

4. DEFLECTION CHECK:

As per IS 800:2007, following table can be referred for deflection check.

Table 6 Deflection Limits

Type of Building	Deflection	Design Load	Member	Supporting	Maximum Deflection
(1)	(2)	(3)	(4)	(5)	(6)
Industrial Buildings	Vertical	Live load/ Wind load	Columns and Gable	Elastic strutting Batten strutting	Span/150 Span/150
		Live load	Simple span	Elastic strutting Batten strutting	Span/150 Span/150
		Live load	Continuous span	Elastic strutting Batten strutting	Span/150 Span/150
		Live load/ Wind load	Rafter supporting	Fuller/Min. Shearing Purlin Shearing	Span/150 Span/150
		Crane load (Manual operation)	Column	Crane	Span/75
	Crane load (Electric operation up to 50 t)	Column	Crane	Span/75	
	Crane load (Electric operation over 50 t)	Column	Crane	Span/100	
	Lateral	Roof rafter	Column	Elastic strutting Masonry/Brick strutting Chain strutting	Height/150 Height/150 Span/100
		Crane wind	Heavy crane	Relative displacement between rafter supporting crane	Span
		Crane wind	Other cranes	Crane elastic strutting purlin strutting Crane elastic strutting, not supported	Height/100 Height/100
Other Buildings	Vertical	Live load	Floor and Roof	Plaster not susceptible to cracking Elastic susceptible to cracking	Span/300 Span/300
		Live load	Continuous	Plaster not susceptible to cracking Elastic susceptible to cracking	Span/150 Span/150
	Lateral	Wind	Roofing	Elastic strutting Batten strutting	Height/100 Height/100
		Wind	Steel masonry wall	—	Storey height/100

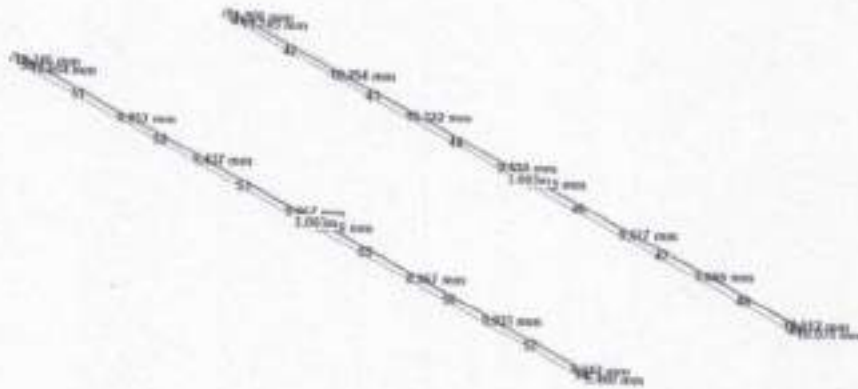
Approved :-

Dr. ISMAIL MOIN
Professor
Dept. of Civil Engineering
F/O Engineering & Technology
Jamia Millia Islamia
New Delhi-110025

Column deflection check:

Maximum deflection in Column = 2.865 mm

Permissible limit for deflection in Column = $1117 / 240 = 4.65 \text{ mm} > 2.865$, Hence OK

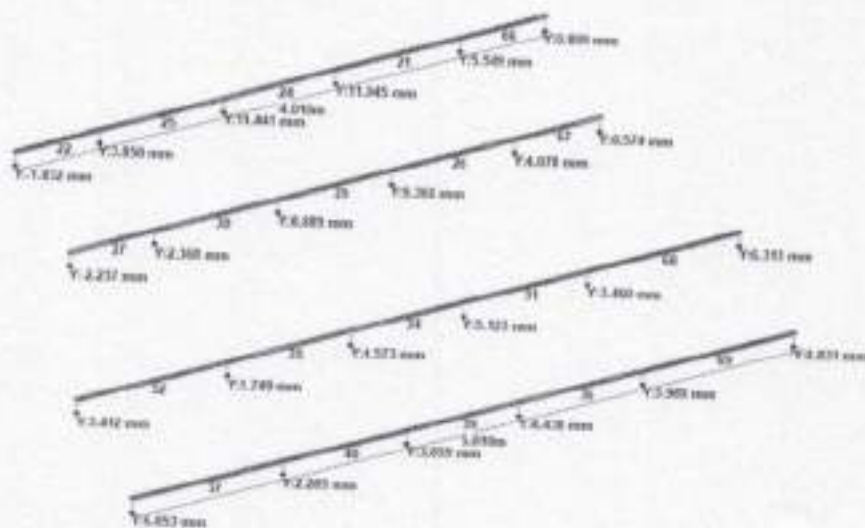
Rafter deflection check:

Maximum deflection in Rafter = 11.906 mm

Permissible limit for deflection in Rafter = $3003 / 180 = 16.683 \text{ mm} > 11.906$, Hence OK

Approved :-
Dr. AHMAD MOJIB
Professor
Dept. of Civil Engineering
F/O Engineering & Technology
Jamia Millia Islamia
New Delhi-110025

Purlin deflection check:



Maximum deflection in Purlin = 11.945 mm

Permissible limit for deflection in Purlin = $4010 / 180 = 22.277 \text{ mm} > 11.945$, Hence OK

5. REACTION SUMMARY:

Node	L/C	Horizontal			Moment		
		F _x kN	F _y kN	F _z kN	M _x kN-m	M _y kN-m	M _z kN-m
3	1 DEAD LOA	0.000	3.753	0.000	-0.404	-0.000	-0.000
2	WRD LOA	-1.536	-0.000	-0.000	-0.000	-0.036	1.764
3	WRD LOA	1.536	0.000	0.000	0.000	0.036	-1.764
4	WRD LOA	-0.000	-16.677	-7.040	-7.491	-0.000	0.000
5	WRD LOA	0.000	16.464	4.951	4.710	0.000	-0.000
6	1 DEAD LO	-1.536	3.753	0.000	-0.404	-0.036	1.764
7	1 DEAD LO	1.536	3.753	0.000	-0.404	0.036	-1.764
8	1 DEAD LO	-0.000	-12.924	-7.049	-7.094	-0.000	0.000
9	1 DEAD LO	0.000	14.217	4.951	4.312	0.000	-0.000
10	1 DEAD L	-1.536	-12.924	-7.049	-7.094	-0.036	1.764
11	1 DEAD L	1.536	-12.924	-7.049	-7.094	0.036	-1.764
12	1 DEAD L	-1.536	14.217	4.951	4.312	-0.036	1.764
13	1 DEAD L	1.536	14.217	4.951	4.312	0.036	-1.764

Approved :-

Dr. KHALID MOJIB
 Professor
 Dept. of Civil Engineering
 FTD Engineering & Technology
 Jamia Millia Islamia
 New Delhi-110025

7. CONCLUSION:

The structure is found to be safe and the maximum utility ratio observed is 0.896. The IS Code referred during analysis is IS 801- Code of practice for use of cold-formed light gauge steel structural members in general building construction, IS 875- Part 3 : Wind Loads and IS 875-Part 1: Dead Loads.

8. STAAD INPUT DATA:

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1 STAAD SPACE DAP INPUT OF PUMP-IMMOBILE.DGN
2 ***** JOB INFORMATION *****
3 BUSINESS DATE 02-Jun-20
4 END JOB INFORMATION
5 INPUT WIDTH 79
6 UNIT SYSTEM KN
7 JOINT COORDINATES
8 1 0 -872.828 -2852.76; 2 0 -872.84 -2852.76; 3 0 -873.945 -2852.76;
9 4 1.26 -872.756 -2852.64; 5 1.26 -872.964 -2852.74; 7 1.26 -872.893 -2852.76;
10 8 1.26 -872.903 -2852.87; 9 1.26 -872.797 -2852.83; 10 1.26 -872.86 -2852.69;
11 11 1.26 -873.13 -2852.84; 12 1.26 -873.018 -2852.8; 13 1.26 -872.837 -2852.81;
14 14 1.26 -872.729 -2852.58; 15 -1.26 -872.756 -2852.64;
16 16 -1.26 -872.964 -2852.74; 17 -1.26 -872.893 -2852.76;
18 18 -1.26 -872.901 -2852.87; 19 -1.26 -872.797 -2852.83;
19 20 -1.26 -872.88 -2852.69; 21 -1.26 -873.13 -2852.84;
22 22 -1.26 -873.028 -2852.8; 23 -1.26 -872.837 -2852.81;
24 -1.26 -872.518 -2852.28; 25 1.26 -872.828 -2852.76;
26 -1.26 -872.828 -2852.76; 27 0 -873.191 -2852.22; 28 0.425 -872.828 -2852.76;
29 29 -0.425 -872.828 -2852.76; 30 1.26 -872.122 -2854; 31 0.425 -872.122 -2854;
32 -1.26 -872.122 -2854; 33 -0.425 -872.122 -2854; 34 -0.425 -872.122 -2854;
35 1.26 -872.488 -2852.22; 37 0.425 -872.488 -2852.22;
38 -1.26 -872.488 -2852.22; 39 -1.485 -872.488 -2852.22;
40 41 -0.425 -872.488 -2852.22; 42 1.26 -872.961 -2852.2;
43 45 0.425 -872.963 -2852.2; 44 -1.26 -872.963 -2852.2;
45 -2.985 -872.963 -2852.2; 47 -0.425 -872.963 -2852.2;
48 1.26 -873.327 -2851.42; 49 0.425 -873.327 -2851.42;
50 -1.26 -873.327 -2851.42; 51 -1.385 -873.327 -2851.42;
52 -0.425 -873.327 -2851.42; 54 1.26 -872.808 -2854.07;
55 1.26 -873.381 -2851.35; 56 -1.26 -872.808 -2854.07;
57 -1.26 -873.381 -2851.35; 58 2.985 -872.122 -2854;
59 2.985 -872.488 -2852.22; 60 2.985 -872.963 -2852.2;
61 2.985 -873.327 -2851.42;
62 MEMBER INCIDENCES
63 1 1 2; 3 1 10; 4 7 9; 5 9 23; 6 11 12; 7 12 6; 8 13 14; 9 15 20; 10 17 19;
64 11 19 26; 12 21 22; 13 22 16; 14 23 10; 15 25 28; 16 1 29; 17 1 27; 18 2 27;
65 19 2 28; 20 1 29; 21 30 33; 22 32 30; 24 31 33; 25 33 32; 26 36 37; 27 38 39;
66 29 37 41; 30 41 38; 31 41 41; 32 44 45; 34 43 47; 35 47 44; 36 48 49; 37 50 51;
67 39 49 53; 40 55 50; 41 54 38; 42 30 14; 43 14 26; 44 36 7; 45 7 5; 46 9 42;
68 47 42 11; 48 11 48; 49 48 55; 50 56 32; 51 32 24; 52 24 58; 53 28 17; 54 17 15;
69 55 15 44; 56 44 31; 57 21 50; 58 50 37; 59 31 37; 60 35 41; 61 43 49; 62 47 53;
70 63 2 3; 64 28 1; 65 29 26; 66 38 10; 67 39 30; 68 60 42; 69 61 48; 70 10 6;
71 9 8; 72 25 30; 73 8 13; 74 6 2; 75 28 14; 76 19 18; 77 26 26; 78 18 23;
79 18 18;
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Approved:-



Dr. KHALID MOIN
Professor
Dept. of Civil Engineering
FAC Engineering & Technology
Jamia Millia Islamia
New Delhi-110025

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43 79 10 10;
44 DEFINE MATERIAL START
45 ISOTROPIC STEEL
46 E 3.05e+008
47 POISSON 0.3
48 DENSITY 78.8199
49 ALPHA 1.2e-005
50 DAMP 0.03
51 TYPE STEEL
52 STRENGTH FY 255300 Fu 407000 RY 1.5 RT 1.2
53 END DEFINE MATERIAL
54 MEMBER PROPERTY INDIAN
55 1 80 TABLE ST PIP1397H
56 MEMBER PROPERTY TATASTRUCTURA
57 15 16 84 85 TABLE ST 3883388K.GSHG
58 MEMBER PROPERTY COLDFORMED INDIAN
59 41 50 TABLE ST 130C360K3.15
60 21 22 24 25 27 29 30 32 34 35 37 39 40 46 48 49 TABLE ST TACS48K2
61 MEMBER PROPERTY TATASTRUCTURA
62 17 TABLE ST 3884K3.2SHG
63 18 TABLE ST 3885K2.9SHG
64 MEMBER PROPERTY COLDFORMED INDIAN
65 8 10 8 12 13 14 15 16 17 18 19 TABLE ST 38C360K3.15
66 MEMBER PROPERTY INDIAN
67 11 26 TABLE ST PIP1397H
68 33 34 35 TABLE ST 2543K3993
69 5 10 5 9 10 11 16 17 21 22 23 24 25 TABLE ST 2543K3993
70 CONSTANTS
71 SETA 100 HOMO 41 50
72 SETA 300 HOMO 21 22 24 25 27 29 30 32 34 35 37 39 40 46 48 49
73 MATERIAL STEEL ALL
74 MEMBER OFFSET
75 21 22 24 25 27 29 30 32 34 35 37 39 40 46 48 49 TO 42 65 TO 69 START @ 0.100 E
76 21 22 24 25 27 29 30 32 34 35 37 39 40 46 48 49 TO 42 65 TO 69 END @ 0.100 E
77 SUPPORTS
78 3 FIXED
79 LOAD 1 LOADTYPE DEAD TITLE DEAD LOAD STRUCTURE
80 SELFWEIGHT Y -1
81 MEMBER LOAD
82 21 22 24 25 27 29 30 32 34 35 37 39 40 46 48 49 UNI BY -0.11
83 LOAD 2 LOADTYPE WIND TITLE WIND LOAD X-
84 MEMBER LOAD
85 1 80 UNI BX 0.010
86 1 4 8 10 12 13 14 15 16 17 18 19 TO 16 70 71 72 73 74 75 76 77 78 79 UNI BX 0.137
87 LOAD 3 LOADTYPE WIND TITLE WIND LOAD X-
88 MEMBER LOAD
89 1 80 UNI BX -0.030

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Approved :-

Dr. FHALID MOH
 Professor
 Dept. of Civil Engineering
 JVO Engineering & Technology
 Jamia Millia Islamia
 New Delhi-110025

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89 1 62 UNI 01 -0.038
90 3 4 6 TO 10 12 TO 14 41 TO 50 70 71 72 TO 78 79 79 UNI 01 -0.137
91 LOAD 4 LOADTYPE WIND TITLE WIND LOAD Z+ UPWARD
92 MEMBER LOAD
93 1 62 UNI 01 0.038
94 19 20 UNI 02 0.0134
95 21 22 24 TO 27 29 TO 31 34 TO 37 39 40 46 TO 49 UNI Y 1.02
96 LOAD 5 LOADTYPE WIND TITLE WIND LOAD Z- DOWNWARD
97 MEMBER LOAD
98 1 62 UNI 02 -0.038
99 19 20 UNI 02 -0.0134
100 21 22 24 TO 27 29 TO 31 34 TO 37 39 40 46 TO 49 UNI Y -0.04
101 LOAD COMB 6 1 DEAD LOAD + 1 WIND LOAD X+
102 1 1.0 1 1.0
103 LOAD COMB 7 1 DEAD LOAD + 1 WIND LOAD X-
104 1 1.0 1 1.0
105 LOAD COMB 8 1 DEAD LOAD + 1 WIND LOAD Z+ UPWARD
106 1 1.0 4 1.0
107 LOAD COMB 9 1 DEAD LOAD + 1 WIND LOAD Z- DOWNWARD
108 1 1.0 5 1.0
109 LOAD COMB 10 1 DEAD LOAD + 1 WIND LOAD X+ + 1 WIND LOAD Z+ UPWARD
110 1 1.0 1 1.0 4 1.0
111 LOAD COMB 11 1 DEAD LOAD + 1 WIND LOAD X+ + 1 WIND LOAD Z- DOWNWARD
112 1 1.0 1 1.0 5 1.0
113 LOAD COMB 12 1 DEAD LOAD + 1 WIND LOAD X- + 1 WIND LOAD Z+ UPWARD
114 1 1.0 4 1.0 1 1.0
115 LOAD COMB 13 1 DEAD LOAD + 1 WIND LOAD X- + 1 WIND LOAD Z- DOWNWARD
116 1 1.0 1 1.0 1 1.0
117 PERFORM ANALYSIS PRINT ALL
118 PARAMETER 1
119 CODE IS01A1
120 PVID 250000 MEMB 1 3 4 9 10 15 TO 20 45 59 TO 65 70 71 75 76
121 NATID 1 MEMB 1 3 4 9 10 15 TO 20 45 59 TO 65 70 71 75 76
122 TRACK 1 MEMB 1 3 4 9 10 15 TO 20 45 59 TO 65 70 71 75 76
123 CHECK CODE MEMB 1 3 4 9 10 15 TO 20 45 59 TO 65 70 71 75 76
124 PARAMETER 2
125 CODE IS081
126 P1 450000 MEMB 6 TO 8 12 TO 14 21 22 24 TO 27 29 TO 31 34 TO 37 39 TO 40 46 -
127 47 TO 49 73 74 78 79
128 PVID 350000 MEMB 6 TO 8 12 TO 14 21 22 24 TO 27 29 TO 31 34 TO 37 39 TO 40 46 -
129 47 TO 49 73 74 78 79
130 NATID 1 MEMB 6 TO 8 12 TO 14 21 22 24 TO 27 29 TO 31 34 TO 37 39 TO 40 46 -
131 47 TO 49 73 74 78 79
132 TRACK 1 MEMB 6 TO 8 12 TO 14 21 22 24 TO 27 29 TO 31 34 TO 37 39 TO 40 46 -
133 47 TO 49 73 74 78 79
134 CHECK CODE MEMB 6 TO 8 12 TO 14 21 22 24 TO 27 29 TO 31 34 TO 37 39 TO 40 46 -
135 47 TO 49 73 74 78 79
136 PARAMETER 3
137 CODE IS001
138 STEEL MEMBER TAKE OFF ALL
139 FINISH

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Approved :-


Dr. KHALID MO'IN
Professor
Dept. of Civil Engineering
F/O Engineering & Technology
Jamia Millia Islamia
New Delhi-110025

9. STAAD OUTPUT:

STAAD.Pro CODE CHECKING - (IS-800:1984) v1.1

ALL UNITS ARE - KN METR (UNLESS OTHERWISE NOTED)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1 ST	PIP1397H		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.582	10
		10.77 C	0.00	5.64	1.01

ALLOWABLE STRESSES FOR MEMB		1	UNIT - MPA		
FCB=163.90 FTE=165.00 FCT=165.00 FTY=165.00		FA=148.06	FV=100.0		

3 ST	ISA50X50X6		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.352	10
		2.50 T	0.24	0.06	0.12

ALLOWABLE STRESSES FOR MEMB		3	UNIT - MPA		
FCB=151.86 FTE=165.00 FCT=165.00 FTY=165.00		FA=150.00	FV=100.0		

4 ST	ISA50X50X6		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.248	11
		1.35 T	0.11	0.08	0.12

ALLOWABLE STRESSES FOR MEMB		4	UNIT - MPA		
FCB=151.86 FTE=165.00 FCT=165.00 FTY=165.00		FA=150.00	FV=100.0		

9 ST	ISA50X50X6		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.352	12
		2.50 T	-0.24	0.06	0.12

ALLOWABLE STRESSES FOR MEMB		9	UNIT - MPA		
FCB=151.86 FTE=165.00 FCT=165.00 FTY=165.00		FA=150.00	FV=100.0		

10 ST	ISA50X50X5		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.248	13
		1.35 T	-0.11	0.08	0.12

ALLOWABLE STRESSES FOR MEMB		10	UNIT - MPA		
FCB=151.86 FTE=165.00 FCT=165.00 FTY=165.00		FA=150.00	FV=100.0		

Approved :-
Dr. KHALID MOIN
Professor
Dept. of Civil Engineering
JVC Engineering & Technology
Jama Milla Islamia
New Delhi-110025

ALL UNITS ARE - KN METRE (UNLESS OTHERWISE NOTED)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
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15 ST	100X100X4.0SHS		(TATA STRUCTURAL SECTIONS)		
		PASS	7.1.2 BEND C	0.259	4
		0.32 T	-1.67	-4.74	0.55

ALLOWABLE STRESSES FOR MEMB	15	UNIT - MPA			
FCE=164.62	FTE=165.00	FCY=165.00	FTY=165.00	FA=150.00	FV=100.0

16 ST	100X100X4.0SHS		(TATA STRUCTURAL SECTIONS)		
		PASS	IS-7.1.1(A)	0.901	4
		12.16 C	-1.60	-4.61	0.81

ALLOWABLE STRESSES FOR MEMB	16	UNIT - MPA			
FCE=163.96	FTE=165.00	FCY=165.00	FTY=165.00	FA=140.18	FV=100.0

17 ST	80X40X3.2SHS		(TATA STRUCTURAL SECTIONS)		
		PASS	IS-7.1.1(A)	0.183	10
		0.83 C	0.01	-0.36	0.00

ALLOWABLE STRESSES FOR MEMB	17	UNIT - MPA			
FCE=156.15	FTE=165.00	FCY=165.00	FTY=165.00	FA=133.65	FV=100.0

18 ST	50X50X2.9SHS		(TATA STRUCTURAL SECTIONS)		
		PASS	IS-7.1.1(A)	0.393	10
		0.71 C	-0.03	0.43	0.00

ALLOWABLE STRESSES FOR MEMB	18	UNIT - MPA			
FCE=160.75	FTE=165.00	FCY=165.00	FTY=165.00	FA=141.69	FV=100.0

19 ST	VIP4206		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.574	11
		16.51 C	0.00	0.11	1.30

ALLOWABLE STRESSES FOR MEMB	19	UNIT - MPA			
FCE=139.97	FTE=165.00	FCY=165.00	FTY=165.00	FA= 87.50	FV=100.0

Dr. KHALID MOIN
Professor
Dept. of Civil Engineering
P.O. Engineering & Technology
Suresh Mittal Institute
New Delhi-110025

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MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MS	LOADING/ LOCATION
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20 ST PIP424H

(INDIAN SECTIONS)

PASS	IS-7.1.1(A)	0.674	13
16.51 C	0.00	0.11	1.30

ALLOWABLE STRESSES FOR MEMB	20	UNIT - MPA
FCD=139.97 FTE=165.00 FCY=165.00 FTY=165.00 FA= 87.50 FV=100.0		

45 ST 120CS60X3.15

(IS COLDFORMED SECTIONS)

PASS	IS-7.1.1(A)	0.390	10
11.78 C	0.25	0.72	0.15

ALLOWABLE STRESSES FOR MEMB	45	UNIT - MPA
FCD=164.92 FTE=165.00 FCY=165.00 FTY=165.00 FA=149.91 FV=100.0		

59 ST ISA35X35X3

(INDIAN SECTIONS)

PASS	IS-7.1.1(A)	0.137	10
0.00 C	0.03	0.00	0.00

ALLOWABLE STRESSES FOR MEMB	59	UNIT - MPA
FCD=112.90 FTE=165.00 FCY=165.00 FTY=165.00 FA= 59.00 FV=100.0		

60 ST ISA35X35X3

(INDIAN SECTIONS)

PASS	IS-7.1.1(A)	0.137	12
0.00 C	-0.03	0.00	0.00

ALLOWABLE STRESSES FOR MEMB	60	UNIT - MPA
FCD=112.90 FTE=165.00 FCY=165.00 FTY=165.00 FA= 59.00 FV=100.0		

61 ST ISA35X35X3

(INDIAN SECTIONS)

PASS	IS-7.1.1(A)	0.131	12
0.01 C	0.03	0.00	0.00

ALLOWABLE STRESSES FOR MEMB	61	UNIT - MPA
FCD=112.90 FTE=165.00 FCY=165.00 FTY=165.00 FA= 59.00 FV=100.0		

DXF IMPORT OF PUMP-10MODULE.DXF

-- PAGE NO. 21

ALL UNITS ARE - KN METRE (UNLESS OTHERWISE NOTED)

Approved :-

 Dr. KHALID MOIN
 Professor
 Dept. of Civil Engineering
 P/O Engineering & Technology
 Jamia Millia Islamia
 New Delhi - 110025

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MS	LOADING/ LOCATION
62 ST	ISA38X35X3		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.131	10
		0.01 C	-0.03	0.00	0.00

ALLOWABLE STRESSES FOR MEMB		62	UNIT - MPA		
FCE=112.90	FTE=165.00	FCY=165.00	FTY=165.00	FA= 59.00	FV=100.0

63 ST	PIP1397H		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.704	10
		12.92 T	0.00	8.09	0.10

ALLOWABLE STRESSES FOR MEMB		63	UNIT - MPA		
FCE=164.97	FTE=165.00	FCY=165.00	FTY=165.00	FA=150.00	FV=100.0

64 ST	100X100X4.0SHS		(TATA STRUCTURA SECTIONS)		
		PASS	IS-7.1.1(A)	0.901	4
		12.16 C	-1.68	-4.61	0.00

ALLOWABLE STRESSES FOR MEMB		64	UNIT - MPA		
FCE=163.96	FTE=165.00	FCY=165.00	FTY=165.00	FA=148.18	FV=100.0

65 ST	100X100X4.0SES		(TATA STRUCTURA SECTIONS)		
		PASS	7.1.2 BEND C	0.859	4
		0.32 T	-1.67	-4.74	0.00

ALLOWABLE STRESSES FOR MEMB		65	UNIT - MPA		
FCE=164.62	FTE=165.00	FCY=165.00	FTY=165.00	FA=150.00	FV=100.0

70 ST	ISA50X50X6		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.209	4
		4.90 C	0.16	-0.06	0.00

ALLOWABLE STRESSES FOR MEMB		70	UNIT - MPA		
FCE=151.86	FTE=165.00	FCY=165.00	FTY=165.00	FA=149.61	FV=100.0

DXF IMPORT OF PUMP-10MODULE.DXF					

ALL UNITS ARE - KN METE (UNLESS OTHERWISE NOTED)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MS	LOADING/ LOCATION
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Approved :-
[Signature]

Dr. KHALID MOIN
Professor
Dept. of Civil Engineering
FJO Engineering & Technology
Sector 22, Faridkot
New Delhi-110025

71 ST ISA50X50X6		(INDIAN SECTIONS)		
PASS	IS-7.1.1(A)	0.345	12	
1.84 C	-0.19	0.07	0.00	

ALLOWABLE STRESSES FOR MEMB 71		UNIT - MPA		
FCE=151.88	FTZ=165.00	FCY=165.00	FTY=165.00	FA=149.65 FV=100.0

75 ST ISA50X50X6		(INDIAN SECTIONS)		
PASS	IS-7.1.1(A)	0.209	4	
4.90 C	-0.16	-0.06	0.00	

ALLOWABLE STRESSES FOR MEMB 75		UNIT - MPA		
FCE=151.86	FTZ=165.00	FCY=165.00	FTY=165.00	FA=149.61 FV=100.0


76 ST ISA50X50X6		(INDIAN SECTIONS)		
PASS	IS-7.1.1(A)	0.345	10	
1.84 C	0.19	0.07	0.00	

ALLOWABLE STRESSES FOR MEMB 76		UNIT - MPA		
FCE=151.88	FTZ=165.00	FCY=165.00	FTY=165.00	FA=149.65 FV=100.0

***** END OF TABULATED RESULT OF DESIGN *****

- 124. PARAMETER 2
- 125. CODE ISS01
- 126. FU 450000 MEMB 6 TO 8 12 TO 14 21 22 24 TO 27 29 TO 32 34 TO 37 39 TO 58 66 -
- 127. 67 TO 69 73 74 78 79
- 128. FTLG 350000 MEMB 6 TO 8 12 TO 14 21 22 24 TO 27 29 TO 32 34 TO 37 39 TO 58 -
- 129. 66 TO 69 73 74 78 79
- 130. RATIO 1 MEMB 6 TO 8 12 TO 14 21 22 24 TO 27 29 TO 32 34 TO 37 39 TO 58 66 -
- 131. 67 TO 69 73 74 78 79
- 132. TRACK 1 MEMB 6 TO 8 12 TO 14 21 22 24 TO 27 29 TO 32 34 TO 37 39 TO 58 66 -
- 133. 67 TO 69 73 74 78 79
- 134. CHECK CODE MEMB 6 TO 8 12 TO 14 21 22 24 TO 27 29 TO 32 34 TO 37 39 TO 58 -
- DXF IMPORT OF PUMP-10MODULE.DXF -- PAGE NO. 23
- 135. 66 TO 69 73 74 78 79
- DXF IMPORT OF PUMP-10MODULE.DXF -- PAGE NO. 24

STAAD.Pro CODE CHECKING - (IS-800:1984) v1.1

Approved :-

 Dr. KHALID MOHY
 Professor
 Dept. of Civil Engineering
 VJO Engineering & Technology
 Gurgaon, Haryana
 New Delhi-110025

UNITS : MM, KN, KMM, MPA

MEMBER# 6 SECTION: 90CS40X3.15 LEN: 766.83 GOV.LOC: 0.00
STATUS: PASS RATIO = 0.177 GOV.MODE: Bend + Compress GOV.LOAD: 13
RESISTANCES: AX.TENS: 0.00 COMPRESS: 101.21
BEND. Z: 3.18 BEND. Y: 0.00 SHEAR Z: 21.38 SHEAR Y: 32.74

UNITS : MM, KN, KMM, MPA

MEMBER# 7 SECTION: 90CS40X3.15 LEN: 154.02 GOV.LOC: 154.02
STATUS: PASS RATIO = 0.238 GOV.MODE: Bend + Compress GOV.LOAD: 13
RESISTANCES: AX.TENS: 0.00 COMPRESS: 107.12
BEND. Z: 3.18 BEND. Y: 0.00 SHEAR Z: 21.38 SHEAR Y: 32.74

UNITS : MM, KN, KMM, MPA

MEMBER# 8 SECTION: 90CS40X3.15 LEN: 770.31 GOV.LOC: 770.31
STATUS: PASS RATIO = 0.176 GOV.MODE: Bend + Compress GOV.LOAD: 13
RESISTANCES: AX.TENS: 0.00 COMPRESS: 101.16
BEND. Z: 3.18 BEND. Y: 0.00 SHEAR Z: 21.38 SHEAR Y: 32.74

UNITS : MM, KN, KMM, MPA

MEMBER# 12 SECTION: 90CS40X3.15 LEN: 766.83 GOV.LOC: 0.00
STATUS: PASS RATIO = 0.177 GOV.MODE: Bend + Compress GOV.LOAD: 11
RESISTANCES: AX.TENS: 0.00 COMPRESS: 101.21
BEND. Z: 3.18 BEND. Y: 0.00 SHEAR Z: 21.38 SHEAR Y: 32.74

DXF IMPORT OF FUNF-10MODULE.DXF

-- PAGE NO. 25

UNITS : MM, KN, KMM, MPA

MEMBER# 13 SECTION: 90CS40X3.15 LEN: 154.02 GOV.LOC: 154.02
STATUS: PASS RATIO = 0.238 GOV.MODE: Bend + Compress GOV.LOAD: 13

Approved:
Dr. KHALID MOJIB
Professor
Dept. of Civil Engineering
Feroz Engineering & Technology
Jamia Millia Islamia
New Delhi-110025

RESISTANCES: AX.TENS: 0.00 COMPRESS: 107.12
BEND. Z: 3.18 BEND. Y: 0.00 SHEAR Z: 21.38 SHEAR Y: 32.74

UNITS : MM, KN, KMM, MPA

MEMBER# 14 SECTION: 90CS40X3.15 LEN: 770.31 GOV.LOC: 770.31
STATUS: PASS RATIO = 0.176 GOV.MODE: Bend + Compress GOV.LOAD: 11

RESISTANCES: AX.TENS: 0.00 COMPRESS: 101.16
BEND. Z: 3.18 BEND. Y: 0.00 SHEAR Z: 21.38 SHEAR Y: 32.74

UNITS : MM, KN, KMM, MPA

MEMBER# 21 SECTION: 70CS40X2 LEN: 935.00 GOV.LOC: 935.00
STATUS: PASS RATIO = 0.423 GOV.MODE: Bend + Compress GOV.LOAD: 4

RESISTANCES: AX.TENS: 0.00 COMPRESS: 45.05
BEND. Z: 1.52 BEND. Y: 0.00 SHEAR Z: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 22 SECTION: 70CS40X2 LEN: 645.00 GOV.LOC: 0.00
STATUS: PASS RATIO = 0.145 GOV.MODE: Bend Z + Shear GOV.LOAD: 4

RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00
BEND. Z: 1.52 BEND. Y: 0.00 SHEAR Z: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 24 SECTION: 70CS40X2 LEN: 850.00 GOV.LOC: 425.00
STATUS: PASS RATIO = 0.483 GOV.MODE: Bend + Compress GOV.LOAD: 4

RESISTANCES: AX.TENS: 0.00 COMPRESS: 45.69
BEND. Z: 1.52 BEND. Y: 0.00 SHEAR Z: 0.00 SHEAR Y: 0.00

DXF IMPORT OF PIMP-10MODULE.DXF

-- PAGE NO. 26

Approved >

Dr. KHALID MOIN
Professor
Dept. of Civil Engineering
I/O Engineering & Technology
Jamia Millia Islamia
New Delhi-110025

UNITS : MM, KN, KMM, MPA

MEMBER# 25 SECTION: 70CS40X2 LEN: 935.00 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.423 GOV.MODE: Bend + Compress GOV.LOAD: 4

RESISTANCES: AX.TENS: 0.00 COMPRESS: 45.05
 BEND. Z: 1.52 BEND. Y: 0.00 SHEAR Z: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 26 SECTION: 70CS40X2 LEN: 935.00 GOV.LOC: 935.00
 STATUS: PASS RATIO = 0.375 GOV.MODE: Bend Z + Shear GOV.LOAD: 4

RESISTANCES: AX.TENS: 59.36 COMPRESS: 0.00
 BEND. Z: 1.52 BEND. Y: 0.00 SHEAR Z: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 27 SECTION: 70CS40X2 LEN: 645.00 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.145 GOV.MODE: Bend Z + Shear GOV.LOAD: 4

RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00
 BEND. Z: 1.52 BEND. Y: 0.00 SHEAR Z: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 29 SECTION: 70CS40X2 LEN: 850.00 GOV.LOC: 425.00
 STATUS: PASS RATIO = 0.435 GOV.MODE: Bending Z GOV.LOAD: 4

RESISTANCES: AX.TENS: 69.36 COMPRESS: 0.00
 BEND. Z: 1.52 BEND. Y: 0.00 SHEAR Z: 0.00 SHEAR Y: 0.00

DXF IMPORT OF PUMP-10MODULE.DXF

-- PAGE NO. 27

UNITS : MM, KN, KMM, MPA

MEMBER# 30 SECTION: 70CS40X2 LEN: 935.00 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.375 GOV.MODE: Bend Z + Shear GOV.LOAD: 4

Dr. KHALID MOIN
 Professor
 Dept. of Civil Engineering
 JNU Engineering & Technology
 Jamia Millia Islamia
 New Delhi-110025

RESISTANCES: AX.TENS: 69.36 COMPRESS: 0.00
 BEND. Z: 1.52 BEND. Y: 0.00 SHEAR X: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 31 SECTION: 70C840X2 LEN: 935.00 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.405 GOV.MODE: Bend + Compress GOV.LOAD: 4
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 45.05
 BEND. Z: 1.52 BEND. Y: 0.00 SHEAR X: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 32 SECTION: 70C840X2 LEN: 1145.00 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.445 GOV.MODE: Bend + Shear GOV.LOAD: 4
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00
 BEND. Z: 1.52 BEND. Y: 0.00 SHEAR X: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 34 SECTION: 70C840X2 LEN: 850.00 GOV.LOC: 425.00
 STATUS: PASS RATIO = 0.254 GOV.MODE: Bend + Compress GOV.LOAD: 4
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 45.69
 BEND. Z: 1.50 BEND. Y: 0.00 SHEAR X: 0.00 SHEAR Y: 0.00

UNITS : MM, KN, KMM, MPA

MEMBER# 35 SECTION: 70C840X2 LEN: 935.00 GOV.LOC: 935.00
 STATUS: PASS RATIO = 0.405 GOV.MODE: Bend + Compress GOV.LOAD: 4
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 45.05
 BEND. Z: 1.52 BEND. Y: 0.00 SHEAR X: 16.80 SHEAR Y: 16.80

DXF IMPORT OF PUMP-10MODULE.DXF

-- PAGE NO 1028 ved :-

DR. RAJESH KUMAR
 Professor
 Dept. of Civil Engineering
 P/O Engineering & Technology
 Jamia Millia Islamia
 New Delhi-110025

UNITS : MM, KN, KMM, MPA

MEMBER# 36 SECTION: 70C840X2 LEN: 935.00 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.463 GOV.MODE: Bending Z GOV.LOAD: 4

RESISTANCES: AX.TENS: 69.36 COMPRESS: 0.00
 BEND. Z: 1.46 BEND. Y: 0.00 SHEAR Z: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 37 SECTION: 70C840X2 LEN: 1145.00 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.445 GOV.MODE: Bend Z + Shear GOV.LOAD: 4

RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00
 BEND. Z: 1.52 BEND. Y: 0.00 SHEAR Z: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 39 SECTION: 70C840X2 LEN: 850.00 GOV.LOC: 425.00
 STATUS: PASS RATIO = 0.176 GOV.MODE: Bending Z GOV.LOAD: 4

RESISTANCES: AX.TENS: 69.36 COMPRESS: 0.00
 BEND. Z: 1.52 BEND. Y: 0.00 SHEAR Z: 0.00 SHEAR Y: 0.00

UNITS : MM, KN, KMM, MPA

MEMBER# 40 SECTION: 70C840X2 LEN: 935.00 GOV.LOC: 935.00
 STATUS: PASS RATIO = 0.463 GOV.MODE: Bending Z GOV.LOAD: 4

RESISTANCES: AX.TENS: 69.36 COMPRESS: 0.00
 BEND. Z: 1.46 BEND. Y: 0.00 SHEAR Z: 16.80 SHEAR Y: 16.80

DXF IMPORT OF PUMP-10MODEL.DXF

-- PAGE NO. 29

UNITS : MM, KN, KMM, MPA

MEMBER# 41 SECTION: 120C860E3.15 LEN: 77.86 GOV.LOC:

Approved :-

 Dr. KHALID MOW
 Professor
 Dept. of Civil Engineering
 FIO Engineering & Technology
 Jinnah Mills, Islamabad
 New Cell-116325

| STATUS: PASS RATIO = 0.000 GOV.MODE: Bend Y + Shear GOV.LOAD: 2 |
 | RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00 |
 | BEND. Z: 0.00 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97 |

UNITS : MM, KN, KMM, MPA

| MEMBER# 42 SECTION: 120CS60X3.15 LEN: 463.81 GOV.LOC: 463.81 |
 | STATUS: PASS RATIO = 0.170 GOV.MODE: Bend Z + Shear GOV.LOAD: 4 |
 | RESISTANCES: AX.TENS: 169.72 COMPRESS: 0.00 |
 | BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97 |

UNITS : MM, KN, KMM, MPA

| MEMBER# 43 SECTION: 120CS60X3.15 LEN: 396.81 GOV.LOC: 0.00 |
 | STATUS: PASS RATIO = 0.214 GOV.MODE: Bend + Compress GOV.LOAD: 4 |
 | RESISTANCES: AX.TENS: 0.00 COMPRESS: 123.01 |
 | BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97 |

UNITS : MM, KN, KMM, MPA

| MEMBER# 44 SECTION: 120CS60X3.15 LEN: 486.39 GOV.LOC: 486.39 |
 | STATUS: PASS RATIO = 0.207 GOV.MODE: Bend + Compress GOV.LOAD: 4 |
 | RESISTANCES: AX.TENS: 0.00 COMPRESS: 122.66 |
 | BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97 |


UNITS : MM, KN, KMM, MPA

| MEMBER# 45 SECTION: 120CS60X3.15 LEN: 153.43 GOV.LOC: 153.43 |
 | STATUS: PASS RATIO = 0.250 GOV.MODE: Bend + Compress GOV.LOAD: 4 |
 | RESISTANCES: AX.TENS: 0.00 COMPRESS: 123.61 |
 | BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97 |

DXF IMPORT OF PDSG-10.MIDDLE.DXF

-- PAGE NO. 30

Approved :


 Dr. KHALID MOIN
 Professor
 Dept. of Civil Engineering
 P.T.O Engineering & Technology
 Jamia Millia Islamia
 New Delhi-110025

UNITS : MM, KN, KMM, MPA

MEMBER# 46 SECTION: 120CS60X3.15 LEN: 486.39 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.248 GOV.MODE: Bend + Compress GOV.LOAD: 4

RESISTANCES: AX.TENS: 0.00 COMPRESS: 122.66
 BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

UNITS : MM, KN, KMM, MPA

MEMBER# 47 SECTION: 120CS60X3.15 LEN: 396.81 GOV.LOC: 396.81
 STATUS: PASS RATIO = 0.223 GOV.MODE: Bend + Compress GOV.LOAD: 4

RESISTANCES: AX.TENS: 0.00 COMPRESS: 123.01
 BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

UNITS : MM, KN, KMM, MPA

MEMBER# 48 SECTION: 120CS60X3.15 LEN: 463.81 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.178 GOV.MODE: Bend Z + Shear GOV.LOAD: 4

RESISTANCES: AX.TENS: 169.72 COMPRESS: 0.00
 BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

UNITS : MM, KN, KMM, MPA


MEMBER# 49 SECTION: 120CS60X3.15 LEN: 77.86 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.000 GOV.MODE: Bend Y + Shear GOV.LOAD: 2

RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00
 BEND. Z: 0.00 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

DEF IMPORT OF PUMP-10MODULE.DXF

-- PAGE NO. 31

UNITS : MM, KN, KMM, MPA

Approved :-

 Dr. KHALID MOHI
 Professor
 Dept. of Civil Engineering
 IIT Engineering & Technology
 Jhansi Road, Gurgaon
 New Delhi-110025

MEMBER# 50 SECTION: 120CS60X3.15 LEN: 77.86 GOV.LOC: 77.86
 STATUS: PASS RATIO = 0.000 GOV.MODE: Bend Y + Shear GOV.LOAD: 2
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00
 BEND. Z: 0.00 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

UNITS : MM, KN, KMM, MPA

MEMBER# 51 SECTION: 120CS60X3.15 LEN: 463.81 GOV.LOC: 463.81
 STATUS: PASS RATIO = 0.170 GOV.MODE: Bend Z + Shear GOV.LOAD: 4
 RESISTANCES: AX.TENS: 169.72 COMPRESS: 0.00
 BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

UNITS : MM, KN, KMM, MPA

MEMBER# 52 SECTION: 120CS60X3.15 LEN: 396.81 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.214 GOV.MODE: Bend + Compress GOV.LOAD: 4
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 123.01
 BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

UNITS : MM, KN, KMM, MPA

MEMBER# 53 SECTION: 120CS60X3.15 LEN: 486.39 GOV.LOC: 486.39
 STATUS: PASS RATIO = 0.207 GOV.MODE: Bend + Compress GOV.LOAD: 4
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 122.66
 BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

UNITS : MM, KN, KMM, MPA

MEMBER# 54 SECTION: 120CS60X3.15 LEN: 153.43 GOV.LOC: 153.43
 STATUS: PASS RATIO = 0.250 GOV.MODE: Bend + Compress GOV.LOAD: 4
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 123.61
 BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

DXF IMPORT OF PUMP-10MODULE.DXF

-- PAGE NO. 32

Dr. KHALID MOIN
 Professor
 Dept. of Civil Engineering
 PVO Engineering & Technology
 Jangra Buzurg, Jalandhar
 New Delhi-110025

UNITS : MM, KN, KMM, MPA

MEMBER# 55 SECTION: 120CS60X3.15 LEN: 486.39 GOV.LOC: 0.00
STATUS: PASS RATIO = 0.248 GOV.MODE: Bend + Compress GOV.LOAD: 4
RESISTANCES: AX.TENS: 0.00 COMPRESS: 122.66
BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

UNITS : MM, KN, KMM, MPA

MEMBER# 56 SECTION: 120CS60X3.15 LEN: 396.01 GOV.LOC: 396.81
STATUS: PASS RATIO = 0.225 GOV.MODE: Bend + Compress GOV.LOAD: 4
RESISTANCES: AX.TENS: 0.00 COMPRESS: 123.01
BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

UNITS : MM, KN, KMM, MPA

MEMBER# 57 SECTION: 120CS60X3.15 LEN: 463.81 GOV.LOC: 0.00
STATUS: PASS RATIO = 0.178 GOV.MODE: Bend Z + Shear GOV.LOAD: 4
RESISTANCES: AX.TENS: 169.72 COMPRESS: 0.00
BEND. Z: 6.32 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

UNITS : MM, KN, KMM, MPA

MEMBER# 58 SECTION: 120CS60X3.15 LEN: 77.86 GOV.LOC: 0.00
STATUS: PASS RATIO = 0.000 GOV.MODE: Bend Y + Shear GOV.LOAD: 2
RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00
BEND. Z: 0.00 BEND. Y: 0.00 SHEAR Z: 39.02 SHEAR Y: 45.97

DXF IMPORT OF PUMP-10MODULE.DXF

--- PAGE NO. 33

UNITS : MM, KN, KMM, MPA

Dr. KHALID MOJIB
Professor
Dept. of Civil Engineering
F/O Engineering & Technology
Jamia Millia Islamia
New Delhi-110025

MEMBER# 66 SECTION: 70CS40X2 LEN: 645.00 GOV.LOC: 645.00
 STATUS: PASS RATIO = 0.145 GOV.MODE: Bend X + Shear GOV.LOAD: 4
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00
 BEND. X: 1.52 BEND. Y: 0.00 SHEAR X: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 57 SECTION: 70CS40X2 LEN: 645.00 GOV.LOC: 645.00
 STATUS: PASS RATIO = 0.145 GOV.MODE: Bend X + Shear GOV.LOAD: 4
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00
 BEND. X: 1.52 BEND. Y: 0.00 SHEAR X: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 68 SECTION: 70CS40X2 LEN: 1145.00 GOV.LOC: 1145.00
 STATUS: PASS RATIO = 0.445 GOV.MODE: Bend X + Shear GOV.LOAD: 4
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00
 BEND. X: 1.52 BEND. Y: 0.00 SHEAR X: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 69 SECTION: 70CS40X2 LEN: 1145.00 GOV.LOC: 1145.00
 STATUS: PASS RATIO = 0.445 GOV.MODE: Bend X + Shear GOV.LOAD: 4
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 0.00
 BEND. X: 1.52 BEND. Y: 0.00 SHEAR X: 16.80 SHEAR Y: 16.80

UNITS : MM, KN, KMM, MPA

MEMBER# 73 SECTION: 90CS40X2.15 LEN: 153.84 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.202 GOV.MODE: Bend + Compress GOV.LOAD: 13
 RESISTANCES: AX.TENS: 0.00 COMPRESS: 107.12
 BEND. X: 3.18 BEND. Y: 0.00 SHEAR X: 21.38 SHEAR Y: 32.74

DEF IMPORT OF FEM-10MODULE.DXF

-- PAGE NO. 33

Dr. RAJALIO MOW
 Professor
 Dept. of Civil Engineering
 FTD Engineering & Technology
 Jomo Sison Island
 New Davao-110025

UNITS : MM, KN, KMM, MPA

MEMBER# 74 SECTION: 90CS40X3.15 LEN: 144.44 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.234 GOV.MODE: Bend + Compress GOV.LOAD: 13

RESISTANCES: AX.TENS: 0.00 COMPRESS: 107.15
 BEND. Z: 3.18 BEND. Y: 0.00 SHEAR Z: 21.38 SHEAR Y: 32.74

UNITS : MM, KN, KMM, MPA

MEMBER# 78 SECTION: 90CS40X3.15 LEN: 153.84 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.202 GOV.MODE: Bend + Compress GOV.LOAD: 11

RESISTANCES: AX.TENS: 0.00 COMPRESS: 107.12
 BEND. Z: 3.18 BEND. Y: 0.00 SHEAR Z: 21.38 SHEAR Y: 32.74

UNITS : MM, KN, KMM, MPA

MEMBER# 79 SECTION: 90CS40X3.15 LEN: 144.44 GOV.LOC: 0.00
 STATUS: PASS RATIO = 0.234 GOV.MODE: Bend + Compress GOV.LOAD: 11

RESISTANCES: AX.TENS: 0.00 COMPRESS: 107.15
 BEND. Z: 3.18 BEND. Y: 0.00 SHEAR Z: 21.38 SHEAR Y: 32.74

DXF IMPORT OF PUMP-10MODULE.DXF

-- PAGE NO. 35

136. PARAMETER 3
 137. CODE IS801
 138. STEEL MEMBER TAKE OFF ALL
 DXF IMPORT OF PUMP-10MODULE.DXF

-- PAGE NO. 36

STEEL TAKE-OFF

PROFILE	LENGTH (METS)	WEIGHT (KN)
ST DIP1397H	1.12	0.196

Approved :-



Dr. ISMAIL MOHAMMAD
 Professor
 Dept. of Civil Engineering
 P/O Engineering & Technology
 Jamia Millia Islamia
 New Delhi-110025

ST	ISA50X50X6	1.22	0.053
ST	90CS40X3.15	3.98	0.180
ST	100X100X4.0SHS	2.72	0.312
ST	80X40X3.2RHS	0.77	0.042
ST	50X50X2.9SHS	0.69	0.028
ST	PIP424M	2.59	0.074
ST	70CS40X2	18.04	0.458
ST	120CS60X3.15	6.01	0.373
ST	ISA35X35X3	3.44	0.054

TOTAL = 1.769

MEMBER	PROFILE	LENGTH (METER)	WEIGHT (KN)
1	ST PIP1397M	1.01	0.177
3	ST ISA50X50X6	0.12	0.005
4	ST ISA50X50X6	0.12	0.005
5	ST ISA50X50X6	0.08	0.003
6	ST 90CS40X3.15	0.77	0.035
7	ST 90CS40X3.15	0.15	0.007
8	ST 90CS40X3.15	0.77	0.035
9	ST ISA50X50X6	0.12	0.005
10	ST ISA50X50X6	0.12	0.005
11	ST ISA50X50X6	0.08	0.003
12	ST 90CS40X3.15	0.77	0.035
13	ST 90CS40X3.15	0.15	0.007
14	ST 90CS40X3.15	0.77	0.035
15	ST 100X100X4.0SHS	0.55	0.053
16	ST 100X100X4.0SHS	0.81	0.093
17	ST 80X40X3.2RHS	0.77	0.042
18	ST 50X50X2.9SHS	0.69	0.028
19	ST PIP424M	1.39	0.037
20	ST PIP424M	1.30	0.037
21	ST 70CS40X2	0.94	0.024
22	ST 70CS40X2	0.65	0.016
24	ST 70CS40X2	0.85	0.022
25	ST 70CS40X2	0.94	0.024
26	ST 70CS40X2	0.94	0.024
27	ST 70CS40X2	0.65	0.016
29	ST 70CS40X2	0.85	0.022
30	ST 70CS40X2	0.94	0.024
31	ST 70CS40X2	0.94	0.024
32	ST 70CS40X2	1.14	0.029
34	ST 70CS40X2	0.85	0.022
35	ST 70CS40X2	0.94	0.024
DXF IMPORT OF RING-10MCOULE.DXF			
36	ST 70CS40X2	0.94	0.024

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Approved :-
Dr. KHALID MOIN
Professor
Dept. of Civil Engineering
FIC Engineering & Technology
Jamia Millia Islamia
New Delhi-110025

37	ST 70C840X2	1.14	0.029
39	ST 70C840X2	0.65	0.022
40	ST 70C840X2	0.94	0.024
41	ST 120C860X3.15	0.08	0.005
42	ST 120C860X3.15	0.46	0.029
43	ST 120C860X3.15	0.40	0.025
44	ST 120C860X3.15	0.49	0.030
45	ST 120C860X3.15	0.15	0.010
46	ST 120C860X3.15	0.49	0.030
47	ST 120C860X3.15	0.40	0.025
48	ST 120C860X3.15	0.46	0.029
49	ST 120C860X3.15	0.08	0.005
50	ST 120C860X3.15	0.08	0.005
51	ST 120C860X3.15	0.46	0.029
52	ST 120C860X3.15	0.40	0.025
53	ST 120C860X3.15	0.49	0.030
54	ST 120C860X3.15	0.15	0.010
55	ST 120C860X3.15	0.49	0.030
56	ST 120C860X3.15	0.40	0.025
57	ST 120C860X3.15	0.46	0.029
58	ST 120C860X3.15	0.08	0.005
59	ST ISA35X35X3	0.86	0.013
60	ST ISA35X35X3	0.86	0.013
61	ST ISA35X35X3	0.86	0.013
62	ST ISA35X35X3	0.86	0.013
63	ST DIP1397H	0.10	0.018
64	ST 100X100X4.0888	0.81	0.093
65	ST 100X100X4.0888	0.55	0.063
66	ST 70C840X2	0.65	0.016
67	ST 70C840X2	0.65	0.016
68	ST 70C840X2	1.14	0.029
69	ST 70C840X2	1.14	0.029
70	ST ISA50X50X6	0.12	0.005
71	ST ISA50X50X6	0.11	0.005
72	ST ISA50X50X6	0.08	0.003
73	ST 90C840X3.15	0.15	0.007
74	ST 90C840X3.15	0.14	0.007
75	ST ISA50X50X6	0.12	0.005
76	ST ISA50X50X6	0.11	0.005
77	ST ISA50X50X6	0.08	0.003
78	ST 90C840X3.15	0.15	0.007
79	ST 90C840X3.15	0.14	0.007

TOTAL = 1.769

***** END OF DATA FROM INTERNAL STORAGE *****

139. FINISH

Approved :-

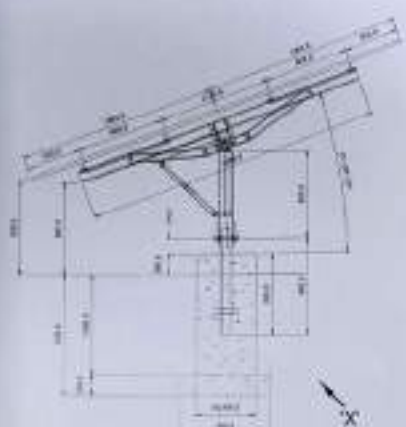


Dr. KHALID MOHD
Professor
Dept. of Civil Engineering
IITD Engineering & Technology
Jamia Millia Islamia
New Delhi-110025

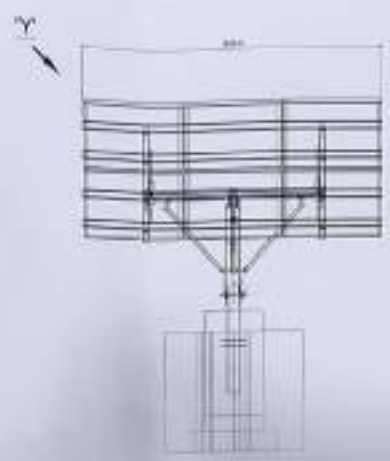
SOLAR PUMP - 6 MODULE						Drawing No.			SEPL/VT/PO2302021/M01				
SR NO	QTY	ITEM NAME	SIZE DETAILS	PARTS DETAIL	UNIT QUANTIFICATION	UNIT PRICE	UNIT IN QUANTITY	QTY	UNIT PRICE	UNIT WEIGHT	UNIT WEIGHT		
1	1	OFFSHOULDER PIP	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	COUPLER (UPPER PIP)	1200 (47.24)	300.00	1	300.00	11.20	11.20	31.61		
2	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	FLANGE (UPPER)	1200 (47.24)	400.00	1	400.00	3.10	3.10			
3	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
4	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
5	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
6	1	COVER COLUMN MOUNT	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	COVER COLUMN PIP	1200 (47.24)	700.00	1	700.00	3.20	3.20	14.61		
7	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
8	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
9	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
10	1	MOTOR ASSEMBLY	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	MOTOR	1200 (47.24)	700.00	1	700.00	3.20	3.20	31.81		
11	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
12	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
13	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
14	1	WELD ASSEMBLY	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10	14.64		
15	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
16	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
17	1	WELD ASSEMBLY	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10	14.64		
18	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED FLANGE	1200 (47.24)	400.00	1	400.00	3.10	3.10			
19	1	PUMP HEAD	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	PUMP HEAD	1200 (47.24)	700.00	1	700.00	3.20	3.20	14.64		
20	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	PUMP HEAD	1200 (47.24)	700.00	1	700.00	3.20	3.20			
21	1	SAS WELD	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	SAS WELD	1200 (47.24)	700.00	1	700.00	3.20	3.20	14.64		
22	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	SAS WELD	1200 (47.24)	700.00	1	700.00	3.20	3.20			
23	1	WELDED COVER BRACKET	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20	14.64		
24	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20			
25	1	WELDED COVER BRACKET	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20	14.64		
26	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20			
27	1	WELDED COVER BRACKET	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20	14.64		
28	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20			
29	1	WELDED COVER BRACKET	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20	14.64		
30	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20			
31	1	WELDED COVER BRACKET	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20	14.64		
32	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20			
33	1	WELDED COVER BRACKET	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20	14.64		
34	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20			
35	1	WELDED COVER BRACKET	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20	14.64		
36	1		Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)	WELDED COVER BRACKET	1200 (47.24)	700.00	1	700.00	3.20	3.20			
TOTAL WEIGHT											122.2	146.368	146.368

WELDING METHOD		
SR NO	QTY	DETAILS
1	11	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24) SPRING WELDED, FLANGE WELDED Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)
2	18	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24) SPRING WELDED, FLANGE WELDED Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)
3	4	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24) SPRING WELDED, FLANGE WELDED Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)
4	8	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24) SPRING WELDED, FLANGE WELDED Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)
5	11	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24) SPRING WELDED, FLANGE WELDED Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)
6	4	Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24) SPRING WELDED, FLANGE WELDED Ø 117.30 (40) X 4.50 (1.73) X 1200 (47.24)

Approved by
 Project Engineer
 Date: 15/05/2021
 Checked by
 Date: 15/05/2021
 Drawn by
 Date: 15/05/2021



SIDE ELEVATION



REAR ELEVATION

NO.	ITEM DESCRIPTION	QTY	UNIT
1	WOOD TRUSS JOIST	2	
2	WOOD TRUSS JOIST	2	
3	WOOD TRUSS JOIST	2	
4	WOOD TRUSS JOIST	2	
5	WOOD TRUSS JOIST	2	
6	WOOD TRUSS JOIST	2	
7	WOOD TRUSS JOIST	2	
8	WOOD TRUSS JOIST	2	
9	WOOD TRUSS JOIST	2	
10	WOOD TRUSS JOIST	2	
11	WOOD TRUSS JOIST	2	
12	WOOD TRUSS JOIST	2	
13	WOOD TRUSS JOIST	2	
14	WOOD TRUSS JOIST	2	
15	WOOD TRUSS JOIST	2	
16	WOOD TRUSS JOIST	2	
17	WOOD TRUSS JOIST	2	
18	WOOD TRUSS JOIST	2	
19	WOOD TRUSS JOIST	2	
20	WOOD TRUSS JOIST	2	



DESIGNED BY
 ENGINEER
 ALL RIGHTS RESERVED
 P.O. BOX 1000
 JAWAHAR NAGAR
 PUNE-411 004

REMARKS:

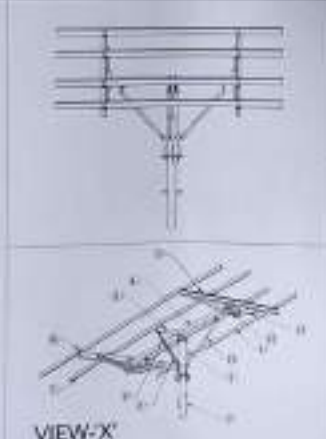
1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER LINE OF THE STRUCTURE UNLESS OTHERWISE SPECIFIED.
4. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER LINE OF THE STRUCTURE UNLESS OTHERWISE SPECIFIED.
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10. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER LINE OF THE STRUCTURE UNLESS OTHERWISE SPECIFIED.

REVISIONS:

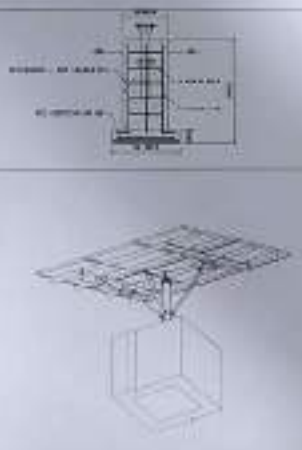
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3	ISSUED FOR PERMIT	10/10/2024
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5	ISSUED FOR PERMIT	10/10/2024
6	ISSUED FOR PERMIT	10/10/2024
7	ISSUED FOR PERMIT	10/10/2024
8	ISSUED FOR PERMIT	10/10/2024
9	ISSUED FOR PERMIT	10/10/2024
10	ISSUED FOR PERMIT	10/10/2024



VIEW-Y WITHOUT FOUNDATION



VIEW-X



REMARKS:

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER LINE OF THE STRUCTURE UNLESS OTHERWISE SPECIFIED.
4. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER LINE OF THE STRUCTURE UNLESS OTHERWISE SPECIFIED.
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10. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER LINE OF THE STRUCTURE UNLESS OTHERWISE SPECIFIED.

REVISIONS:

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	10/10/2024
2	ISSUED FOR PERMIT	10/10/2024
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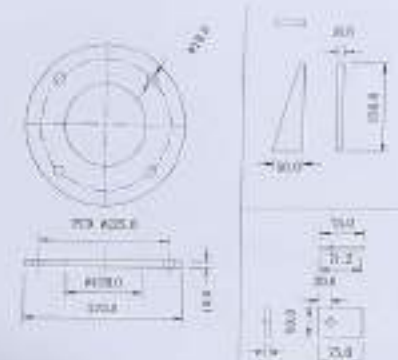
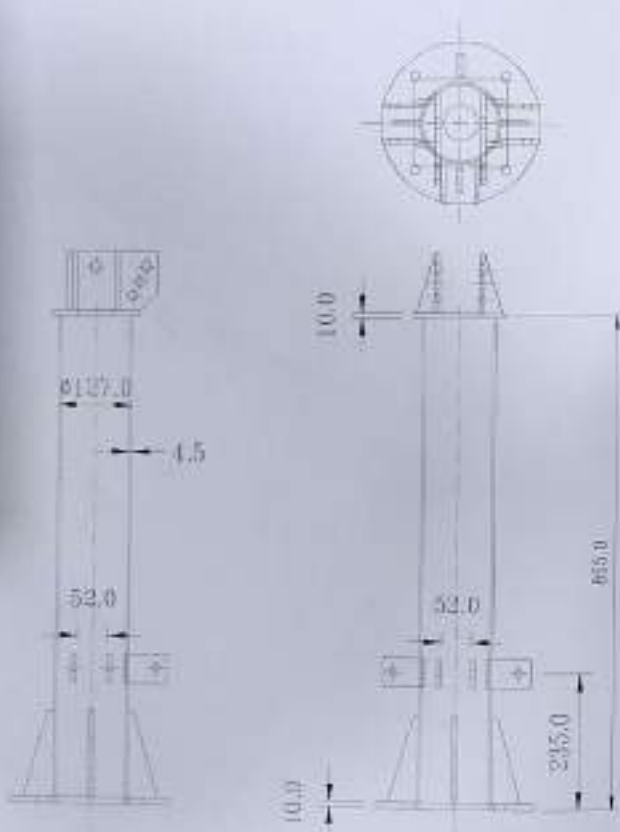
DESIGNED BY: [Signature]

ENGINEER: [Signature]

SCALE: 1:100

DATE: 10/10/2024

SHEET NO.: 1 OF 1





 Dr. Venkatesh
 Lecturer
 PCCET, Chittoor
 PCCET Engineering & Technology
 Chittoor, Andhra Pradesh
 522002

- REVISIONS**
1. As per drawing
 2. As per drawing
 3. As per drawing
 4. As per drawing
 5. As per drawing
 6. As per drawing
 7. As per drawing
 8. As per drawing
 9. As per drawing
 10. As per drawing

The undersigned hereby certifies that the design and the
 drawing are correct and complete and that the same are
 in accordance with the requirements of the contract and
 that the design and drawing are the property of the
 undersigned and shall remain confidential and shall not
 be disclosed to any third party without the written
 consent of the undersigned.

NO.	DATE	DESCRIPTION	BY	CHKD.

APPROVED

 Dr. Venkatesh
 Lecturer
 PCCET, Chittoor
 PCCET Engineering & Technology
 Chittoor, Andhra Pradesh
 522002

PROJECT WORK SHEET
 www.pccet.ac.in

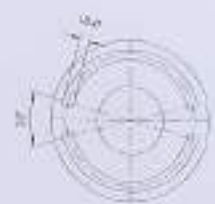
Sl. No.	DATE	NAME	MARKS	REMARKS

RELEASED FOR: POST 2/24
 Prepared by: Checked by:
 Approved by: Date:



WELD ALL AROUND

Ø-10 ROD WELD



NOTES:
 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 2. FINISH: UNLESS OTHERWISE SPECIFIED, ALL SURFACES SHALL BE MACHINED TO A FINISH OF 12.5 µm (0.5 mil) RMS.
 3. ALL DIMENSIONS SHALL BE TO UNLESS OTHERWISE SPECIFIED.
 4. ALL DIMENSIONS SHALL BE TO UNLESS OTHERWISE SPECIFIED.
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 7. ALL DIMENSIONS SHALL BE TO UNLESS OTHERWISE SPECIFIED.
 8. ALL DIMENSIONS SHALL BE TO UNLESS OTHERWISE SPECIFIED.

REVISIONS
 NO. DATE BY
 1 10/10/10 J.S.

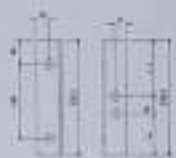
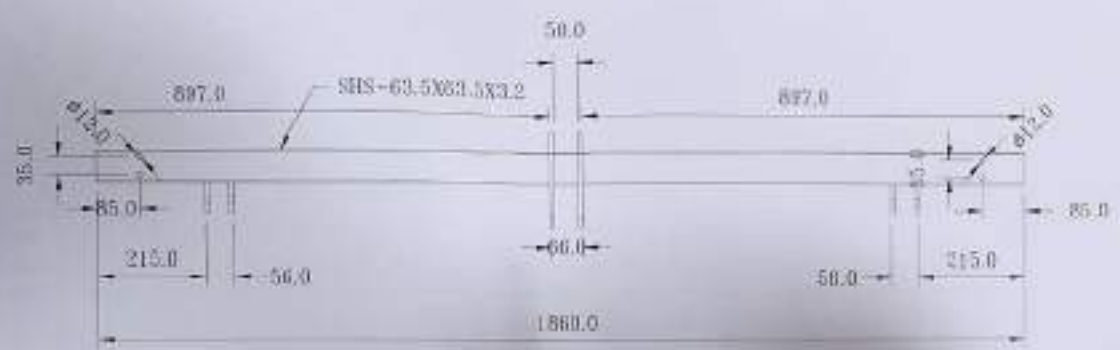
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REV	DATE	DESCRIPTION	BY	CHKD
1	10/10/10	ISSUED FOR MANUFACTURE	J.S.	

APPROVED FOR MANUFACTURE
 J.S.

NO.	DATE	DESCRIPTION	BY	CHKD
1	10/10/10	ISSUED FOR MANUFACTURE	J.S.	

ISSUED FOR MANUFACTURE
 J.S.

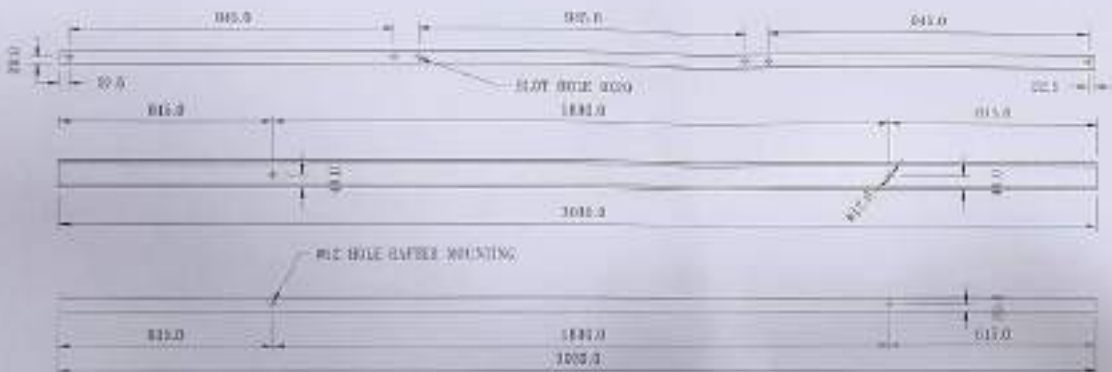


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1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

| NO. | REVISION | DATE | BY | CHECKED |
|-----|----------|------|----|---------|
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1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.



- 1. This drawing is prepared in accordance with the provisions of the relevant codes and standards.
- 2. The drawing is prepared in accordance with the provisions of the relevant codes and standards.
- 3. The drawing is prepared in accordance with the provisions of the relevant codes and standards.
- 4. The drawing is prepared in accordance with the provisions of the relevant codes and standards.
- 5. The drawing is prepared in accordance with the provisions of the relevant codes and standards.
- 6. The drawing is prepared in accordance with the provisions of the relevant codes and standards.
- 7. The drawing is prepared in accordance with the provisions of the relevant codes and standards.
- 8. The drawing is prepared in accordance with the provisions of the relevant codes and standards.
- 9. The drawing is prepared in accordance with the provisions of the relevant codes and standards.
- 10. The drawing is prepared in accordance with the provisions of the relevant codes and standards.

The responsibility of the design is on the designer. The designer is responsible for the accuracy of the drawing and the compliance of the drawing with the relevant codes and standards.



Approved by:
 [Signature]
 [Name]
 [Title]
 [Company Name]
 [Address]
 [Phone Number]

BY: [Signature]
 [Name]
 [Title]
 [Company Name]
 [Address]
 [Phone Number]

| NO. | REV. | DESCRIPTION | DATE |
|-----|------|-------------------------|------------|
| 1 | 1 | ISSUED FOR CONSTRUCTION | 10/10/2023 |



Approved by
 [Signature]
 [Name]
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 4. The drawing is for reference only and should not be used for construction without the approval of the designer.
 5. The drawing is the property of the designer and should not be reproduced without permission.
 6. The drawing is valid for the project and should not be used for other projects.
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 8. The drawing is prepared on A3 paper.
 9. The drawing is prepared in black ink on white paper.
 10. The drawing is prepared in metric units.

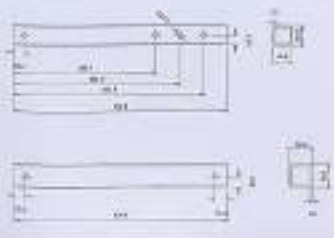
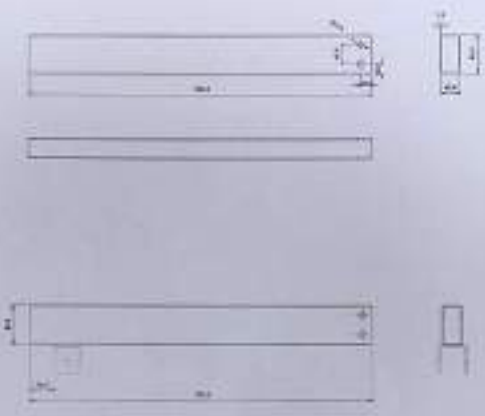
11. The drawing is prepared in accordance with the requirements of the relevant codes and standards.
 12. The design is based on the data provided in the project description.
 13. The designer is not responsible for any errors or omissions in the drawing.
 14. The drawing is for reference only and should not be used for construction without the approval of the designer.
 15. The drawing is the property of the designer and should not be reproduced without permission.
 16. The drawing is valid for the project and should not be used for other projects.
 17. The drawing is prepared using AutoCAD software.
 18. The drawing is prepared on A3 paper.
 19. The drawing is prepared in black ink on white paper.
 20. The drawing is prepared in metric units.

| NO | REV | DESCRIPTION | DATE |
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NOTES
 1. Check with the client before starting the work.
 2. All dimensions are in millimeters unless otherwise specified.
 3. The drawing is for reference only and should not be used for construction without the approval of the designer.
 4. The drawing is the property of the designer and should not be reproduced without permission.
 5. The drawing is valid for the project and should not be used for other projects.
 6. The drawing is prepared using AutoCAD software.
 7. The drawing is prepared on A3 paper.
 8. The drawing is prepared in black ink on white paper.
 9. The drawing is prepared in metric units.

| NO | REV | DESCRIPTION | DATE |
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1. This drawing is prepared in accordance with the requirements of the relevant codes and standards.
 2. The design is based on the data provided in the project description.
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 7. The drawing is prepared using AutoCAD software.
 8. The drawing is prepared on A3 paper.
 9. The drawing is prepared in black ink on white paper.
 10. The drawing is prepared in metric units.



- 1. The welder shall be qualified in accordance with AWS D1.1.
- 2. The welder shall be qualified in accordance with AWS D1.1.
- 3. The welder shall be qualified in accordance with AWS D1.1.
- 4. The welder shall be qualified in accordance with AWS D1.1.
- 5. The welder shall be qualified in accordance with AWS D1.1.
- 6. The welder shall be qualified in accordance with AWS D1.1.
- 7. The welder shall be qualified in accordance with AWS D1.1.
- 8. The welder shall be qualified in accordance with AWS D1.1.
- 9. The welder shall be qualified in accordance with AWS D1.1.
- 10. The welder shall be qualified in accordance with AWS D1.1.


REVISIONS

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DESIGNED BY

 CHECKED BY

 DATE
 10/10/2010

APPROVED BY

 DATE
 10/10/2010

WELDING SYMBOL

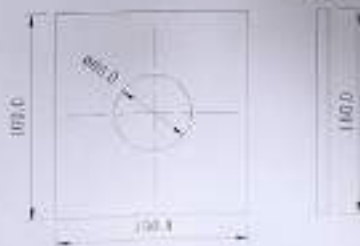
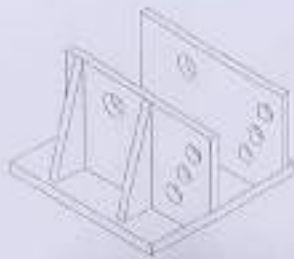
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WELDING SYMBOL

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| NO. | DATE | DESCRIPTION |
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ASSAYER
 DATE



NOTE:
 1. THE DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 2. ALL DIMENSIONS ARE TO BE TAKEN TO THE CENTER OF THE HOLE.
 3. ALL DIMENSIONS ARE TO BE TAKEN TO THE CENTER OF THE HOLE.
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 5. ALL DIMENSIONS ARE TO BE TAKEN TO THE CENTER OF THE HOLE.

APPROVED

REVISIONS

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APPROVED BY: _____
 PROJECT ENGINEER: _____
 DRAWING NO.: _____

| NO. | DATE | DESCRIPTION | BY | CHKD. |
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REVISIONS

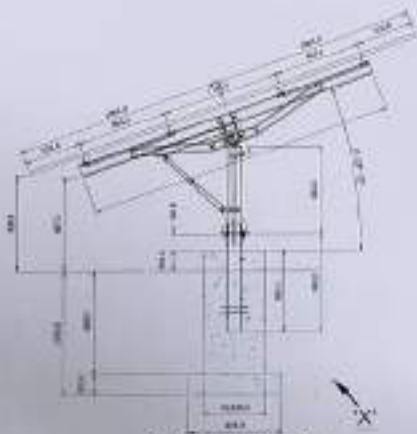
| NO. | DATE | DESCRIPTION | BY | CHKD. |
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Bill of Material

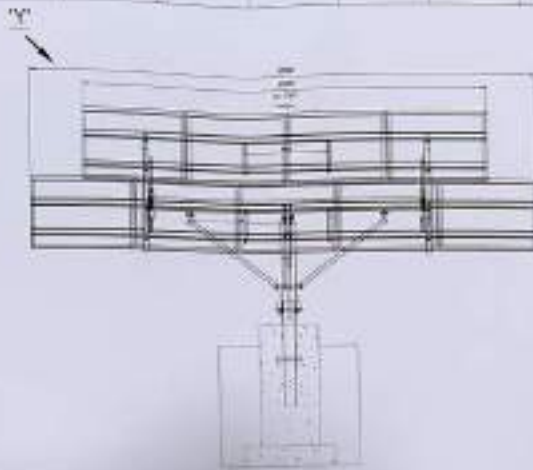
| SOLAR PUMP - 09 MODULE | | | | | | | | Drawing No. | | SPP/V1/PE220001/M02 | | | |
|------------------------|-----|-------------------|--|-----------------|---------------------------|--------|---------------|-------------|------------|---------------------|--------------|-----------------|-------|
| SR NO | QTY | DESCRIPTION | ECO DETAILS | PART DETAILS | MANUFACTURE SPECIFICATION | FINISH | LENGTH METERS | EQTY | UNIT PRICE | TOTAL WEIGHT | QTY REQD | PER UNIT WEIGHT | |
| 1 | 1 | COVER (2) 4MM FRP | E 140 X 140 MM 4.5 MM THICK COVER FR 100 | COVER SHEET FRP | FR 100 4.5 140 | FRP | 1.40 | 1 | 13.60 | 14.00 | 1 | 14.00 | |
| 2 | 1 | | E 200 X 140 MM THICK | WOT PLATE | FR 200 4.5 140 | FRP | 1.40 | 1 | 2.27 | 1.17 | 1 | 1.17 | |
| 3 | 1 | | 150 X 60 | BRACKET PLATE | FR 150 4.5 140 | FRP | FRP | 1.40 | 1 | 0.22 | 1.17 | 1 | 1.17 |
| 4 | 1 | | ADDY | WALL BRACKET | FR 150 4.5 140 | FRP | FRP | 1.40 | 1 | 0.31 | 1.17 | 1 | 1.17 |
| 5 | 1 | | E 140 X 140 MM 4.5 MM THICK COVER FR 100 | COVER LOWER FRP | FR 140 4.5 140 | FRP | FRP | 1.40 | 1 | 9.75 | 9.00 | 1 | 9.00 |
| 6 | 1 | COVER (2) 4MM FRP | E 270 X 140 MM THICK | WOT PLATE | FR 270 4.5 140 | FRP | 1.40 | 1 | 2.38 | 2.00 | 1 | 2.00 | |
| 7 | 1 | | 270 X 140 MM THICK | BRACKET PLATE | FR 270 4.5 140 | FRP | FRP | 1.40 | 1 | 0.99 | 0.80 | 1 | 0.80 |
| 8 | 1 | | ADDY | WALL BRACKET | FR 270 4.5 140 | FRP | FRP | 1.40 | 1 | 1.39 | 1.20 | 1 | 1.20 |
| 9 | 1 | | E 140 X 140 MM 4.5 MM THICK COVER FR 100 | COVER LOWER FRP | FR 140 4.5 140 | FRP | FRP | 1.40 | 1 | 9.75 | 9.00 | 1 | 9.00 |
| 10 | 1 | SUPPORT ROD | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 | |
| 11 | 1 | | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 |
| 12 | 1 | | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 |
| 13 | 1 | | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 |
| 14 | 1 | SUPPORT ROD | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 | |
| 15 | 1 | | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 |
| 16 | 1 | | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 |
| 17 | 1 | SUPPORT ROD | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 | |
| 18 | 1 | | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 |
| 19 | 1 | SUPPORT ROD | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 | |
| 20 | 1 | | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 |
| 21 | 1 | SUPPORT ROD | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 | |
| 22 | 1 | | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 |
| 23 | 1 | SUPPORT ROD | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 | |
| 24 | 1 | | Ø 10 X 1000 (FR) | WATER | FR 10 10 1000 | FRP | FRP | 1.00 | 1 | 10.00 | 10.00 | 1 | 10.00 |
| TOTAL WEIGHT | | | | | | | | | | 238.8 | 238.8 | 338.3562 | |

| HARDWARE LIST | | |
|---------------|-----|--|
| SR NO | QTY | DESCRIPTION |
| 1 | 1 | Ø 10 X 1000 (FR) W/ PUMP W/ BRACKET COVER W/ WOT PLATE & BRACKET |
| 2 | 1 | Ø 10 X 1000 (FR) W/ PUMP W/ BRACKET COVER W/ WOT PLATE & BRACKET |
| 3 | 1 | Ø 10 X 1000 (FR) W/ PUMP W/ BRACKET COVER W/ WOT PLATE & BRACKET |
| 4 | 1 | Ø 10 X 1000 (FR) W/ PUMP W/ BRACKET COVER W/ WOT PLATE & BRACKET |
| 5 | 1 | Ø 10 X 1000 (FR) W/ PUMP W/ BRACKET COVER W/ WOT PLATE & BRACKET |
| 6 | 1 | Ø 10 X 1000 (FR) W/ PUMP W/ BRACKET COVER W/ WOT PLATE & BRACKET |

Approved By
 [Signature]
 Project Engineer
 Date: 10/10/2024



SIDE ELEVATION



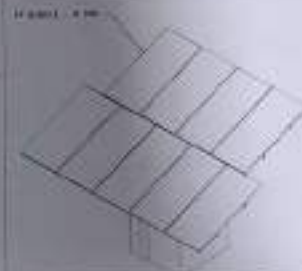
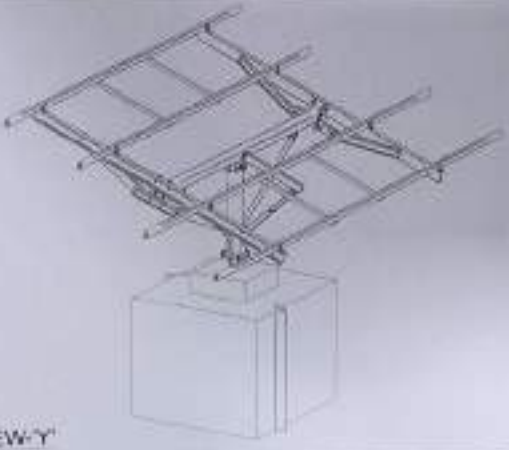
REAR ELEVATION

| NO. | DESCRIPTION | QTY | UNIT |
|-----|--------------|-----|------|
| 1 | TRUSS (TOP) | 1 | PC |
| 2 | TRUSS (SIDE) | 2 | PC |
| 3 | POST | 1 | PC |
| 4 | RAFTER | 12 | PC |
| 5 | RAFTER BRACE | 12 | PC |
| 6 | TRUSS BRACE | 2 | PC |
| 7 | TRUSS BRACE | 2 | PC |
| 8 | TRUSS BRACE | 2 | PC |
| 9 | TRUSS BRACE | 2 | PC |
| 10 | TRUSS BRACE | 2 | PC |
| 11 | TRUSS BRACE | 2 | PC |
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| 13 | TRUSS BRACE | 2 | PC |
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| 16 | TRUSS BRACE | 2 | PC |
| 17 | TRUSS BRACE | 2 | PC |
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| 36 | TRUSS BRACE | 2 | PC |
| 37 | TRUSS BRACE | 2 | PC |
| 38 | TRUSS BRACE | 2 | PC |
| 39 | TRUSS BRACE | 2 | PC |
| 40 | TRUSS BRACE | 2 | PC |



PREPARED BY:
 CHECKED BY:
 APPROVED BY:
 DATE:
 PROJECT:
 SHEET NO.
 OF
 TOTAL SHEETS

| NO. | DESCRIPTION | QTY | UNIT | PRICE | TOTAL |
|-------|--------------|-----|------|-------|--------|
| 1 | TRUSS (TOP) | 1 | PC | 1000 | 1000 |
| 2 | TRUSS (SIDE) | 2 | PC | 1200 | 2400 |
| 3 | POST | 1 | PC | 800 | 800 |
| 4 | RAFTER | 12 | PC | 1500 | 18000 |
| 5 | RAFTER BRACE | 12 | PC | 1000 | 12000 |
| 6 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 7 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 8 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 9 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 10 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 11 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 12 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 13 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 14 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 15 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 16 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 17 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 18 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 19 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 20 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
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| 38 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 39 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| 40 | TRUSS BRACE | 2 | PC | 1200 | 2400 |
| TOTAL | | | | | 100000 |



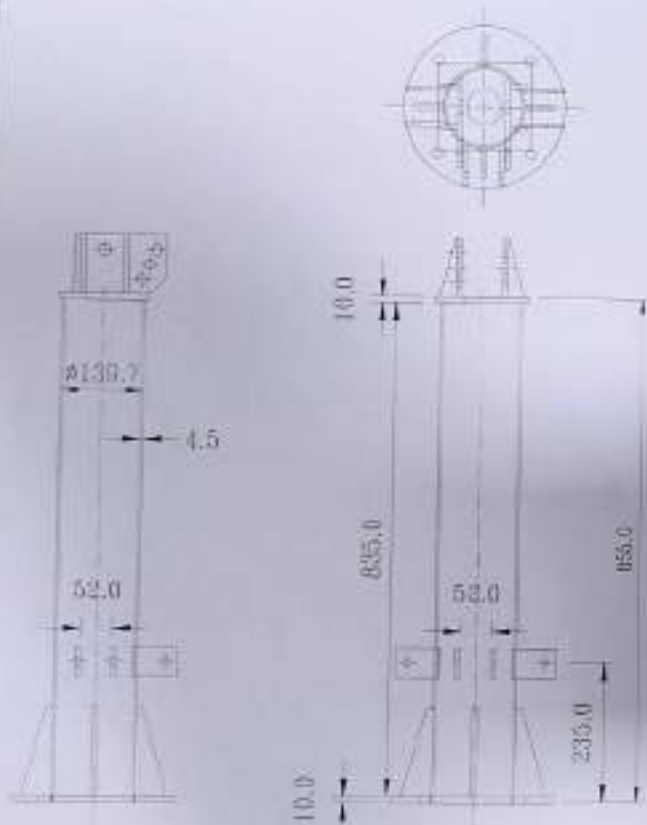
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VIEW-X

REVISIONS

| NO. | DESCRIPTION | DATE |
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PREPARED BY:
 CHECKED BY:
 APPROVED BY:
 DATE:
 PROJECT:
 SHEET NO.
 OF
 TOTAL SHEETS



Approved by
 [Signature]
 Design Engineer
 PDS Engineering & Technology
 10/10/2014

1. The drawing is to be used for the purpose of...
 2. The drawing is to be used for the purpose of...
 3. The drawing is to be used for the purpose of...
 4. The drawing is to be used for the purpose of...
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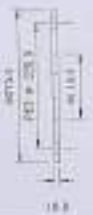
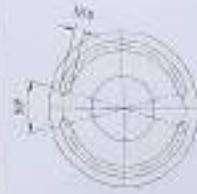
PDS ENGINEERING & TECHNOLOGY
 10/10/2014

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REVISIONS

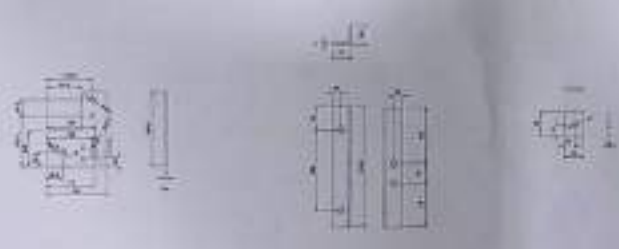
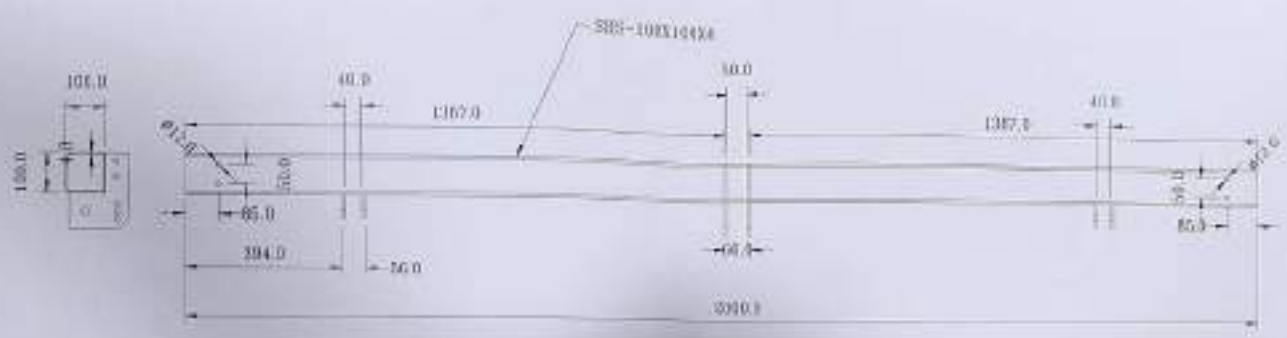
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APPROVED BY
 DESIGNER: [Signature]
 CHECKED BY: [Signature]
 DRAWN BY: [Signature]
 REV: 0001-11/2013

REVISIONS

PROGRESSIVE LIST
 OF ALL THE REVISED
 PARTS OF THE DRAWING

| REV. | DATE | DESCRIPTION | BY | CHK. |
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Approved by
 M.
 IN CHARGE OF THE
 PROJECT
 A.D. P. 10/10/10/10/10
 DATE OF ISSUE
 DATE OF REVISION

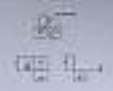
1. The drawing is prepared in accordance with the standards of the Ministry of Defense of the Russian Federation. 2. The drawing is prepared in accordance with the standards of the Ministry of Defense of the Russian Federation. 3. The drawing is prepared in accordance with the standards of the Ministry of Defense of the Russian Federation. 4. The drawing is prepared in accordance with the standards of the Ministry of Defense of the Russian Federation. 5. The drawing is prepared in accordance with the standards of the Ministry of Defense of the Russian Federation. 6. The drawing is prepared in accordance with the standards of the Ministry of Defense of the Russian Federation. 7. The drawing is prepared in accordance with the standards of the Ministry of Defense of the Russian Federation. 8. The drawing is prepared in accordance with the standards of the Ministry of Defense of the Russian Federation. 9. The drawing is prepared in accordance with the standards of the Ministry of Defense of the Russian Federation. 10. The drawing is prepared in accordance with the standards of the Ministry of Defense of the Russian Federation.

| № | ИЗМЕНЕНИЯ | ДАТА | ИЗМЕНИТЕЛЬ | ПРОВЕРЯЮЩИЙ |
|---|-----------|------|------------|-------------|
| | | | | |

КОМПЛЕКТ ЧЕРТЕЖЕЙ
 1. Чертеж детали (1 экз.)
 2. Чертеж сборки (1 экз.)
 3. Чертеж детали (1 экз.)
 4. Чертеж сборки (1 экз.)

КОМПЛЕКТ ЧЕРТЕЖЕЙ
 1. Чертеж детали (1 экз.)
 2. Чертеж сборки (1 экз.)
 3. Чертеж детали (1 экз.)
 4. Чертеж сборки (1 экз.)

| № | ИЗМЕНЕНИЯ | ДАТА | ИЗМЕНИТЕЛЬ | ПРОВЕРЯЮЩИЙ |
|---|-----------|------|------------|-------------|
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Approved by
 Dr. RAJESH KUMAR
 P. O. Box 1000
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 100000
 100000

- 1. All dimensions are in millimeters (mm).
- 2. All dimensions are to be maintained as shown in the drawing.
- 3. All dimensions are to be maintained as shown in the drawing.
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- 5. All dimensions are to be maintained as shown in the drawing.
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- 9. All dimensions are to be maintained as shown in the drawing.
- 10. All dimensions are to be maintained as shown in the drawing.

CONSTRUCTION & MATERIAL SPECIFICATIONS FOR ALL STRUCTURAL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARDS OF THE GOVERNMENT OF INDIA AND THE GOVERNMENT OF KARNATAKA.

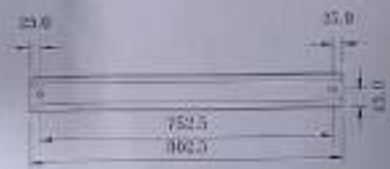
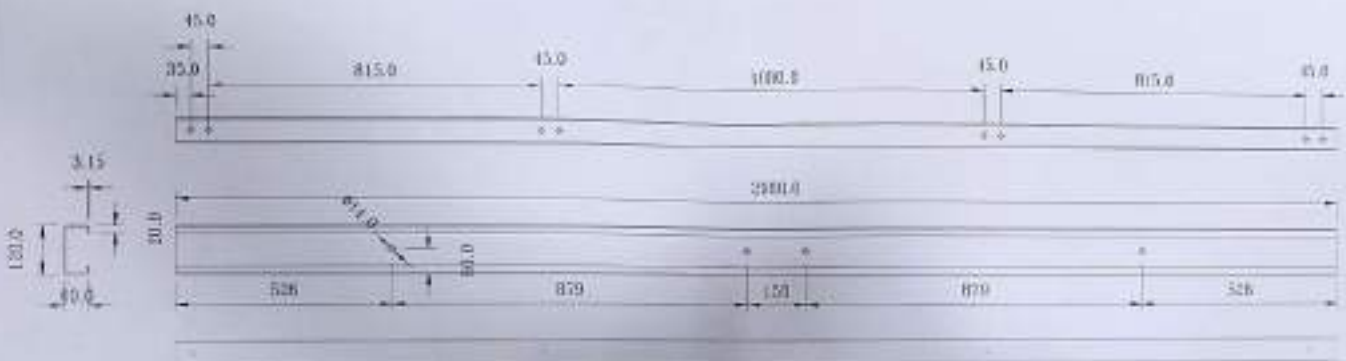
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DESIGN BY
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SCALE: AS SHOWN IN DRAWING

| Sl. No. | Description | Quantity | Unit |
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| Sl. No. | Description | Quantity | Unit |
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NOTES:
 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 2. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE TO BE TAKEN TO THE CENTER OF THE HOLE OR THE CENTER OF THE GROOVE.
 3. ALL DIMENSIONS ARE TO BE TAKEN TO THE CENTER OF THE HOLE OR THE CENTER OF THE GROOVE.
 4. ALL DIMENSIONS ARE TO BE TAKEN TO THE CENTER OF THE HOLE OR THE CENTER OF THE GROOVE.
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 9. ALL DIMENSIONS ARE TO BE TAKEN TO THE CENTER OF THE HOLE OR THE CENTER OF THE GROOVE.
 10. ALL DIMENSIONS ARE TO BE TAKEN TO THE CENTER OF THE HOLE OR THE CENTER OF THE GROOVE.

Approved by
 [Signature]
 Mr. [Name]
 Engineer
 [Address]
 [City]
 [Country]

REVISIONS

| NO. | DESCRIPTION | DATE | BY | CHKD. |
|-----|-------------|------|----|-------|
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SCALE: 1:1

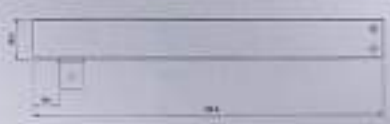
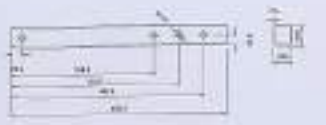
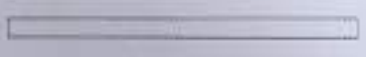
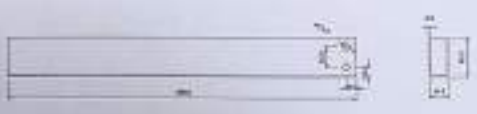
DATE: 2024/01/01

PROJECT: [Project Name]

DRAWING NO: [Drawing No.]

REVISED BY: [Name]

REVISED DATE: [Date]



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 2. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE TO BE TAKEN TO THE CENTER OF THE HOLE
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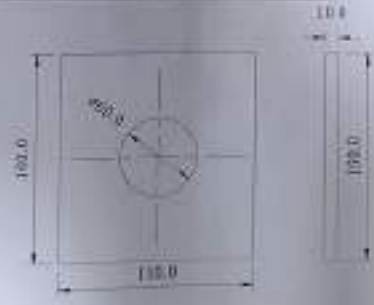
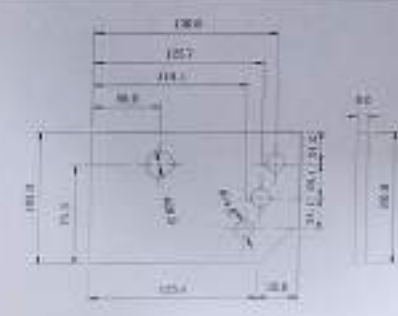
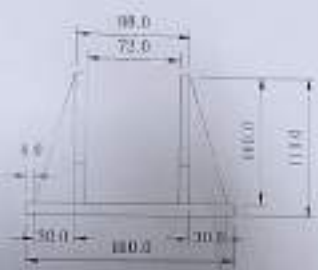
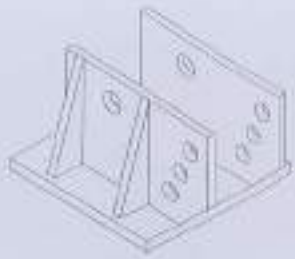
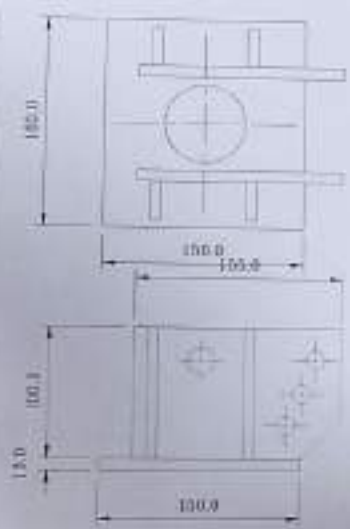
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WELDING
 ALL WELDING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WELDING CODE AND THE WELDING PROCEDURE SPECIFICATION (WPS) APPROVED BY THE QUALITY CONTROL DEPARTMENT.

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Alıştırmalar

1. Birinci sınıf
2. İkinci sınıf
3. Üçüncü sınıf
4. Dördüncü sınıf
5. Beşinci sınıf

- NOTLAR
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2024 YILI
TEKİRNEZ İNŞAAT LİMİTLİ ŞİRKETİ
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