



# L&T Construction

Power Transmission & Distribution

CLIENT :



**BIHAR STATE POWER TRANSMISSION CO.LTD., PATNA**

PROJECT :

PACKAGE - NIT 77 UNDER STATE PLAN [80:20], CONSTRUCTION OF :  
(I) LILO OF BARH-PATNA 400 KV D/C ( QUAD) TL AT BAKHTIYARPUR (LINE LENGTH 10RKM),  
(II) 220 KV D/C BAKHTIYARPUR - SHEIKHPURA TL (ACSR ZEBRA) (LINE LENGTH - 51 RKM),  
(III) 220 KV D/C BAKHTIYARPUR -HATHIDAH TL (ACSR ZEBRA) (LINE LENGTH -52 RKM) AND  
(IV) 220 KV D/C BAKHTIYARPUR – FATHUA TL (ACSR ZEBRA) (LINE LENGTH - 28 RKM)

Spec. No. : NIT no. 77/PR/BSPTCL/2018

DRG. No. : O18089-T-TL-8D-GA-0203

BOM No. : BOM/LE19D023/4DB/003

NO OF SHEETS: 8

## BILL OF MATERIAL

**+0M BODY EXTN. FOR TOWER TYPE - "4DB"**  
**400kV D/C QUAD ACSR MOOSE (WZ-4)**

| WEIGHT OF STRUCTURE                                                                                                   |                     |
|-----------------------------------------------------------------------------------------------------------------------|---------------------|
| HT MEMBERS:<br>BOM/LE19D023/PQB0E                                                                                     | 3862.972            |
| MS MEMBERS INCLUDING PACK WASHERS AND ACCESSORIES ECT.<br>BOM/LE19D023/PQB0E = 1803.446<br>BOM/LE19D023/PQB0W = 7.836 | 1811.282            |
| WEIGHT OF BOLTS & NUTS, SPRING WASHERS AND STEP BOLTS<br>BOM/LE19D023/PQB0B                                           | 210.824             |
| <b>TOTAL WEIGHT OF STRUCTURE:</b>                                                                                     | <b>5885.078 Kgs</b> |

**SUCCESSFULLY TESTED AT L&T-TLTRS-KANCHIPURAM**  
**ON 22nd OF AUGUST 2019**

**APPROVED**  
Subject to the condition that you are not absolved of responsibility for correctness of the materials used as per specification  
*[Signature]*  
Electrical Superintending Engineer  
(Planning and Engineering)  
Bihar State Power Transmission Company Limited  
Vidyut Bhawan, Patna-800021

SK  
27.08.19

|             |          |                                                  |             |             |  |          |        |       |
|-------------|----------|--------------------------------------------------|-------------|-------------|--|----------|--------|-------|
| 0           | 26.08.19 | SUBMISSION FOR APPROVAL AFTER SUCCESSFUL TESTING |             |             |  | PU       | BSR    | CSR   |
| REV.        | DATE     | DESCRIPTION                                      |             |             |  | CHKD.    | REVED. | APPD. |
| PREPARED BY |          | CHECKED BY                                       | REVIEWED BY | APPROVED BY |  | DATE     |        |       |
| MBR         |          | PU                                               | BSR         | CSR         |  | 26.08.19 |        |       |

THIS IS PROPRIETARY ITEM AND DESIGN RIGHT IS STRICTLY RESERVED WITH BSPTCL UNDER NO CIRCUMSTANCES THIS DRAWING SHALL BE USED BY ANYBODY WITHOUT PRIOR PERMISSION FROM BSPTCL IN WRITING.



LARSEN & TOUBRO LIMITED, CONSTRUCTION.,  
979, Mount-Poonamallee Road, Manapakkam,  
Tamilnadu-600089, PHONE :044-22526000, FAX :044-22526059

Date: 26-Aug-2019

Page: 1 of 5

### BILL OF MATERIAL

Order No : LE19D023 - Intra Kanchi R- TL -BSPTCL NIT-77

Bom No : BOM/LE19D023/PQB0E

Order Ref: REF/LE19D023

| Sl.No                                                              | Part Code   | Raw Material       | Length Size<br>(In MM) | Unit Wt<br>(In KG) | Req<br>Qty | Per piece<br>wt | Total Wt | Per Piece<br>Ass.Wt |
|--------------------------------------------------------------------|-------------|--------------------|------------------------|--------------------|------------|-----------------|----------|---------------------|
| <b>BOM OF +0M BODY EXTN. FOR TOWER TYPE-"4DB" (400kV D/C QUAD)</b> |             |                    |                        |                    |            |                 |          |                     |
| 1                                                                  | 77B4DB21SH  | L200X200X15H-E350A | 5500.00                | 45.600             | 2          | 250.800         | 501.600  |                     |
| 2                                                                  | 77B4DB22H   | L200X200X15H-E350A | 5500.00                | 45.600             | 2          | 250.800         | 501.600  |                     |
| 3                                                                  | 77B4DB23SH  | L200X200X15H-E350A | 3805.00                | 45.600             | 2          | 173.508         | 347.016  |                     |
| 4                                                                  | 77B4DB24H   | L200X200X15H-E350A | 3805.00                | 45.600             | 2          | 173.508         | 347.016  |                     |
| 5                                                                  | 77B4DB25H   | L150X150X12H-E350A | 606.00                 | 27.300             | 8          | 16.544          | 132.352  |                     |
| 6                                                                  | 77B4DB26H   | 12MM PLATE H-E350A | 150.00 X 606.00        | 94.200             | 16         | 8.563           | 137.008  |                     |
| 7                                                                  | 77B4DB27LH  | L75X75X5H-E350A    | 5500.00                | 5.700              | 2          | 31.350          | 62.700   |                     |
| 8                                                                  | 77B4DB27RH  | L75X75X5H-E350A    | 5500.00                | 5.700              | 2          | 31.350          | 62.700   |                     |
| 9                                                                  | 77B4DB27ALH | L75X75X6H-E350A    | 5500.00                | 6.800              | 2          | 37.400          | 74.800   |                     |
| 10                                                                 | 77B4DB27ARH | L75X75X6H-E350A    | 5500.00                | 6.800              | 2          | 37.400          | 74.800   |                     |
| 11                                                                 | 77B4DB28LH  | L75X75X5H-E350A    | 5501.00                | 5.700              | 2          | 31.356          | 62.712   |                     |
| 12                                                                 | 77B4DB28RH  | L75X75X5H-E350A    | 5501.00                | 5.700              | 2          | 31.356          | 62.712   |                     |
| 13                                                                 | 77B4DB28ALH | L75X75X6H-E350A    | 5501.00                | 6.800              | 2          | 37.407          | 74.814   |                     |
| 14                                                                 | 77B4DB28ARH | L75X75X6H-E350A    | 5501.00                | 6.800              | 2          | 37.407          | 74.814   |                     |
| 15                                                                 | 77B4DB29LH  | L75X75X5H-E350A    | 6762.00                | 5.700              | 2          | 38.543          | 77.086   |                     |
| 16                                                                 | 77B4DB29RH  | L75X75X5H-E350A    | 6762.00                | 5.700              | 2          | 38.543          | 77.086   |                     |
| 17                                                                 | 77B4DB29ALH | L75X75X6H-E350A    | 6762.00                | 6.800              | 2          | 45.982          | 91.964   |                     |
| 18                                                                 | 77B4DB29ARH | L75X75X6H-E350A    | 6762.00                | 6.800              | 2          | 45.982          | 91.964   |                     |
| 19                                                                 | 77B4DB30LH  | L75X75X5H-E350A    | 6762.00                | 5.700              | 2          | 38.543          | 77.086   |                     |
| 20                                                                 | 77B4DB30RH  | L75X75X5H-E350A    | 6762.00                | 5.700              | 2          | 38.543          | 77.086   |                     |
| 21                                                                 | 77B4DB30ALH | L75X75X6H-E350A    | 6762.00                | 6.800              | 2          | 45.982          | 91.964   |                     |
| 22                                                                 | 77B4DB30ARH | L75X75X6H-E350A    | 6762.00                | 6.800              | 2          | 45.982          | 91.964   |                     |
| 23                                                                 | 77B4DB31LH  | L60X60X5H-E350A    | 286.00                 | 4.500              | 4          | 1.287           | 5.148    |                     |
| 24                                                                 | 77B4DB31RH  | L60X60X5H-E350A    | 286.00                 | 4.500              | 4          | 1.287           | 5.148    |                     |
| 25                                                                 | 77B4DB31ALH | L60X60X5H-E350A    | 286.00                 | 4.500              | 4          | 1.287           | 5.148    |                     |
| 26                                                                 | 77B4DB31ARH | L60X60X5H-E350A    | 286.00                 | 4.500              | 4          | 1.287           | 5.148    |                     |
| 27                                                                 | 77B4DB32H   | 12MM PLATE H-E350A | 60.00 X 286.00         | 94.200             | 8          | 1.616           | 12.928   |                     |
| 28                                                                 | 77B4DB33H   | 6MM PLATE H-E350A  | 144.00 X 286.00        | 47.100             | 8          | 1.940           | 15.520   |                     |
| 29                                                                 | 77B4DB34L   | L50X50X4-E250A     | 1280.00                | 3.000              | 4          | 3.840           | 15.360   |                     |
| 30                                                                 | 77B4DB34R   | L50X50X4-E250A     | 1280.00                | 3.000              | 4          | 3.840           | 15.360   |                     |
| 31                                                                 | 77B4DB35L   | L55X55X4-E250A     | 2030.00                | 3.300              | 4          | 6.699           | 26.796   |                     |
| 32                                                                 | 77B4DB35R   | L55X55X4-E250A     | 2030.00                | 3.300              | 4          | 6.699           | 26.796   |                     |
| 33                                                                 | 77B4DB36    | 5MM PLATE-E250A    | 110.00 X 115.00        | 39.250             | 8          | 0.497           | 3.976    |                     |

\*\* -- Item Welded with another item

\*\*\* -- Item Assembled with another item

**APPROVED**  
Subject to the condition that you are not absolved  
the responsibility for correctness of the materials  
supplied as per specification

**Electrical Superintending Engineer**  
(Planning and Engineering)  
Bihar State Power Transmission Company Limited  
Vidya Bhawan  
22-09-19



LARSEN & TOUBRO LIMITED, CONSTRUCTION.,  
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Tamilnadu-600089, PHONE :044-22526000, FAX :044-22526059

Date: 26-Aug-2019

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### BILL OF MATERIAL

Order No : LE19D023 - Intra Kanchi R- TL -BSPTCL NIT-77

Bom No : BOM/LE19D023/PQB0E

Order Ref: REF/LE19D023

| Sl.No | Part Code  | Raw Material       | Length Size<br>(In MM) | Unit Wt<br>(In KG) | Req<br>Qty | Per piece<br>wt | Total Wt | Per Piece<br>Ass.Wt |
|-------|------------|--------------------|------------------------|--------------------|------------|-----------------|----------|---------------------|
| 34    | 77B4DB37   | 6MM PLATE-E250A    | 50.00 X 115.00         | 47.100             | 8          | 0.271           | 2.168    |                     |
| 35    | 77B4DB38L  | L65X65X5-E250A     | 2509.00                | 4.900              | 3          | 12.294          | 36.882   |                     |
| 36    | 77B4DB38R  | L65X65X5-E250A     | 2509.00                | 4.900              | 3          | 12.294          | 36.882   |                     |
| 37    | 77B4DB38AL | L65X65X5-E250A     | 2509.00                | 4.900              | 1          | 12.294          | 12.294   |                     |
| 38    | 77B4DB38AR | L65X65X5-E250A     | 2509.00                | 4.900              | 1          | 12.294          | 12.294   |                     |
| 39    | 77B4DB39L  | L65X65X5-E250A     | 2767.00                | 4.900              | 3          | 13.558          | 40.674   |                     |
| 40    | 77B4DB39R  | L65X65X5-E250A     | 2767.00                | 4.900              | 3          | 13.558          | 40.674   |                     |
| 41    | 77B4DB39AL | L65X65X5-E250A     | 2767.00                | 4.900              | 1          | 13.558          | 13.558   |                     |
| 42    | 77B4DB39AR | L65X65X5-E250A     | 2767.00                | 4.900              | 1          | 13.558          | 13.558   |                     |
| 43    | 77B4DB40   | 6MM PLATE-E250A    | 110.00 X 273.00        | 47.100             | 8          | 1.414           | 11.312   |                     |
| 44    | 77B4DB41   | 6MM PLATE-E250A    | 50.00 X 273.00         | 47.100             | 8          | 0.643           | 5.144    |                     |
| 45    | 77B4DB42L  | L50X50X4-E250A     | 2715.00                | 3.000              | 4          | 8.145           | 32.580   |                     |
| 46    | 77B4DB42R  | L50X50X4-E250A     | 2715.00                | 3.000              | 4          | 8.145           | 32.580   |                     |
| 47    | 77B4DB43L  | L65X65X4-E250A     | 2304.00                | 4.000              | 4          | 9.216           | 36.864   |                     |
| 48    | 77B4DB43R  | L65X65X4-E250A     | 2304.00                | 4.000              | 4          | 9.216           | 36.864   |                     |
| 49    | 77B4DB44L  | L65X65X4-E250A     | 3774.00                | 4.000              | 4          | 15.096          | 60.384   |                     |
| 50    | 77B4DB44R  | L65X65X4-E250A     | 3774.00                | 4.000              | 4          | 15.096          | 60.384   |                     |
| 51    | 77B4DB47L  | L65X65X4-E250A     | 3966.00                | 4.000              | 4          | 15.864          | 63.456   |                     |
| 52    | 77B4DB47R  | L65X65X4-E250A     | 3966.00                | 4.000              | 4          | 15.864          | 63.456   |                     |
| 53    | 77B4DB48L  | L50X50X4-E250A     | 1608.00                | 3.000              | 4          | 4.824           | 19.296   |                     |
| 54    | 77B4DB48R  | L50X50X4-E250A     | 1608.00                | 3.000              | 4          | 4.824           | 19.296   |                     |
| 55    | 77B4DB48AL | L45X45X4-E250A     | 983.00                 | 2.700              | 4          | 2.654           | 10.616   |                     |
| 56    | 77B4DB48AR | L45X45X4-E250A     | 983.00                 | 2.700              | 4          | 2.654           | 10.616   |                     |
| 57    | 77B4DB49L  | L50X50X4-E250A     | 3689.00                | 3.000              | 4          | 11.067          | 44.268   |                     |
| 58    | 77B4DB49R  | L50X50X4-E250A     | 3689.00                | 3.000              | 4          | 11.067          | 44.268   |                     |
| 59    | 77B4DB50LH | L45X45X4H-E350A    | 1567.00                | 2.700              | 4          | 4.231           | 16.924   |                     |
| 60    | 77B4DB50RH | L45X45X4H-E350A    | 1567.00                | 2.700              | 4          | 4.231           | 16.924   |                     |
| 61    | 77B4DB51L  | L45X45X4-E250A     | 2274.00                | 2.700              | 4          | 6.140           | 24.560   |                     |
| 62    | 77B4DB51R  | L45X45X4-E250A     | 2274.00                | 2.700              | 4          | 6.140           | 24.560   |                     |
| 63    | 77B4DB52H  | 12MM PLATE H-E350A | 296.00 X 500.00        | 94.200             | 4          | 13.942          | 55.768   |                     |
| 64    | 77B4DB53   | 5MM PLATE-E250A    | 109.00 X 110.00        | 39.250             | 8          | 0.471           | 3.768    |                     |
| 65    | 77B4DB54   | L80X80X6-E250A     | 5700.00                | 7.300              | 4          | 41.610          | 166.440  |                     |
| 66    | 77B4DB55   | L80X80X6-E250A     | 6642.00                | 7.300              | 4          | 48.487          | 193.948  |                     |
| 67    | 77B4DB56   | L65X65X5-E250A     | 286.00                 | 4.900              | 4          | 1.401           | 5.604    |                     |

\*\* -- Item Welded with another item

\*\*\* -- Item Assembled with another item

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supplied as per specification

Electrical Superintending Engineer  
(Planning and Engineering)  
Tamil Nadu State Power Transmission Company Limited  
Chennai-600021

27.09.19



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Tamilnadu-600089, PHONE :044-22526000, FAX :044-22526059

Date: 26-Aug-2019

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### BILL OF MATERIAL

Order No : LE19D023 - Intra Kanchi R- TL -BSPTCL NIT-77

Bom No : BOM/LE19D023/PQB0E

Order Ref: REF/LE19D023

| Sl.No | Part Code  | Raw Material      | Length Size<br>(In MM) | Unit Wt<br>(In KG) | Req<br>Qty | Per piece<br>wt | Total Wt | Per Piece<br>Ass.Wt |
|-------|------------|-------------------|------------------------|--------------------|------------|-----------------|----------|---------------------|
| 68    | 77B4DB57   | 6MM PLATE-E250A   | 50.00 X 286.00         | 47.100             | 8          | 0.674           | 5.392    |                     |
| 69    | 77B4DB58H  | L45X45X4H-E350A   | 1741.00                | 2.700              | 4          | 4.701           | 18.804   |                     |
| 70    | 77B4DB59   | L45X45X4-E250A    | 3495.00                | 2.700              | 4          | 9.437           | 37.748   |                     |
| 71    | 77B4DB59X  | L45X45X4-E250A    | 3495.00                | 2.700              | 4          | 9.437           | 37.748   |                     |
| 72    | 77B4DB60   | L55X55X4-E250A    | 4878.00                | 3.300              | 4          | 16.097          | 64.388   |                     |
| 73    | 77B4DB60X  | L55X55X4-E250A    | 4878.00                | 3.300              | 4          | 16.097          | 64.388   |                     |
| 74    | 77B4DB61   | L60X60X4-E250A    | 4614.00                | 3.700              | 4          | 17.072          | 68.288   |                     |
| 75    | 77B4DB61X  | L60X60X4-E250A    | 4614.00                | 3.700              | 4          | 17.072          | 68.288   |                     |
| 76    | 77B4DB62H  | L50X50X4H-E350A   | 2307.00                | 3.000              | 8          | 6.921           | 55.368   |                     |
| 77    | 77B4DB63   | L45X30X4-E250A    | 1142.00                | 2.200              | 8          | 2.512           | 20.096   |                     |
| 78    | 77B4DB64   | L45X45X4-E250A    | 3938.00                | 2.700              | 8          | 10.633          | 85.064   |                     |
| 79    | 77B4DB65   | 6MM PLATE-E250A   | 110.00 X 144.00        | 47.100             | 8          | 0.746           | 5.968    |                     |
| 80    | 77B4DB66H  | 6MM PLATE H-E350A | 110.00 X 234.00        | 47.100             | 8          | 1.212           | 9.696    |                     |
| 81    | 77B4DB67L  | 6MM PLATE-E250A   | 125.00 X 257.00        | 47.100             | 4          | 1.513           | 6.052    |                     |
| 82    | 77B4DB67R  | 6MM PLATE-E250A   | 125.00 X 257.00        | 47.100             | 4          | 1.513           | 6.052    |                     |
| 83    | 77B4DB68L  | 6MM PLATE-E250A   | 110.00 X 261.00        | 47.100             | 4          | 1.352           | 5.408    |                     |
| 84    | 77B4DB68R  | 6MM PLATE-E250A   | 110.00 X 261.00        | 47.100             | 4          | 1.352           | 5.408    |                     |
| 85    | 77B4DB69   | 6MM PLATE-E250A   | 110.00 X 234.00        | 47.100             | 8          | 1.212           | 9.696    |                     |
| 86    | 77B4DB70H  | 6MM PLATE H-E350A | 110.00 X 234.00        | 47.100             | 8          | 1.212           | 9.696    |                     |
| 87    | 77B4DB71L  | 6MM PLATE-E250A   | 115.00 X 254.00        | 47.100             | 4          | 1.376           | 5.504    |                     |
| 88    | 77B4DB71R  | 6MM PLATE-E250A   | 115.00 X 254.00        | 47.100             | 4          | 1.376           | 5.504    |                     |
| 89    | 77B4DB72   | 6MM PLATE-E250A   | 130.00 X 179.00        | 47.100             | 4          | 1.096           | 4.384    |                     |
| 90    | 77B4DB73H  | L60X60X5H-E350A   | 353.00                 | 4.500              | 4          | 1.589           | 6.356    |                     |
| 91    | 77B4DB74H  | L60X60X4H-E350A   | 2809.00                | 3.700              | 4          | 10.393          | 41.572   |                     |
| 92    | 77B4DB75H  | L50X50X4H-E350A   | 2174.00                | 3.000              | 4          | 6.522           | 26.088   |                     |
| 93    | 77B4DB75XH | L50X50X4H-E350A   | 2174.00                | 3.000              | 4          | 6.522           | 26.088   |                     |
| 94    | 77B4DB76H  | L65X65X5H-E350A   | 4980.00                | 4.900              | 4          | 24.402          | 97.608   |                     |
| 95    | 77B4DB76XH | L65X65X5H-E350A   | 4980.00                | 4.900              | 4          | 24.402          | 97.608   |                     |
| 96    | 77B4DB77H  | L70X70X5H-E350A   | 461.00                 | 5.300              | 4          | 2.443           | 9.772    |                     |
| 97    | 77B4DB78H  | L45X45X4H-E350A   | 1480.00                | 2.700              | 4          | 3.996           | 15.984   |                     |
| 98    | 77B4DB78AH | L45X45X4H-E350A   | 1203.00                | 2.700              | 4          | 3.248           | 12.992   |                     |
| 99    | 77B4DB78B  | L45X45X4-E250A    | 775.00                 | 2.700              | 4          | 2.093           | 8.372    |                     |
| 100   | 77B4DB79AH | L45X45X4H-E350A   | 1203.00                | 2.700              | 4          | 3.248           | 12.992   |                     |
| 101   | 77B4DB79H  | L45X45X4H-E350A   | 1480.00                | 2.700              | 4          | 3.996           | 15.984   |                     |

\*\* -- Item Welded with another item

\*\*\* -- Item Assembled with another item

**APPROVED**

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supplied as per specification

sk  
27-09-19

Electrical Superintending Engineer  
(Planning and Engineering)  
Transmission Company Limited



LARSEN & TOUBRO LIMITED, CONSTRUCTION.,  
979, Mount-Poonamallee Road, Manapakkam,  
Tamilnadu-600089, PHONE : 044-22526000, FAX : 044-22526059

Date: 26-Aug-2019

Page: 4 of 5

### BILL OF MATERIAL

Order No : LE19D023 - Intra Kanchi R- TL -BSPTCL NIT-77

Bom No : BOM/LE19D023/PQB0E

Order Ref: REF/LE19D023

| Sl.No                 | Part Code | Raw Material    | Length Size<br>(In MM) | Unit Wt<br>(In KG) | Req<br>Qty | Per piece<br>wt | Total Wt        | Per Piece<br>Ass.Wt |
|-----------------------|-----------|-----------------|------------------------|--------------------|------------|-----------------|-----------------|---------------------|
| 102                   | 77B4DB79B | L45X45X4-E250A  | 775.00                 | 2.700              | 4          | 2.093           | 8.372           |                     |
| 103                   | 77B4DB80H | L60X60X5H-E350A | 4159.00                | 4.500              | 4          | 18.716          | 74.864          |                     |
| 104                   | 77B4DB81  | L45X45X4-E250A  | 1081.00                | 2.700              | 4          | 2.919           | 11.676          |                     |
| 105                   | 77B4DB82  | 6MM PLATE-E250A | 120.00 X 187.00        | 47.100             | 2          | 1.057           | 2.114           |                     |
| <b>Total Weight :</b> |           |                 |                        |                    |            |                 | <b>5666.418</b> |                     |

#### Associated Parts

| Part Code           | Type of Association | Associated with | Total Weight |
|---------------------|---------------------|-----------------|--------------|
| No Association Part |                     |                 |              |

| Raw Material Involved                                              | Standard Material | Total Weight ( In Kg) |
|--------------------------------------------------------------------|-------------------|-----------------------|
| <b>BOM OF +0M BODY EXTN. FOR TOWER TYPE-"4DB" (400kV D/C QUAD)</b> |                   |                       |
| 12MM PLATE H-E350A                                                 | HT                | 205.704               |
| 5MM PLATE-E250A                                                    | MS                | 7.744                 |
| 6MM PLATE H-E350A                                                  | HT                | 34.912                |
| 6MM PLATE-E250A                                                    | MS                | 80.106                |
| L150X150X12H-E350A                                                 | HT                | 132.352               |
| L200X200X15H-E350A                                                 | HT                | 1697.232              |
| L45X30X4-E250A                                                     | MS                | 20.096                |
| L45X45X4-E250A                                                     | MS                | 259.332               |
| L45X45X4H-E350A                                                    | HT                | 110.604               |
| L50X50X4-E250A                                                     | MS                | 223.008               |
| L50X50X4H-E350A                                                    | HT                | 107.544               |
| L55X55X4-E250A                                                     | MS                | 182.368               |
| L60X60X4-E250A                                                     | MS                | 136.576               |
| L60X60X4H-E350A                                                    | HT                | 41.572                |
| L60X60X5H-E350A                                                    | HT                | 101.812               |
| L65X65X4-E250A                                                     | MS                | 321.408               |
| L65X65X5-E250A                                                     | MS                | 212.420               |
| L65X65X5H-E350A                                                    | HT                | 195.216               |
| L70X70X5H-E350A                                                    | HT                | 9.772                 |
| L75X75X5H-E350A                                                    | HT                | 559.168               |
| L75X75X6H-E350A                                                    | HT                | 667.084               |

**APPROVED**

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supplied as per specification

\*\* -- Item Welded with another item  
\*\*\* -- Item Assembled with another item

Electrical Superintending Engineer  
(Planning and Engineering)  
Tamil Nadu Power Transmission Company Limited

27-09-19



LARSEN & TOUBRO LIMITED, CONSTRUCTION.,  
979, Mount-Poonamallee Road, Manapakkam,  
Tamilnadu-600089, PHONE :044-22526000, FAX :044-22526059

Date: 26-Aug-2019

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### BILL OF MATERIAL

Order No : LE19D023 - Intra Kanchi R- TL -BSPTCL NIT-77

Bom No : BOM/LE19D023/PQB0E

Order Ref: REF/LE19D023

L80X80X6-E250A

|              |                 |
|--------------|-----------------|
| MS           | 360.388         |
| <b>Total</b> | <b>5666.418</b> |
| HT           | <b>3862.972</b> |
| MS           | <b>1803.446</b> |

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(Planning and Engineering)  
Sihar State Power Transmission Company Limited  
Vidyut Bhawan, Patna-800021

CM  
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Page: 1 of 2

### BILL OF MATERIAL

Order No : LE19D023 - Intra Kanchi R- TL -BSPTCL NIT-77

Bom No : BOM/LE19D023/PQB0B

Order Ref: REF/LE19D023

| Sl.No                                                                             | Part Code | Raw Material                         | Length Size<br>(In MM) | Unit Wt<br>(In KG) | Req Qty | Per piece wt | Total Wt       | Per Piece Ass.Wt |
|-----------------------------------------------------------------------------------|-----------|--------------------------------------|------------------------|--------------------|---------|--------------|----------------|------------------|
| <b>BOLTS &amp; NUTS OF +0M BODY EXTN. FOR TOWER TYPE - "4DB" (400kV D/C QUAD)</b> |           |                                      |                        |                    |         |              |                |                  |
| 1                                                                                 | PQB0B1    | M16X35MM LONG<br>(IS:12427)          |                        | 0.119              | 428     | 0.119        | 50.932         |                  |
| 2                                                                                 | PQB0B2    | M16X40MM LONG<br>(IS:12427)          |                        | 0.126              | 144     | 0.126        | 18.144         |                  |
| 3                                                                                 | PQB0B3    | M16X45MM LONG<br>(IS:12427)          |                        | 0.134              | 320     | 0.134        | 42.880         |                  |
| 4                                                                                 | PQB0B9    | M16x3.5MM SPRING<br>WASHER IS3063    |                        | 0.009              | 1364    | 0.009        | 12.276         |                  |
| 5                                                                                 | PQB0B4    | M16X50MM LONG<br>(IS:12427)          |                        | 0.142              | 120     | 0.142        | 17.040         |                  |
| 6                                                                                 | PQB0B5    | M16X55MM LONG<br>(IS:12427)          |                        | 0.150              | 44      | 0.150        | 6.600          |                  |
| 7                                                                                 | PQB0B6    | M16X60MM LONG<br>(IS:12427)          |                        | 0.158              | 52      | 0.158        | 8.216          |                  |
| 8                                                                                 | PQB0B7    | M16X65MM LONG<br>(IS:12427)          |                        | 0.164              | 252     | 0.164        | 41.328         |                  |
| 9                                                                                 | PQB0B8    | M16X70MM LONG<br>(IS:12427)          |                        | 0.173              | 4       | 0.173        | 0.692          |                  |
| 10                                                                                | PQB0B10   | M16x175LG STEP BOLT<br>(350D) 2N+1SP |                        | 0.374              | 34      | 0.374        | 12.716         |                  |
| <b>Total Weight :</b>                                                             |           |                                      |                        |                    |         |              | <b>210.824</b> |                  |

#### Associated Parts

| Part Code | Type of Association | Associated with | Total Weight |
|-----------|---------------------|-----------------|--------------|
|-----------|---------------------|-----------------|--------------|

No Association Part

| Raw Material Involved                                                             | Standard Material | Total Weight ( In Kg) |
|-----------------------------------------------------------------------------------|-------------------|-----------------------|
| <b>BOLTS &amp; NUTS OF +0M BODY EXTN. FOR TOWER TYPE - "4DB" (400kV D/C QUAD)</b> |                   |                       |
| M16x175LG STEP BOLT(350D) 2N+1SP                                                  |                   | 12.716                |
| M16x3.5MM SPRING WASHER IS3063                                                    |                   | 12.276                |
| M16X35MM LONG (IS:12427)                                                          |                   | 50.932                |
| M16X40MM LONG (IS:12427)                                                          |                   | 18.144                |
| M16X45MM LONG (IS:12427)                                                          |                   | 42.880                |
| M16X50MM LONG (IS:12427)                                                          |                   | 17.040                |
| M16X55MM LONG (IS:12427)                                                          |                   | 6.600                 |
| M16X60MM LONG (IS:12427)                                                          |                   | 8.216                 |
| M16X65MM LONG (IS:12427)                                                          |                   | 41.328                |
| M16X70MM LONG (IS:12427)                                                          |                   | 0.692                 |
| <b>Total</b>                                                                      |                   | <b>210.824</b>        |

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**Electrical Superintending Engineer**  
(Planning and Engineering)  
Bihar State Power Transmission Company Limited  
Vidhyut Bhawan, Patna-800021

Sh  
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**BILL OF MATERIAL**

Order No : LE19D023 - Intra Kanchi R- TL -BSPTCL NIT-77

Bom No : BOM/LE19D023/PQB0B

Order Ref: REF/LE19D023

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### BILL OF MATERIAL

Order No : LE19D023 - Intra Kanchi R- TL -BSPTCL NIT-77

Bom No : BOM/LE19D023/PQB0W

Order Ref: REF/LE19D023

| Sl.No                                                                         | Part Code | Raw Material                        | Length Size<br>(In MM) | Unit Wt<br>(In KG) | Req Qty | Per piece<br>wt | Total Wt     | Per Piece<br>Ass.Wt |
|-------------------------------------------------------------------------------|-----------|-------------------------------------|------------------------|--------------------|---------|-----------------|--------------|---------------------|
| <b>PACK WASHERS OF +0M BODY EXTN. FOR TOWER TYPE - "4DB" (400kV D/C QUAD)</b> |           |                                     |                        |                    |         |                 |              |                     |
| 1                                                                             | PQB0W1    | M16x5MM ROUND PACK<br>WASHER IS2016 |                        | 0.018              | 20      | 0.018           | 0.360        |                     |
| 2                                                                             | PQB0W2    | M16x6MM ROUND PACK<br>WASHER IS2016 |                        | 0.021              | 356     | 0.021           | 7.476        |                     |
| <b>Total Weight :</b>                                                         |           |                                     |                        |                    |         |                 | <b>7.836</b> |                     |

#### Associated Parts

| Part Code           | Type of Association | Associated with | Total Weight |
|---------------------|---------------------|-----------------|--------------|
| No Association Part |                     |                 |              |

| Raw Material Involved                                                             | Standard Material | Total Weight ( In Kg) |
|-----------------------------------------------------------------------------------|-------------------|-----------------------|
| <b>PACK WASHERS OF +0M BODY EXTN. FOR TOWER TYPE - "4DB"<br/>(400kV D/C QUAD)</b> |                   |                       |
| M16x5MM ROUND PACK WASHER IS2016                                                  |                   | 0.360                 |
| M16x6MM ROUND PACK WASHER IS2016                                                  |                   | 7.476                 |
| <b>Total</b>                                                                      |                   | <b>7.836</b>          |

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27.09.19

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\*\*\* -- Item Assembled with another item