



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-0206

BOM No. : BOM/LE19D023/4DB/007

NO OF SHEETS: 6

BILL OF MATERIAL

+6M BODY EXTN. FOR TOWER TYPE - "4DB"

400kv D/C QUAD ACSR MOOSE (WZ-4)

WEIGHT OF STRUCTURE	
HT MEMBERS: BOM/LE19D023/PQB6E	2100.632
MS MEMBERS INCLUDING PACK WASHERS AND ACCESSORIES ECT. BOM/LE19D023/PQB6E = 3419.714 BOM/LE19D023/PQB6W = 0.268	3419.982
WEIGHT OF BOLTS & NUTS, SPRING WASHERS AND STEP BOLTS BOM/LE19D023/PQB6B	140.612
TOTAL WEIGHT OF STRUCTURE:	5661.226 Kgs

APPROVED

Subject to the condition that you are not to be held responsible for correctness of the materials supplied as per specification

22/10/19

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

(Signature)

0	09.09.19	SUBMISSION FOR APPROVAL AFTER PROTO			PU	BSR	CSR
REV.	DATE	DESCRIPTION			CHKD.	REVED.	APPD.
PREPARED BY		CHECKED BY	REVIEWED BY	APPROVED BY	DATE		
MBR		PU	BSR	CSR	09.09.19		

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: 09-Sep-2019

Page: 1 of 4

BILL OF MATERIAL

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

Bom No : BOM/LE19D023/PQB6E

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 +6M BODY EXTN. FOR TOWER TYPE-"4DB" (400kV D/C QUAD)								
1	77B4DB6000SH	L200X200X15H-E350A	6348.00	45.600	2	289.469	578.938	
2	77B4DB6001H	L200X200X15H-E350A	6348.00	45.600	2	289.469	578.938	
3	77B4DB6002H	L150X150X12H-E350A	606.00	27.300	4	16.544	66.176	
4	77B4DB6003H	12MM PLATE H-E350A	150.00 X 606.00	94.200	8	8.563	68.504	
5	77B4DB6004L	L110X110X7-E250A	6200.00	11.800	4	73.160	292.640	
6	77B4DB6004R	L110X110X7-E250A	6200.00	11.800	4	73.160	292.640	
7	77B4DB6005L	L110X110X7-E250A	5363.00	11.800	4	63.283	253.132	
8	77B4DB6005R	L110X110X7-E250A	5363.00	11.800	4	63.283	253.132	
9	77B4DB6006L	L80X80X6-E250A	346.00	7.300	4	2.526	10.104	
10	77B4DB6006R	L80X80X6-E250A	346.00	7.300	4	2.526	10.104	
11	77B4DB6007	6MM PLATE-E250A	80.00 X 346.00	47.100	16	1.304	20.864	
12	77B4DB6008L	L65X65X4-E250A	2128.00	4.000	4	8.512	34.048	
13	77B4DB6008R	L65X65X4-E250A	2128.00	4.000	4	8.512	34.048	
14	77B4DB6009L	L65X65X4-E250A	2341.00	4.000	4	9.364	37.456	
15	77B4DB6009R	L65X65X4-E250A	2341.00	4.000	4	9.364	37.456	
16	77B4DB6010L	L45X45X4-E250A	2349.00	2.700	3	6.342	19.026	
17	77B4DB6010R	L45X45X4-E250A	2349.00	2.700	3	6.342	19.026	
18	77B4DB6010AL	L45X45X4-E250A	2349.00	2.700	1	6.342	6.342	
19	77B4DB6010AR	L45X45X4-E250A	2349.00	2.700	1	6.342	6.342	
20	77B4DB6011L	50X4 FLAT-E250A	1887.00	1.567	1	2.957	2.957	
21	77B4DB6011R	50X4 FLAT-E250A	1887.00	1.567	1	2.957	2.957	
22	77B4DB6012L	L65X65X5-E250A	2436.00	4.900	3	11.936	35.808	
23	77B4DB6012R	L65X65X5-E250A	2436.00	4.900	3	11.936	35.808	
24	77B4DB6012AL	L65X65X5-E250A	2436.00	4.900	1	11.936	11.936	
25	77B4DB6012AR	L65X65X5-E250A	2436.00	4.900	1	11.936	11.936	
26	77B4DB6013L	L65X65X5-E250A	4135.00	4.900	4	20.262	81.048	
27	77B4DB6013R	L65X65X5-E250A	4135.00	4.900	4	20.262	81.048	
28	77B4DB6014L	L70X70X5-E250A	4822.00	5.300	4	25.557	102.228	
29	77B4DB6014R	L70X70X5-E250A	4822.00	5.300	4	25.557	102.228	
30	77B4DB6015L	L60X60X4-E250A	2081.00	3.700	4	7.700	30.800	
31	77B4DB6015R	L60X60X4-E250A	2081.00	3.700	4	7.700	30.800	
32	77B4DB6016L	L45X30X4-E250A	833.00	2.200	4	1.833	7.332	
33	77B4DB6016R	L45X30X4-E250A	833.00	2.200	4	1.833	7.332	

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 Superintendent Engineer
(Planning and Engineering)
Bihar State Power Transmission Corporation Limited
Vidyt Bhawa

SK

200021



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

Date: 09-Sep-2019

Page: 2 of 4

BILL OF MATERIAL

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

Bom No : BOM/LE19D023/PQB6E

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	77B4DB6017	L45X45X4-E250A	3181.00	2.700	8	8.589	68.712	
35	77B4DB6018LH	L50X50X4H-E350A	2128.00	3.000	4	6.384	25.536	
36	77B4DB6018RH	L50X50X4H-E350A	2128.00	3.000	4	6.384	25.536	
37	77B4DB6019L	L45X45X4-E250A	2289.00	2.700	4	6.180	24.720	
38	77B4DB6019R	L45X45X4-E250A	2289.00	2.700	4	6.180	24.720	
39	77B4DB6020L	L45X30X4-E250A	1567.00	2.200	4	3.447	13.788	
40	77B4DB6020R	L45X30X4-E250A	1567.00	2.200	4	3.447	13.788	
41	77B4DB6021	L100X100X6-E250A	5900.00	9.200	4	54.280	217.120	
42	77B4DB6022	L100X100X6-E250A	4944.00	9.200	4	45.485	181.940	
43	77B4DB6023	L100X100X6-E250A	5900.00	9.200	4	54.280	217.120	
44	77B4DB6024	L75X75X5-E250A	316.00	5.700	8	1.801	14.408	
45	77B4DB6025	5MM PLATE-E250A	70.00 X 316.00	39.250	16	0.868	13.888	
46	77B4DB6026	6MM PLATE-E250A	63.00 X 224.00	47.100	8	0.665	5.320	
47	77B4DB6027H	L60X60X4H-E350A	2903.00	3.700	4	10.741	42.964	
48	77B4DB6028	L60X60X4-E250A	5006.00	3.700	8	18.522	148.176	
49	77B4DB6029	L60X60X4-E250A	3550.00	3.700	8	13.135	105.080	
50	77B4DB6030	L60X60X4-E250A	4358.00	3.700	8	16.125	129.000	
51	77B4DB6031	L45X45X4-E250A	1886.00	2.700	8	5.092	40.736	
52	77B4DB6032L	L60X60X4-E250A	4684.00	3.700	4	17.331	69.324	
53	77B4DB6032R	L60X60X4-E250A	4684.00	3.700	4	17.331	69.324	
54	77B4DB6033L	L45X45X4-E250A	1505.00	2.700	4	4.064	16.256	
55	77B4DB6033R	L45X45X4-E250A	1505.00	2.700	4	4.064	16.256	
56	77B4DB6034L	L50X50X4-E250A	4127.00	3.000	4	12.381	49.524	
57	77B4DB6034R	L50X50X4-E250A	4127.00	3.000	4	12.381	49.524	
58	77B4DB6035H	6MM PLATE H-E350A	110.00 X 160.00	47.100	8	0.829	6.632	
59	77B4DB6036L	6MM PLATE-E250A	145.00 X 222.00	47.100	4	1.516	6.064	
60	77B4DB6036R	6MM PLATE-E250A	145.00 X 222.00	47.100	4	1.516	6.064	
61	77B4DB6037	6MM PLATE-E250A	110.00 X 160.00	47.100	8	0.829	6.632	
62	77B4DB6038	6MM PLATE-E250A	110.00 X 160.00	47.100	8	0.829	6.632	
63	77B4DB6039L	6MM PLATE-E250A	114.00 X 182.00	47.100	4	0.977	3.908	
64	77B4DB6039R	6MM PLATE-E250A	114.00 X 182.00	47.100	4	0.977	3.908	
65	77B4DB6040	6MM PLATE-E250A	147.00 X 161.00	47.100	4	1.115	4.460	
66	77B4DB6041AH	L90X90X6H-E350A	457.00	8.200	4	3.747	14.988	
67	77B4DB6041H	L65X65X4H-E350A	3817.00	4.000	4	15.268	61.072	

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)

Binar State Power Transmission Company Limited



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

Date: 09-Sep-2019

Page: 3 of 4

BILL OF MATERIAL

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

Bom No : BOM/LE19D023/PQB6E

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	77B4DB6042H	L65X65X4H-E350A	2916.00	4.000	4	11.664	46.656	
69	77B4DB6042XH	L65X65X4H-E350A	2916.00	4.000	4	11.664	46.656	
70	77B4DB6043H	L75X75X5H-E350A	6700.00	5.700	4	38.190	152.760	
71	77B4DB6043XH	L75X75X5H-E350A	6700.00	5.700	4	38.190	152.760	
72	77B4DB6044H	L70X70X5H-E350A	460.00	5.300	4	2.438	9.752	
73	77B4DB6045H	6MM PLATE H-E350A	113.00 X 239.00	47.100	4	1.272	5.088	
74	77B4DB6047H	L50X50X4H-E350A	2006.00	3.000	4	6.018	24.072	
75	77B4DB6048H	L50X50X4H-E350A	2006.00	3.000	4	6.018	24.072	
76	77B4DB6049H	L45X45X4H-E350A	1597.00	2.700	4	4.312	17.248	
77	77B4DB6050H	L45X45X4H-E350A	1597.00	2.700	4	4.312	17.248	
78	77B4DB6051	L45X45X4-E250A	1053.00	2.700	4	2.843	11.372	
79	77B4DB6052	L45X45X4-E250A	1053.00	2.700	4	2.843	11.372	
80	77B4DB6053H	L45X45X4H-E350A	1442.00	2.700	4	3.893	15.572	
81	77B4DB6054H	L70X70X5H-E350A	5635.00	5.300	4	29.866	119.464	
Total Weight :							5520.346	

Associated Parts

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

No Association Part

Raw Material Involved	Standard Material	Total Weight (In Kg)
BOM OF +6M BODY EXTN. FOR TOWER TYPE-"4DB" (400kV D/C QUAD)		
12MM PLATE H-E350A	HT	68.504
50X4 FLAT-E250A	MS	5.914
5MM PLATE-E250A	MS	13.888
6MM PLATE H-E350A	HT	11.720
6MM PLATE-E250A	MS	63.852
L100X100X6-E250A	MS	616.180
L110X110X7-E250A	MS	1091.544
L150X150X12H-E350A	HT	66.176
L200X200X15H-E350A	HT	1157.876
L45X30X4-E250A	MS	42.240
L45X45X4-E250A	MS	264.880
L45X45X4H-E350A	HT	50.068

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)
Bihar State Power Transmission Company Limited



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

Date: 09-Sep-2019

Page: 4 of 4

BILL OF MATERIAL

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

Bom No : BOM/LE19D023/PQB6E

Order Ref: REF/LE19D023

L50X50X4-E250A	MS	99.048
L50X50X4H-E350A	HT	99.216
L60X60X4-E250A	MS	582.504
L60X60X4H-E350A	HT	42.964
L65X65X4-E250A	MS	143.008
L65X65X4H-E350A	HT	154.384
L65X65X5-E250A	MS	257.584
L70X70X5-E250A	MS	204.456
L70X70X5H-E350A	HT	129.216
L75X75X5-E250A	MS	14.408
L75X75X5H-E350A	HT	305.520
L80X80X6-E250A	MS	20.208
L90X90X6H-E350A	HT	14.988
Total		5520.346
HT		2100.632
MS		3419.714

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)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800002

8k
22/10/19

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



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

Date: 09-Sep-2019

Page: 1 of 1

BILL OF MATERIAL

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

Bom No : BOM/LE19D023/PQB6B

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 +6M BODY EXTN. FOR TOWER TYPE - "4DB" (400kV D/C QUAD)								
1	PQB6B3	M16X45MM LONG (IS:12427)		0.134	160	0.134	21.440	
2	PQB6B1	M16X35MM LONG (IS:12427)		0.119	320	0.119	38.080	
3	PQB6B7	M16x3.5MM SPRING WASHER IS3063		0.009	940	0.009	8.460	
4	PQB6B2	M16X40MM LONG (IS:12427)		0.126	292	0.126	36.792	
5	PQB6B4	M16X50MM LONG (IS:12427)		0.142	16	0.142	2.272	
6	PQB6B5	M16X55MM LONG (IS:12427)		0.150	24	0.150	3.600	
7	PQB6B6	M16X65MM LONG (IS:12427)		0.164	128	0.164	20.992	
8	PQB6B8	M16x175LG STEP BOLT (350D) 2N+1SP		0.374	24	0.374	8.976	
Total Weight :							140.612	

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 +6M BODY EXTN. FOR TOWER TYPE - "4DB" (400kV D/C QUAD)		
M16x175LG STEP BOLT(350D) 2N+1SP		8.976
M16x3.5MM SPRING WASHER IS3063		8.460
M16X35MM LONG (IS:12427)		38.080
M16X40MM LONG (IS:12427)		36.792
M16X45MM LONG (IS:12427)		21.440
M16X50MM LONG (IS:12427)		2.272
M16X55MM LONG (IS:12427)		3.600
M16X65MM LONG (IS:12427)		20.992
Total		140.612

APPROVED

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

(Signature)

** -- Item Welded with another item

*** -- Item Assembled with another item

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

SK
22.10.19



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

Date: 09-Sep-2019

Page: 1 of 1

BILL OF MATERIAL

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

Bom No : BOM/LE19D023/PQB6W

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 +6M BODY EXTN. FOR TOWER TYPE - "4DB" (400kV D/C QUAD)								
1	PQB6W1	M16x4MM ROUND PACK WASHER IS2016		0.014	8	0.014	0.112	
2	PQB6W2	M16x5MM ROUND PACK WASHER IS2016		0.018	4	0.018	0.072	
3	PQB6W3	M16x6MM ROUND PACK WASHER IS2016		0.021	4	0.021	0.084	
Total Weight :							0.268	

Associated Parts

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

No Association Part

Raw Material Involved	Standard Material	Total Weight (In Kg)
PACK WASHERS OF +6M BODY EXTN. FOR TOWER TYPE - "4DB" (400kV D/C QUAD)		
M16x4MM ROUND PACK WASHER IS2016		0.112
M16x5MM ROUND PACK WASHER IS2016		0.072
M16x6MM ROUND PACK WASHER IS2016		0.084
Total		0.268

APPROVED

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

Electrical Superintendent Engineer
(Planning and Engineering)
Tamil Nadu State Power Transmission Company Limited
/idylut Bhawar. Tamil-500021

SK
22.10.19

** -- Item Welded with another item

*** -- Item Assembled with another item