

संदर्भ/Ref : CC-ENGG-C2021001-1001422-T14221-4524-BMDD+0BE

Date : 28/12/2023

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/DD/+0MBE
Orgn. Drg. No. : C2021001-1001422-T14221-4524-BMDD+0BE
Revision No. : 00
Drg. Title : BILL OF MATERIAL FOR TT DD +0M BE FOR 400 kV D/C WZ-5 (ACSR MOOSE) TL
App. Category : CAT-I
Release Date : 28/12/2023



Scan to verify

Comments : ok**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.
- 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. SL/PGCIL/400KV/BUTW-GRKH/DD/+0MBE

NO. OF SHEET : 5

POWER GRID CORPORATION OF INDIA LTD.

(A Government of India Enterprise)

BILL OF MATERIALSINITIAL / FINAL
(GALVANIZED)

STRUCTURE UNIT : 400KV D/C "DD(0°-60°)/DE(0°-15°)"-MKD"G507 DD"

PART : +0M BODY EXTENSION

REF.DRG.NO. : C:ENGG:TL:4524-4ACSR-M-P-03

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)

TOWER COMBINATION :

- | | | |
|-----|---------------|-------------------------------------|
| 1) | DA-6M TOWER | BASIC TOWER (+) -6M BE |
| 2) | DA-4.5M TOWER | BASIC TOWER (+) -4.5M BE |
| 3) | DA-3M TOWER | BASIC TOWER (+) -3M BE |
| 4) | DA-1.5M TOWER | BASIC TOWER (+) -1.5M BE |
| 5) | DA±0M TOWER | BASIC TOWER (+) ±0M BE |
| 6) | DA+1.5M TOWER | BASIC TOWER (+) +1.5M BE |
| 7) | DA+3M TOWER | BASIC TOWER (+) +3M BE |
| 8) | DA+4.5M TOWER | BASIC TOWER (+) +0M BE (+) +4.5M BE |
| 9) | DA+6M TOWER | BASIC TOWER (+) +0M BE (+) +6M BE |
| 10) | DA+7.5M TOWER | BASIC TOWER (+) +0M BE (+) +7.5M BE |
| 11) | DA+9M TOWER | BASIC TOWER (+) +0M BE (+) +9M BE |

NOTE FOR PREFIX	
SP4BDD XXX	FOR M.S
SP4BDD 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 +0M BODY EXTENSION	
1	WT.OF ALL (HT) MEMBERS IN KGS.	9450.20	
2	WT.OF ALL (MS) MEMBERS IN KGS.(INCL. PACK WASHERS)	1193.09	
3	WT.OF BOLT & NUTS IN KGS.	398.45	
	TOTAL WT. OF STRUCTURES IN KGS.	11041.74	
A	PROTO CORRECTED & SUCCESSFULLY TESTED AT SKIPPER LTD. TEST BED DATED 10.12.23		20.12.2023
0	FIRST ISSUE		18.10.2023
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/DD/+0MBE

STRUCTURE : 400KV D/C "DD(0°-60°)/DE(0°-15°)"-MKD"G507 DD"

BILL OF MATERIALS

PART : +0M BODY EXTENSION

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	SP4BDD	1380H	HL180X180X16		5500	43.21	237.66	2	475.32	
2	SP4BDD	1381H	HL180X180X16		5500	43.21	237.66	2	475.32	
3	SP4BDD	1382H	HL180X180X16		5500	43.21	237.66	4	950.64	
4	SP4BDD	1383H	HL180X180X16		6006	43.21	259.52	2	519.04	
5	SP4BDD	1384H	HL180X180X16		6006	43.21	259.52	2	519.04	
6	SP4BDD	1385H	HL180X180X16		6006	43.21	259.52	4	1038.08	
7	SP4BDD	1386H	HL200X200X12		610	36.85	22.48	8	179.84	
8	SP4BDD	1387H	HL200X200X12		610	36.85	22.48	8	179.84	
9	SP4BDD	1388H	H14 THK.	346	610	109.90	23.20	4	92.80	
10	SP4BDD	1389H	H14 THK.	150	610	109.90	10.06	8	80.48	
11	SP4BDD	1390H	HL200X200X12		610	36.85	22.48	8	179.84	
12	SP4BDD	1391H	HL200X200X12		610	36.85	22.48	8	179.84	
13	SP4BDD	1392H	H14 THK.	346	610	109.90	23.20	4	92.80	
14	SP4BDD	1393H	H14 THK.	150	610	109.90	10.06	8	80.48	
15	SP4BDD	1394H	HL110X110X8		4000	13.40	53.60	2	107.20	
16	SP4BDD	1395H	HL110X110X8		4002	13.40	53.63	2	107.26	
17	SP4BDD	1396H	HL110X110X8		4002	13.40	53.63	2	107.26	
18	SP4BDD	1397H	HL110X110X8		4000	13.40	53.60	2	107.20	
19	SP4BDD	1398H	HL110X110X7		4000	11.85	47.40	2	94.80	
20	SP4BDD	1399H	HL110X110X7		4002	11.85	47.42	2	94.84	
21	SP4BDD	1400H	HL110X110X7		4002	11.85	47.42	2	94.84	
22	SP4BDD	1401H	HL110X110X7		4000	11.85	47.40	2	94.80	
23	SP4BDD	1402H	HL110X110X8		4500	13.40	60.30	2	120.60	
24	SP4BDD	1403H	HL110X110X8		4500	13.40	60.30	2	120.60	
25	SP4BDD	1404H	HL110X110X8		4500	13.40	60.30	2	120.60	
26	SP4BDD	1405H	HL110X110X8		4500	13.40	60.30	2	120.60	
27	SP4BDD	1406H	HL110X110X7		4500	11.85	53.33	2	106.66	
28	SP4BDD	1407H	HL110X110X7		4500	11.85	53.33	2	106.66	
29	SP4BDD	1408H	HL110X110X7		4500	11.85	53.33	2	106.66	
30	SP4BDD	1409H	HL110X110X7		4500	11.85	53.33	2	106.66	
31	SP4BDD	1410H	HL110X110X8		6161	13.40	82.56	2	165.12	
32	SP4BDD	1411H	HL110X110X8		6161	13.40	82.56	2	165.12	
33	SP4BDD	1412H	HL110X110X8		6161	13.40	82.56	2	165.12	
34	SP4BDD	1413H	HL110X110X8		6161	13.40	82.56	2	165.12	
35	SP4BDD	1414H	HL110X110X7		6161	11.85	73.01	2	146.02	
36	SP4BDD	1415H	HL110X110X7		6161	11.85	73.01	2	146.02	
37	SP4BDD	1416H	HL110X110X7		6161	11.85	73.01	2	146.02	
38	SP4BDD	1417H	HL110X110X7		6161	11.85	73.01	2	146.02	
39	SP4BDD	1418H	HL90X90X7		306	9.60	2.94	8	23.52	
40	SP4BDD	1419H	HL90X90X7		306	9.60	2.94	8	23.52	
41	SP4BDD	1420H	HL90X90X7		306	9.60	2.94	8	23.52	
42	SP4BDD	1421H	HL90X90X7		306	9.60	2.94	8	23.52	
43	SP4BDD	1422H	H14 THK.	80	306	109.90	2.69	16	43.04	

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. SI/PGCIL/400KV/BUTW-GRKH/DD/+0MBE

STRUCTURE : 400KV D/C "DD(0°-60°)/DE(0°-15°)"-MKD"G507 DD"

BILL OF MATERIALS

PART : +0M BODY EXTENSION

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	SP4BDD	1423H	H6 THK.	204	306	47.10	2.94	16	47.04	
45	SP4BDD	1424H	H14 THK.	142	356	109.90	5.56	4	22.24	
46	SP4BDD	1425H	H14 THK.	100	356	109.90	3.91	36	140.76	
47	SP4BDD	1426H	H14 THK.	138	356	109.90	5.40	4	21.60	
48	SP4BDD	1427H	H14 THK.	136	356	109.90	5.32	4	21.28	
49	SP4BDD	1428H	HL60X60X5		806	4.58	3.69	4	14.76	
50	SP4BDD	1429H	HL60X60X5		806	4.58	3.69	4	14.76	
51	SP4BDD	1430H	HL55X55X4		1525	3.40	5.19	4	20.76	
52	SP4BDD	1431H	HL55X55X4		1525	3.40	5.19	4	20.76	
53	SP4BDD	1432H	HL65X65X5		1637	4.98	8.15	4	32.60	
54	SP4BDD	1433H	HL65X65X5		1637	4.98	8.15	4	32.60	
55	SP4BDD	1434H	HL75X75X5		3020	5.77	17.43	4	69.72	
56	SP4BDD	1435H	HL75X75X5		3020	5.77	17.43	4	69.72	
57	SP4BDD	1436AH	HL70X70X5		3299	5.38	17.75	1	17.75	
58	SP4BDD	1436H	HL70X70X5		3299	5.38	17.75	3	53.25	
59	SP4BDD	1437AH	HL70X70X5		3299	5.38	17.75	1	17.75	
60	SP4BDD	1437H	HL70X70X5		3299	5.38	17.75	3	53.25	
61	SP4BDD	1438H	H5 THK.	130	190	39.25	0.97	8	7.76	
62	SP4BDD	1439H	HL75X75X5		3031	5.77	17.49	3	52.47	
63	SP4BDD	1439AH	HL75X75X5		3031	5.77	17.49	1	17.49	
64	SP4BDD	1440H	HL75X75X5		3031	5.77	17.49	3	52.47	
65	SP4BDD	1440AH	HL75X75X5		3031	5.77	17.49	1	17.49	
66	SP4BDD	1441	L50X50X4		3307	3.08	10.19	4	40.76	
67	SP4BDD	1442	L50X50X4		3307	3.08	10.19	4	40.76	
68	SP4BDD	1443	L45X45X4		2906	2.75	7.99	4	31.96	
69	SP4BDD	1444	L45X45X4		2906	2.75	7.99	4	31.96	
70	SP4BDD	1445H	HL80X80X6		4962	7.36	36.52	4	146.08	
71	SP4BDD	1446H	HL80X80X6		4962	7.36	36.52	4	146.08	
72	SP4BDD	1447H	H5 THK.	110	190	39.25	0.82	8	6.56	
73	SP4BDD	1448	5 THK.	120	158	39.25	0.74	8	5.92	
74	SP4BDD	1449H	HL75X75X5		2908	5.77	16.78	4	67.12	
75	SP4BDD	1450H	HL75X75X5		2908	5.77	16.78	4	67.12	
76	SP4BDD	1451	L60X60X4		3747	3.71	13.90	4	55.60	
77	SP4BDD	1452	L60X60X4		3747	3.71	13.90	4	55.60	
78	SP4BDD	1453	L50X50X4		3032	3.08	9.34	4	37.36	
79	SP4BDD	1454	L50X50X4		3032	3.08	9.34	4	37.36	
80	SP4BDD	1455	L45X45X4		1906	2.75	5.24	4	20.96	
81	SP4BDD	1456	L45X45X4		1906	2.75	5.24	4	20.96	
82	SP4BDD	1457	L50X50X4		2936	3.08	9.04	4	36.16	
83	SP4BDD	1458	L50X50X4		2936	3.08	9.04	4	36.16	
84	SP4BDD	1459	5 THK.	175	342	39.25	2.35	8	18.80	
85	SP4BDD	1460	5 THK.	121	175	39.25	0.83	8	6.64	
86	SP4BDD	1461	5 THK.	120	160	39.25	0.75	2	1.50	

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/DD/+0MBE

STRUCTURE : 400KV D/C "DD(0°-60°)/DE(0°-15°)"-MKD"G507 DD"

BILL OF MATERIALS

PART : +0M BODY EXTENSION

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	SP4BDD	1470H	HL50X50X4	100	2147	3.08	6.61	4	26.44		
88	SP4BDD	1471	L50X50X4		4887	3.08	15.05	4	60.20		
89	SP4BDD	1472	L50X50X4		4887	3.08	15.05	4	60.20		
90	SP4BDD	1473	L45X45X4		2336	2.75	6.42	4	25.68		
91	SP4BDD	1474	L45X45X4		2336	2.75	6.42	4	25.68		
92	SP4BDD	1475	5 THK.		121	39.25	0.47	8	3.76		
93	SP4BDD	1476	L50X50X4		6734	3.08	20.74	4	82.96		
94	SP4BDD	1477	L50X50X4		6734	3.08	20.74	4	82.96		
95	SP4BDD	1478	L45X45X4		2550	2.75	7.01	4	28.04		
96	SP4BDD	1479	L45X45X4		2550	2.75	7.01	4	28.04		
97	SP4BDD	1480	5 THK.	100	100	39.25	0.39	8	3.12		
98	SP4BDD	1481	L50X50X4		4409	3.08	13.58	4	54.32		
99	SP4BDD	1482	L50X50X4		4409	3.08	13.58	4	54.32		
100	SP4BDD	1483	5 THK.		100	39.25	0.39	8	3.12		
101	SP4BDD	1484	L45X45X4		2260	2.75	6.22	4	24.88		
102	SP4BDD	1485	L45X45X4		2260	2.75	6.22	4	24.88		
103	SP4BDD	1486	L45X45X4		3385	2.75	9.31	4	37.24		
104	SP4BDD	1487	L45X45X4		3385	2.75	9.31	4	37.24		
105	SP4BDD	1488	5 THK.	97	101	39.25	0.38	8	3.04		
106	SP4BDD	1489	5 THK.	140	180	39.25	0.99	4	3.96		
107	SP4BDD	1490H	H8 THK.	120	174	62.80	1.31	8	10.48		
108	SP4BDD	1491H	H5 THK.	180	349	39.25	2.47	4	9.88		
109	SP4BDD	1492H	H5 THK.	180	349	39.25	2.47	4	9.88		
110	SP4BDD	1493	5 THK.	200	333	39.25	2.61	4	10.44		
111	SP4BDD	1494	5 THK.	200	333	39.25	2.61	4	10.44		
112	SP4BDD	1495	5 THK.	120	313	39.25	1.47	4	5.88		
113	SP4BDD	1496	5 THK.	120	313	39.25	1.47	4	5.88		
114	SP4BDD	1497	5 THK.	120	349	39.25	1.64	4	6.56		
115	SP4BDD	1498	5 THK.	120	349	39.25	1.64	4	6.56		
116	SP4BDD	1499	5 THK.	120	313	39.25	1.47	4	5.88		
117	SP4BDD	1500	5 THK.	120	313	39.25	1.47	4	5.88		
TOTAL WT=									10629.82		

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

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

				SKIPPER LIMITED
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/DD/+0MBE

STRUCTURE : 400KV D/C "DD(0°-60°)/DE(0°-15°)"-MKD"G507 DD"

BILL OF MATERIALS

PART : +0M BODY EXTENSION

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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LIST OF PACK WASHERS

4 THK. PACK WASHERS (For 16 Ø Bolt)	0.014	8	0.11	
5 THK. PACK WASHERS (For 16 Ø Bolt)	0.018	24	0.43	
6 THK. PACK WASHERS (For 16 Ø Bolt)	0.021	264	5.54	
8 THK. PACK WASHERS (For 16 Ø Bolt)	0.028	264	7.39	
TOTAL WT.			13.47	Kgs

WEIGHT OF STEEL MEMBERS

A) TOTAL WT. OF HT STEEL FAB. MEMBER	=	9450.20	Kgs
B) TOTAL WT. OF MILD STEEL FAB. MEMBER	=	1179.62	Kgs
C) TOTAL WT. OF PACK WASHERS	=	13.47	Kgs
GRAND TOTAL WT. OF FAB. MEMBER WITH PACK WASHERS (A+B+C)	=	10643.29	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	380	45.22
HRH BOLT / NUT FOR M16X40	0.126	260	32.76
HRH BOLT / NUT FOR M16X45	0.134	272	36.45
HRH BOLT / NUT FOR M16X50	0.142	12	1.70
HRH BOLT / NUT FOR M16X55	0.150	492	73.80
HRH BOLT / NUT FOR M16X60	0.158	104	16.43
HRH BOLT / NUT FOR M16X65	0.164	44	7.22
HRH BOLT / NUT FOR M16X70	0.173	240	41.52
HRH BOLT / NUT FOR M16X75	0.180	0	0.00
HRH BOLT / NUT FOR M16X80	0.185	292	54.02
HRH BOLT / NUT FOR M16X85	0.193	260	50.18
HRH BOLT / NUT FOR M16X90	0.199	0	0.00
MS STD. SPR. WASHERS FOR M16 BOLTS	0.009	2356	21.20
STEP BOLTS OF 16X175MM DIA WITH 2 NUTS 1 S.W	0.374	48	17.95
TOTAL WT. OF HEXAGONAL BOLTS / NUTS , SPRING WASHERS STEP BOLT	=	398.45	Kgs

SUMMARY OF WEIGHTS

A) WT. OF MS MEMBERS	=	1179.62	Kgs
B) WT. OF PACK WASHERS	=	13.47	Kgs
C) WT. OF HT MEMBERS	=	9450.20	Kgs
D) WT. OF FAB MEMBERS (A+B+C)	=	10643.29	Kgs
E) WT. OF BOLT & NUTS	=	398.45	Kgs
F) TOTAL	=	11041.74	Kgs

				SKIPPER LIMITED
REV. No	REVISION	DATE	INITIAL	



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 "DD(0°-60°)/DE(0°-15°)"-MKD"G507 DD"
PART : +0M BODY EXTENSION

BOM NO. SL/PGCIL/400KV/BUTW-GRKH/DD/+0MBE

SECTION ABSTRACT

MILD STEEL	WEIGHT (Kg)	HIGH TENSILE	WEIGHT (Kg)	MS. PLATE	WEIGHT
L40X40X3		HL180X180X15		2 THK.	
L40X40X4		HL180X180X16	3977.44	3 THK.	
L40X40X5		HL45X45X4		4 THK.	
L40X40X6		HL45X45X5		5 THK.	107.38
L45X30X4		HL50X50X4	26.44	6 THK.	
L45X30X5		HL50X50X5		8 THK.	
L45X45X4	337.52	HL55X55X4	41.52	10 THK.	
L45X45X3		HL55X55X5		14 THK.	
L45X45X5		HL60X60X4		32 THK.	
L45X45X6		HL60X60X5	29.52	20 THK.	
L50X50X3		HL60X60X6		22 THK.	
L50X50X4	623.52	HL65X65X4			
L50X50X5		HL65X65X5	65.20	TOTAL MS PLT.	107.38
L50X50X6		HL65X65X6			
L55X55X4		HL70X70X5	142.00	HT. PLATE	WEIGHT
L55X55X5		HL70X70X6		H6 THK.	47.04
L55X55X6		HL75X75X5	413.60	H5 THK.	34.08
L55X55X8		HL75X75X6		H8 THK.	10.48
L60X60X4	111.20	HL80X80X6	292.16	H10 THK.	
L60X60X5		HL80X80X5		H12 THK.	
L60X60X6		HL90X90X6		H14 THK.	595.48
L65X65X4		HL90X90X7	94.08	H16 THK.	
L65X65X5		HL90X90X5		H20 THK.	
L65X65X6		HL100X100X6		H18 THK.	
L80X80X5		HL100X100X7			
L70X70X5		HL100X100X8		TOTAL HT PLT.	687.08
L70X70X6		HL100X100X10			
L75X75X5		HL110X110X8	1571.80		
L75X75X6		HL110X110X10			
L80X80X6		HL110X110X9			
L80X80X8					
L90X90X5		HL120X120X8			
L90X90X7		HL120X120X10			
L90X90X8		HL120X120X9			
L100X100X6		HL130X130X14			
L100X100X7		HL130X130X12			
L110X110X10		HL150X150X10			
L150X150X15		HL130X130X15			
L150X150X16		HL130X130X9			
L150X150X20		HL150X150X12			
L200X200X16		HL150X150X14			
L200X200X20		HL110X110X6			
		HL110X110X7	1390.00		
		HL120X120X7			
		HL200X200X12	719.36		
		HL200X200X15			
TOTAL	1072.24	TOTAL	8763.12		
		GRAND TOTAL =	10629.82		