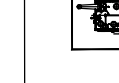







| S.NO. | DESCRIPTION | 400KV |
|-------|--|------------------------|
| 01 | SYSTEM OPERATING VOLTAGE | 400kV |
| 02 | MAXIMUM OPERATING VOLTAGE OF THE SYSTEM (rms) | 420kV |
| 03 | RATED FREQUENCY | 50Hz |
| 04 | FULL WAVE IMPULSE WITHSTAND VOLTAGE (1.2/50 MICROSES.) | 1550kVp |
| 05 | SWITCHING IMPULSE WITHSTAND VOLTAGE (250/2500 MICRO SEC.) DRY AND WRT | 1050kVp |
| 06 | ONE MINUTE POWER FREQUENCY DRY WITHSTAND VOLTAGE (rms) | 630kV |
| 07 | ONE MINUTE POWER FREQUENCY DRY AND WET WITHSTAND VOLTAGE (rms) | -- |
| 08 | CORONA EXTINCTION VOLTAGE | 320kV |
| 09 | MAX. RADIO INTERFERENCE VOLTAGE FOR FREQUENCY BETWEEN 0.5 MHz AND 2 MHz | 1000µV AT 266KV rms |
| 10 | MINIMUM CREEPAGE DISTANCE- FOR EQUIPMENT OTHER THAN INSULATOR STRING | 10500mm |
| 11 | SYSTEM FAULT LEVEL | 40KA FOR 1 SEC |
| 12 | MINIMUM CLEARANCE (PHASE TO PHASE) CONDUCTOR CONDUCTOR CONF. / CONDUCTOR ROD CONF. | 4000/4200mm |
| 13 | MINIMUM CLEARANCE PHASE TO EARTH | 3500mm |
| 14 | SECTIONAL CLEARANCES OTHER THAN INSULATOR STRING | 6500mm |

BILL OF QUANTITIES-400KV, 40KA/1 SEC:

| S.NO. | DECEPTION | SYMBOL | QTY. (NOS) |
|-------|---|---|---------------|
| 01 | 125MVAR 400kV, 3-PH BUS REACTOR (NOT IN BHEL SCOPE) |  | 1 |
| 02 | 400KV, 3150A, 3-PH CIRCUIT BREAKER WITHOUT CLOSING RESISTOR |  | 1 |
| 03 | CONTROLLED SWITCHING DEVICE (SUITABLE FOR 3 PHASE CIRCUIT BREAKER) | -- | 2 |
| 04 | 400KV, 3150A, 3-PH, HORIZONTAL DOUBLE BREAK ISOLATOR WITH 1 E/S |  | 2 |
| 05 | 400KV, 3000A, 1-PH CURRENT TRANSFORMER WITH 120% EXTENDED CURRENT RATING |  | 3 |
| 06 | 336KV, 1-PH, SURGE ARRESTER |  | 3 |
| 07 | 400KV, 1-PH, BUS POST INSULATOR |  | 3 |

CONDUCTOR & STRINGING DETAILS -400kV:


| SL.NO. | DESCRIPTION | LEVEL FROM PLINTH | SUB-CONDUCTOR | TENSION INSULATOR STRING/PHASE |
|--------|---------------------------|-------------------|--|---|
| 1. | MAIN BUS-I & II | (AT 15M HEIGHT) | QUAD AAC MOOSE CONDUCTOR WITH 450MM SUB-CONDUCTOR SPACING | |
| 2. | JACKBUS | (AT 22M HEIGHT) | TWIN MOOSE ACSR CONDUCTOR WITH 450MM SUB-CONDUCTOR SPACING | |
| 3. | DROPPERS/JUMPERING | - | TWIN MOOSE ACSR CONDUCTOR WITH 450MM SUB-CONDUCTOR SPACING | SINGLE SUSPENSION STRING-120kN POLYMER STRING INSULATOR |
| 4. | EQUIPMENT INTERCONNECTION | (AT 8M HEIGHT) | 4" IPS AL. TUBE / TWIN ACSR MOOSE CONDUCTOR WITH 450MM SPACING | |

LEGENDS:—

| | |
|-------|-------------------|
| _____ | PRESENT SCOPE |
| _____ | EXISTING / FUTURE |

| |
|--|
| BHEL REF. DRAWING: |
| SLD OF 400KV RAJGARH EXTN. DWG. NO. |
| TB-408-510-R01 REV 00 |
| PGCIL REF. DRAWING: |
| LAYOUT PLAN/SECTION DWG. NO.: |
| J-796/RAJGARH/E-DRG/E-LAY/PLAN-SEC./002 REV 04 |

NOA NO. : CC-CS/901-WR2/SS-3931/3/G3/NOA-I/8864 & 8865 DT. 29.07.19

| | | | | | | | | |
|--|--------------------------|---------------------|-------------|--|--|---------------------|--|--------------------------|
| | | | | श्रावक / परिचालन स्तर नाम NAME OF CUSTOMER/PROJECT | | | | |
| ADDITIONAL INFORMATION W.D.No. 119TB00001 | | | | POWER GRID CORPORATION OF INDIA LIMITED Substation Package--SS19 for extension of (i) 765kV Solapur S/S; (ii) 765kV Aurangabad S/S; (iii) 765kV Wardha S/S; (iv) 400kV Khandwa S/S; (v) 400kV Raigarh S/S; (vi) 400kV Champa S/S; (vii) 400/220kV Itarsi S/S & (viii) 400/220kV Jabalpur Substation under WRSS-2020 | | | | |
| STATUS OF DRAWING | | | | CONTRACT | | | | |
| DISTRIBUTION OF PRINTS | | | | <div><div><div><div>भारत हेवी इलेक्ट्रिकल्स लिमिटेड भारतीय भारी विद्युत् निगम BHARAT HEAVY ELECTRICALS LTD. TRANSMISSION PROJECTS DIVISION</div><div></div></div><div><div>प्रकार / TYPE DS</div><div>पृष्ठ / SHEET NO. JK</div><div>स्वीकृत / APPROVED SKS</div></div><div><div>नाम / NAME DS</div><div>हस्ता / SIGN. JK</div><div>दि./DATE 24.09.19</div></div></div></div> | | | | |
| REV. | DATE | ALTERED | विभाग DEPT. | TBM | प्रमाणित / SCALE | कार्ड कोड CARD CODE | | |
| 01 | 26.12.19 | CHECKED APPROVED | कोड CODE | 422 | NTS | | | |
| ZONE | REVISED WITH REACTOR OGA | | | श्रीलंक/TITLE | डाईग्राम/DRAWING NO. TB-408-510-R02 | | | पृष्ठ/REV. |
| | | | | PLAN/ SECTION LAYOUT FOR EXTN. OF 400KV RAJGARH S/S | | | | |
| | | | | | पृष्ठ क्र./SHEET No. 01 | | | अगला पृष्ठ/NEXT SHEET -- |

SIZE-A0

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

| INVENTORY NO | SIGN AND DATE | REF. DRG. NO. | COMPUTER FILE NAME |
|--------------|---------------|---------------|------------------------|
| | | | 03810101560.S00R01.DWG |