



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-0207

BOM No. : BOM/LE19D023/4DB/008

NO OF SHEETS: 6

BILL OF MATERIAL

+9M BODY EXTN. FOR TOWER TYPE - "4DB"
400KV D/C QUAD ACSR MOOSE (WZ-4)

WEIGHT OF STRUCTURE	
HT MEMBERS: BOM/LE19D023/PQB9E	2899.364
MS MEMBERS INCLUDING PACK WASHERS AND ACCESSORIES ECT. BOM/LE19D023/PQB9E = 4179.058 BOM/LE19D023/PQB9W = 0.608	4179.666
WEIGHT OF BOLTS & NUTS, SPRING WASHERS AND STEP BOLTS BOM/LE19D023/PQB9B	189.716
TOTAL WEIGHT OF STRUCTURE:	7268.746 Kgs

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

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

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BILL OF MATERIAL

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

Bom No : BOM/LE19D023/PQB9E

Order Ref: REF/LE19D023

Sl.No	Part Code	Raw Material	Length Size (In MM)	Unit Wt (In KG)	Req Qty	Per piece wt	Total Wt	Per Piece Ass.Wt
BOM OF +9M BODY EXTN. FOR TOWER TYPE-"4DB" (400kV D/C QUAD)								
1	77B4DB9000SH	L200X200X15H-E350A	4600.00	45.600	2	209.760	419.520	
2	77B4DB9001H	L200X200X15H-E350A	4600.00	45.600	2	209.760	419.520	
3	77B4DB9002SH	L200X200X15H-E350A	4918.00	45.600	2	224.261	448.522	
4	77B4DB9003H	L200X200X15H-E350A	4918.00	45.600	2	224.261	448.522	
5	77B4DB9004H	L150X150X12H-E350A	606.00	27.300	8	16.544	132.352	
6	77B4DB9005H	12MM PLATE H-E350A	150.00 X 606.00	94.200	16	8.563	137.008	
7	77B4DB9006L	L100X100X7-E250A	5100.00	10.700	4	54.570	218.280	
8	77B4DB9006R	L100X100X7-E250A	5100.00	10.700	4	54.570	218.280	
9	77B4DB9007L	L100X100X7-E250A	4600.00	10.700	4	49.220	196.880	
10	77B4DB9007R	L100X100X7-E250A	4600.00	10.700	4	49.220	196.880	
11	77B4DB9008L	L100X100X7-E250A	4302.00	10.700	4	46.031	184.124	
12	77B4DB9008R	L100X100X7-E250A	4302.00	10.700	4	46.031	184.124	
13	77B4DB9009L	L75X75X6-E250A	316.00	6.800	8	2.149	17.192	
14	77B4DB9009R	L75X75X6-E250A	316.00	6.800	8	2.149	17.192	
15	77B4DB9010	6MM PLATE-E250A	70.00 X 316.00	47.100	32	1.042	33.344	
16	77B4DB9011L	L50X50X4-E250A	1436.00	3.000	4	4.308	17.232	
17	77B4DB9011R	L50X50X4-E250A	1436.00	3.000	4	4.308	17.232	
18	77B4DB9012L	L50X50X4-E250A	1887.00	3.000	4	5.661	22.644	
19	77B4DB9012R	L50X50X4-E250A	1887.00	3.000	4	5.661	22.644	
20	77B4DB9013L	L70X70X5-E250A	2821.00	5.300	3	14.951	44.853	
21	77B4DB9013R	L70X70X5-E250A	2821.00	5.300	3	14.951	44.853	
22	77B4DB9013AL	L70X70X5-E250A	2821.00	5.300	1	14.951	14.951	
23	77B4DB9013AR	L70X70X5-E250A	2821.00	5.300	1	14.951	14.951	
24	77B4DB9014L	L65X65X5-E250A	2899.00	4.900	3	14.205	42.615	
25	77B4DB9014R	L65X65X5-E250A	2899.00	4.900	3	14.205	42.615	
26	77B4DB9014AL	L65X65X5-E250A	2899.00	4.900	1	14.205	14.205	
27	77B4DB9014AR	L65X65X5-E250A	2899.00	4.900	1	14.205	14.205	
28	77B4DB9015	6MM PLATE-E250A	106.00 X 152.00	47.100	8	0.759	6.072	
29	77B4DB9016L	L50X50X4-E250A	2301.00	3.000	4	6.903	27.612	
30	77B4DB9016R	L50X50X4-E250A	2301.00	3.000	4	6.903	27.612	
31	77B4DB9017L	L65X65X5-E250A	2438.00	4.900	4	11.946	47.784	
32	77B4DB9017R	L65X65X5-E250A	2438.00	4.900	4	11.946	47.784	
33	77B4DB9018L	L65X65X5-E250A	4136.00	4.900	4	20.266	81.064	

APPROVED

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

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

Electrical Superintending Engineer
(Planning and Engineering)
Bharat Heavy Electricals Limited
2021

SK
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/PQB9E

Order Ref: REF/LE19D023

Sl.No	Part Code	Raw Material	Length Size (In MM)	Unit Wt (In KG)	Req Qty	Per piece wt	Total Wt	Per Piece Ass.Wt
34	77B4DB9018R	L65X65X5-E250A	4136.00	4.900	4	20.266	81.064	
35	77B4DB9019	L50X50X4-E250A	2492.00	3.000	8	7.476	59.808	
36	77B4DB9020L	L75X75X5-E250A	3103.00	5.700	4	17.687	70.748	
37	77B4DB9020R	L75X75X5-E250A	3103.00	5.700	4	17.687	70.748	
38	77B4DB9021L	L75X75X5-E250A	5445.00	5.700	4	31.037	124.148	
39	77B4DB9021R	L75X75X5-E250A	5445.00	5.700	4	31.037	124.148	
40	77B4DB9022L	L70X70X5-E250A	4826.00	5.300	4	25.578	102.312	
41	77B4DB9022R	L70X70X5-E250A	4826.00	5.300	4	25.578	102.312	
42	77B4DB9023L	L60X60X4-E250A	2081.00	3.700	4	7.700	30.800	
43	77B4DB9023R	L60X60X4-E250A	2081.00	3.700	4	7.700	30.800	
44	77B4DB9024	L45X45X4-E250A	837.00	2.700	8	2.260	18.080	
45	77B4DB9025	L45X45X4-E250A	3178.00	2.700	8	8.581	68.648	
46	77B4DB9026LH	L50X50X4H-E350A	2128.00	3.000	4	6.384	25.536	
47	77B4DB9026RH	L50X50X4H-E350A	2128.00	3.000	4	6.384	25.536	
48	77B4DB9027L	L50X50X4-E250A	2377.00	3.000	4	7.131	28.524	
49	77B4DB9027R	L50X50X4-E250A	2377.00	3.000	4	7.131	28.524	
50	77B4DB9028	L45X45X4-E250A	1614.00	2.700	8	4.358	34.864	
51	77B4DB9029	L100X100X6-E250A	5900.00	9.200	4	54.280	217.120	
52	77B4DB9030	L100X100X6-E250A	4944.00	9.200	4	45.485	181.940	
53	77B4DB9031	L100X100X6-E250A	5900.00	9.200	4	54.280	217.120	
54	77B4DB9032	L75X75X5-E250A	316.00	5.700	8	1.801	14.408	
55	77B4DB9033	5MM PLATE-E250A	70.00 X 316.00	39.250	16	0.868	13.888	
56	77B4DB9034H	L50X50X4H-E350A	1936.00	3.000	4	5.808	23.232	
57	77B4DB9035	L45X45X4-E250A	3584.00	2.700	4	9.677	38.708	
58	77B4DB9035X	L45X45X4-E250A	3584.00	2.700	4	9.677	38.708	
59	77B4DB9036	L55X55X4-E250A	7163.00	3.300	8	23.638	189.104	
60	77B4DB9037	L50X50X4-E250A	2808.00	3.000	8	8.424	67.392	
61	77B4DB9038	L45X30X4-E250A	1236.00	2.200	8	2.719	21.752	
62	77B4DB9039	L65X65X4-E250A	5025.00	4.000	4	20.100	80.400	
63	77B4DB9039X	L65X65X4-E250A	5025.00	4.000	4	20.100	80.400	
64	77B4DB9040H	L65X65X4H-E350A	3105.00	4.000	8	12.420	99.360	
65	77B4DB9041	L45X30X4-E250A	1287.00	2.200	8	2.831	22.648	
66	77B4DB9042	L55X55X4-E250A	4761.00	3.300	8	15.711	125.688	
67	77B4DB9043H	6MM PLATE H-E350A	110.00 X 155.00	47.100	8	0.803	6.424	

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

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

Electrical Superintending Engineer
(Planning and Engineering)

Chief Engineer, Power Transmission, mpa

27.09.19



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/PQB9E

Order Ref: REF/LE19D023

Sl.No	Part Code	Raw Material	Length Size (In MM)	Unit Wt (In KG)	Req Qty	Per piece wt	Total Wt	Per Piece Ass.Wt
68	77B4DB9044L	6MM PLATE-E250A	186.00 X 210.00	47.100	4	1.840	7.360	
69	77B4DB9044R	6MM PLATE-E250A	186.00 X 210.00	47.100	4	1.840	7.360	
70	77B4DB9045	6MM PLATE-E250A	110.00 X 155.00	47.100	8	0.803	6.424	
71	77B4DB9046L	6MM PLATE-E250A	115.00 X 175.00	47.100	4	0.948	3.792	
72	77B4DB9046R	6MM PLATE-E250A	115.00 X 175.00	47.100	4	0.948	3.792	
73	77B4DB9047	6MM PLATE-E250A	110.00 X 155.00	47.100	8	0.803	6.424	
74	77B4DB9048H	6MM PLATE H-E350A	110.00 X 155.00	47.100	8	0.803	6.424	
75	77B4DB9049L	6MM PLATE-E250A	114.00 X 176.00	47.100	4	0.945	3.780	
76	77B4DB9049R	6MM PLATE-E250A	114.00 X 176.00	47.100	4	0.945	3.780	
77	77B4DB9050	6MM PLATE-E250A	134.00 X 164.00	47.100	4	1.035	4.140	
78	77B4DB9051H	L90X90X6H-E350A	457.00	8.200	4	3.747	14.988	
79	77B4DB9052H	L65X65X4H-E350A	3817.00	4.000	4	15.268	61.072	
80	77B4DB9053H	L65X65X4H-E350A	2916.00	4.000	4	11.664	46.656	
81	77B4DB9053XH	L65X65X4H-E350A	2916.00	4.000	4	11.664	46.656	
82	77B4DB9054H	L75X75X5H-E350A	6700.00	5.700	4	38.190	152.760	
83	77B4DB9054XH	L75X75X5H-E350A	6700.00	5.700	4	38.190	152.760	
84	77B4DB9055H	L70X70X5H-E350A	460.00	5.300	4	2.438	9.752	
85	77B4DB9056H	6MM PLATE H-E350A	113.00 X 239.00	47.100	4	1.272	5.088	
86	77B4DB9057H	L50X50X4H-E350A	2006.00	3.000	4	6.018	24.072	
87	77B4DB9058H	L50X50X4H-E350A	2006.00	3.000	4	6.018	24.072	
88	77B4DB9059H	L45X45X4H-E350A	1597.00	2.700	4	4.312	17.248	
89	77B4DB9060H	L45X45X4H-E350A	1597.00	2.700	4	4.312	17.248	
90	77B4DB9061	L45X45X4-E250A	1053.00	2.700	4	2.843	11.372	
91	77B4DB9062	L45X45X4-E250A	1053.00	2.700	4	2.843	11.372	
92	77B4DB9063H	L70X70X5H-E350A	5635.00	5.300	4	29.866	119.464	
93	77B4DB9064H	L45X45X4H-E350A	1442.00	2.700	4	3.893	15.572	
94	77B4DB9065	6MM PLATE-E250A	63.00 X 224.00	47.100	8	0.665	5.320	
95	77B4DB9066	6MM PLATE-E250A	120.00 X 187.00	47.100	2	1.057	2.114	
Total Weight :							7078.422	

Associated Parts

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

Raw Material Involved	Standard Material	Total Weight (In Kg)
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APPROVED
Subject to the condition that you are not absolved of
the responsibility for correctness of the materials
supplied as per specification

** -- Item Welded with another item

*** -- Item Assembled with another item

Electrical Superintending Engineer
(Planning and Engineering)
Tamil Nadu State Power Transmission Corporation

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/PQB9E

Order Ref: REF/LE19D023

BOM OF +9M BODY EXTN. FOR TOWER TYPE-"4DB" (400kV D/C QUAD)

12MM PLATE H-E350A	HT	137.008
5MM PLATE-E250A	MS	13.888
6MM PLATE H-E350A	HT	17.936
6MM PLATE-E250A	MS	93.702
L100X100X6-E250A	MS	616.180
L100X100X7-E250A	MS	1198.568
L150X150X12H-E350A	HT	132.352
L200X200X15H-E350A	HT	1736.084
L45X30X4-E250A	MS	44.400
L45X45X4-E250A	MS	221.752
L45X45X4H-E350A	HT	50.068
L50X50X4-E250A	MS	319.224
L50X50X4H-E350A	HT	122.448
L55X55X4-E250A	MS	314.792
L60X60X4-E250A	MS	61.600
L65X65X4-E250A	MS	160.800
L65X65X4H-E350A	HT	253.744
L65X65X5-E250A	MS	371.336
L70X70X5-E250A	MS	324.232
L70X70X5H-E350A	HT	129.216
L75X75X5-E250A	MS	404.200
L75X75X5H-E350A	HT	305.520
L75X75X6-E250A	MS	34.384
L90X90X6H-E350A	HT	14.988
Total		7078.422
HT		2899.364
MS		4179.058

APPROVED

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited

Vidhyut Bhawan Patna-800021

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

SK
27-09-19



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Page: 1 of 1

BILL OF MATERIAL

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

Bom No : BOM/LE19D023/PQB9B

Order Ref: REF/LE19D023

Sl.No	Part Code	Raw Material	Length Size (In MM)	Unit Wt (In KG)	Req Qty	Per piece wt	Total Wt	Per Piece Ass.Wt
BOLTS & NUTS OF +9M BODY EXTN. FOR TOWER TYPE - "4DB" (400kV D/C QUAD)								
1	PQB9B1	M16X35MM LONG (IS:12427)		0.119	268	0.119	31.892	
2	PQB9B2	M16X40MM LONG (IS:12427)		0.126	356	0.126	44.856	
3	PQB9B3	M16X45MM LONG (IS:12427)		0.134	264	0.134	35.376	
4	PQB9B4	M16X50MM LONG (IS:12427)		0.142	48	0.142	6.816	
5	PQB9B5	M16X55MM LONG (IS:12427)		0.150	24	0.150	3.600	
6	PQB9B6	M16X65MM LONG (IS:12427)		0.164	252	0.164	41.328	
7	PQB9B7	M16X70MM LONG (IS:12427)		0.173	4	0.173	0.692	
8	PQB9B8	M16x3.5MM SPRING WASHER IS3063		0.009	1216	0.009	10.944	
9	PQB9B9	M16x175LG STEP BOLT (350D) 2N+1SP		0.374	38	0.374	14.212	
Total Weight :							189.716	

Associated Parts

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

Raw Material Involved	Standard Material	Total Weight (In Kg)
BOLTS & NUTS OF +9M BODY EXTN. FOR TOWER TYPE - "4DB" (400kV D/C QUAD)		
M16x175LG STEP BOLT(350D) 2N+1SP		14.212
M16x3.5MM SPRING WASHER IS3063		10.944
M16X35MM LONG (IS:12427)		31.892
M16X40MM LONG (IS:12427)		44.856
M16X45MM LONG (IS:12427)		35.376
M16X50MM LONG (IS:12427)		6.816
M16X55MM LONG (IS:12427)		3.600
M16X65MM LONG (IS:12427)		41.328
M16X70MM LONG (IS:12427)		0.692
Total		189.716

APPROVED

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

Electrical Supervising Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Mishra, Bihar - 800021

27.09.19



LARSEN & TOUBRO LIMITED, CONSTRUCTION.,
979, Mount-Poonamallee Road, Manapakkam,
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Page: 1 of 1

BILL OF MATERIAL

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

Bom No : BOM/LE19D023/PQB9W

Order Ref: REF/LE19D023

Sl.No	Part Code	Raw Material	Length Size (In MM)	Unit Wt (In KG)	Req Qty	Per piece wt	Total Wt	Per Piece Ass.Wt
PACK WASHERS OF +9M BODY EXTN. FOR TOWER TYPE - "4DB" (400kV D/C QUAD)								
1	PQB9W1	M16x4MM ROUND-PACK WASHER IS2016		0.014	4	0.014	0.056	
2	PQB9W2	M16x5MM ROUND PACK WASHER IS2016		0.018	12	0.018	0.216	
3	PQB9W3	M16x6MM ROUND PACK WASHER IS2016		0.021	16	0.021	0.336	
Total Weight :							0.608	

Associated Parts

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

Raw Material Involved	Standard Material	Total Weight (In Kg)
PACK WASHERS OF +9M BODY EXTN. FOR TOWER TYPE - "4DB" (400kV D/C QUAD)		
M16x4MM ROUND PACK WASHER IS2016		0.056
M16x5MM ROUND PACK WASHER IS2016		0.216
M16x6MM ROUND PACK WASHER IS2016		0.336
Total		0.608

APPROVED

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

SK
27.09.19

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