

संदर्भ/Ref : CC-ENGG-C2021001-1001422-T14221-4522-BM BTB DB

Date : 19/06/2024

From : NITESH KUMAR SINHA
Senior DGM**To :** SKIPPER LTD.
3A loudon Street Kolkata 700017
700017**Cc :** ER**Subject :** Tower Package-TW01 for Indian Portion of New Butwal-Gorakhpur 400kV D/C (Quad) line
LOA Ref : 5002002333/CONSULTANCY GIVEN/DOM/A04-CC CS-5/NOA-I/01,NOA-II/02 Dated 13/06/2023

Please find enclosed following drawings/ documents for necessary action at your end.

Vendor Drg. No. : SL/PGCIL/400KV/BUTW-GRKH/DB/BB
Orgn. Drg. No. : C2021001-1001422-T14221-4522-BM BTB DB
Revision No. : 00
Drg. Title : BILL OF MATERIAL FOR TT DB BTB FOR 400 kV D/C WZ-5 (ACSR MOOSE) TL
App. Category : CAT-I
Release Date : 19/06/2024



Scan to verify

Comments : Generally in order.**अनुमोदित श्रेणी/App. Category:**

- I. फेब्रिकेशन/निर्माण/टाइप टेस्टिंग हेतु जारी।
Approved/released for fabrication/construction.
- II. फेब्रिकेशन/निर्माण/टाइप टेस्टिंग हेतु अनुमोदित/जारी बशर्ते दिए गए टिप्पणियाँ एवं आशोधनों की सम्मिलित किया जाये। कृपया रिवाइज्ड दस्तावेज अनुमोदनार्थ प्रस्तुत करें।
Approved/released for fabrication/ construction subject to incorporation of comments and modification as noted. Revised drawing required for approval.
- III. टिप्पणियाँ सम्मिलित करने के उपरांत दस्तावेज को अनुमोदनार्थ प्रस्तुत करें।
To be resubmitted for approval after incorporating the comments.
- IV. सूचनार्थ एवं रिकार्ड हेतु।
For information and record.
- CATREL/
REL-CON निर्माण हेतु जारी।
Released for construction.

नोट/Note:

1. Approval/Comments conveyed herein neither relieve the contractor of his contractual obligations and his responsibilities, weights, quantities, design details assemble fits, performance particulars and conformity of the supplies with the Indian Statutory Laws as may be applicable, nor does it limits the purchaser's right under the contract.
2. The approval conveyed vide this letter does not cover the approval of make for sub-vendor items.

BOM NO. SI/PGCIL/400KV/BUTW-GRKH/DB/BB

NO. OF SHEET : 20

POWER GRID CORPORATION OF INDIA LTD.

(A Government of India Enterprise)

BILL OF MATERIALSINITIAL / FINAL
(GALVANIZED)

STRUCTURE UNIT : 400KV D/C "DB(0°-2°) MKD"G507 DB"

PART : BASIC BODY

REF.DRG.NO. : C:ENGG:TL:4522-4ACSR-M-P-03 (SHEET 1 TO 7)

NOA No. : 5002002333/CONSULTANCY GIVEN/DOM/ A04-CC CS -5/NOA-I/01 Dated 13.06.2023 (Supply) & 5002002333/CONSULTANCY GIVEN/DOM/A04-CC-CS -5/NOA-II/02 Dated 13.06.2023 (Service)

LINE NAME : Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

NOTE FOR PREFIX

SP4BDB XXX FOR M.S

SP4BDB XXXH FOR H.T

THIS BILL OF MATERIAL IS APPLICABLE FOR MANUFACTURE OF TOWERS
AT FACTORY OF SKIPPER LIMITED, HOWRAH

SUMMARY OF WEIGHTS

SL.NO.	DESCRIPTION	WEIGHT OF BASIC BODY	
1	WT.OF ALL (HT) MEMBERS IN KGS.	17593.68	
2	WT.OF ALL (MS) MEMBERS IN KGS.(INCL. PACK WASHERS)	4163.01	
3	WT.OF BOLT & NUTS IN KGS.	943.52	
	TOTAL WT. OF STRUCTURES IN KGS.	22700.21	
A	PROTO CORRECTED & SUCCESSFULLY TESTED AT M/s SKIPPER LTD. TEST BED DATED 29.05.24		05.06.2024 BKL
0	FIRST ISSUE		18.10.2023 BKL
REV. No.	DESCRIPTION	DATE	INITIAL
PREPARED BY:	CHECKED BY:	VERIFIED BY:	CONTRACTOR
P.KOLE	B.K.LAHA	S.B	SKIPPER LIMITED KOLKATA

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

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
1	SP4BDB	10	L65X65X5		6738	4.98	33.56	1	33.56	
2	SP4BDB	11	L65X65X5		6738	4.98	33.56	1	33.56	
3	SP4BDB	12	L65X65X5		6408	4.98	31.91	1	31.91	
4	SP4BDB	13	L65X65X5		6408	4.98	31.91	1	31.91	
5	SP4BDB	14	L45X30X4		701	2.27	1.59	1	1.59	
6	SP4BDB	15	L45X30X4		701	2.27	1.59	1	1.59	
7	SP4BDB	16H	HL45X45X4		1928	2.75	5.30	2	10.60	
8	SP4BDB	17	L45X30X4		1298	2.27	2.95	1	2.95	
9	SP4BDB	18	L45X30X4		1298	2.27	2.95	1	2.95	
10	SP4BDB	19H	HL45X45X4		2245	2.75	6.17	2	12.34	
11	SP4BDB	20	L45X45X4		1899	2.75	5.22	1	5.22	
12	SP4BDB	21	L45X45X4		1899	2.75	5.22	1	5.22	
13	SP4BDB	22H	HL50X50X4		2520	3.08	7.76	1	7.76	
14	SP4BDB	23H	HL50X50X4		2520	3.08	7.76	1	7.76	
15	SP4BDB	24	L65X65X5		2374	4.98	11.82	1	11.82	
16	SP4BDB	25	L65X65X5		2374	4.98	11.82	1	11.82	
17	SP4BDB	26H	H8 THK.	333	368	62.80	7.70	1	7.70	
18	SP4BDB	27H	H12 THK.	260	340	94.20	8.33	1	8.33	
19	SP4BDB	28	6 THK.	103	110	47.10	0.53	2	1.06	
20	SP4BDB	29	6 THK.	99	160	47.10	0.75	1	0.75	
21	SP4BDB	30	L45X30X4		855	2.27	1.94	1	1.94	
22	SP4BDB	31	L45X30X4		2081	2.27	4.72	1	4.72	
23	SP4BDB	32	L45X30X4		2081	2.27	4.72	1	4.72	
24	SP4BDB	33	L45X45X4		2598	2.75	7.14	1	7.14	
25	SP4BDB	34	L45X45X4		2598	2.75	7.14	1	7.14	
26	SP4BDB	35	L45X45X4		3178	2.75	8.74	1	8.74	
27	SP4BDB	36	L45X45X4		3178	2.75	8.74	1	8.74	
28	SP4BDB	37	L45X30X4		700	2.27	1.59	1	1.59	
29	SP4BDB	38	L45X30X4		1899	2.27	4.31	1	4.31	
30	SP4BDB	39	L45X30X4		1899	2.27	4.31	1	4.31	
31	SP4BDB	40	L45X45X4		2259	2.75	6.21	1	6.21	
32	SP4BDB	41	L45X45X4		2259	2.75	6.21	1	6.21	
33	SP4BDB	42	L45X45X4		2629	2.75	7.23	1	7.23	
34	SP4BDB	43	L45X45X4		2629	2.75	7.23	1	7.23	
35	SP4BDB	44	6 THK.	99	160	47.10	0.75	1	0.75	
36	SP4BDB	45H	H8 THK.	125	334	62.80	2.62	1	2.62	
37	SP4BDB	46H	H8 THK.	125	334	62.80	2.62	1	2.62	
38	SP4BDB	50	L65X65X5		6216	4.98	30.96	1	30.96	
39	SP4BDB	51	L65X65X5		6216	4.98	30.96	1	30.96	
40	SP4BDB	52	L55X55X5		5659	4.19	23.71	1	23.71	
41	SP4BDB	53	L55X55X5		5659	4.19	23.71	1	23.71	
42	SP4BDB	54	L45X30X4		697	2.27	1.58	1	1.58	
43	SP4BDB	55	L45X30X4		697	2.27	1.58	1	1.58	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
44	SP4BDB	56H	HL45X45X4		1690	2.75	4.65	2	9.30	
45	SP4BDB	57	L45X30X4		1297	2.27	2.94	1	2.94	
46	SP4BDB	58	L45X30X4		1297	2.27	2.94	1	2.94	
47	SP4BDB	59H	HL45X45X4		2005	2.75	5.51	2	11.02	
48	SP4BDB	60	L45X45X4		1899	2.75	5.22	1	5.22	
49	SP4BDB	61	L45X45X4		1899	2.75	5.22	1	5.22	
50	SP4BDB	62H	HL50X50X4		2289	3.08	7.05	1	7.05	
51	SP4BDB	63H	HL50X50X4		2289	3.08	7.05	1	7.05	
52	SP4BDB	64	L65X65X5		2374	4.98	11.82	1	11.82	
53	SP4BDB	65	L65X65X5		2374	4.98	11.82	1	11.82	
54	SP4BDB	66H	H8 THK.	304	360	62.80	6.87	1	6.87	
55	SP4BDB	67H	H12 THK.	260	340	94.20	8.33	1	8.33	
56	SP4BDB	68	6 THK.	99	164	47.10	0.76	1	0.76	
57	SP4BDB	69	L45X30X4		855	2.27	1.94	1	1.94	
58	SP4BDB	70	L45X30X4		1973	2.27	4.48	1	4.48	
59	SP4BDB	71	L45X30X4		1973	2.27	4.48	1	4.48	
60	SP4BDB	72	L45X45X4		2513	2.75	6.91	1	6.91	
61	SP4BDB	73	L45X45X4		2513	2.75	6.91	1	6.91	
62	SP4BDB	74	L45X45X4		3111	2.75	8.56	1	8.56	
63	SP4BDB	75	L45X45X4		3111	2.75	8.56	1	8.56	
64	SP4BDB	76	L45X30X4		721	2.27	1.64	1	1.64	
65	SP4BDB	77	L45X30X4		1748	2.27	3.97	1	3.97	
66	SP4BDB	78	L45X30X4		1748	2.27	3.97	1	3.97	
67	SP4BDB	79	L45X45X4		2140	2.75	5.89	1	5.89	
68	SP4BDB	80	L45X45X4		2140	2.75	5.89	1	5.89	
69	SP4BDB	81	L45X45X4		2544	2.75	7.00	1	7.00	
70	SP4BDB	82	L45X45X4		2544	2.75	7.00	1	7.00	
71	SP4BDB	83	6 THK.	99	187	47.10	0.87	1	0.87	
72	SP4BDB	84H	HL75X75X5		437	5.77	2.52	2	5.04	
73	SP4BDB	85H	H8 THK.	235	437	62.80	6.45	2	12.90	
74	SP4BDB	86H	HL65X65X5		3599	4.98	17.92	2	35.84	
75	SP4BDB	87H	HL65X65X5		3599	4.98	17.92	2	35.84	
76	SP4BDB	88H	HL45X30X4		1427	2.27	3.24	2	6.48	
77	SP4BDB	89H	HL45X30X4		1427	2.27	3.24	2	6.48	
78	SP4BDB	90	6 THK.	100	109	47.10	0.51	4	2.04	
79	SP4BDB	91	6 THK.	100	146	47.10	0.69	4	2.76	
80	SP4BDB	92H	HL80X80X5		2471	6.17	15.25	1	15.25	
81	SP4BDB	93H	H8 THK.	125	333	62.80	2.61	1	2.61	
82	SP4BDB	94H	H8 THK.	125	333	62.80	2.61	1	2.61	
83	SP4BDB	100H	HL90X90X7		1700	9.61	16.34	2	32.68	
84	SP4BDB	101H	HL90X90X7		1700	9.61	16.34	2	32.68	
85	SP4BDB	102H	HL80X80X6		3126	7.36	23.01	2	46.02	
86	SP4BDB	103H	HL65X65X5		3778	4.98	18.81	2	37.62	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
87	SP4BDB	104H	HL65X65X5		3778	4.98	18.81	2	37.62	
88	SP4BDB	105	L45X30X4		946	2.27	2.15	2	4.30	
89	SP4BDB	106	L45X30X4		946	2.27	2.15	2	4.30	
90	SP4BDB	107	L45X30X4		999	2.27	2.27	2	4.54	
91	SP4BDB	108	L45X30X4		999	2.27	2.27	2	4.54	
92	SP4BDB	109	L45X30X4		973	2.27	2.21	4	8.84	
93	SP4BDB	110	L45X30X4		937	2.27	2.13	2	4.26	
94	SP4BDB	111	L45X30X4		1066	2.27	2.42	2	4.84	
95	SP4BDB	112H	HL110X110X8		3419	13.40	45.81	2	91.62	
96	SP4BDB	113	6 THK.	50	150	47.10	0.35	4	1.40	
97	SP4BDB	114H	H8 THK.	397	485	62.80	12.09	1	12.09	
98	SP4BDB	115H	H8 THK.	397	485	62.80	12.09	1	12.09	
99	SP4BDB	116H	H8 THK.	397	465	62.80	11.59	1	11.59	
100	SP4BDB	117H	H8 THK.	397	465	62.80	11.59	1	11.59	
101	SP4BDB	118	6 THK.	170	215	47.10	1.72	2	3.44	
102	SP4BDB	119H	H12 THK.	346	583	94.20	19.00	2	38.00	
103	SP4BDB	120H	H12 THK.	346	583	94.20	19.00	2	38.00	
104	SP4BDB	121	6 THK.	90	275	47.10	1.17	4	4.68	
105	SP4BDB	122	12 THK.	80	130	94.20	0.98	4	3.92	
106	SP4BDB	123	L65X65X5		3126	4.98	15.57	2	31.14	
107	SP4BDB	124H	HL60X60X5		3851	4.58	17.64	2	35.28	
108	SP4BDB	125H	HL60X60X5		3851	4.58	17.64	2	35.28	
109	SP4BDB	126	L45X30X4		959	2.27	2.18	2	4.36	
110	SP4BDB	127	L45X30X4		959	2.27	2.18	2	4.36	
111	SP4BDB	128	L45X30X4		1025	2.27	2.33	2	4.66	
112	SP4BDB	129	L45X30X4		1025	2.27	2.33	2	4.66	
113	SP4BDB	130	L45X30X4		1037	2.27	2.35	4	9.40	
114	SP4BDB	131H	HL50X50X4		3696	3.08	11.38	1	11.38	
115	SP4BDB	131A	L50X50X4		250	3.08	0.77	1	0.77	
116	SP4BDB	132H	HL50X50X4		3711	3.08	11.43	1	11.43	
117	SP4BDB	132A	L50X50X4		250	3.08	0.77	1	0.77	
118	SP4BDB	133H	H12 THK.	168	393	94.20	6.22	4	24.88	
119	SP4BDB	134H	HL90X90X7		4090	9.61	39.30	2	78.60	
120	SP4BDB	135H	HL90X90X7		4090	9.61	39.30	2	78.60	
121	SP4BDB	136H	HL90X90X6		5503	8.32	45.78	2	91.56	
122	SP4BDB	137H	HL90X90X6		5503	8.32	45.78	2	91.56	
123	SP4BDB	138H	HL90X90X6		2894	8.32	24.08	2	48.16	
124	SP4BDB	139H	HL90X90X6		2894	8.32	24.08	2	48.16	
125	SP4BDB	140H	HL90X90X6		2490	8.32	20.72	2	41.44	
126	SP4BDB	141H	HL90X90X6		2490	8.32	20.72	2	41.44	
127	SP4BDB	142	L45X30X4		902	2.27	2.05	2	4.10	
128	SP4BDB	143	L45X30X4		902	2.27	2.05	2	4.10	
129	SP4BDB	144	L45X45X4		1810	2.75	4.98	2	9.96	

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BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
130	SP4BDB	145	L45X45X4		1810	2.75	4.98	2	9.96	
131	SP4BDB	146	L45X30X4		1054	2.27	2.39	2	4.78	
132	SP4BDB	147	L45X30X4		1054	2.27	2.39	2	4.78	
133	SP4BDB	148	L45X45X4		1958	2.75	5.38	4	21.52	
134	SP4BDB	149H	H12 THK.	329	353	94.20	10.94	2	21.88	
135	SP4BDB	150	12 THK.	121	182	94.20	2.07	4	8.28	
136	SP4BDB	151H	HL75X75X6		5482	6.86	37.61	2	75.22	
137	SP4BDB	152H	HL75X75X6		5482	6.86	37.61	2	75.22	
138	SP4BDB	153H	HL75X75X6		2893	6.86	19.85	2	39.70	
139	SP4BDB	154H	HL75X75X6		2893	6.86	19.85	2	39.70	
140	SP4BDB	155H	HL75X75X6		2487	6.86	17.06	2	34.12	
141	SP4BDB	156H	HL75X75X6		2487	6.86	17.06	2	34.12	
142	SP4BDB	157	L45X30X4		943	2.27	2.14	2	4.28	
143	SP4BDB	158	L45X30X4		943	2.27	2.14	2	4.28	
144	SP4BDB	159	L45X45X4		1825	2.75	5.02	2	10.04	
145	SP4BDB	160	L45X45X4		1825	2.75	5.02	2	10.04	
146	SP4BDB	161	L45X30X4		1037	2.27	2.35	2	4.70	
147	SP4BDB	162	L45X30X4		1037	2.27	2.35	2	4.70	
148	SP4BDB	163	L45X45X4		1943	2.75	5.34	4	21.36	
149	SP4BDB	164H	H12 THK.	324	329	94.20	10.04	2	20.08	
150	SP4BDB	165	12 THK.	121	182	94.20	2.07	4	8.28	
151	SP4BDB	166H	HL120X120X10		2500	18.15	45.38	2	90.76	
152	SP4BDB	167H	HL120X120X10		2500	18.15	45.38	2	90.76	
153	SP4BDB	168H	HL120X120X12		2250	21.57	48.53	2	97.06	
154	SP4BDB	169H	HL120X120X12		2250	21.57	48.53	2	97.06	
155	SP4BDB	170H	HL80X80X5		2578	6.17	15.91	2	31.82	
156	SP4BDB	171H	HL80X80X5		2578	6.17	15.91	2	31.82	
157	SP4BDB	172H	HL80X80X5		2578	6.17	15.91	2	31.82	
158	SP4BDB	173H	HL80X80X5		2578	6.17	15.91	2	31.82	
159	SP4BDB	174	L45X30X4		1040	2.27	2.36	2	4.72	
160	SP4BDB	175	L45X30X4		1040	2.27	2.36	2	4.72	
161	SP4BDB	176	L45X30X4		1393	2.27	3.16	2	6.32	
162	SP4BDB	177	L45X30X4		1393	2.27	3.16	2	6.32	
163	SP4BDB	178H	H8 THK.	186	445	62.80	5.20	4	20.80	
164	SP4BDB	179H	HL90X90X6		2141	8.32	17.81	2	35.62	
165	SP4BDB	179XH	HL90X90X6		2141	8.32	17.81	2	35.62	
166	SP4BDB	179CH	HL90X90X6		526	8.32	4.38	2	8.76	
167	SP4BDB	180H	H10 THK.	393	526	78.50	16.23	2	32.46	
168	SP4BDB	181H	HL75X75X5		2943	5.77	16.98	2	33.96	
169	SP4BDB	182H	HL75X75X5		2943	5.77	16.98	2	33.96	
170	SP4BDB	183H	HL75X75X5		2943	5.77	16.98	2	33.96	
171	SP4BDB	184H	HL75X75X5		2943	5.77	16.98	2	33.96	
172	SP4BDB	185	L45X30X4		1311	2.27	2.98	2	5.96	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
173	SP4BDB	186	L45X30X4		1311	2.27	2.98	2	5.96	
174	SP4BDB	187	L45X30X4		960	2.27	2.18	2	4.36	
175	SP4BDB	188	L45X30X4		960	2.27	2.18	2	4.36	
176	SP4BDB	189	L45X45X4		2039	2.75	5.61	2	11.22	
177	SP4BDB	189A	L45X45X4		2092	2.75	5.75	2	11.50	
178	SP4BDB	190	10 THK.	135	198	78.50	2.10	4	8.40	
179	SP4BDB	191H	HL110X110X8		4599	13.40	61.63	2	123.26	
180	SP4BDB	192H	H8 THK.	368	494	62.80	11.42	1	11.42	
181	SP4BDB	193H	H8 THK.	368	494	62.80	11.42	1	11.42	
182	SP4BDB	194H	H8 THK.	368	507	62.80	11.72	1	11.72	
183	SP4BDB	195H	H8 THK.	368	507	62.80	11.72	1	11.72	
184	SP4BDB	196H	H10 THK.	328	555	78.50	14.29	2	28.58	
185	SP4BDB	197H	H10 THK.	328	555	78.50	14.29	2	28.58	
186	SP4BDB	198	12 THK.	90	200	94.20	1.70	4	6.80	
187	SP4BDB	199	16 THK.	100	154	125.60	1.93	4	7.72	
188	SP4BDB	200H	HL70X70X5		2558	5.38	13.76	2	27.52	
189	SP4BDB	201H	HL70X70X5		2558	5.38	13.76	2	27.52	
190	SP4BDB	202H	HL70X70X5		2558	5.38	13.76	2	27.52	
191	SP4BDB	203H	HL70X70X5		2558	5.38	13.76	2	27.52	
192	SP4BDB	204	L45X30X4		1079	2.27	2.45	2	4.90	
193	SP4BDB	205	L45X30X4		1079	2.27	2.45	2	4.90	
194	SP4BDB	206	L45X30X4		1418	2.27	3.22	2	6.44	
195	SP4BDB	207	L45X30X4		1418	2.27	3.22	2	6.44	
196	SP4BDB	208	L90X90X6		2144	8.32	17.84	2	35.68	
197	SP4BDB	208X	L90X90X6		2144	8.32	17.84	2	35.68	
198	SP4BDB	208C	L90X90X5		432	6.97	3.01	2	6.02	
199	SP4BDB	209H	H12 THK.	166	349	94.20	5.46	4	21.84	
200	SP4BDB	210H	H8 THK.	140	335	62.80	2.95	4	11.80	
201	SP4BDB	211H	H10 THK.	375	432	78.50	12.72	2	25.44	
202	SP4BDB	212H	HL80X80X5		3035	6.17	18.73	2	37.46	
203	SP4BDB	213H	HL80X80X5		3035	6.17	18.73	2	37.46	
204	SP4BDB	214H	HL80X80X5		3035	6.17	18.73	2	37.46	
205	SP4BDB	215H	HL80X80X5		3035	6.17	18.73	2	37.46	
206	SP4BDB	216	L45X30X4		1367	2.27	3.10	2	6.20	
207	SP4BDB	217	L45X30X4		1367	2.27	3.10	2	6.20	
208	SP4BDB	218	L45X30X4		1002	2.27	2.27	2	4.54	
209	SP4BDB	219	L45X30X4		1002	2.27	2.27	2	4.54	
210	SP4BDB	220	10 THK.	125	200	78.50	1.96	4	7.84	
211	SP4BDB	221H	HL60X60X5		4879	4.58	22.35	1	22.35	
212	SP4BDB	221A	L60X60X5		200	4.58	0.92	1	0.92	
213	SP4BDB	222H	HL60X60X5		4897	4.58	22.43	1	22.43	
214	SP4BDB	222A	L60X60X5		200	4.58	0.92	1	0.92	
215	SP4BDB	223H	H10 THK.	170	489	78.50	6.53	4	26.12	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
216	SP4BDB	224H	HL130X130X12		468	23.45	10.97	4	43.88	
217	SP4BDB	224P	6 THK.	95	177	47.10	0.79	2	1.58	
218	SP4BDB	225H	H12 THK.	90	468	94.20	3.97	8	31.76	
219	SP4BDB	226H	HL150X150X13		4000	29.50	118.00	2	236.00	
220	SP4BDB	227H	HL150X150X13		4000	29.50	118.00	2	236.00	
221	SP4BDB	228H	HL150X150X13		528	29.50	15.58	4	62.32	
222	SP4BDB	229H	H12 THK.	98	528	94.20	4.87	8	38.96	
223	SP4BDB	230	5 THK.	98	260	39.25	1.00	8	8.00	
224	SP4BDB	231H	HL90X90X7		6342	9.61	60.95	2	121.90	
225	SP4BDB	232H	HL90X90X7		6342	9.61	60.95	2	121.90	
226	SP4BDB	233H	HL90X90X7		3278	9.61	31.50	2	63.00	
227	SP4BDB	234H	HL90X90X7		3278	9.61	31.50	2	63.00	
228	SP4BDB	235H	HL90X90X7		2936	9.61	28.21	2	56.42	
229	SP4BDB	236H	HL90X90X7		2936	9.61	28.21	2	56.42	
230	SP4BDB	237	L45X30X4		1189	2.27	2.70	2	5.40	
231	SP4BDB	238	L45X30X4		1189	2.27	2.70	2	5.40	
232	SP4BDB	239	L45X45X4		1974	2.75	5.43	2	10.86	
233	SP4BDB	240	L45X45X4		1974	2.75	5.43	2	10.86	
234	SP4BDB	241	L45X45X4		1318	2.75	3.62	2	7.24	
235	SP4BDB	242	L45X45X4		1318	2.75	3.62	2	7.24	
236	SP4BDB	243	L45X45X4		1961	2.75	5.39	4	21.56	
237	SP4BDB	244H	H12 THK.	272	332	94.20	8.51	2	17.02	
238	SP4BDB	245	12 THK.	117	214	94.20	2.36	4	9.44	
239	SP4BDB	246H	H12 THK.	195	400	94.20	7.35	4	29.40	
240	SP4BDB	247H	HL90X90X7		6316	9.61	60.70	2	121.40	
241	SP4BDB	248H	HL90X90X7		6316	9.61	60.70	2	121.40	
242	SP4BDB	249H	HL90X90X7		3261	9.61	31.34	2	62.68	
243	SP4BDB	250H	HL90X90X7		3261	9.61	31.34	2	62.68	
244	SP4BDB	251H	HL90X90X7		2926	9.61	28.12	2	56.24	
245	SP4BDB	252H	HL90X90X7		2926	9.61	28.12	2	56.24	
246	SP4BDB	253	L45X30X4		1193	2.27	2.71	2	5.42	
247	SP4BDB	254	L45X30X4		1193	2.27	2.71	2	5.42	
248	SP4BDB	255	L45X45X4		1987	2.75	5.46	2	10.92	
249	SP4BDB	256	L45X45X4		1987	2.75	5.46	2	10.92	
250	SP4BDB	257	L45X45X4		1318	2.75	3.62	2	7.24	
251	SP4BDB	258	L45X45X4		1318	2.75	3.62	2	7.24	
252	SP4BDB	259	L45X45X4		1949	2.75	5.36	4	21.44	
253	SP4BDB	260H	H12 THK.	271	334	94.20	8.53	2	17.06	
254	SP4BDB	261	12 THK.	117	200	94.20	2.20	4	8.80	
255	SP4BDB	262H	H8 THK.	180	403	62.80	4.56	4	18.24	
256	SP4BDB	263H	HL150X150X18		4070	40.01	162.84	2	325.68	
257	SP4BDB	264H	HL150X150X18		4070	40.01	162.84	2	325.68	
258	SP4BDB	265H	HL150X150X18		528	40.01	21.13	4	84.52	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
259	SP4BDB	266H	H18 THK.	98	528	141.30	7.31	8	58.48	
260	SP4BDB	266P	6 THK.	120	177	47.10	1.00	4	4.00	
261	SP4BDB	267H	HL90X90X6		3095	8.32	25.75	2	51.50	
262	SP4BDB	268H	HL90X90X6		3095	8.32	25.75	2	51.50	
263	SP4BDB	269H	HL90X90X6		3095	8.32	25.75	2	51.50	
264	SP4BDB	270H	HL90X90X6		3095	8.32	25.75	2	51.50	
265	SP4BDB	271H	HL50X50X4		1370	3.08	4.22	2	8.44	
266	SP4BDB	272H	HL50X50X4		1370	3.08	4.22	2	8.44	
267	SP4BDB	273	L50X50X4		1684	3.08	5.19	2	10.38	
268	SP4BDB	274	L50X50X4		1684	3.08	5.19	2	10.38	
269	SP4BDB	275H	HL90X90X6		2716	8.32	22.60	2	45.20	
270	SP4BDB	275XH	HL90X90X6		2716	8.32	22.60	2	45.20	
271	SP4BDB	275CH	HL90X90X6		555	8.32	4.62	2	9.24	
272	SP4BDB	276	L50X50X4		1543	3.08	4.75	2	9.50	
273	SP4BDB	277	L50X50X4		1543	3.08	4.75	2	9.50	
274	SP4BDB	278H	HL50X50X4		1289	3.08	3.97	2	7.94	
275	SP4BDB	279H	HL50X50X4		1289	3.08	3.97	2	7.94	
276	SP4BDB	280	L45X45X4		1939	2.75	5.33	2	10.66	
277	SP4BDB	280A	L45X45X4		1990	2.75	5.47	2	10.94	
278	SP4BDB	281H	HL130X130X11		5725	21.70	124.23	2	248.46	
279	SP4BDB	282H	H12 THK.	378	555	94.20	19.76	2	39.52	
280	SP4BDB	283	12 THK.	115	193	94.20	2.09	4	8.36	
281	SP4BDB	284H	H8 THK.	362	491	62.80	11.16	1	11.16	
282	SP4BDB	285H	H8 THK.	362	491	62.80	11.16	1	11.16	
283	SP4BDB	286H	H8 THK.	362	487	62.80	11.07	1	11.07	
284	SP4BDB	287H	H8 THK.	362	487	62.80	11.07	1	11.07	
285	SP4BDB	288H	HL80X80X6		3090	7.36	22.74	2	45.48	
286	SP4BDB	289H	HL80X80X6		3090	7.36	22.74	2	45.48	
287	SP4BDB	290H	HL80X80X6		3090	7.36	22.74	2	45.48	
288	SP4BDB	291H	HL80X80X6		3090	7.36	22.74	2	45.48	
289	SP4BDB	292H	HL50X50X4		1399	3.08	4.31	2	8.62	
290	SP4BDB	293H	HL50X50X4		1399	3.08	4.31	2	8.62	
291	SP4BDB	294	L50X50X4		1701	3.08	5.24	2	10.48	
292	SP4BDB	295	L50X50X4		1701	3.08	5.24	2	10.48	
293	SP4BDB	296H	HL100X100X8		2713	12.18	33.04	2	66.08	
294	SP4BDB	296XH	HL100X100X8		2713	12.18	33.04	2	66.08	
295	SP4BDB	296CH	HL100X100X6		611	9.26	5.66	2	11.32	
296	SP4BDB	297H	H12 THK.	384	611	94.20	22.10	2	44.20	
297	SP4BDB	298H	HL80X80X6		3389	7.36	24.94	2	49.88	
298	SP4BDB	299H	HL80X80X6		3389	7.36	24.94	2	49.88	
299	SP4BDB	300H	HL80X80X6		3389	7.36	24.94	2	49.88	
300	SP4BDB	301H	HL80X80X6		3389	7.36	24.94	2	49.88	
301	SP4BDB	302	L45X45X4		1570	2.75	4.32	2	8.64	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
302	SP4BDB	303	L45X45X4		1570	2.75	4.32	2	8.64	
303	SP4BDB	304H	HL50X50X4		1290	3.08	3.97	2	7.94	
304	SP4BDB	305H	HL50X50X4		1290	3.08	3.97	2	7.94	
305	SP4BDB	306	12 THK.	115	200	94.20	2.17	4	8.68	
306	SP4BDB	307H	HL130X130X8		6053	15.92	96.36	1	96.36	
307	SP4BDB	307A	L130X130X8		220	15.92	3.50	1	3.50	
308	SP4BDB	308H	HL130X130X8		6054	15.92	96.38	1	96.38	
309	SP4BDB	308A	L130X130X8		220	15.92	3.50	1	3.50	
310	SP4BDB	309	L45X30X4		1207	2.27	2.74	4	10.96	
311	SP4BDB	310	5 THK.	120	252	39.25	1.19	4	4.76	
312	SP4BDB	311	5 THK.	120	232	39.25	1.09	4	4.36	
313	SP4BDB	312	6 THK.	120	152	47.10	0.86	8	6.88	
314	SP4BDB	313	6 THK.	120	142	47.10	0.80	8	6.40	
315	SP4BDB	314	L45X30X4		997	2.27	2.26	4	9.04	
316	SP4BDB	315	L45X45X4		1953	2.75	5.37	4	21.48	
317	SP4BDB	316	L45X45X4		1949	2.75	5.36	4	21.44	
318	SP4BDB	317	5 THK.	120	252	39.25	1.19	8	9.52	
319	SP4BDB	318	5 THK.	120	232	39.25	1.09	8	8.72	
320	SP4BDB	319	6 THK.	120	152	47.10	0.86	4	3.44	
321	SP4BDB	320	6 THK.	120	142	47.10	0.80	4	3.20	
322	SP4BDB	321	L45X30X4		1397	2.27	3.17	4	12.68	
323	SP4BDB	322	5 THK.	120	235	39.25	1.11	4	4.44	
324	SP4BDB	323	5 THK.	120	220	39.25	1.04	4	4.16	
325	SP4BDB	324	6 THK.	120	140	47.10	0.79	8	6.32	
326	SP4BDB	325	6 THK.	120	130	47.10	0.73	8	5.84	
327	SP4BDB	326	L45X30X4		1132	2.27	2.57	4	10.28	
328	SP4BDB	327	L45X45X4		2234	2.75	6.14	4	24.56	
329	SP4BDB	328	L45X45X4		2210	2.75	6.08	4	24.32	
330	SP4BDB	329	5 THK.	120	230	39.25	1.08	8	8.64	
331	SP4BDB	330	5 THK.	120	235	39.25	1.11	8	8.88	
332	SP4BDB	331	6 THK.	120	140	47.10	0.79	8	6.32	
333	SP4BDB	332	L45X45X4		1618	2.75	4.45	4	17.80	
334	SP4BDB	333	5 THK.	120	252	39.25	1.19	4	4.76	
335	SP4BDB	334	5 THK.	120	252	39.25	1.19	4	4.76	
336	SP4BDB	335	6 THK.	120	152	47.10	0.86	16	13.76	
337	SP4BDB	336	L45X45X4		1382	2.75	3.80	4	15.20	
338	SP4BDB	337	L45X45X4		2527	2.75	6.95	4	27.80	
339	SP4BDB	338	L45X45X4		2510	2.75	6.90	4	27.60	
340	SP4BDB	339	5 THK.	120	252	39.25	1.19	8	9.52	
341	SP4BDB	340	5 THK.	120	252	39.25	1.19	8	9.52	
342	SP4BDB	341	6 THK.	120	152	47.10	0.86	8	6.88	
343	SP4BDB	342	L45X45X4		1813	2.75	4.99	4	19.96	
344	SP4BDB	343	5 THK.	120	252	39.25	1.19	4	4.76	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
345	SP4BDB	344	5 THK.	120	237	39.25	1.12	4	4.48	
346	SP4BDB	345	6 THK.	120	152	47.10	0.86	8	6.88	
347	SP4BDB	346	6 THK.	120	142	47.10	0.80	8	6.40	
348	SP4BDB	347	L45X45X4		1556	2.75	4.28	4	17.12	
349	SP4BDB	348	L45X45X4		2739	2.75	7.53	4	30.12	
350	SP4BDB	349	L45X45X4		2732	2.75	7.51	4	30.04	
351	SP4BDB	350	5 THK.	120	237	39.25	1.12	8	8.96	
352	SP4BDB	351	5 THK.	120	237	39.25	1.12	8	8.96	
353	SP4BDB	352	6 THK.	120	142	47.10	0.80	8	6.40	
354	SP4BDB	353H	HL80X80X6		3325	7.36	24.47	2	48.94	
355	SP4BDB	353A	L45X30X4		988	2.27	2.24	2	4.48	
356	SP4BDB	354H	HL80X80X6		3325	7.36	24.47	2	48.94	
357	SP4BDB	354A	L45X30X4		1046	2.27	2.37	2	4.74	
358	SP4BDB	355P	6 THK.	169	203	47.10	1.62	2	3.24	
359	SP4BDB	355H	HL80X80X6		3325	7.36	24.47	2	48.94	
360	SP4BDB	356H	HL80X80X6		3325	7.36	24.47	2	48.94	
361	SP4BDB	360H	HL130X130X12		6965	23.45	163.33	1	163.33	
362	SP4BDB	361H	HL130X130X12		6965	23.45	163.33	1	163.33	
363	SP4BDB	362H	HL100X100X6		6857	9.26	63.50	1	63.50	
364	SP4BDB	363H	HL100X100X6		6857	9.26	63.50	1	63.50	
365	SP4BDB	364	L45X45X4		2199	2.75	6.05	1	6.05	
366	SP4BDB	365	L45X45X4		2199	2.75	6.05	1	6.05	
367	SP4BDB	366	L45X45X4		1561	2.75	4.29	1	4.29	
368	SP4BDB	367	L45X45X4		1561	2.75	4.29	1	4.29	
369	SP4BDB	368	L45X45X4		1927	2.75	5.30	1	5.30	
370	SP4BDB	369	L45X45X4		1927	2.75	5.30	1	5.30	
371	SP4BDB	370	L45X30X4		1050	2.27	2.38	1	2.38	
372	SP4BDB	371	L45X30X4		1050	2.27	2.38	1	2.38	
373	SP4BDB	372	L45X45X4		1721	2.75	4.73	1	4.73	
374	SP4BDB	373	L45X45X4		1721	2.75	4.73	1	4.73	
375	SP4BDB	374	L45X30X4		539	2.27	1.22	1	1.22	
376	SP4BDB	375	L45X30X4		539	2.27	1.22	1	1.22	
377	SP4BDB	376H	HL45X45X4		2050	2.75	5.64	1	5.64	
378	SP4BDB	377H	HL45X45X4		2050	2.75	5.64	1	5.64	
379	SP4BDB	378H	HL45X45X4		2758	2.75	7.58	1	7.58	
380	SP4BDB	379H	HL45X45X4		2758	2.75	7.58	1	7.58	
381	SP4BDB	380H	HL45X45X4		2074	2.75	5.70	1	5.70	
382	SP4BDB	381H	HL45X45X4		2074	2.75	5.70	1	5.70	
383	SP4BDB	382H	HL45X30X4		888	2.27	2.02	1	2.02	
384	SP4BDB	383H	HL130X130X12		655	23.45	15.36	1	15.36	
385	SP4BDB	384H	HL130X130X12		572	23.45	13.41	1	13.41	
386	SP4BDB	385H	HL130X130X12		262	23.45	6.14	2	12.28	
387	SP4BDB	386	32 THK.	400	512	251.20	51.45	1	51.45	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
388	SP4BDB	387H	H6 THK.	97	215	47.10	0.98	2	1.96	
389	SP4BDB	392	L45X45X4		2015	2.75	5.54	1	5.54	
390	SP4BDB	393	L45X45X4		2015	2.75	5.54	1	5.54	
391	SP4BDB	394	L45X45X4		2694	2.75	7.41	1	7.41	
392	SP4BDB	395	L45X45X4		2694	2.75	7.41	1	7.41	
393	SP4BDB	396	L45X30X4		2122	2.27	4.82	1	4.82	
394	SP4BDB	397	L45X30X4		2122	2.27	4.82	1	4.82	
395	SP4BDB	398	L45X30X4		970	2.27	2.20	1	2.20	
396	SP4BDB	399	L45X45X4		231	2.75	0.64	1	0.64	
397	SP4BDB	400	6 THK.	120	135	47.10	0.76	1	0.76	
398	SP4BDB	410H	HL120X120X12		6106	21.57	131.71	1	131.71	
399	SP4BDB	411H	HL120X120X12		6106	21.57	131.71	1	131.71	
400	SP4BDB	412H	HL100X100X6		6030	9.26	55.84	1	55.84	
401	SP4BDB	413H	HL100X100X6		6030	9.26	55.84	1	55.84	
402	SP4BDB	414	L50X50X4		2285	3.08	7.04	1	7.04	
403	SP4BDB	415	L50X50X4		2285	3.08	7.04	1	7.04	
404	SP4BDB	416	L45X30X4		1386	2.27	3.15	1	3.15	
405	SP4BDB	417	L45X30X4		1386	2.27	3.15	1	3.15	
406	SP4BDB	418	L45X45X4		2015	2.75	5.54	1	5.54	
407	SP4BDB	419	L45X45X4		2015	2.75	5.54	1	5.54	
408	SP4BDB	420	L45X30X4		707	2.27	1.60	1	1.60	
409	SP4BDB	421	L45X30X4		707	2.27	1.60	1	1.60	
410	SP4BDB	422H	HL45X45X4		2131	2.75	5.86	1	5.86	
411	SP4BDB	423H	HL45X45X4		2131	2.75	5.86	1	5.86	
412	SP4BDB	424H	HL45X45X4		2543	2.75	6.99	1	6.99	
413	SP4BDB	425H	HL45X45X4		2543	2.75	6.99	1	6.99	
414	SP4BDB	426H	HL45X30X4		1190	2.27	2.70	1	2.70	
415	SP4BDB	427H	HL130X130X12		242	23.45	5.67	2	11.34	
416	SP4BDB	428	32 THK.	370	492	251.20	45.73	1	45.73	
417	SP4BDB	429H	H6 THK.	97	207	47.10	0.95	2	1.90	
418	SP4BDB	432	L45X45X4		2153	2.75	5.92	1	5.92	
419	SP4BDB	433	L45X45X4		2153	2.75	5.92	1	5.92	
420	SP4BDB	434	L50X50X4		2286	3.08	7.04	1	7.04	
421	SP4BDB	435	L45X30X4		1232	2.27	2.80	1	2.80	
422	SP4BDB	436	L45X45X4		235	2.75	0.65	1	0.65	
423	SP4BDB	437	6 THK.	120	135	47.10	0.76	1	0.76	
424	SP4BDB	440H	HL70X70X5		4783	5.38	25.73	1	25.73	
425	SP4BDB	441H	HL70X70X5		4783	5.38	25.73	1	25.73	
426	SP4BDB	442H	HL55X55X4		2449	3.40	8.33	2	16.66	
427	SP4BDB	443H	HL55X55X4		2449	3.40	8.33	2	16.66	
428	SP4BDB	444	L45X30X4		931	2.27	2.11	2	4.22	
429	SP4BDB	445	L45X30X4		931	2.27	2.11	2	4.22	
430	SP4BDB	446	L45X30X4		829	2.27	1.88	2	3.76	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
431	SP4BDB	447	L45X30X4		829	2.27	1.88	2	3.76	
432	SP4BDB	448	6 THK.	140	142	47.10	0.94	4	3.76	
433	SP4BDB	449	6 THK.	204	250	47.10	2.40	1	2.40	
434	SP4BDB	450	6 THK.	204	250	47.10	2.40	1	2.40	
435	SP4BDB	460H	HL130X130X10		7103	19.72	140.07	1	140.07	
436	SP4BDB	461H	HL130X130X10		7103	19.72	140.07	1	140.07	
437	SP4BDB	462H	HL100X100X6		6992	9.26	64.75	1	64.75	
438	SP4BDB	463H	HL100X100X6		6992	9.26	64.75	1	64.75	
439	SP4BDB	464	L50X50X4		2258	3.08	6.95	1	6.95	
440	SP4BDB	465	L50X50X4		2258	3.08	6.95	1	6.95	
441	SP4BDB	466	L45X45X4		1588	2.75	4.37	1	4.37	
442	SP4BDB	467	L45X45X4		1588	2.75	4.37	1	4.37	
443	SP4BDB	468	L45X45X4		1980	2.75	5.45	1	5.45	
444	SP4BDB	469	L45X45X4		1980	2.75	5.45	1	5.45	
445	SP4BDB	470	L45X30X4		1068	2.27	2.42	1	2.42	
446	SP4BDB	471	L45X30X4		1068	2.27	2.42	1	2.42	
447	SP4BDB	472	L45X45X4		1766	2.75	4.86	1	4.86	
448	SP4BDB	473	L45X45X4		1766	2.75	4.86	1	4.86	
449	SP4BDB	474	L45X30X4		548	2.27	1.24	1	1.24	
450	SP4BDB	475	L45X30X4		548	2.27	1.24	1	1.24	
451	SP4BDB	476H	HL45X45X4		2376	2.75	6.53	1	6.53	
452	SP4BDB	477H	HL45X45X4		2376	2.75	6.53	1	6.53	
453	SP4BDB	478H	HL45X45X4		3375	2.75	9.28	1	9.28	
454	SP4BDB	479H	HL45X45X4		3375	2.75	9.28	1	9.28	
455	SP4BDB	480H	HL45X45X4		2355	2.75	6.48	1	6.48	
456	SP4BDB	481H	HL45X45X4		2355	2.75	6.48	1	6.48	
457	SP4BDB	482H	HL45X30X4		1147	2.27	2.60	1	2.60	
458	SP4BDB	483H	HL130X130X12		808	23.45	18.95	1	18.95	
459	SP4BDB	484H	HL130X130X12		696	23.45	16.32	1	16.32	
460	SP4BDB	485H	HL130X130X12		262	23.45	6.14	2	12.28	
461	SP4BDB	486	32 THK.	395	512	251.20	50.80	1	50.80	
462	SP4BDB	487H	H6 THK.	105	219	47.10	1.08	2	2.16	
463	SP4BDB	492	L45X45X4		2322	2.75	6.39	1	6.39	
464	SP4BDB	493	L45X45X4		2322	2.75	6.39	1	6.39	
465	SP4BDB	494	L45X45X4		3318	2.75	9.12	1	9.12	
466	SP4BDB	495	L45X45X4		3318	2.75	9.12	1	9.12	
467	SP4BDB	496	L45X45X4		2427	2.75	6.67	1	6.67	
468	SP4BDB	497	L45X45X4		2427	2.75	6.67	1	6.67	
469	SP4BDB	498	L45X30X4		1269	2.27	2.88	1	2.88	
470	SP4BDB	499	L45X45X4		248	2.75	0.68	1	0.68	
471	SP4BDB	500	6 THK.	150	183	47.10	1.29	1	1.29	
472	SP4BDB	510H	HL130X130X10		6276	19.72	123.76	1	123.76	
473	SP4BDB	511H	HL130X130X10		6276	19.72	123.76	1	123.76	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
474	SP4BDB	512H	HL90X90X6		6194	8.32	51.53	1	51.53	
475	SP4BDB	513H	HL90X90X6		6194	8.32	51.53	1	51.53	
476	SP4BDB	514	L50X50X4		2361	3.08	7.27	1	7.27	
477	SP4BDB	515	L50X50X4		2361	3.08	7.27	1	7.27	
478	SP4BDB	516	L45X30X4		1410	2.27	3.20	1	3.20	
479	SP4BDB	517	L45X30X4		1410	2.27	3.20	1	3.20	
480	SP4BDB	518	L45X45X4		2085	2.75	5.73	1	5.73	
481	SP4BDB	519	L45X45X4		2085	2.75	5.73	1	5.73	
482	SP4BDB	520	L45X30X4		719	2.27	1.63	1	1.63	
483	SP4BDB	521	L45X30X4		719	2.27	1.63	1	1.63	
484	SP4BDB	522H	HL45X45X4		2374	2.75	6.53	1	6.53	
485	SP4BDB	523H	HL45X45X4		2374	2.75	6.53	1	6.53	
486	SP4BDB	524H	HL45X45X4		2960	2.75	8.14	1	8.14	
487	SP4BDB	525H	HL45X45X4		2960	2.75	8.14	1	8.14	
488	SP4BDB	526H	HL45X30X4		1545	2.27	3.51	1	3.51	
489	SP4BDB	527H	HL130X130X12		262	23.45	6.14	2	12.28	
490	SP4BDB	528	32 THK.	370	512	251.20	47.59	1	47.59	
491	SP4BDB	529H	H6 THK.	105	219	47.10	1.08	2	2.16	
492	SP4BDB	532	L45X45X4		2377	2.75	6.54	1	6.54	
493	SP4BDB	533	L45X45X4		2377	2.75	6.54	1	6.54	
494	SP4BDB	534	L55X55X4		3076	3.40	10.46	1	10.46	
495	SP4BDB	535	L45X45X4		1623	2.75	4.46	1	4.46	
496	SP4BDB	536	6 THK.	130	160	47.10	0.98	1	0.98	
497	SP4BDB	537	6 THK.	150	188	47.10	1.33	1	1.33	
498	SP4BDB	538	L45X45X4		250	2.75	0.69	1	0.69	
499	SP4BDB	540H	HL70X70X5		6449	5.38	34.70	1	34.70	
500	SP4BDB	541H	HL70X70X5		6449	5.38	34.70	1	34.70	
501	SP4BDB	542H	HL60X60X4		3284	3.71	12.18	2	24.36	
502	SP4BDB	543H	HL60X60X4		3284	3.71	12.18	2	24.36	
503	SP4BDB	544	L45X30X4		1238	2.27	2.81	2	5.62	
504	SP4BDB	545	L45X30X4		1238	2.27	2.81	2	5.62	
505	SP4BDB	546	L45X30X4		1122	2.27	2.55	2	5.10	
506	SP4BDB	547	L45X30X4		1122	2.27	2.55	2	5.10	
507	SP4BDB	548	6 THK.	200	216	47.10	2.03	1	2.03	
508	SP4BDB	549	6 THK.	200	216	47.10	2.03	1	2.03	
509	SP4BDB	560H	HL130X130X10		8093	19.72	159.59	1	159.59	
510	SP4BDB	561H	HL130X130X10		8093	19.72	159.59	1	159.59	
511	SP4BDB	562H	HL110X110X6		7912	10.20	80.70	1	80.70	
512	SP4BDB	563H	HL110X110X6		7912	10.20	80.70	1	80.70	
513	SP4BDB	564	L50X50X4		2424	3.08	7.47	1	7.47	
514	SP4BDB	565	L50X50X4		2424	3.08	7.47	1	7.47	
515	SP4BDB	566	L45X45X4		1548	2.75	4.26	1	4.26	
516	SP4BDB	567	L45X45X4		1548	2.75	4.26	1	4.26	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
517	SP4BDB	568	L45X45X4	415	2188	2.75	6.02	1	6.02	
518	SP4BDB	569	L45X45X4		2188	2.75	6.02	1	6.02	
519	SP4BDB	570	L45X30X4		1041	2.27	2.36	1	2.36	
520	SP4BDB	571	L45X30X4		1041	2.27	2.36	1	2.36	
521	SP4BDB	572	L45X45X4		2004	2.75	5.51	1	5.51	
522	SP4BDB	573	L45X45X4		2004	2.75	5.51	1	5.51	
523	SP4BDB	574	L45X30X4		534	2.27	1.21	1	1.21	
524	SP4BDB	575	L45X30X4		534	2.27	1.21	1	1.21	
525	SP4BDB	576H	HL50X50X4		2831	3.08	8.72	1	8.72	
526	SP4BDB	577H	HL50X50X4		2831	3.08	8.72	1	8.72	
527	SP4BDB	578H	HL50X50X4		4093	3.08	12.61	1	12.61	
528	SP4BDB	579H	HL50X50X4		4093	3.08	12.61	1	12.61	
529	SP4BDB	580H	HL45X45X4		2793	2.75	7.68	1	7.68	
530	SP4BDB	581H	HL45X45X4		2793	2.75	7.68	1	7.68	
531	SP4BDB	582H	HL45X30X4		1397	2.27	3.17	1	3.17	
532	SP4BDB	583H	HL130X130X12		836	23.45	19.60	1	19.60	
533	SP4BDB	584H	HL130X130X12		713	23.45	16.72	1	16.72	
534	SP4BDB	585H	HL130X130X12		262	23.45	6.14	2	12.28	
535	SP4BDB	586	32 THK.		512	251.20	53.37	1	53.37	
536	SP4BDB	592	L50X50X4		2764	3.08	8.51	1	8.51	
537	SP4BDB	593	L50X50X4		2764	3.08	8.51	1	8.51	
538	SP4BDB	594	L50X50X4		4045	3.08	12.46	1	12.46	
539	SP4BDB	595	L50X50X4		4045	3.08	12.46	1	12.46	
540	SP4BDB	596	L45X45X4		2882	2.75	7.93	1	7.93	
541	SP4BDB	597	L45X45X4		2882	2.75	7.93	1	7.93	
542	SP4BDB	598	L45X45X4		1566	2.75	4.31	1	4.31	
543	SP4BDB	599	L45X45X4		269	2.75	0.74	1	0.74	
544	SP4BDB	600	6 THK.	150	186	47.10	1.31	1	1.31	
545	SP4BDB	601	8 THK.	225	252	62.80	3.56	2	7.12	
546	SP4BDB	610H	HL130X130X8	7273	15.92	115.79	1	115.79		
547	SP4BDB	611H	HL130X130X8	7273	15.92	115.79	1	115.79		
548	SP4BDB	612H	HL100X100X6	7112	9.26	65.86	1	65.86		
549	SP4BDB	613H	HL100X100X6	7112	9.26	65.86	1	65.86		
550	SP4BDB	614	L55X55X4	2626	3.40	8.93	1	8.93		
551	SP4BDB	615	L55X55X4	2626	3.40	8.93	1	8.93		
552	SP4BDB	616	L45X30X4	1376	2.27	3.12	1	3.12		
553	SP4BDB	617	L45X30X4	1376	2.27	3.12	1	3.12		
554	SP4BDB	618	L50X50X4	2401	3.08	7.40	1	7.40		
555	SP4BDB	619	L50X50X4	2401	3.08	7.40	1	7.40		
556	SP4BDB	620	L45X30X4	702	2.27	1.59	1	1.59		
557	SP4BDB	621	L45X30X4	702	2.27	1.59	1	1.59		
558	SP4BDB	622H	HL50X50X4	2829	3.08	8.71	1	8.71		
559	SP4BDB	623H	HL50X50X4	2829	3.08	8.71	1	8.71		

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
560	SP4BDB	624H	HL50X50X4	370	3581	3.08	11.03	1	11.03	
561	SP4BDB	625H	HL50X50X4		3581	3.08	11.03	1	11.03	
562	SP4BDB	626H	HL45X45X4		1918	2.75	5.27	1	5.27	
563	SP4BDB	627H	HL130X130X12		262	23.45	6.14	2	12.28	
564	SP4BDB	628	32 THK.		512	251.20	47.59	1	47.59	
565	SP4BDB	629	L45X45X4		267	2.75	0.73	1	0.73	
566	SP4BDB	632	L50X50X4		2813	3.08	8.66	1	8.66	
567	SP4BDB	633	L50X50X4		2813	3.08	8.66	1	8.66	
568	SP4BDB	634	L60X60X4		3846	3.71	14.27	1	14.27	
569	SP4BDB	635	L45X45X4		2012	2.75	5.53	1	5.53	
570	SP4BDB	636	6 THK.	135	165	47.10	1.05	1	1.05	
571	SP4BDB	637	6 THK.	135	165	47.10	1.05	1	1.05	
572	SP4BDB	638	6 THK.	150	191	47.10	1.35	1	1.35	
573	SP4BDB	639	8 THK.	224	255	62.80	3.59	2	7.18	
574	SP4BDB	640H	HL90X90X5	220	8042	6.97	56.05	1	56.05	
575	SP4BDB	641H	HL90X90X5		8042	6.97	56.05	1	56.05	
576	SP4BDB	642H	HL75X75X5		4087	5.77	23.58	2	47.16	
577	SP4BDB	643H	HL75X75X5		4087	5.77	23.58	2	47.16	
578	SP4BDB	644H	HL45X30X4		1533	2.27	3.48	2	6.96	
579	SP4BDB	645H	HL45X30X4		1533	2.27	3.48	2	6.96	
580	SP4BDB	646H	HL45X30X4		1399	2.27	3.18	2	6.36	
581	SP4BDB	647H	HL45X30X4		1399	2.27	3.18	2	6.36	
582	SP4BDB	648	6 THK.		232	47.10	2.40	1	2.40	
583	SP4BDB	649	6 THK.		232	47.10	2.40	1	2.40	
584	SP4BDB	680H	HL200X200X17	165	7168	51.40	368.44	2	736.88	
585	SP4BDB	681H	HL200X200X17		7168	51.40	368.44	2	736.88	
586	SP4BDB	682H	HL200X200X15		746	45.60	34.02	8	272.16	
587	SP4BDB	683H	H12 THK.		746	94.20	11.60	16	185.60	
588	SP4BDB	684H	HL80X80X6		4800	7.36	35.33	2	70.66	
589	SP4BDB	685H	HL80X80X6		4800	7.36	35.33	2	70.66	
590	SP4BDB	686H	HL80X80X6		1600	7.36	11.78	2	23.56	
591	SP4BDB	687H	HL80X80X6		5619	7.36	41.36	2	82.72	
592	SP4BDB	688H	HL80X80X6		3910	7.36	28.78	2	57.56	
593	SP4BDB	689H	HL80X80X6		4800	7.36	35.33	2	70.66	
594	SP4BDB	690H	HL80X80X6	60	4800	7.36	35.33	2	70.66	
595	SP4BDB	691H	HL80X80X6		5619	7.36	41.36	2	82.72	
596	SP4BDB	692H	HL80X80X6		1600	7.36	11.78	2	23.56	
597	SP4BDB	693H	HL80X80X6		3910	7.36	28.78	2	57.56	
598	SP4BDB	694H	HL70X70X6		356	6.39	2.27	8	18.16	
599	SP4BDB	695H	HL70X70X6		356	6.39	2.27	8	18.16	
600	SP4BDB	696H	H10 THK.		356	78.50	1.68	8	13.44	
601	SP4BDB	696AH	H12 THK.		356	94.20	2.01	8	16.08	
602	SP4BDB	697H	H6 THK.	160	356	47.10	2.68	4	10.72	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
603	SP4BDB	697AH	H6 THK.	162	356	47.10	2.72	4	10.88	
604	SP4BDB	698	L50X50X4		1178	3.08	3.63	2	7.26	
605	SP4BDB	699	L50X50X4		1178	3.08	3.63	2	7.26	
606	SP4BDB	700	L60X60X4		2244	3.71	8.33	2	16.66	
607	SP4BDB	701	L60X60X4		2244	3.71	8.33	2	16.66	
608	SP4BDB	702	L65X65X4		2323	4.03	9.36	2	18.72	
609	SP4BDB	703	L65X65X4		2323	4.03	9.36	2	18.72	
610	SP4BDB	704	L65X65X5		3033	4.98	15.10	2	30.20	
611	SP4BDB	705	L65X65X5		3033	4.98	15.10	2	30.20	
612	SP4BDB	706	L50X50X4		2843	3.08	8.76	2	17.52	
613	SP4BDB	707	L50X50X4		2843	3.08	8.76	2	17.52	
614	SP4BDB	708	L45X30X4		1404	2.27	3.19	2	6.38	
615	SP4BDB	709	L45X30X4		1404	2.27	3.19	2	6.38	
616	SP4BDB	710	L60X60X4		1952	3.71	7.24	2	14.48	
617	SP4BDB	711	L60X60X4		1952	3.71	7.24	2	14.48	
618	SP4BDB	712H	H10 THK.	347	361	78.50	9.83	2	19.66	
619	SP4BDB	713H	H10 THK.	355	560	78.50	15.61	2	31.22	
620	SP4BDB	714H	H10 THK.	355	560	78.50	15.61	2	31.22	
621	SP4BDB	715H	H6 THK.	50	144	47.10	0.34	8	2.72	
622	SP4BDB	715AH	H6 THK.	50	176	47.10	0.41	8	3.28	
623	SP4BDB	716H	H6 THK.	50	151	47.10	0.36	4	1.44	
624	SP4BDB	716AH	H6 THK.	50	187	47.10	0.44	4	1.76	
625	SP4BDB	717H	H6 THK.	50	161	47.10	0.38	4	1.52	
626	SP4BDB	717AH	H6 THK.	50	197	47.10	0.46	4	1.84	
627	SP4BDB	718H	HL100X100X6		4800	9.26	44.45	2	88.90	
628	SP4BDB	719H	HL100X100X6		4800	9.26	44.45	2	88.90	
629	SP4BDB	720H	HL100X100X6		1528	9.26	14.15	2	28.30	
630	SP4BDB	721H	HL100X100X6		5556	9.26	51.45	2	102.90	
631	SP4BDB	722H	HL100X100X6		3908	9.26	36.19	2	72.38	
632	SP4BDB	723	L50X50X4		1187	3.08	3.66	2	7.32	
633	SP4BDB	724	L50X50X4		1187	3.08	3.66	2	7.32	
634	SP4BDB	725	L60X60X4		2275	3.71	8.44	2	16.88	
635	SP4BDB	726	L60X60X4		2275	3.71	8.44	2	16.88	
636	SP4BDB	727	L60X60X4		2341	3.71	8.69	2	17.38	
637	SP4BDB	728	L60X60X4		2341	3.71	8.69	2	17.38	
638	SP4BDB	729H	HL70X70X4		3085	4.30	13.27	2	26.54	
639	SP4BDB	730H	HL70X70X4		3085	4.30	13.27	2	26.54	
640	SP4BDB	731	L50X50X4		2796	3.08	8.61	2	17.22	
641	SP4BDB	732	L50X50X4		2796	3.08	8.61	2	17.22	
642	SP4BDB	733	L45X30X4		1401	2.27	3.18	2	6.36	
643	SP4BDB	734	L45X30X4		1401	2.27	3.18	2	6.36	
644	SP4BDB	735	L55X55X4		1915	3.40	6.51	2	13.02	
645	SP4BDB	736	L55X55X4		1915	3.40	6.51	2	13.02	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
646	SP4BDB	737H	H12 THK.	350	372	94.20	12.26	2	24.52	
647	SP4BDB	738H	HL100X100X6		4800	9.26	44.45	2	88.90	
648	SP4BDB	739H	HL100X100X6		4800	9.26	44.45	2	88.90	
649	SP4BDB	740H	HL100X100X6		1528	9.26	14.15	2	28.30	
650	SP4BDB	741H	HL100X100X6		5556	9.26	51.45	2	102.90	
651	SP4BDB	742H	HL100X100X6		3908	9.26	36.19	2	72.38	
652	SP4BDB	743H	H12 THK.	125	193	94.20	2.27	4	9.08	
653	SP4BDB	743AH	H10 THK.	110	181	78.50	1.56	4	6.24	
654	SP4BDB	744H	H8 THK.	303	564	62.80	10.73	2	21.46	
655	SP4BDB	745H	H8 THK.	303	564	62.80	10.73	2	21.46	
656	SP4BDB	746	L45X45X4		1615	2.75	4.44	4	17.76	
657	SP4BDB	747	L45X45X4		3190	2.75	8.77	2	17.54	
658	SP4BDB	748	L45X45X4		3203	2.75	8.81	2	17.62	
659	SP4BDB	749	L50X50X4		4370	3.08	13.46	2	26.92	
660	SP4BDB	750	L50X50X4		4399	3.08	13.55	2	27.10	
661	SP4BDB	751	5 THK.	110	230	39.25	0.99	4	3.96	
662	SP4BDB	751A	5 THK.	110	272	39.25	1.17	4	4.68	
663	SP4BDB	752	5 THK.	110	317	39.25	1.37	2	2.74	
664	SP4BDB	753	5 THK.	110	275	39.25	1.19	2	2.38	
665	SP4BDB	754	5 THK.	110	304	39.25	1.31	2	2.62	
666	SP4BDB	755	5 THK.	110	262	39.25	1.13	2	2.26	
667	SP4BDB	747X	L45X45X4		3190	2.75	8.77	2	17.54	
668	SP4BDB	748X	L45X45X4		3203	2.75	8.81	2	17.62	
669	SP4BDB	749X	L50X50X4		4370	3.08	13.46	2	26.92	
670	SP4BDB	750X	L50X50X4		4399	3.08	13.55	2	27.10	
671	SP4BDB	752X	5 THK.	110	317	39.25	1.37	2	2.74	
672	SP4BDB	753X	5 THK.	110	275	39.25	1.19	2	2.38	
673	SP4BDB	754X	5 THK.	110	304	39.25	1.31	2	2.62	
674	SP4BDB	755X	5 THK.	110	262	39.25	1.13	2	2.26	
675	SP4BDB	756	L50X50X4		2145	3.08	6.61	4	26.44	
676	SP4BDB	757	L50X50X4		3660	3.08	11.27	2	22.54	
677	SP4BDB	758	L50X50X4		3728	3.08	11.48	2	22.96	
678	SP4BDB	759	5 THK.	110	230	39.25	0.99	4	3.96	
679	SP4BDB	760	5 THK.	110	272	39.25	1.17	4	4.68	
680	SP4BDB	761	5 THK.	110	252	39.25	1.09	2	2.18	
681	SP4BDB	762	5 THK.	110	294	39.25	1.27	2	2.54	
682	SP4BDB	757X	L50X50X4		3660	3.08	11.27	2	22.54	
683	SP4BDB	758X	L50X50X4		3728	3.08	11.48	2	22.96	
684	SP4BDB	761X	5 THK.	110	252	39.25	1.09	2	2.18	
685	SP4BDB	762X	5 THK.	110	294	39.25	1.27	2	2.54	
686	SP4BDB	763H	HL200X200X17		6900	51.40	354.66	2	709.32	
687	SP4BDB	764H	HL200X200X17		6900	51.40	354.66	2	709.32	
688	SP4BDB	765H	HL75X75X5		7896	5.77	45.56	2	91.12	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
689	SP4BDB	765XH	HL75X75X5	110	7896	5.77	45.56	2	91.12	
690	SP4BDB	766H	HL75X75X5		7896	5.77	45.56	2	91.12	
691	SP4BDB	766XH	HL75X75X5		7896	5.77	45.56	2	91.12	
692	SP4BDB	767	L55X55X4		1581	3.40	5.38	4	21.52	
693	SP4BDB	768	L55X55X4		1581	3.40	5.38	4	21.52	
694	SP4BDB	769	L55X55X4		2034	3.40	6.92	4	27.68	
695	SP4BDB	770	L55X55X4		2034	3.40	6.92	4	27.68	
696	SP4BDB	771	L45X45X4		1712	2.75	4.71	4	18.84	
697	SP4BDB	772	L45X45X4		1712	2.75	4.71	4	18.84	
698	SP4BDB	773H	HL60X60X4		3165	3.71	11.74	4	46.96	
699	SP4BDB	774H	HL60X60X4		3165	3.71	11.74	4	46.96	
700	SP4BDB	775H	HL60X60X4		2577	3.71	9.56	4	38.24	
701	SP4BDB	776H	HL60X60X4		2577	3.71	9.56	4	38.24	
702	SP4BDB	777	L45X45X4		2048	2.75	5.63	4	22.52	
703	SP4BDB	778	L45X45X4		2048	2.75	5.63	4	22.52	
704	SP4BDB	779H	HL70X70X5		4749	5.38	25.55	4	102.20	
705	SP4BDB	780H	HL70X70X5		4749	5.38	25.55	4	102.20	
706	SP4BDB	781H	H6 THK.		130	47.10	0.67	8	5.36	
707	SP4BDB	782	L55X55X4		3102	3.40	10.55	4	42.20	
708	SP4BDB	783	L55X55X4		3102	3.40	10.55	4	42.20	
709	SP4BDB	784H	HL45X45X4		2506	2.75	6.89	4	27.56	
710	SP4BDB	785H	HL45X45X4		2506	2.75	6.89	4	27.56	
711	SP4BDB	786	L60X60X4	183	1967	3.71	7.30	4	29.20	
712	SP4BDB	787	L60X60X4		1967	3.71	7.30	4	29.20	
713	SP4BDB	788	L45X30X4		886	2.27	2.01	4	8.04	
714	SP4BDB	789	L45X30X4		886	2.27	2.01	4	8.04	
715	SP4BDB	790H	HL75X75X6		7896	6.86	54.17	2	108.34	
716	SP4BDB	790XH	HL75X75X6		7896	6.86	54.17	2	108.34	
717	SP4BDB	791H	HL75X75X6		7896	6.86	54.17	2	108.34	
718	SP4BDB	791XH	HL75X75X6		7896	6.86	54.17	2	108.34	
719	SP4BDB	791PH	H6 THK.		210	47.10	1.81	4	7.24	
720	SP4BDB	792H	H6 THK.	50	151	47.10	0.36	4	1.44	
721	SP4BDB	792AH	H6 THK.	50	158	47.10	0.37	4	1.48	
722	SP4BDB	793H	H6 THK.	50	146	47.10	0.34	8	2.72	
723	SP4BDB	794	L45X45X4	97	2150	2.75	5.91	4	23.64	
724	SP4BDB	795	L45X45X4		1960	2.75	5.39	4	21.56	
725	SP4BDB	796	L45X45X4		1960	2.75	5.39	4	21.56	
726	SP4BDB	797	L50X50X4		4390	3.08	13.52	4	54.08	
727	SP4BDB	798	5 THK.		250	39.25	0.95	4	3.80	
728	SP4BDB	799	L55X55X4		5271	3.40	17.92	4	71.68	
729	SP4BDB	800	L55X55X4		5271	3.40	17.92	4	71.68	
730	SP4BDB	801	L45X45X4		1594	2.75	4.38	4	17.52	
731	SP4BDB	802	L45X45X4		1594	2.75	4.38	4	17.52	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.		SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
732	SP4BDB	803	L45X30X4		1206	2.27	2.74	8	21.92	
733	SP4BDB	804	5 THK.	110	227	39.25	0.98	16	15.68	
734	SP4BDB	805	5 THK.	110	264	39.25	1.14	4	4.56	
735	SP4BDB	806	5 THK.	110	264	39.25	1.14	4	4.56	
736	SP4BDB	807	5 THK.	110	244	39.25	1.05	4	4.20	
737	SP4BDB	808	5 THK.	110	244	39.25	1.05	4	4.20	
738	SP4BDB	809H	H12 THK.	365	508	94.20	17.47	4	69.88	
739	SP4BDB	809AH	H12 THK.	401	508	94.20	19.19	4	76.76	
740	SP4BDB	810H	HL65X65X5		7000	4.98	34.86	4	139.44	
741	SP4BDB	811H	HL65X65X5		5642	4.98	28.10	4	112.40	
742	SP4BDB	812H	HL60X60X5		356	4.58	1.63	4	6.52	
743	SP4BDB	813H	H6 THK.	60	356	47.10	1.01	8	8.08	
744	SP4BDB	814H	HL70X70X5		7046	5.38	37.91	4	151.64	
745	SP4BDB	815H	HL70X70X5		7046	5.38	37.91	4	151.64	
746	SP4BDB	816H	HL45X30X4		1510	2.27	3.43	4	13.72	
747	SP4BDB	817H	HL45X30X4		1510	2.27	3.43	4	13.72	
748	SP4BDB	818H	HL50X50X4		4320	3.08	13.31	4	53.24	
749	SP4BDB	819H	H6 THK.	105	115	47.10	0.57	8	4.56	
750	SP4BDB	820H	H6 THK.	105	174	47.10	0.86	8	6.88	
751	SP4BDB	821H	HL45X30X4		1098	2.27	2.49	4	9.96	
752	SP4BDB	822	L65X65X4		2908	4.03	11.72	4	46.88	
753	SP4BDB	823H	HL80X80X5		292	6.17	1.80	4	7.20	
754	SP4BDB	824H	H6 THK.	220	257	47.10	2.66	4	10.64	
755	SP4BDB	825H	H6 THK.	95	190	47.10	0.85	8	6.80	
756	SP4BDB	SP1H	H6 THK.	130	180	47.10	1.10	8	8.80	
TOTAL WT=									21726.23	

For MILD STEEL : (As Per IS : 2062, Designated Y.S. 250Mpa)

For HIGH TENSILE STEEL : (As Per IS:2062, Designated Y.S. 350Mpa)

LIST OF PACK WASHERS

4 THK. PACK WASHERS (For 16 Ø Bolt)	0.014	4	0.06	
5 THK. PACK WASHERS (For 16 Ø Bolt)	0.018	22	0.40	
6 THK. PACK WASHERS (For 16 Ø Bolt)	0.021	189	3.97	
8 THK. PACK WASHERS (For 16 Ø Bolt)	0.028	66	1.85	
10 THK. PACK WASHERS (For 16 Ø Bolt)	0.036	213	7.67	
12 THK. PACK WASHERS (For 16 Ø Bolt)	0.043	384	16.51	
TOTAL WT.			30.46	Kgs

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REV. No	REVISION	DATE	INITIAL	

Tower Package TW0I for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DB/BB

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"

BILL OF MATERIALS

PART : BASIC BODY

SL.No.	MARK No.	SECTION / PLATE THICKNESS (mm)	PLATE WIDTH (mm)	LENGTH (mm)	UNIT WT (kg/m)	WEIGHT/PC (kg)	PIECES / STRUCT.	TOTAL WT. (kg)	REMARKS
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WEIGHT OF STEEL MEMBERS

A) TOTAL WT. OF HT STEEL FAB. MEMBER	=	17593.68	Kgs
B) TOTAL WT. OF MILD STEEL FAB. MEMBER	=	4132.55	Kgs
C) TOTAL WT. OF PACK WASHERS	=	30.46	Kgs
GRAND TOTAL WT. OF FAB. MEMBER WITH PACK WASHERS (A+B+C)	=	21756.69	Kgs

LIST OF BOLTS & NUTS CONFORMING TO IS:12427 WITH MECHANICAL PROPERTIES CONFORMING TO PROPERTY CLASS 5.6 FOR BOLTS AND CLASS 5.0 FOR NUTS.
LIST OF SPRING WASHERS (TYPE-B) AS PER IS:3063-1994, ELECTRO GALVD.

BOLT & NUTS

HRH BOLT / NUT FOR M16X35	0.119		1463	174.10
HRH BOLT / NUT FOR M16X40	0.126		1020	128.52
HRH BOLT / NUT FOR M16X45	0.134		652	87.37
HRH BOLT / NUT FOR M16X50	0.142		1360	193.12
HRH BOLT / NUT FOR M16X55	0.150		302	45.30
HRH BOLT / NUT FOR M16X60	0.158		318	50.24
HRH BOLT / NUT FOR M16X65	0.164		170	27.88
HRH BOLT / NUT FOR M16X70	0.173		564	97.57
HRH BOLT / NUT FOR M16X75	0.180		100	18.00
HRH BOLT / NUT FOR M16X80	0.185		80	14.80
HRH BOLT / NUT FOR M16X85	0.193		0	0.00
HRH BOLT / NUT FOR M16X90	0.199		0	0.00
MS STD. SPR. WASHERS FOR M16 BOLTS	0.009		6029	54.26
STEP BOLTS OF 16X175MM DIA WITH 2 NUTS 1 S.W	0.374		140	52.36
TOTAL WT. OF HEXAGONAL BOLTS / NUTS , SPRING WASHERS STEP BOLT	=		943.52	Kgs

SUMMARY OF WEIGHTS

A) WT. OF MS MEMBERS	=	4132.55	Kgs
B) WT. OF PACK WASHERS	=	30.46	Kgs
C) WT. OF HT MEMBERS	=	17593.68	Kgs
D) WT. OF FAB MEMBERS (A+B+C)	=	21756.69	Kgs
E) WT. OF BOLT & NUTS	=	943.52	Kgs
F) TOTAL	=	22700.21	Kgs

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REV. No	REVISION	DATE	INITIAL
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Tower Package TW01 for India Portion of 400 KV D/C (Quad Moose) New Butwal - Gorakhpur Transmission Line.
(Specification No. 5002002333/ CONSULTANCY GIVEN/DOM/A04-CC CS-5)

STRUCTURE : 400KV D/C "DB(0°-2°)"-MKD"G507 DB"
PART : BASIC BODY

BOM NO. SI/PGCIL/400KV/BUTW-GRKH/DB/BB

SECTION ABSTRACT

MILD STEEL	WEIGHT (Kg)	HIGH TENSILE	WEIGHT (Kg)	MS. PLATE	WEIGHT
L40X40X3		HL45X30X4	91.00	2 THK.	
L40X40X4		HL45X30X5		3 THK.	
L40X40X5		HL45X45X4	256.47	4 THK.	
L40X40X6		HL45X45X5		5 THK.	200.92
L45X30X4	488.31	HL50X50X4	253.69	6 THK.	133.35
L45X30X5		HL50X50X5		8 THK.	14.30
L45X45X4	1199.97	HL55X55X4	33.32	10 THK.	16.24
L45X45X3		HL55X55X5		12 THK.	62.56
L45X45X5		HL60X60X4	219.12	14 THK.	
L45X45X6		HL60X60X5	121.86	16 THK.	7.72
L50X50X3		HL60X60X6		20 THK.	
L50X50X4	579.02	HL65X65X4		22 THK.	
L50X50X5		HL65X65X5	398.76	25 THK.	
L50X50X6		HL65X65X6		32 THK.	296.53
L55X55X4	380.52	HL70X70X4	53.08		
L55X55X5	47.42	HL70X70X5	738.62	TOTAL MS PLT.	731.62
L55X55X6		HL70X70X6	36.32		
L55X55X8		HL75X75X4		HT. PLATE	WEIGHT
L60X60X4	203.47	HL75X75X5	599.68	H5 THK.	
L60X60X5	1.84	HL75X75X6	731.44	H6 THK.	106.34
L60X60X6		HL80X80X5	299.57	H8 THK.	269.79
L65X65X4	84.32	HL80X80X6	1233.54	H10 THK.	242.96
L65X65X5	331.68	HL80X80X8		H12 THK.	781.18
L65X65X6		HL90X90X5	112.10	H14 THK.	
L80X80X5		HL90X90X6	851.02	H16 THK.	
L70X70X4		HL90X90X7	1185.84	H18 THK.	58.48
L70X70X5		HL90X90X8		H20 THK.	
L70X70X6		HL100X100X6	1273.98	H30 THK.	
L75X75X4		HL100X100X7			
L75X75X5		HL100X100X8	132.16		
L75X75X6		HL100X100X10		TOTAL HT PLT.	1458.75
L80X80X6		HL110X110X6	161.40		
L80X80X8		HL110X110X7			
L90X90X5	6.02	HL110X110X8	214.88		
L90X90X6	71.36	HL110X110X10			
L100X100X8		HL120X120X10	181.52		
L100X100X10		HL120X120X12	457.54		
L110X110X6		HL130X130X8	424.32		
L110X110X8		HL130X130X10	846.84		
L110X110X10		HL130X130X11	248.46		
L110X110X12		HL130X130X12	543.64		
L130X130X8	7.00	HL150X150X13	534.32		
L150X150X12		HL150X150X18	735.88		
L200X200X20		HL200X200X15	272.16		
		HL200X200X17	2892.40		

TOTAL 3400.93 TOTAL 16134.93

GRAND TOTAL = 21726.23