

NSPCL-ROURKELA

1x250MW Project

VOLUME – II

**TECHNICAL SPECIFICATION FOR
GENERATOR CIRCUIT BREAKER (GCB)**

**BHEL DOCUMENT NO. : PE-TS-427-510-E001
REV-0**



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**TECHNICAL SPECIFICATION FOR
GENERATOR CIRCUIT BREAKER****1 X 250 MW ROURKELA TPS****SPECIFICATION NO. PE-TS-427-510-E001****VOLUME II****CONTENTS SHEET****REVISION 0 | DATE: 04.01.2017****SHEET 1 OF 1****CONTENTS**

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SECTION – 'I'

SPECIFIC TECHNICAL REQUIREMENTS



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1.0 SCOPE OF ENQUIRY

- 1.1 This specification covers design, manufacture, assembly, inspection & testing at manufacturer's works, proper packing, delivery and supervision of E&C of Generator Circuit Breaker (GCB) as mentioned in different sections of this specification, complete with all accessories for efficient and trouble-free operation.
- 1.2 It is not the intent to specify completely herein all details of the design and manufacture. However, the equipment shall conform in all respects to high standards of design engineering and workmanship and shall be capable of performing in continuous commercial operation up to bidder's guarantee.
- 1.3 Standard technical requirements of the GCB are indicated in Section-II. Project specific requirements/changes are listed in Section-I.
- 1.4 The requirements of Section-I shall prevail and govern in case of conflict between the corresponding requirements of Section-I and Section-II.
- 1.5 The documents shall be in English language and MKS system of units.

2.0 BILL OF QUANTITIES:

- 2.1 Quantity requirements shall be as per BOQ-cum-price schedule as part of NIT.

3.0 SPECIFIC TECHNICAL REQUIREMENTS

<u>S.No.</u>	<u>Reference Clause No. of Section- II</u>	<u>Specific Requirement/ Change</u>
	3.05.00	The interrupters of the circuit breaker shall be SF6/ Air blast type.
	3.07.00	The circuit breaker shall be operated with a Motorized or Hydraulic spring charged / Pneumatic System.

4.0 DOCUMENTATION

- 4.1 Documents required along with technical offer shall be as per attachment-III.
- 4.2 Documents required after award of LOI shall be as per attachment-IV.



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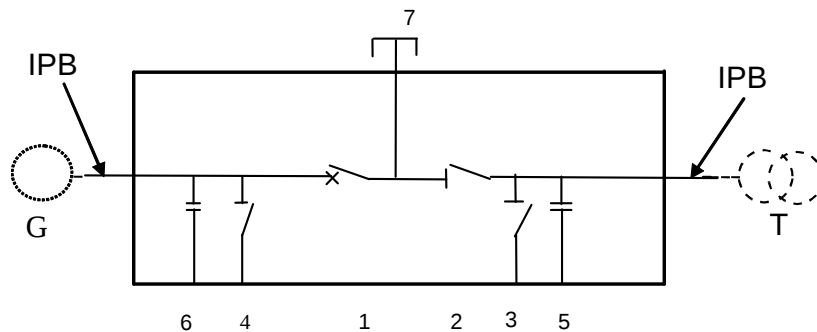
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ATTACHMENT – I



- | | | | |
|------|-------------------|------|--------------------------------------|
| 1 | Circuit-breaker | 7 | Manual Short-circuiting connection |
| 2 | Isolator | 5, 6 | Surge capacitors (as per applicable) |
| 3, 4 | Earthing switches | 8 | System enclosure |

REFERENCE SINGLE LINE CONFIGURATION OF GENERATOR CIRCUIT BREAKER



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8	X/R RATIO		27.3
9	SHORT CIRCUIT IMPEDANCE	P.U.	0.125
10	TOLERANCE IN SHORT CIRCUIT IMPEDANCE	%	10
11	MOTOR LOADS CONNECTED TO STATION TRANSFORMNER	MVA	0
12	MOTOR RATED VOLTAGE	KV	NA
13	MOTOR STARTING CURRENT (TIMES FULL LOAD CURRENT)	TIMES	NA
G	SYSTEM PARAMETERS		
1	RATED VOLTAGE	KV	220
2	MAXIMUM VOLTAGE	KV	242
3	MINIMUM VOLTAGE	KV	218
4	RATED FREQUENCY	HZ	50
5	MAXIMUM THREE PHASE SHORT CIRCUIT CURRENT	KA	78.6 (RMS)
6	X/R RATIO		14

NOTES: PLEASE REFER ATTACHED SINGLE LINE DIAGRAM FOR CONFIGURATION

