	5% of each Type & rating. Minimum 1.
15.1	Current transformers(metering)	5% of each Type & rating. Minimum 1.
15.2	Current transformers(protection)	5% of each Type & rating. Minimum 1.
16	Voltage transformers	5% of each Type & rating. Minimum 1.
17	Control transformers	5% of each Type & rating. Minimum 1.
19	Relays & Timers	5% of each Type & rating. Minimum 1.
20	ACB spares Including -	5% of each Type & rating. Minimum 1.
20.1	Auxiliary contact blocks	5% of each Type & rating. Minimum 1.
20.2	Male and female secondary isolating Contacts	5% of each Type & rating. Minimum 1.
20.3	Fixed and moving arcing contacts	5% of each Type & rating. Minimum 1.
20.4	Arcing chutes	5% of each Type & rating. Minimum 1.
20.5	Shunt trip coils	5% of each Type & rating. Minimum 1.
20.6	spring charging motors	5% of each Type & rating. Minimum 1.

SIGNATURE OF BIDDER**NAME****DESIGNATION****DATE****COMPANY SEAL****COPYRIGHT AND CONFIDENTIAL**

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LIST OF COMMISSIONING SPARES AND TOOLS & TACKLES

(Material Code: PY9755109080)

COMMISSIONING SPARES

SL. NO.	ITEM	QUANTITY
1	Closing Coil	2
2	Tripping Coil	2
3	Control MCBs	50
4	Auxiliary Contactors	20
5	Timers	1
6	Glass for front fascia meters	10
7	Control TBs	50
8	Slide In Contact Assembly	5
9	Shrouds	50
10	Gaskets	5
11	Push Buttons	10
12	Limit Position Switches	2
13	L/R Switches	2
14	Breaker Control Switches	2
15	Indication lamp	50

Note: Type and rating of commissioning spares shall be decided during project execution and same shall be complied without any price implication.

TOOLS & TACKLES

SL. NO.	ITEM	QUANTITY
1	Breaker Lifting Trolley	1
2	Breaker Racking Handle	1

SIGNATURE OF BIDDER _____

NAME _____

DESIGNATION _____

DATE _____

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