

# KARNATAKA POWER TRANSMISSION CORPORATION LIMITED

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No: KPTCL/B19/345/84-85/25-26 (9)

Date: 30 JAN 2026

## CIRCULAR

**Sub:** Standardization of drawings of Electrical Equipments / Materials / Structure / Towers of Sub-station & Transmission Lines –reg.

- Ref:**
1. Circular No: D(T)/PS/2006-07/9966-73 dated: 21.11.2006.
  2. Letter No: CEE/P&C/SET/EE (TL)/AEE-9/2021-22/10039-49 dated: 05.10.2021 of CEE (P&C), KPTCL.
  3. Circular No: KPTCL/B19/345/85-86 dated: 08.07.2022 - Identification codes for existing Transmission Line Tower designs in KPTCL.
  4. Circular No: KPTCL/B19/345/85-86/2025-26[1] dated: 24.04.2025
  5. E-Office Note No: 285557 of CEE (P&C) approved by the Managing Director, KPTCL on 23.01.2026.

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KPTCL is responsible for the Transmission of Electricity across the State of Karnataka by constructing new Transmission Lines and Sub-stations at various Voltage levels such as 400kV, 220kV, 110kV and 66kV.

Construction of Sub-stations & Transmission Lines involves supply and erection of Electrical Equipments / Materials, Tower structures, Conductor, etc., For construction of new Sub-stations & Transmission Lines, as per standard prevailing practices, the EPC Contractor shall finalize the make/ manufacturer of Equipments / Materials of Sub-station & Transmission Line and the same are submitted for approval. Due to this, there is considerable delay in process of approval of drawings.

As part of its continuous efforts to reduce construction time, enhance operational efficiency and maintain safety and reliability, KPTCL has undertaken the task of standardizing tower structure drawings and line related materials for Transmission Lines and Equipments /

Materials for Sub-stations. This initiative of Standardization of Drawings is aimed at reducing the approval time which in turn reduces the project completion time.

Various types of Transmission Line tower designs have been adopted in KPTCL for construction of Transmission Lines associated with different projects. Different types of Electrical Equipments / Materials, conductors & insulators etc., are being used for the projects undertaken by KPTCL depending on requirements. Further, in order to have uniformity, Corporation has decided to adopt standardization in respect of drawings and GTPs of Transmission Line towers and Sub-station equipments / materials of 400kV, 220kV, 110kV and 66kV Voltage class used in KPTCL.

Hence, the drawings of Transmission Line towers / Structure / Materials of 400kV, 220kV, 110kV & 66kV and Sub-station equipments / materials of 220kV, 110kV & 66kV are hereby standardized Voltage class wise and considering the existing KPTCL approved vendors. The same drawings shall be adopted for all works including Turnkey / Deposit Contribution Works executed by KPTCL and Self-execution works to be taken up by the IPP / EHT / HT applicants. The details of standard drawings of Transmission towers & accessories are enclosed as Annexure-1, Sub-station equipments / materials are enclosed as Annexure-2 and SCADA equipments are enclosed as Annexure-3.

These standard drawings are uploaded in KPTCL website (e-prasarana) and access will be given to CEE (P&C), all CEE Transmission (Operations) Zone and all SEE, Projects Circle of KPTCL to download the same.

Following procedure shall be followed by CEE (P&C), CEE, Transmission (Operation) Zone and SEE, Projects Circle of KPTCL for communicating approval for adoption of above standard drawings to the EPC Contractors / IPP / EHT / HT Applicants.

1. The EPC Contractor shall source the Equipment / Materials for the Projects from the KPTCL empaneled vendors and shall furnish the list of make / vendors for supply of equipments / materials to the concerned office as below.
  - **For 400kV & 220kV Projects:** The EPC Contractor / IPP / EHT / HT applicant shall submit details of the list of make / vendor finalized for supply of materials / equipments to CEE (P&C). Further, CEE (P&C) shall download

the Standard drawings from website and communicate adoption approval to the EPC Contractor / IPP / EHT / HT applicant without any delay.

- **For 110kV & 66kV Projects:** The EPC Contractor / IPP / EHT / HT applicant shall submit details of the list of make / vendor finalized for supply of materials / equipments to respective CEE, Transmission (Operations) Zone/ SEE, Projects Circle. Further, CEE, Transmission (Operations) Zone / SEE, Projects Circle shall download the drawings from website and communicate adoption approval to the EPC contractor / IPP / EHT / HT applicant without any delay.

2. These standard approved drawings uploaded in the website shall be considered till any further major changes are adopted by KPTCL / Vendors. For any change in design / drawings, the Vendors shall submit the drawings to CEE (P&C) for approval and the approved drawings will be uploaded in the KPTCL website.
3. For procurement / supply of equipments / materials from any of the vendors other than KPTCL approved vendors, the necessary vendor approval shall be obtained from CEE (T&P) and drawings shall be submitted to CEE (P&C) for approval.

  
Chief General Manager (Tech)  
KPTCL

**Copy submitted:**

1. All Chief Engineers (Ele), KPTCL.
2. All Financial Advisors, KPTCL.
3. All Superintending Engineers (Ele), KPTCL.
4. All Controllers of Accounts, KPTCL.
5. All Executive Engineer (Ele) / (Civil), KPTCL.
6. All Deputy Controllers of Accounts, KPTCL.
7. All Asst. Executive Engineers (El)/(Civil), KPTCL.
8. All Accounts Officers, KPTCL.
9. All Asst. Engineers (El)/(Civil), KPTCL.

**Copy for information to:**

1. SPS to MD/DP/DO/DF/D (A&R), KPTCL, Bengaluru.
2. Company Secretary, KPTCL, Bengaluru.

**Copy to:**

1. The Superintending Engineer (Ele), IT, KPTCL with a request to arrange to upload in KPTCL website.

**Annexure-1**

| <b>Voltage class</b> | <b>Type of Tower Designs</b>  | <b>Conductor &amp; Span length</b> | <b>Design Code</b>       |
|----------------------|---|------------------------------------|--------------------------|
| <b>A</b>             | <b>Towers</b>   |                                    |                          |
| <b>400KV</b>         | 400KV DC Towers of M/s. KEC design (DA, DB, DC & DD with BE)                                      | Twin ACSR Moose & 400M             | KPTCL-4D-TM-BTPS         |
|                      | 400KV DC Towers of M/s. L&T design (Standard design for 400KV DC Lines) (DA, DB, DC & DD with BE) | Quad ACSR Moose & 400M             | KPTCL-4D-QM-YTPS         |
|                      | 400KV MC Towers of M/s. L&T design (Standard design for 400KV MC Lines) (MA, MB & MD with BE)     | Quad ACSR Moose & 400M             | KPTCL-4M-QM-YTPS         |
| <b>220KV</b>         | 220KV DC Towers of M/s L&T design (conventional base) (DA, DB, DC & DD with BE)                   | Drake ACSR & 320M                  | KPTCL-2D-GDG             |
|                      | 220KV DC Narrow Base towers of M/s L&T design (DA & DB/DE type)                                   | Drake ACSR & 320M                  | KPTCL-2D-NB-NRS          |
|                      | 220KV DC Narrow Base towers of M/s L&T design   | AAAC Moose & 200M                  | KPTCL-2D-NB-HAL          |
|                      | 220KV MC Towers of M/s KRR design (conventional base) (Standard design for 220KV MC Lines)        | Drake ACSR & 320M                  | KPTCL-2M-DGM             |
|                      | 220KV MC Narrow Base Towers of M/s L&T design   | AAAC Moose & 200M                  | KPTCL-2M-NB-VKTP         |
|                      | 220/66KV MCMV Towers of Modified VKTP design  | AAAC Moose & 200M                  | KPTCL-26M-NB-YEL (MVKTP) |
|                      | 220/66KV MCMV Towers of M/s L&T design  | Drake ACSR, Coyote ACSR & 320M     | KPTCL-26M-BIAL           |
|                      | 220/110KV MCMV towers of M/s L&T design   | Drake ACSR, Lynx ACSR & 320M       | KPTCL-21M-KHMR           |
|                      | 220/110KV MCMV narrow base towers of M/s L&T design   | Drake ACSR, Lynx ACSR & 320M       | KPTCL-21M-NB-KVR         |
| <b>110KV</b>         | 110KV DC Towers of M/s Kalpataru design (Conventional) (Standard design for 110KV DC Lines)       | Lynx ACSR & 320M                   | KPTCL-1D-AQS             |
|                      | 110KV DC Narrow base towers of KPTCL design   | Lynx ACSR & 320M                   | KPTCL-1D-NB              |
|                      | 110KV MC Towers of M/s CPRI design (Standard design for 110KV MC Lines)                           | Lynx ACSR & 320M                   | KPTCL-1M-CPRI            |
| <b>66KV</b>          | 66KV DC Narrow base towers of KPTCL design  | Coyote ACSR & 250M                 | KPTCL-6D-NB              |
|                      | 66KV MC Towers of M/s CPRI design (Standard design for 66KV MC Lines)                             | Coyote ACSR & 275M                 | KPTCL-6M-CPRI            |
|                      | 66KV MC Narrow base towers of KIADB design  | Drake ACSR & 200M                  | KPTCL-6M-NB-VMGL         |

|  |   |                    |                   |
|--|---|--------------------|-------------------|
|  | 66KV DC Towers of M/s KGN design (Conventional) (Standard design for 66KV DC Lines) | Coyote ACSR & 275M | KPTCL-6D-NGML     |
|  | 66KV DC Narrow base towers with single side cross arms of M/s L&T design            | Coyote ACSR & 150M | KPTCL-6D-NBS-HSR  |
|  | 66KV DC Narrow base towers with single side cross arms of M/s Deepak cable design   | Coyote ACSR & 200M | KPTCL-6D-NBS-MDKR |

| Sl. No.   | Particulars   | Drawing No.             |
|-----------|---|-------------------------|
| <b>I</b>  | <b>220/66kV station structure</b>   |                         |
| 1         | Structural details of Beam mkd – “ 2T1”                                       | KPTCL/220kV/STN-STR-2T1 |
| 2         | Structural details of Beam mkd – “ 2B1”                                       | KPTCL/220kV/STN-STR-2B1 |
| 3.        | Structural details of Beam mkd – “ 2T2”                                       | KPTCL/220kV/STN-STR-2T2 |
| 4.        | Structural details of Beam mkd – “ 2B2”                                       | KPTCL/220kV/STN-STR-2B2 |
| 5.        | Lightning mast  | 2018/SY/S09 Rev 0       |
| <b>II</b> | <b>220/66kV Station structures</b>  |                         |
| 1         | Structural details of Beam mkd -6T3   | 2018/SY/S05 Rev 0       |
| 2         | Structural details of Beam mkd -6T3 with 5 Mtr extension                      | 2018/SY/S35 Rev 0       |
| 3         | Structural details of Beam mkd – 6T2  | 2018/SY/S01 Rev 01      |
| 4         | Structural details of Beam mkd – 6B3  | 2018/SY/S06 Rev 01      |
| 5         | Structural details of Beam mkd -6B2   | 2018/SY/S02 Rev 0       |
| 6         | Structural details of stub setting template for tower type 2T, 2T2, 6T2 & 6T3 | 2018/SY/S30 Rev 0       |

|            |   |                             |
|------------|---|-----------------------------|
| 7          | Structural details of stub setting template for tower type 6T3 with extension         | 2018/SY/S38 Rev 0           |
| <b>III</b> | <b>220/110kV Station structures</b>   |                             |
| 1          | Structural details of Beam mkd -1T1   | KPTCL/P&C/220-110kV-1T1     |
| 2          | Structural details of Beam mkd -1T1 with 2.5 Mtr extension                            | KPTCL/P&C/220-110kV-1T1+2.5 |
| 3          | Structural details of Beam mkd – 1T2  | KPTCL/P&C/220-110kV-1T2     |
| 4          | Structural details of Beam mkd – 1B1  | KPTCL/P&C/220-110kV-1B1     |
| 5          | Structural details of Beam mkd -1B2   | KPTCL/P&C/220-110kV-1B2     |
| <b>IV</b>  | <b>220kV equipment mounting structure</b>   |                             |
| 1.         | GA drawing of supporting structure for 220kV Isolator without Earth Switch(HL-8250mm) | KPTCL/P&C/220kV-ISO-HL      |
| 2.         | GA drawing of supporting structure for 220kV Isolator with Earth Switch(LL-5750mm)    | KPTCL/P&C/220kV-ISO-LL      |
| 3.         | GA drawing of supporting structure for 220kV PI                                       | KPTCL/P&C/220kV-PI          |
| 4.         | GA drawing of supporting structure for 220kV LA                                       | KPTCL/P&C/220kV-LA          |
| 5.         | GA drawing of supporting structure for 220kV LPI                                      | KPTCL/P&C/220kV-LPI         |
| 9.         | GA drawing of supporting structure for 220kV CT                                       | KPTCL/P&C/220kV-CT          |
| 11         | GA drawing of supporting structure for 220kV CVT/PT                                   | KPTCL/P&C/220kV-CVT/PT      |
| 12         | GA drawing of supporting structure for 220kV HBPI                                     | KPTCL/P&C/220kV-HBPI        |
| <b>A</b>   | <b>66kV Station structures (For 66kV station only)</b>                                |                             |
| 1.         | Station structure of Type tower 6T1   | KPTCL/P&C/TECH/66KV/6T1     |

|          |  |                                     |
|----------|--|-------------------------------------|
| 2.       | Station structure of Type Beam 6B1(7.6M)                           | KPTCL/P&C/TECH/66KV/6B1(7.6)        |
| <b>B</b> | <b>66kV equipment mounting structure (For 66kV station only)</b>   |                                     |
| 1        | Equipment mounting structure for 66kV CT/NCT                       | KPTCL/P&C/TECH/66KV/CT & NCT        |
| 2        | Equipment mounting structure for 66kV PT                           | KPTCL/P&C/TECH/66KV/PT              |
| 3        | Equipment mounting structure for 66kV Isolator(LPH 4600mm)         | KPTCL/P&C/TECH/66KV/ISO(4.6)        |
| 4        | Equipment mounting structure for 66kV PI                           | KPTCL/P&C/TECH/66KV/PI              |
| 5        | Equipment mounting structure for 66kV LA                           | KPTCL/P&C/TECH/66KV/LA              |
| 6        | Equipment mounting structure for 66kV Isolator(LPH 6350mm)         | KPTCL/P&C/TECH/66KV/ISO(6.35)       |
| <b>A</b> | <b>110kV Station structures (For 110kV station only)</b>           |                                     |
| 1.       | Station structure of Type tower 1T1                                | KPTCL/P&C/TECH/110KV/1T1            |
| 2.       | Station structure of Type Beam 1B1(10.4M)                          | KPTCL/P&C/TECH/110KV/1B1            |
| <b>C</b> | <b>110kV equipment mounting structure (For 110kV station only)</b> |                                     |
| 1        | GA drawing of equipment support structure- 110kV Isolator          | KPTCL/P&C/TECH/110KV/ISO (4.60 LPH) |
| 2        | GA drawing of equipment support structure- 110kV LA                | KPTCL/P&C/TECH/110KV/LA             |
| 3        | GA drawing of equipment support structure- 110kV PT                | KPTCL/P&C/TECH/110KV/PT             |
| 4        | GA drawing of equipment support structure- 110kV CT                | KPTCL/P&C/TECH/110KV/CT&NCT         |
| 5        | GA drawing of equipment support structure- 110kV low level PI      | KPTCL/P&C/TECH/110KV/PI             |

|              |   |                            |
|--------------|---|----------------------------|
| <b>B</b>     | <b>Insulators</b>   |                            |
| <b>SL No</b> | <b>Particulars</b>  | <b>Drg No</b>              |
| <b>I</b>     | <b>M/s Spark Insulators make</b>                                    |                            |
| 1            | 220kV, 120KN composite silicone rubber long rod Tension insulator   | SPARKIL-220KV-T-120KN-REV0 |
| 2            | 220kV, 90KN composite silicone rubber long rod Suspension insulator | SPARKIL-220KV-S-90KN-REV0  |
| 3            | Composite Silicon rubber Tension insulator-90KN                     | SPARKIL-110KV-T-90KN-Rev0  |
| 4            | Composite Silicon rubber suspension insulator-90KN                  | SPARKIL-110KV-S-90KN-Rev0  |
| <b>II</b>    | <b>M/s Deccan Insulator Make</b>                                    |                            |
| 1            | 220kV 90KN suspension SRC insulator                                 | 1052                       |
| 2            | 220kV 120KN Tension SRC insulator                                   | 1053                       |
| <b>III</b>   | <b>M/s IEC Make</b>   |                            |
| 1            | 11kV, 90KN Disc insulator   | CQ D 090 4 S 08            |
| 2            | 11kV, 120KN Disc insulator  | CQ D 120 4S 06             |
| <b>IV</b>    | <b>M/s Imperial Ceramics make</b>                                   |                            |
| 1            | GTP of 11kV 120KN Disc Insulators(B&S) Type (320CD)                 | Nil                        |
| 2            | Drawing of 11kV/120kN Disc Insulator                                | ICPL:-25 Dtd :01.09.05     |
| 3            | GTP of 11kV 90KN Disc Insulators(B&S) Type (320CD)                  | Nil                        |
| 4            | Drawing of 11kV/90kN Disc Insulator                                 | ICPL:-19 Dtd :01.09.05     |
| <b>V</b>     | <b>M/s Phoenix Make</b>   |                            |
| 1            | 220kV 90KN suspension SRC insulator                                 | 209                        |
| 2            | 220kV 120KN Tension SRC insulator                                   | 210                        |



|             |   |                               |
|-------------|---|-------------------------------|
| <b>VI</b>   | <b>M/s Shree Radhe Industries Make</b>                              |                               |
| 1           | GTP of 110kV 90kN Suspension Silicon Rubber Composite Insulator     | Nil                           |
| 2           | Drawing of 110kV 90kN Suspension Silicon Rubber Composite Insulator | 666086                        |
| 3           | GTP of 110kV 90kN Tension Silicon Rubber Composite Insulator        | Nil                           |
| 4           | Drawing of 110kV 90kN Tension Silicon Rubber Composite Insulator    | 666090                        |
| 5           | GTP of 220kV 90kN Suspension Silicon Rubber Composite Insulator     | Nil                           |
| 6           | Drawing of 220kV 90kN Suspension Silicon Rubber Composite Insulator | 666140                        |
| 7           | GTP of 220kV 120kN Tension Silicon Rubber Composite Insulator       | Nil                           |
| 8           | Drawing of 220kV 120kN Tension Silicon Rubber Composite Insulator   | 666042                        |
| <b>VII</b>  | <b>Adithya Birla Make</b>   |                               |
| 1           | 220kV 90KN suspension SRC insulator                                 | O 985 474                     |
| 2           | 220kV 120KN Tension SRC insulator                                   | O 985 478                     |
| 3           | 11kV, 90KN Disc insulator   | JS-D120/Z                     |
| 4           | 11kV, 120KN Disc insulator  | JS-D568/Z                     |
| 5           | 11kV, 160KN Disc insulator  | JS-D859/Z                     |
| 6           | 11kV, 120KN Disc insulator antifog type                             | JS-D188/Z                     |
| 7           | 11kV, 160KN Disc insulator antifog type                             | JS-D572/Z                     |
| <b>VIII</b> | <b>M/s Pioneer Pultru-tech Engineering Pvt Ltd make</b>             |                               |
| 1           | GTP of 66kV-90kN(B&S) Suspension Composite Insulator                | Nil                           |
| 2           | Drawing of 66kV-90kN(B&S) Suspension Composite Insulator            | PPEPL-66KV-90KN-SUS-001 Rev 0 |

|           |   |                                 |
|-----------|---|---------------------------------|
| 3         | GTP of 66kV-90kN(B&S) Tension Composite Insulator         | Nil                             |
| 4         | Drawing of 66kV-90kN(B&S) Tension Composite Insulator     | PPEPL-66KV-90KN-TEN-001 Rev 0   |
| 5         | GTP of 110kV-90kN(B&S) Suspension Composite Insulator     | Nil                             |
| 6         | Drawing of 110kV-90kN(B&S) Suspension Composite Insulator | PPEPL-110KV-90KN-SUS-001 Rev 0  |
| 7         | GTP of 110kV-90kN(B&S) Tension Composite Insulator        | Nil                             |
| 8         | Drawing of 110kV-90kN(B&S) Tension Composite Insulator    | PPEPL-110KV-90KN-TEN-001 Rev 0  |
| 9         | GTP of 220kV-90kN(B&S) Suspension Composite Insulator     | Nil                             |
| 10        | Drawing of 220kV-90kN(B&S) Suspension Composite Insulator | PPEPL-220KV-90KN -001 Rev 0     |
| 11        | GTP of 220kV-120kN(B&S) Tension Composite Insulator       | Nil                             |
| 12        | Drawing of 220kV-120kN(B&S) Tension Composite Insulator   | PPEPL-220KV-120KN-TEN-002 Rev 0 |
| <b>C</b>  | <b>Conductors</b>   |                                 |
| <b>I</b>  | <b>M/s Sharavathy conductors make</b>                     |                                 |
| 1         | GTP of ACSR Drake conductor                               | NIL                             |
|           | Drum drawing  | SCPL/WDD/04/Rev.B(M)            |
| 2         | GTP of ACSR Coyote conductor                              | NIL                             |
|           | Drum drawing  | SCPL/WDD/02/Rev.B(M)            |
| 3         | GTP of ACSR Lynx conductor                                | NIL                             |
|           | Drum drawing  | SCPL/WDD/02/Rev.B(M)            |
| 4         | GTP of ACSR Moose conductor                               | NIL                             |
|           | Drum drawing  | SCPL/WDD/05/Rev.B(M)            |
| 5         | GTP of earthwire 7/3.15mm                                 | NIL                             |
|           | Drum drawing  | SCPL/WDD/01/Rev.B(M)            |
| 6         | GTP of earthwire 7/3.66mm                                 | NIL                             |
|           | Drum drawing  | SCPL/WDD/01/Rev.B(M)            |
| <b>II</b> | <b>Uni Power Transmission(Mysore) Pvt Ltd Make</b>        |                                 |
| 1         | GTP of ACSR Drake conductor                               | NIL                             |

|            |  |                                |
|------------|--|--------------------------------|
|            | Drum drawing                             | NIL                            |
| <b>III</b> | <b>Prakash Metal Products make</b>       |                                |
| 1          | GTP of ACSR Drake conductor              | NIL                            |
|            | Drum drawing                             | PMP/ACSDRK/23-24/001           |
| 2          | GTP of ACSR Coyote conductor             |                                |
|            | Drum drawing                             | PMP/ACSCYT/23-24/001           |
| 3          | GTP of ACSR Lynx conductor               | NIL                            |
|            | Drum drawing                             | PMP/ACSLNX/23-24/001           |
| <b>IV</b>  | <b>OSWAL CABLES PVT LIMITED MAKE</b>     |                                |
| 1          | GTP of ACSR Drake conductor              | NIL                            |
|            | Drum drawing                             | OCPL/DRAKE/12-03               |
| 2          | GTP of ACSR Lynx conductor               | NIL                            |
|            | Drum drawing                             | OCPL/LYNX/12-02                |
| <b>V</b>   | <b>KJV ALLOY CONDUCTORS PVT LTD make</b> |                                |
| 1          | GTP of ACSR Drake conductor              | NIL                            |
|            | Drum drawing                             | KJV/DRAKE                      |
| 2          | GTP of ACSR Lynx conductor               | NIL                            |
|            | Drum drawing                             | ACSR LYNX, 30(AL)+7(ST)/2.79MM |

| <b>D</b> | <b>Hardwares</b>   |                |
|----------|--|----------------|
| Sl. No   | Particulars  | Drawing No     |
| <b>I</b> | <b>M/s Legion Energy make</b>                                    |                |
| 1        | 110kV Double Tension string for ACSR Lynx conductor              | LE-DT-SL-19.53 |
| 2        | 110kV Double Tension string for ACSR Lynx conductor-Part drawing | LE-DT-SL-PD    |

|           |  |                  |
|-----------|--|------------------|
| 3         | 110kV Single Tension string for ACSR Lynx conductor  | LE-ST-SL-19.53   |
| 4         | 110kV Single Tension string for ACSR Lynx conductor-Part drawing                                     | LE-ST-SL-PD      |
| 5         | 110kV Double Suspension string for ACSR Lynx conductor   | LE-DS-SL-19.53   |
| 6         | 110kV Double Suspension string for ACSR Lynx conductor-Part drawing                                  | LE-DS-SL-PD      |
| 7         | 110kV Single Suspension string for ACSR Lynx conductor   | LE-SS—SL-19.53   |
| 8         | 110kV Single Suspension string for ACSR Lynx conductor-Part drawing                                  | LE-SS-SL-PD      |
| 9         | 220kV Single Tension for ACSR Drake conductor  | LE-ST-SD-28.14   |
| 10        | 220kV Single Tension for ACSR Drake conductor- Part drawing  | LE-ST-SD-PD      |
| 11        | 220kV Single Suspension string for ACSR Drake conductor string for ACSR drake conductor              | LE-SS-SD-205     |
| 12        | 220kV Single Suspension string for ACSR Drake conductor string for ACSR drake conductor-Part drawing | LE-SS-SD-PD      |
| 13        | 220kV Double Tension string for ACSR Drake conductor   | LE-DT-SD-28.14   |
| 14        | 220kV Double Tension for ACSR Drake conductor- part drawing  | LE-DT-SD-PD      |
| 15        | 220kV Double Suspension string for ACSR Drake conductor  | LE-DS-SD-205     |
| 16        | 220kV Double Suspension string for ACSR Drake conductor-part drawing                                 | LE-DS-SD-PD      |
| <b>II</b> | <b>Insulator Hardwares of M/s ANR Enterprises Make</b>   |                  |
| 1         | GTP of 220kV Double Suspension Hardware Fitting ACSR Drake   | Nil              |
| 2         | Drawing of 220kV Double Suspension Hardware Fitting ACSR Drake                                       | ANR-DSD-2024-001 |
| 3         | GTP of 220kV Single Suspension Hardware Fitting ACSR Drake   | Nil              |
| 4         | Drawing of 220kV Single Suspension Hardware Fitting ACSR Drake                                       | ANR-SSD-2024-002 |
| 5         | GTP of 220kV Double Tension Hardware Fitting ACSR Drake  | Nil              |

|            |   |                    |
|------------|---|--------------------|
| 6          | Drawing of 220kV Double Tension Hardware Fitting ACSR Drake                                 | ANR-DTD-2024-001   |
| 7          | GTP of 220kV Single Tension Hardware Fitting ACSR Drake                                     | Nil                |
| 8          | Drawing of 220kV Single Tension Hardware Fitting ACSR Drake                                 | ANR-STD-2024-002   |
| <b>III</b> | <b>66kV Insulator Hardware of M/s Mosdorfer India Pvt Ltd Make</b>                          |                    |
| 1          | GTP of Single Suspension /Double Suspension Hardware fittings suitable for ACSR Drake 28.11 | Nil                |
| 2          | GTP of Tension Hardware fittings suitable for ACSR Drake 28.11                              | Nil                |
| 3          | GTP of mid span compression joint suitable for ACSR Drake 28.11                             | Nil                |
| 4          | GTP of Repair sleeve suitable for ACSR drake 28.11mm  | Nil                |
| 5          | GTP of Vibration Damper suitable for ACSR drake 28.11                                       | Nil                |
| 6          | <b>66KV Double tension String for Drake ACSR</b>  | <b>I_AS21E0478</b> |
| 7          | Anchor Shackle  | KI_F03090017       |
| 8          | Chain Link  | KI_F0322005        |
| 9          | Ball Clevis   | KI_F03050022       |
| 10         | Socket Clevis   | KI_F03070029       |
| 11         | Clevis Eye Twisted  | KI_F03110053       |
| 12         | Compression dead end clamp for ACSR drake   | KI_F05050015       |
| 13         | Arching Horn Single   | KI_F07070122       |
| 14         | Yoke Plate  | KI_F03160063       |
| 15         | <b>66KV Double Suspension String</b>  | <b>I_HS21E0339</b> |
| 16         | Anchor Shackle  | KI_F0309002        |
| 17         | Clevis Eye Twisted  | KI_F03110052       |

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|----|--|--------------------|
| 18 | Yoke Plate   | KI_F03160064       |
| 19 | Ball Clevis  | KI_F03050006       |
| 20 | Socket Clevis  | KI_F03070014       |
| 21 | Clevis Eye Straight  | KI_F03110020       |
| 22 | HSU-Clamp(Armour Grip Type Suspension Clamp)                             | KI_F18070041       |
| 23 | <b>66KV Single Tension String</b>  | <b>I_AS11E0621</b> |
| 24 | Anchor Shackle   | KI_F03090015       |
| 25 | Horn Holder Ball Link  | KI_F03240006       |
| 26 | Arching Horn Single  | KI_F07070132       |
| 27 | Horn Holder Socket Eye Straight  | KI_F03080002       |
| 28 | Compression Dead end clamp   | KI_F05050015       |
| 29 | <b>66KV Single Suspension String</b>                                     | <b>I_HS11E0856</b> |
| 30 | Anchor Shackle   | KI_F03090015       |
| 31 | Horn Holder Ball Link  | KI_F03240013       |
| 32 | Arching Horn   | KI_F07070120       |
| 33 | Horn Holder Socket Eye Twisted   | KI_F03080012       |
| 34 | HSU-Clamp(Armour Grip Type Suspension Clamp)                             | KI_F18070041       |
| 35 | <b>Drake ACSR Conductor Accessories M/s Mosdorfer India Pvt Ltd Make</b> |                    |
| 36 | Armour Rod   | KI_F10030007       |
| 37 | Stockbridge Vibration Damper   | KI_F10010071       |

|    |  |                    |
|----|--|--------------------|
| 38 | Mid Span Compression Joint   | KI_F11010024       |
| 39 | Repair Sleeve Compression  | KI_F11060043       |
| 40 | <b>220kV Insulator Hardwares of M/s Mosdorfer India Pvt Ltd Make</b> |                    |
| 41 | GTP of Tension Hardwares fittings suitable for ACSR Drake 28.11      | Nil                |
| 42 | GTP of mid span compression joint suitable for ACSR Drake 28.11      | Nil                |
| 43 | GTP of Repair sleeve suitable for ACSR drake 28.11mm                 | Nil                |
| 44 | GTP of Vibration Damper suitable for ACSR drake 28.11                | Nil                |
| 45 | <b>220KV Single Tension String for ACSR Drake</b>                    | <b>I_AS11E0615</b> |
| 46 | Anchor Shackle   | KI_F03090052       |
| 47 | Horn Holder Ball link  | KI_F03240006       |
| 48 | Arching Horn   | KI_F07070107       |
| 49 | Horn Holder Socket Eye straight                                      | KI_F03080007       |
| 50 | Arching ring   | KI_F07110526       |
| 51 | Compression Dead End clamp   | KI_F05050015       |
| 52 | <b>220KV Double Tension String</b>                                   | <b>I_AS21E0477</b> |
| 53 | Anchor Shackle   | KI_F03090017       |
| 54 | Chain Link   | KI_F03220005       |
| 55 | Yoke Plate   | KI_F03160475       |
| 56 | Ball Clevis  | KI_F03050049       |
| 57 | Arcing Horn  | KI_F07070105       |

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|----|--|--------------------|
| 58 | Arching Ring Racket Type   | KI_F07110525       |
| 59 | Socket Clevis  | KI_F03070070       |
| 60 | Clevis Eye Twisted   | KI_F03110045       |
| 61 | Compression Dead End clamp   | KI_F05050015       |
| 62 | <b>400KV Insulator hardware for Quad Moose ACSR M/s Mosdorfer India Pvt Ltd Make</b> |                    |
| 63 | <b>400kv Quad Tension String</b>   | <b>I_AS44X0065</b> |
| 64 | Anchor Shackle   | KI_F03090071       |
| 65 | Anchor Shackle   | KI_F03090064       |
| 66 | Yoke Plate   | KI_F03160151       |
| 67 | Anchor Shackle   | KI_F03090062       |
| 68 | Yoke Plate   | KI_F03160026       |
| 69 | Arching Horn   | KI_F07070002       |
| 70 | Ball Clevis  | KI_F03050023       |
| 71 | Socket Clevis  | KI_F03070044       |
| 72 | Yoke Plate   | KI_F03180084       |
| 73 | Corona Control Ring  | KI_F07110317       |
| 74 | Anchor Shackle   | KI_F03090061       |
| 75 | Yoke Plate   | KI_F03180083       |
| 76 | Sag Adjuster   | KI_F03140021       |
| 77 | Clevis Eye Straight  | KI_F03120163       |



|    |   |                    |
|----|---|--------------------|
| 78 | Compression Dead End Clamp  | KI_F05050040       |
| 79 | Twin Rigid Spacer   | KI_F09010006       |
| 80 | Clevis Eye Straight   | KI_F03120164       |
| 81 | <b>400KV Single Suspension Pilot String</b>   | <b>I_HS14X0095</b> |
| 82 | Anchor Shackle  | KI_F03090052       |
| 83 | Clevis Eye Stright  | KI_F03120068       |
| 84 | Horn Holder Ball Eye  | KI_F03030003       |
| 85 | Arching Horn  | KI_F07070008       |
| 86 | Corona Control Ring   | KI_F07110113       |
| 87 | Socket Clevis   | KI_F03070029       |
| 88 | Yoke Plate  | KI_F03200013       |
| 89 | Suspension Hinge  | KI_F02100003       |
| 90 | Corona free Suspension Clamp  | KI_F0409001        |
| 91 | Anchor Shackle  | KI_F03090015       |
| 92 | <b>400KV Insulator hardware for Twin Moose ACSR M/s Mosdorfer India Pvt Ltd Make</b>                                |                    |
| 93 | GTP of Single Suspension /Double Suspension /Double Suspension Hardware fittings suitable for Twin ACSR Moose 31.77 | Nil                |
| 94 | GTP of Single Suspension Pilot Hardware fittings suitable for Twin ACSR Moose 31.77                                 | Nil                |
| 95 | GTP of Tension Hardware fittings suitable for Twin ACSR Moose 31.77   | Nil                |
| 96 | GTP of Mid Span Compression Joint suitable for Twin ACSR Moose 31.77  | Nil                |
| 97 | GTP of Repair Sleeve suitable for Twin ACSR Moose 31.77   | Nil                |

|     |   |                    |
|-----|---|--------------------|
| 98  | GTP for Quad Spacer Damper suitable for Twin ACSR Moose 31.77 | Nil                |
| 99  | <b>400KV Double Tension String</b>                            | <b>I_AS22H0197</b> |
| 100 | Anchor Shackle  | KI_F0390130        |
| 101 | Chain Link  | KI_F03220001       |
| 102 | Yoke Plate  | KI_F03160347       |
| 103 | Arching Horn  | KI_F07070362       |
| 104 | Ball Clevis   | KI_F03050023       |
| 105 | Socket Clevis   | KI_F03070044       |
| 106 | Yoke Plate  | KI_F03180164       |
| 107 | Corona Control Ring   | KI_F07110389       |
| 108 | Clevis Eys Twisted  | KI_F03110045       |
| 109 | Sag Adjuster  | KI_F03140073       |
| 110 | Compression Dead End Clamp                                    | KI_F05050040       |
| 111 | 400KV Single Suspension Pilot String                          | I_HS12H0328        |
| 112 | Anchor Shackle  | KI_F03090116       |
| 113 | Horn Holder Ball Eye  | KI_F03030003       |
| 114 | Arching Horn  | KI_F07070364       |
| 115 | Corona Control Ring   | KI_F07110318       |
| 116 | Socket Clevis   | KI_F03070058       |
| 117 | Yoke Plate  | KI_F03160438       |

|     |   |              |
|-----|---|--------------|
| 118 | Clevis Eye Twisted  | KI_F03110044 |
| 119 | Corona Free Suspension Clamp  | KI_F04020015 |
| 120 | Counterweight Set   | KI_F04090036 |
| 121 | <b>ACSR Moose Conductor Accessories of M/s Mosdorfer India Pvt Ltd Make</b> |              |
| 122 | Armour Rod  | KI_F10030003 |
| 123 | Quadruple Rigid Spacer  | KI_F09010009 |
| 124 | Armour Rod  | KI_F10030003 |
| 125 | Mid Span Compression Joint  | KI_F11010002 |
| 126 | Compression Repair Sleeve   | KI_F11060003 |

|               |  |                   |
|---------------|--|-------------------|
| <b>E</b>      | <b>Conductor accessories</b>                       |                   |
| <b>Sl. No</b> | <b>Particulars</b>                                 | <b>Drawing No</b> |
| 1             | Wedge Connectors for ACSR Drake to Drake conductor | MF41378           |
| 2             | Wedge Connectors for ACSR Drake to Lynx conductor  | MF41413           |
| 3             | Mid Span Compression joint for ACSR Drake          | MF29220           |
| 4             | Repair sleeve for ACSR Drake                       | MF29110           |
| 5             | Preformed armor rod for ACSR Drake                 | MF29290           |
| 6             | Vibration damper for ACSR Drake                    | MF29050           |
| 7             | PG Clamp for ACSR Drake                            | MF41240           |

|              |                          |                   |
|--------------|--------------------------|-------------------|
| <b>F</b>     | <b>Tower accessories</b> |                   |
| <b>S1 No</b> | <b>Particulars</b>       | <b>Drawing No</b> |
| 1            | Number plate             | TF01010           |
| 2            | Phase plate              | TF01050           |

|   |                        |                   |
|---|------------------------|-------------------|
| 3 | Danger board           | TF01 100          |
| 4 | Circuit plate — I & II | TF01045           |
| 5 | 220kV Tower hanger     | LE-TH-I 65-300-16 |

|               |                               |                   |
|---------------|-------------------------------|-------------------|
| <b>G</b>      | <b>Earth wire accessories</b> |                   |
| <b>Sl No.</b> | <b>Particulars</b>            | <b>Drawing No</b> |
| 1             | Mid Span compression joint    | MF30030           |
| 2             | Repair sleeve                 | MF30020           |
| 3             | PG Clamp                      | MF30110           |
| 4             | Bolted type tension clamp     | MF30180           |
| 5             | Suspension clamp              | MF30200           |

| <b>Sl No.</b> | <b>Particulars</b>   | <b>Drawing/Document No.</b> |
|---------------|--|-----------------------------|
| <b>A</b>      | <b>Disc Insulators of M/s Imperial Ceramics make</b>                         |                             |
| 1             | GTP of 11kV 120KN Disc Insulators(B&S) Type (320CD)                          | Nil                         |
| 2             | Drawing of 11kV/120kN Disc Insulator   | ICPL:-25 Dtd :01.09.05      |
| 3             | GTP of 11kV 90KN Disc Insulators(B&S) Type (320CD)                           | Nil                         |
| 4             | Drawing of 11kV/90kN Disc Insulator  | ICPL:-19 Dtd :01.09.05      |
| <b>B</b>      | <b>Silicon Rubber Composite Insulator of M/s Shree Radhe Industries make</b> |                             |
| 1             | GTP of 110kV 90kN Suspension Silicon Rubber Composite Insulator              | Nil                         |
| 2             | Drawing of 110kV 90kN Suspension Silicon Rubber Composite Insulator          | 666086                      |
| 3             | GTP of 110kV 90kN Tension Silicon Rubber Composite Insulator                 | Nil                         |
| 4             | Drawing of 110kV 90kN Tension Silicon Rubber Composite Insulator             | 666090                      |
| 5             | GTP of 220kV 90kN Suspension Silicon Rubber Composite Insulator              | Nil                         |
| 6             | Drawing of 220kV 90kN Suspension Silicon Rubber Composite Insulator          | 666140                      |
| 7             | GTP of 220kV 120kN Tension Silicon Rubber Composite Insulator                | Nil                         |

|          |  |                                 |
|----------|--|---------------------------------|
| 8        | Drawing of 220kV 120kN Tension Silicon Rubber Composite Insulator                            | 666042                          |
| <b>C</b> | <b>Silicon Rubber Composite Insulator of M/s Pioneer Pultrutech Engineering Pvt Ltd make</b> |                                 |
| 1        | GTP of 66kV-90kN(B&S) Suspension Composite Insulator   | Nil                             |
| 2        | Drawing of 66kV-90kN(B&S) Suspension Composite Insulator                                     | PPEPL-66KV-90KN-SUS-001 Rev 0   |
| 3        | GTP of 66kV-90kN(B&S) Tension Composite Insulator  | Nil                             |
| 4        | Drawing of 66kV-90kN(B&S) Tension Composite Insulator  | PPEPL-66KV-90KN-TEN-001 Rev 0   |
| 5        | GTP of 110kV-90kN(B&S) Suspension Composite Insulator  | Nil                             |
| 6        | Drawing of 110kV-90kN(B&S) Suspension Composite Insulator                                    | PPEPL-110KV-90KN-SUS-001 Rev 0  |
| 7        | GTP of 110kV-90kN(B&S) Tension Composite Insulator   | Nil                             |
| 8        | Drawing of 110kV-90kN(B&S) Tension Composite Insulator                                       | PPEPL-110KV-90KN-TEN-001 Rev 0  |
| 9        | GTP of 220kV-90kN(B&S) Suspension Composite Insulator  | Nil                             |
| 10       | Drawing of 220kV-90kN(B&S) Suspension Composite Insulator                                    | PPEPL-220KV-90KN-001 Rev 0      |
| 11       | GTP of 220kV-120kN(B&S) Tension Composite Insulator  | Nil                             |
| 12       | Drawing of 220kV-120kN(B&S) Tension Composite Insulator                                      | PPEPL-220KV-120KN-TEN-002 Rev 0 |
| <b>D</b> | <b>Insulator Hardware of M/s ANR Enterprises Make</b>  |                                 |
| 1        | GTP of 220kV Double Suspension Hardware Fitting ACSR Drake                                   | Nil                             |
| 2        | Drawing of 220kV Double Suspension Hardware Fitting ACSR Drake                               | ANR-DSD-2024-001                |
| 3        | GTP of 220kV Single Suspension Hardware Fitting ACSR Drake                                   | Nil                             |
| 4        | Drawing of 220kV Single Suspension Hardware Fitting ACSR Drake                               | ANR-SSD-2024-002                |
| 5        | GTP of 220kV Double Tension Hardware Fitting ACSR Drake                                      | Nil                             |
| 6        | Drawing of 220kV Double Tension Hardware Fitting ACSR Drake                                  | ANR-DTD-2024-001                |
| 7        | GTP of 220kV Single Tension Hardware Fitting ACSR Drake                                      | Nil                             |

|          |  |                    |
|----------|--|--------------------|
| 8        | Drawing of 220kV Single Tension Hardware Fitting ACSR Drake                                  | ANR-STD-2024-002   |
| <b>E</b> | <b>66kV Insulator Hardwares of M/s Mosdorfer India Pvt Ltd Make</b>                          |                    |
| 1        | GTP of Single Suspension /Double Suspension Hardwares fittings suitable for ACSR Drake 28.11 | Nil                |
| 2        | GTP of Tension Hardwares fittings suitable for ACSR Drake 28.11                              | Nil                |
| 3        | GTP of mid span compression joint suitable for ACSR Drake 28.11                              | Nil                |
| 4        | GTP of Repair sleeve suitable for ACSR drake 28.11mm   | Nil                |
| 5        | GTP of Vibration Damper suitable for ACSR drake 28.11  | Nil                |
| 6        | <b>66KV Double tension String for Drake ACSR</b>   | <b>I_AS21E0478</b> |
| 7        | Anchor Shackle   | K I_F03090017      |
| 8        | Chain Link   | KI_F0322005        |
| 9        | Ball Clevis  | KI_F03050022       |
| 10       | Socket Clevis  | KI_F03070029       |
| 11       | Clevis Eye Twisted   | KI_F03110053       |
| 12       | Compression dead end clamp for ACSR drake  | KI_F05050015       |
| 13       | Arching Horn Single  | KI_F07070122       |
| 14       | Yoke Plate   | KI_F03160063       |
| 15       | <b>66KV Double Suspension String</b>   | <b>I_HS21E0339</b> |
| 16       | Anchor Shackle   | KI_F0309002        |
| 17       | Clevis Eye Twisted   | KI_F03110052       |
| 18       | Yoke Plate   | KI_F03160064       |
| 19       | Ball Clevis  | KI_F03050006       |

|    |  |                    |
|----|--|--------------------|
| 20 | Socket Clevis  | KI_F03070014       |
| 21 | Clevis Eye Straight  | KI_F03110020       |
| 22 | HSU-Clamp(Armour Grip Type Suspension Clamp)                             | KI_F18070041       |
| 23 | <b>66KV Single Tension String</b>  | <b>I_AS11E0621</b> |
| 24 | Anchor Shackle   | KI_F03090015       |
| 25 | Horn Holder Ball Link  | KI_F03240006       |
| 26 | Arching Horn Single  | KI_F07070132       |
| 27 | Horn Holder Socket Eye Straight  | KI_F03080002       |
| 28 | Compression Dead end clamp   | KI_F05050015       |
| 29 | <b>66KV Single Suspension String</b>                                     | <b>I_HS11E0856</b> |
| 30 | Anchor Shackle   | KI_F03090015       |
| 31 | Horn Holder Ball Link  | KI_F03240013       |
| 32 | Arching Horn   | KI_F07070120       |
| 33 | Horn Holder Socket Eye Twisted   | KI_F03080012       |
| 34 | HSU-Clamp(Armour Grip Type Suspension Clamp)                             | KI_F18070041       |
| 35 | <b>Drake ACSR Conductor Accessories M/s Mosdorfer India Pvt Ltd Make</b> |                    |
| 36 | Armour Rod   | KI_F10030007       |
| 37 | Stockbridge Vibration Damper   | KI_F10010071       |
| 38 | Mid Span Compression Joint   | KI_F11010024       |
| 39 | Repair Sleeve Compression  | KI_F11060043       |

|    |  |                    |
|----|--|--------------------|
| 40 | <b>220kV Insulator Hardwares of M/s Mosdorfer India Pvt Ltd Make</b> |                    |
| 41 | GTP of Tension Hardwares fittings suitable for ACSR Drake 28.11      | Nil                |
| 42 | GTP of mid span compression joint suitable for ACSR Drake 28.11      | Nil                |
| 43 | GTP of Repair sleeve suitable for ACSR drake 28.11mm                 | Nil                |
| 44 | GTP of Vibration Damper suitable for ACSR drake 28.11                | Nil                |
| 45 | <b>220KV Single Tension String for ACSR Drake</b>                    | <b>I_AS11E0615</b> |
| 46 | Anchor Shackle   | KI_F03090052       |
| 47 | Horn Holder Ball link  | KI_F03240006       |
| 48 | Arching Horn   | KI_F07070107       |
| 49 | Horn Holder Socket Eye straight                                      | KI_F03080007       |
| 50 | Arching ring   | KI_F07110526       |
| 51 | Compression Dead End clamp   | KI_F05050015       |
| 52 | <b>220KV Double Tension String</b>                                   | <b>I_AS21E0477</b> |
| 53 | Anchor Shackle   | KI_F03090017       |
| 54 | Chain Link   | KI_F03220005       |
| 55 | Yoke Plate   | KI_F03160475       |
| 56 | Ball Clevis  | KI_F03050049       |
| 57 | Arcing Horn  | KI_F07070105       |
| 58 | Arching Ring Racket Type   | KI_F07110525       |
| 59 | Socket Clevis  | KI_F03070070       |



|    |  |                    |
|----|--|--------------------|
| 60 | Clevis Eye Twisted   | KI_F03110045       |
| 61 | Compression Dead End clamp   | KI_F05050015       |
| 62 | <b>400KV Insulator hardware for Quad Moose ACSR M/s Mosdorfer India Pvt Ltd Make</b> |                    |
| 63 | <b>400kv Quad Tension String</b>   | <b>I_AS44X0065</b> |
| 64 | Anchor Shackle   | KI_F03090071       |
| 65 | Anchor Shackle   | KI_F03090064       |
| 66 | Yoke Plate   | KI_F03160151       |
| 67 | Anchor Shackle   | KI_F03090062       |
| 68 | Yoke Plate   | KI_F03160026       |
| 69 | Arching Horn   | KI_F07070002       |
| 70 | Ball Clevis  | KI_F03050023       |
| 71 | Socket Clevis  | KI_F03070044       |
| 72 | Yoke Plate   | KI_F03180084       |
| 73 | Corona Control Ring  | KI_F07110317       |
| 74 | Anchor Shackle   | KI_F03090061       |
| 75 | Yoke Plate   | KI_F03180083       |
| 76 | Sag Adjuster   | KI_F03140021       |
| 77 | Clevis Eye Straight  | KI_F03120163       |
| 78 | Compression Dead End Clamp   | KI_F05050040       |
| 79 | Twin Rigid Spacer  | KI_F09010006       |

|    |   |                    |
|----|---|--------------------|
| 80 | Clevis Eye Straight   | KI_F03120164       |
| 81 | <b>400KV Single Suspension Pilot String</b>   | <b>I_HS14X0095</b> |
| 82 | Anchor Shackle  | KI_F03090052       |
| 83 | Clevis Eye Stright  | KI_F03120068       |
| 84 | Horn Holder Ball Eye  | KI_F03030003       |
| 85 | Arching Horn  | KI_F07070008       |
| 86 | Corona Control Ring   | KI_F07110113       |
| 87 | Socket Clevis   | KI_F03070029       |
| 88 | Yoke Plate  | KI_F03200013       |
| 89 | Suspension Hinge  | KI_F02100003       |
| 90 | Corona free Suspension Clamp  | KI_F0409001        |
| 91 | Anchor Shackle  | KI_F03090015       |
| 92 | <b>400KV Insulator hardware for Twin Moose ACSR M/s Mosdorfer India Pvt Ltd Make</b>                                |                    |
| 93 | GTP of Single Suspension /Double Suspension /Double Suspension Hardware fittings suitable for Twin ACSR Moose 31.77 | Nil                |
| 94 | GTP of Single Suspension Pilot Hardware fittings suitable for Twin ACSR Moose 31.77                                 | Nil                |
| 95 | GTP of Tension Hardware fittings suitable for Twin ACSR Moose 31.77   | Nil                |
| 96 | GTP of Mid Span Compression Joint suitable for Twin ACSR Moose 31.77  | Nil                |
| 97 | GTP of Repair Sleeve suitable for Twin ACSR Moose 31.77   | Nil                |
| 98 | GTP for Quad Spacer Damper suitable for Twin ACSR Moose 31.77   | Nil                |
| 99 | <b>400KV Double Tension String</b>  | <b>I_AS22H0197</b> |

|     |                                      |              |
|-----|--------------------------------------|--------------|
| 100 | Anchor Shackle                       | KI_F0390130  |
| 101 | Chain Link                           | KI_F03220001 |
| 102 | Yoke Plate                           | KI_F03160347 |
| 103 | Arching Horn                         | KI_F07070362 |
| 104 | Ball Clevis                          | KI_F03050023 |
| 105 | Socket Clevis                        | KI_F03070044 |
| 106 | Yoke Plate                           | KI_F03180164 |
| 107 | Corona Control Ring                  | KI_F07110389 |
| 108 | Clevis Eys Twisted                   | KI_F03110045 |
| 109 | Sag Adjuster                         | KI_F03140073 |
| 110 | Compression Dead End Clamp           | KI_F05050040 |
| 111 | 400KV Single Suspension Pilot String | I_HS12H0328  |
| 112 | Anchor Shackle                       | KI_F03090116 |
| 113 | Horn Holder Ball Eye                 | KI_F03030003 |
| 114 | Arching Horn                         | KI_F07070364 |
| 115 | Corona Control Ring                  | KI_F07110318 |
| 116 | Socket Clevis                        | KI_F03070058 |
| 117 | Yoke Plate                           | KI_F03160438 |
| 118 | Clevis Eye Twisted                   | KI_F03110044 |
| 119 | Corona Free Suspension Clamp         | KI_F04020015 |

|          |   |                          |
|----------|---|--------------------------|
| 120      | Counterweight Set   | KI_F04090036             |
| 121      | <b>ACSR Moose Conductor Accessories of M/s Mosdorfer India Pvt Ltd Make</b> |                          |
| 122      | Armour Rod  | KI_F10030003             |
| 123      | Quadruple Rigid Spacer  | KI_F09010009             |
| 124      | Armour Rod  | KI_F10030003             |
| 125      | Mid Span Compression Joint  | KI_F11010002             |
| 126      | Compression Repair Sleeve   | KI_F11060003             |
| <b>F</b> | <b>ACSR Conductors of M/s Prakash Metal Products Make</b>                   |                          |
| i)       | <b>ACSR Coyote Conductor</b>  |                          |
| 1        | GTP of ACSR Coyote Conductor  | Nil                      |
| 2        | Drum Drawing -1   | PMP/ACSCYT/23-24/01      |
| 3        | Drum Drawing-2  | PMP/ACSRCOY/25-26/001    |
| ii)      | <b>ACSR Lynx Conductor</b>  |                          |
| 1        | GTP of ACSR Lynx Conductor  | Nil                      |
| 2        | Drum Drawing -1   | PMP/ACSLNX/23-24/001     |
| 3        | Drum Drawing-2  | PMP/ACSRLYNX/25-26/001   |
| iii)     | <b>ACSR Drake Conductor</b>   |                          |
| 1        | GTP of ACSR Drake Conductor   | Nil                      |
| 2        | Drum Drawing -1   | PMP/ACSDRK/23-24/001     |
| 3        | Drum Drawing-2  | PMP/ACSR DRAKE/25-26/001 |

|      |                             |                          |
|------|-----------------------------|--------------------------|
| ii)  | <b>ACSR Lynx Conductor</b>  |                          |
| 1    | GTP of ACSR Lynx Conductor  | Nil                      |
| 2    | Drum Drawing -1             | PMP/ACSLNX/23-24/001     |
| 3    | Drum Drawing-2              | PMP/ACSRLYNX/25-26/001   |
| iii) | <b>ACSR Drake Conductor</b> |                          |
| 1    | GTP of ACSR Drake Conductor | Nil                      |
| 2    | Drum Drawing -1             | PMP/ACSDRK/23-24/001     |
| 3    | Drum Drawing-2              | PMP/ACSR DRAKE/25-26/001 |

Further, there are no approved vendor of KPTCL for supplying HPC conductor. Hence, project specific vendor approval shall be obtained for such works.

## ANNEXURE-2

**STANDARDIZED EQUIPMENTS DRAWINGS OF VENDORS OF KPTCL FOR THE ADOPTING FOR SUPPLY OF MATERIALS/EQUIPMENTS TO TOTAL TURN KEY/PARTIAL BY TURNKEY 'EPC' CONTRACTORS EXECUTING PROJECTS OF K.P.T.C.L./PROJECTS EXECUTED UNDER SELF EXECUTION/DCW BASIS**

| A     | 220kV VOLTAGE CLASS            |  |
|-------|--------------------------------|--|
| Sl.No | Equipments/Materials           | Approved vendors of KPTCL                        |
| 1     | Current Transformer            | CG Power & Industrials Solutions Ltd             |
|       |                                | Mehru Electrical & Mechanical Engineers (P) Ltd. |
|       |                                | Vidyuth Control Systems Pvt. Ltd.                |
|       |                                | GE Vernova T&D India Limited                     |
| 2     | Insulator                      | Modern Insulators Ltd.                           |
|       |                                | Aditya birla Insulators                          |
|       |                                | Insulators & Electricals Company                 |
|       |                                | Deccan Enterprises Private Ltd                   |
|       |                                | Saravana Global Energy Limited                   |
|       |                                | CJI Porcelain Pvt. Ltd.                          |
| 3     | Isolator                       | IPL Products                                     |
|       |                                | Tritech Disconnectors (India) Pvt. Ltd.          |
| 4     | SF6 circuit breaker            | CG Power & Industrials Solutions Ltd             |
|       |                                | Siemens Limited                                  |
|       |                                | Hitachi Energy India Ltd.                        |
|       |                                | GE Vernova T&D India Limited                     |
| 5     | Voltage transformer            | CG Power & Industrials Solutions Ltd             |
|       |                                | Mehru Electrical & Mechanical Engineers (P) Ltd. |
|       |                                | Vidyuth Control Systems Pvt. Ltd.                |
| 6     | Surge arrester                 | Shreem Electric Ltd.,                            |
|       |                                | CG Power & Industrials Solutions Ltd             |
|       |                                | Oblum Electrical Industries Pvt. Ltd.            |
| 7     | Capacitive voltage transformer | Mehru Electrical & Mechanical Engineers (P) Ltd. |
|       |                                | CG Power & Industrials Solutions Ltd             |
|       |                                | GE Vernova T&D India Limited                     |
|       |                                | Siemens Limited                                  |
| B     | 110kV VOLTAGE CLASS            |  |
| Sl.No | Equipments/Materials           | Approved vendors of KPTCL                        |
| 1     | Current Transformer            | CG Power & Industrials Solutions Ltd             |
|       |                                | GE Vernova T&D India Limited                     |
|       |                                | Vidyuth Control Systems Pvt. Ltd.                |
|       |                                | Mehru Electrical & Mechanical Engineers (P) Ltd. |
| 2     | Insulator                      | Aditya birla Insulators                          |
|       |                                | Modern Insulators Ltd.                           |
|       |                                | Insulators & Electricals Company                 |
|       |                                | Saravana Global Energy Limited                   |
|       |                                | CJI Porcelain Pvt. Ltd.                          |
| 3     | Isolator                       | GR Power switchgear Limited                      |
|       |                                | IPL Products                                     |
|       |                                | Tritech Disconnectors (India) Pvt. Ltd.          |
| 4     | SF6 circuit breaker            | CG Power & Industrials Solutions Ltd             |
|       |                                | Siemens Limited                                  |
|       |                                | Hitachi Energy India Ltd.                        |
|       |                                | GE Vernova T&D India Limited                     |

|              |                                   |  |
|--------------|-----------------------------------|--|
| 5            | Voltage transformer               | CG Power & Industrials Solutions Ltd             |
|              |                                   | Mehru Electrical & Mechanical Engineers (P) Ltd. |
|              |                                   | Vidyuth Control Systems Pvt. Ltd.                |
| 6            | Surge arrester                    | Shreem Electric Ltd.,                            |
|              |                                   | CG Power & Industrials Solutions Ltd             |
| <b>C</b>     | <b>66kV VOLTAGE CLASS</b>         |  |
| <b>Sl.No</b> | <b>Equipments/Materials</b>       | <b>Approved vendors of KPTCL</b>                 |
| 1            | Current Transformer               | CG Power & Industrials Solutions Ltd             |
|              |                                   | GE Vernova T&D India Limited                     |
|              |                                   | Vidyuth Control Systems Pvt. Ltd.                |
|              |                                   | Mehru Electrical & Mechanical Engineers (P) Ltd. |
| 2            | Insulator                         | Aditya birla Insulators                          |
|              |                                   | Modern Insulators Ltd.                           |
|              |                                   | Insulators & Electricals Company                 |
|              |                                   | Saravana Global Energy Limited                   |
|              |                                   | CJI Porcelain Pvt. Ltd.                          |
| 3            | Isolator                          | GR Power switchgear Limited                      |
|              |                                   | IPL Products                                     |
|              |                                   | Tritech Disconnectors (India) Pvt. Ltd.          |
|              |                                   | Switchgear & Structures (India) Pvt. Ltd.        |
| 4            | SF6 circuit breaker               | CG Power & Industrials Solutions Ltd             |
|              |                                   | Siemens Limited                                  |
|              |                                   | Hitachi Energy India Ltd.                        |
|              |                                   | GE Vernova T&D India Limited                     |
| 5            | Voltage transformer               | Mehru Electrical & Mechanical Engineers (P) Ltd. |
|              |                                   | Vidyuth Control Systems Pvt. Ltd.                |
| 6            | Surge arrester                    | CG Power & Industrials Solutions Ltd             |
| <b>D</b>     | <b>General Equipment drawings</b> |  |
| <b>Sl.No</b> | <b>Equipments/Materials</b>       | <b>Approved vendors of KPTCL</b>                 |
| 1            | 11kV Isolator & DP structure      | IPL Products                                     |
|              |                                   | Tritech Disconnectors (India) Pvt. Ltd.          |
| 2            | 11kV Surge arrestor               | CG Power & Industrials Solutions Ltd             |
| 3            | 11kV Switchgear                   | Megawin Switchgear -P-Limited                    |
|              |                                   | Stelmac Limited                                  |
|              |                                   | CG Power and Industrial Solutions Limited        |
|              |                                   | Mysore Electrical Industries Ltd                 |
| 4            | 11kV UG cable termination         | Compaq International Pvt. Ltd                    |
|              |                                   | Vikram Power Technologies Pvt. Ltd.              |
|              |                                   | Raychem RPG Pvt. Ltd                             |
| 5            | 33kV Surge arrester               | CG Power & Industrials Solutions Ltd             |
| 6            | LTAC, ACDB and DCDB Panels        | Selmount Power Systems Pvt Ltd                   |
| 7            | Battery Charger                   | Servilink Engineers Pvt. Ltd                     |
|              |                                   | Voltech Manufacturing Company Limited            |
| 8            | Capacitor bank                    | Hitachi Energy India Limited                     |
| 9            | Control, Power and 11kV UG Cables | Chandresh Cables Limited                         |
|              |                                   | KEC International Limited                        |
|              |                                   | KEI International Limited                        |
|              |                                   | SBEE Cables India Limited                        |
|              |                                   | Ravin Cables Limited                             |
|              |                                   | Polycab India Limited                            |
| 10           | C-Type Wedge connector            | Raychem RPG Pvt. Ltd                             |
| 11           | 33kV Current transformer          | Mehru Electrical & Mechanical Engineers (P) Ltd. |
|              |                                   | Vidyuth Control Systems Pvt. Ltd.                |
| 12           | 11kV Current Transformer          | Vidyuth Control Systems Pvt. Ltd.                |
| 13           | 33kV Isolator                     | Tritech Disconnectors (India) Pvt. Ltd.          |

## ANNEXURE-3

### SCADA EQUIPMENTS

| Sl. No. | Equipments   |
|---------|--|
| i.      | <b>48V Battery charger and DCDB – GTP and GA</b>             |
| ii.     | 1. CS – MDAS – DCU   |
|         | Karel GTP  |
|         | Revised drawings Karel                                       |
|         | MFT – Accord   |
|         | DRS 48F OPGW Apar  |
|         | MQP – OPGW Rev 00 Dated 29.12.2020 drawings.                 |
|         | Apar – KPTCL – 11.70mm – 48F – DRS                           |
|         | Par – KPTCL – 11.90mm – 24F – DRS                            |
|         | Drawing of DTPC – NSD – 570                                  |
|         | DRS_ DPC_ R1   |
|         | ZIV_DTPC drawing   |
|         | ZIV_DTPC _ GTP_ KPTCL  |
|         | RTU 560A DRAWING   |
|         |  |
|         | 2. GE RTU drawing  |
|         | Siemens Approved RTU drawing.                                |
|         | MQP of Quality Power WT                                      |
|         | Approved TS DRS – 48F OPGW Cable_ 290                        |
|         | GTP Drawing of ETL – 600                                     |
|         | GTP Drawing of ZIV – PLCC                                    |
|         | Quality Power – KEC International – KPTCL – GTP for Approval |
|         | Approved_ RTU_ Drawing                                       |
|         |  |