



AKTU CODE : 162

An ISO 9001:2008 Certified Institute

SHAMBHUNATH INSTITUTE OF ENGINEERING & TECHNOLOGY (SIET)

(Approved by AICTE, New Delhi & Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow)

SIET/GSPL-MMS/001/1

23/11/2020

Ref.:

Date :

TO WHOMSOEVER IT MAY CONCERN

We have been offered various configuration/designs of solar photovoltaic Module Mounting structure (MMS) as per the following drawings for evaluation as per IS 875-1964.

These designs were evaluated by using Staad Pro report for various parameters described in IS 875-1964 & IS-800 and found to be having a factor of safety of 2.0 or higher at wind load of 150 kms/hour.

Structure size	Drawing Number	Calculated Factor of Safety as per IS 875-1964
5 Module	GSPL/5-SPV/MMS	The elements have been designed using guideline as per IS 875-1964, the attached report shows that actual stresses in the elements are at least 2 time less than allowable stresses. Hence it has 2 FOS.
6 Module	GSPL/6-SPV/MMS	
8 Module	GSPL/8-SPV/MMS	
9 Module	GSPL/9-SPV/MMS	
10 Module	GSPL/10-SPV/MMS	
11 module	GSPL/11-SPV/MMS	

We therefore certify that the Solar Photovoltaic Module mounting structures as per aforementioned design and drawings numbers fully comply with the requirements of IS 875-1964 as are suitable for withstanding a wind load of 150 kms/hour.

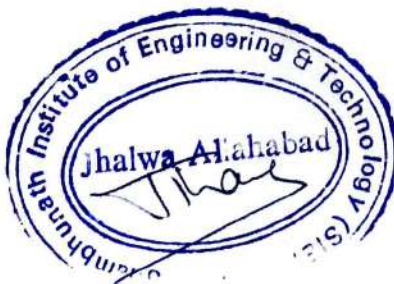
Certified by

Name: Vinay Mishra

Post: HOD - Civil

Date: 23/11/2020

Location: Alahabad





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(Approved by AICTE, New Delhi & Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow)

Ref.:

SIET/GSPL-MMS/001

23/11/2020.....

To,
M/s Gautam Solar Private Limited
D-120/121 Okhla Industrial Area,
Phase-I, New Delhi-110020

Subject: Evaluation of module Mounting structures.

Dear Sir,

You have submitted following drawings for various types/designs of Solar Photovoltaic Module mounting structures for evaluation of their suitability for being a wind Load of 150 Kms/hour

Sr. No.	Structure Size	Drawing Number
1	5 Module MMS	GSPL/5-SPV/MMS
2	6 Module MMS	GSPL/6-SPV/MMS
3	8 Module MMS	GSPL/8-SPV/MMS
4	9 Module MMS	GSPL/9-SPV/MMS
5	10 Module MMS	GSPL/10-SPV/MMS
6	11 Module MMS	GSPL/11-SPV/MMS

The same have been evaluated as per IS 875-1964 for bearing a wind load of 150 kms/hour and we are herewith enclosing the following documents:

1. Certificate confirming that the drawings meet the requirements of IS 875-1964 for a wind load of 150 kms/hour.
2. Our analysis of each of these structures.
3. Certified copy of each of the aforementioned drawings, including the drawing for the foundation.
4. Details of various structural design and certification projects undertaken by the structural engineering department of our college.
5. Background information of our college.

Name: Vinay Mishra

Post: HOD - Civil

Date: 23/11/2020

Location: Allahabad





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Ref.:

SIET/GSPL-MMS/001/2

Date :

23/11/2020

We have compared the design of the structures which are provided in the tender no. NIT/Bid Document No. EESL / 06 / 2019-20 / KUSUM / SWPS /Phase-1/ Off Grid /192007012 dt 18-07-2019 (Section-4; Page 19 of 102 Clause 3.5.3) which we call as the "indicative MNRE design" with the structure foundation designs as per following drawing numbers which we call the 'ALTERNATE design'

Sr. No.	Structure Size	Drawing Number
1	5 Module MMS	GSPL/5-SPV/MMS
2	6 Module MMS	GSPL/6-SPV/MMS
3	8 Module MMS	GSPL/8-SPV/MMS
4	9 Module MMS	GSPL/9-SPV/MMS
5	10 Module MMS	GSPL/10-SPV/MMS
6	11 Module MMS	GSPL/11-SPV/MMS

The designs have been verified and duly certified by us vide our letter no. SIET/GSPL-MMS/001/1 dated: 23/11/2020 and that certificate should be read in conjunction with this certificate.

We hereby state the improved technical features and advantages of the Alternate design over the indicative MNRE Design.

Sr. No.	Feature	Improvement in Alternate design	Advantage/Benefit
1	Factor of safety	MNRE design specifies the structure should be suitable for wind load of 150 Kms/hour. The alternate design has a factor of 2.0 or higher of all the structural members considering a wind load of 150 Kms/hour on basis of 'Staad Pro' report for various parameters described in 875-	Higher Factor of safety would result in better reliability and longer life of the structure.
2	Use of all parts as per BIS standards	MNRE design has several parts as per attached table which are not as per IS 1161 whereas all the members used in ALTERNATE design are as per IS 1161 Refer annexure to this certificate	100% conformity of all parts to national standards resulting in better quality.
3	Shear force withstanding capability	The central member of MNRE design has a shear force withstanding ability of 8.0 KN/m, whereas the ALTERNATE design has a shear force withstanding ability of 11.5 KN/m, for 10 MMS design and 11.0 KN/m for 9 MMS design.	35% higher shear force withstanding ability of the central member would ensure higher strength and reliability of the ALTERNATE design.



4	Shadow Free area occupied by the structures	As per MNRE design 2 Structures are required in 3 HP covering an area of 34 sq m with 02 foundations and in ALTERNATE design, a single structure is required requiring and areas of 20 sq m with 01 foundation.	30% higher land use efficiency for 3 HP Pumps.
5	Foundation suitability for sandy soils	<p>As per MNRE, Annexure-I of circular No. F. No. 41/3/2018-SPV Division dated 17.07.2019 specifications of MMS-specification of main parts point 1. Centre shaft, suggest foundation with Base plate and direct piling foundation design.</p> <p>The ALTERNATE design employs piling foundation type and such type of foundation is better suited for soft and sandy soils having density lower than 1.7g/cm³</p>	<p>Use in multiple locations including soft and sandy soils having density lower than 1.73 g/cm³. Direct piling design is design is preferable for soft soil type like sandy soil or soil having low bearing capacity it is also provide hide uplift resistance to wind loads, the structure having piing foundations has better alignment than the structure having 4 nos. J-BOLT foundations.</p> <p>Alternate structure top of foundation is 200 mm above ground level, so no water logging and longer life of structure.</p> <p>In J-Bolt foundation structure design the whole loads are on J-Bolts which are 750 mm below ground level where in piling foundation the main pole is 850 mm below ground level which gives more stability to structure.</p> <p>Piling design prevents the users from installing the structures on their roof tops and other unsuitable sites.</p>

Thus we state that the 'ALTERNATE design' of structures have several improvements over the indicative MNRE design as stated above and hence the ALTERNATE design is an improved design.



ANNEXURE TO THE CERTIFICATE

Table of materials specified for the MNRE design

Bill of Quantity for main parts of MMS for Solar Water Pumping System

SR. NO.	PART NAME	CROSS SECTION DETAILS	LENGTH (MM)	QUANTITY PER SET
A	Common for MMS for 4, 6 and 8 Modules			
1	MAIN POLE	139 OD	1500	1
2	TOP PLATE	300 OD	--	1
3	CLAMP WITH BLADE	75X8	380	2
4	SUPPORTING PIPES	41 OD & 33 OD	--	6
B	Different for MMS for 4, 6 and 8 Modules			
5	MAIN TUBE			
	4 and 6 Modules	60X60X3.6	3300	1
	8 Modules	122X61X3.6	3300	1
6	SIDE TUBE			
	4 and 6 Modules	50X50X3.6	3300	2
	8 Modules	80X40X3.2	3300	
7	Mounting Purlin			
	8 Module	80X50X15X2	2050	4
	6 Module	80X50X15X2	3100	4
	8 Module	80X50X15X2	4150	4

The following components in the table above do not confirm to IS Standards

- Main Pole-PIPE 139 OD and 4 mm thick-Non confirming to IS 1161
- Supporting Pipes-PIPE 41 OD and 33 OD-Non confirming to IS 1161
- Main Tube for 4 & 6 modules- TUBE 60X60X3.6, Not conforming to IS 4923

As may be seen in the drawings of ALTERNATE design, each main part of each MMS conforms to the relevant IS standards.





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Ref.:

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23/11/2020

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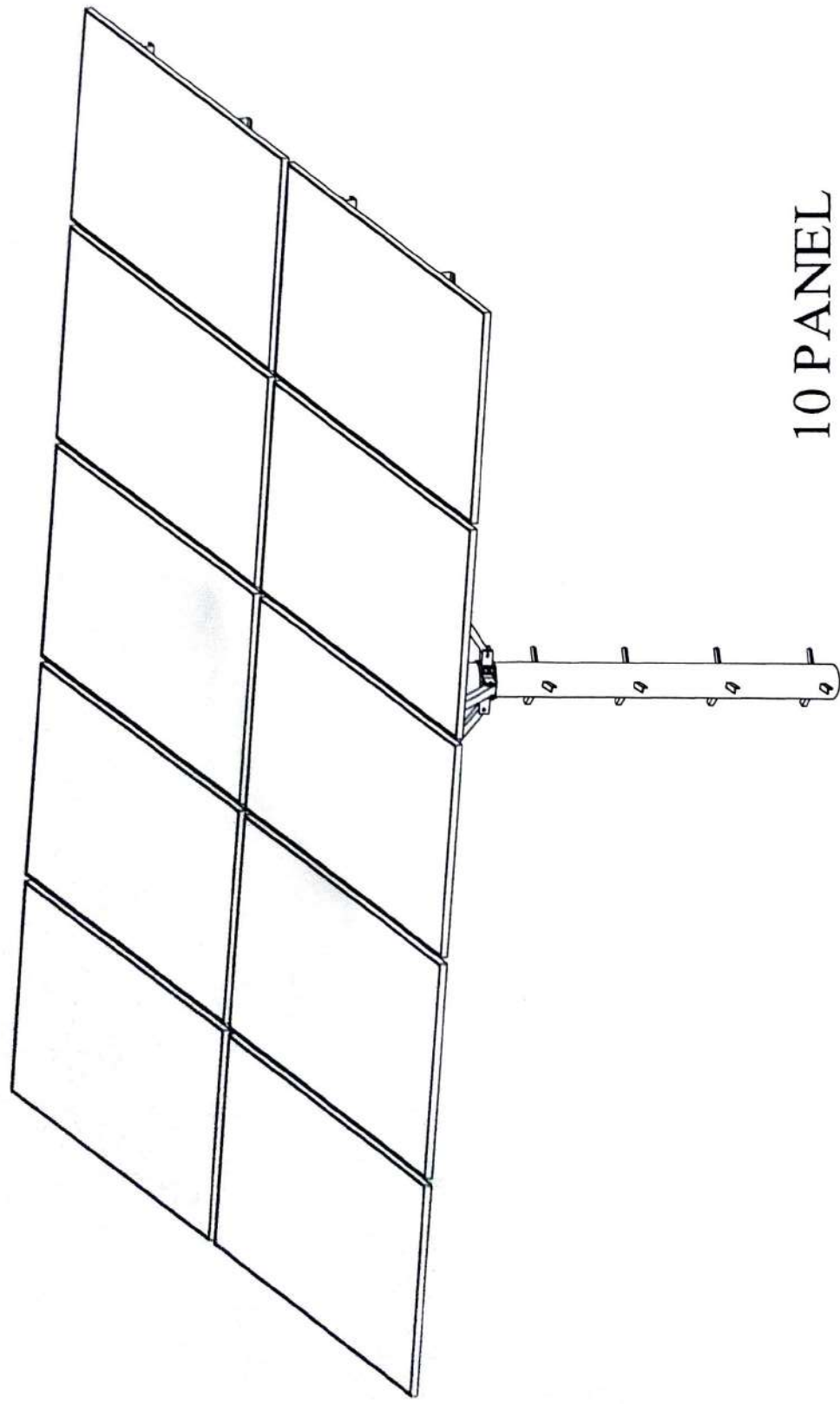


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DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM



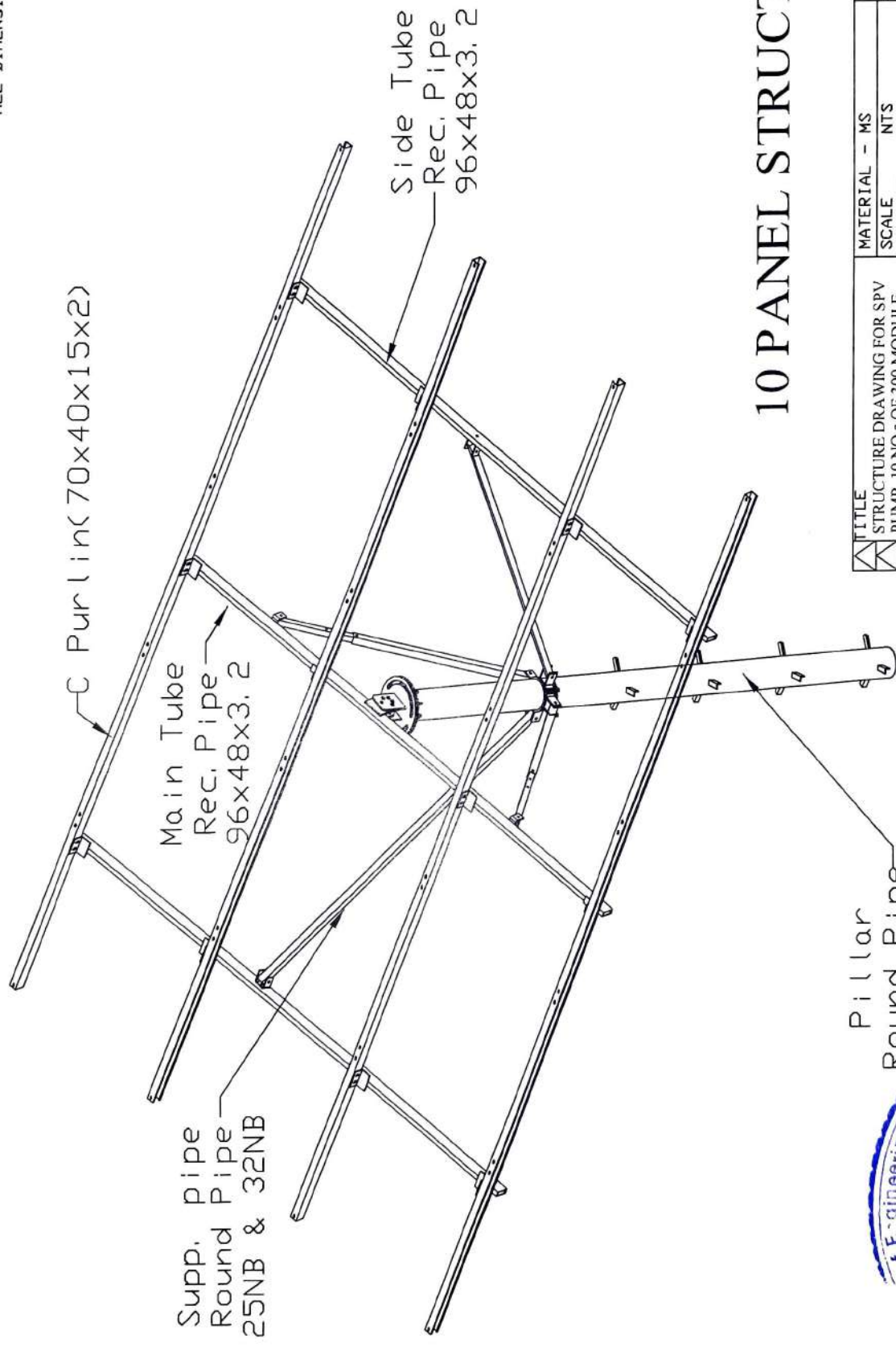
10 PANEL

STRUCTURE DRAWING FOR SPV PUMP, 10 NO.s OF 300 MODULE	MATERIAL - MS		DATE
	SCALE	NTS	SHEET - 1/13-
	DRAWN BY	--SUNIL--	
	CHECKED BY	--HEMANT--	
APPROVED BY			-ANIRUDH-
GAUTAM SOLAR PVT. LTD.			PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur			PART NO. -
SIDKUL, Haridwar - 249403 (UTTRAKHAND)			GSPL/10-SPV/MMS
Ph. 01334315551, Mob. 9810041987, 9310141982			DRAWING NO. -
www.gautamsolar.com			

NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED



DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM



10 PANEL STRUCTURE

TITLE	MATERIAL - MS	DATE
STRUCTURE DRAWING FOR SPV PUMP, 10 NO.s OF 300 MODULE	SCALE NTS	SHEET -2/13-
SR.NO	DRAWN BY --SUNIL--	
CHANGE RECORD	CHECKED BY --HEMANT--	
	APPROVED BY -ANIRUDH-	
GAUTAM SOLAR PVT. LTD.		PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur		PART NO. -
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		DRAWING NO. GSPL/10-SPV/MMS
Ph. 01334315551, Mob. 9810041987, 9310141982		
www.gautamsolar.com		

NOTES: -
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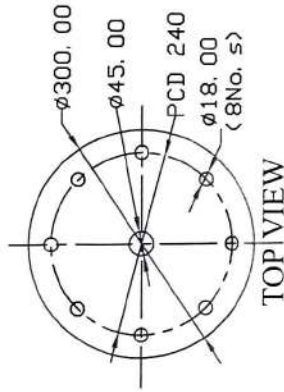
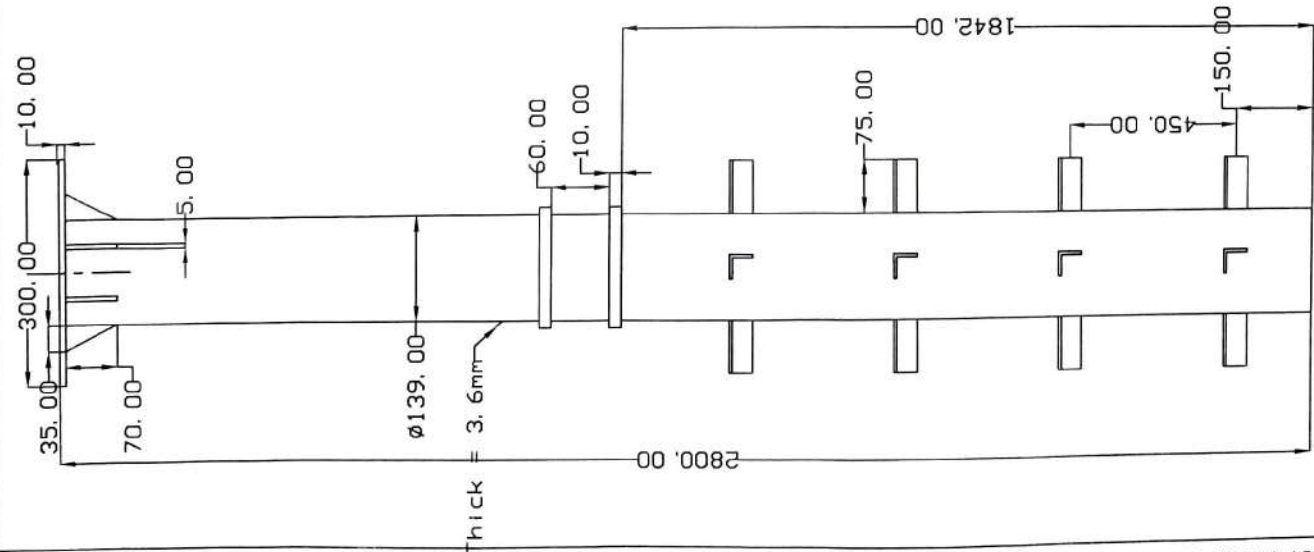


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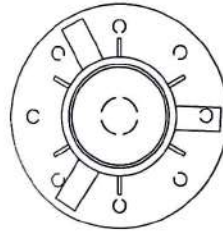
PILLAR

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ITEM - 01
QTY - 1 NO.S



TOP VIEW



BOTTOM VIEW

Angle
32x32x3



ISOMETRIC VIEW

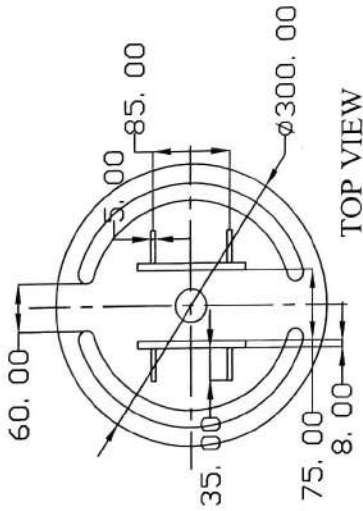
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SR.NO	DRAWN BY --SUNIL--	
CHANGE RECORD	CHECKED BY --HEMANT--	
	APPROVED BY --ANIRUDH--	
GAUTAM SOLAR PVT. LTD.		PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur SIDKUL, Haridwar - 249403 (UTTRAKHAND)		PART NO. -
Ph. 01334315551, Mob. 9810041987, 9310141982		DRAWING NO. -
www.gautamsolar.com		GSPL/10-SPV/NMS

NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

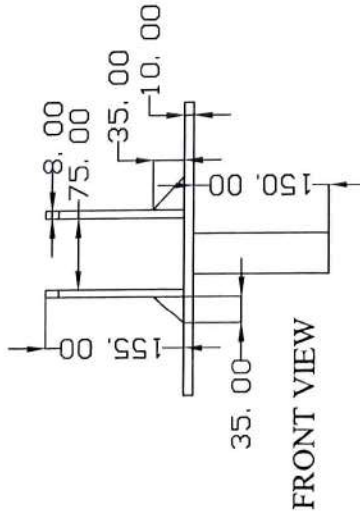
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UPPER ROTATION PLATE

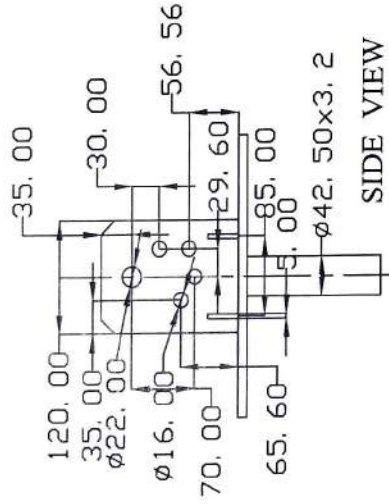
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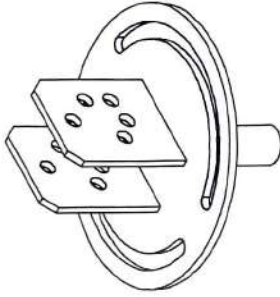
TOP VIEW



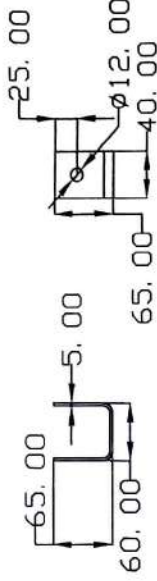
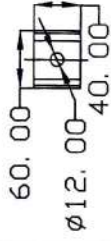
FRONT VIEW



SIDE VIEW



U CLAMP



ITEM - 03
QTY - 2 NO.S

ITEM - 02
QTY - 1 NO.S

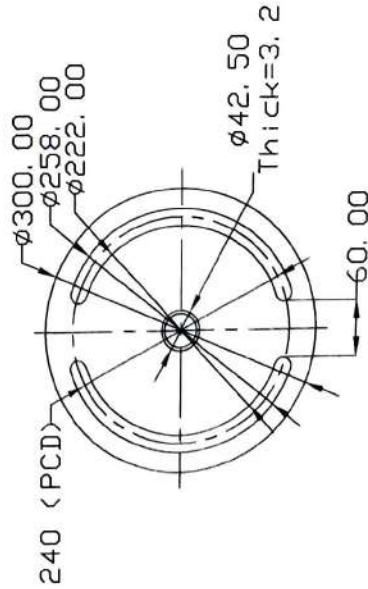


ITEM	TITLE	MATERIAL - MS	DATE
STRUCTURE DRAWING FOR SPV	SCALE	NTS	SHEET - 4/13-
PUMP, 10 NO.s OF 300 MODULE	DRAWN BY	--SUNIL--	
SR. NO	CHECKED BY	--HEMANT--	
CHANGE RECORD	APPROVED BY	--ANIRUDH--	
GAUTAM SOLAR PVT. LTD.			
Plot No. 114, Sector-6A, IIE Ranipur			
SIDKUL, Haridwar - 249403 (UTTRAKHAND)			
Ph. 01334315551, Mob. 9810041987, 9310141982			
www.gautamsolar.com			
PART NAME -			
PART NO. -			
DRAWING NO. GSPL/10-SPV/MMS			

NOTES: -

DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

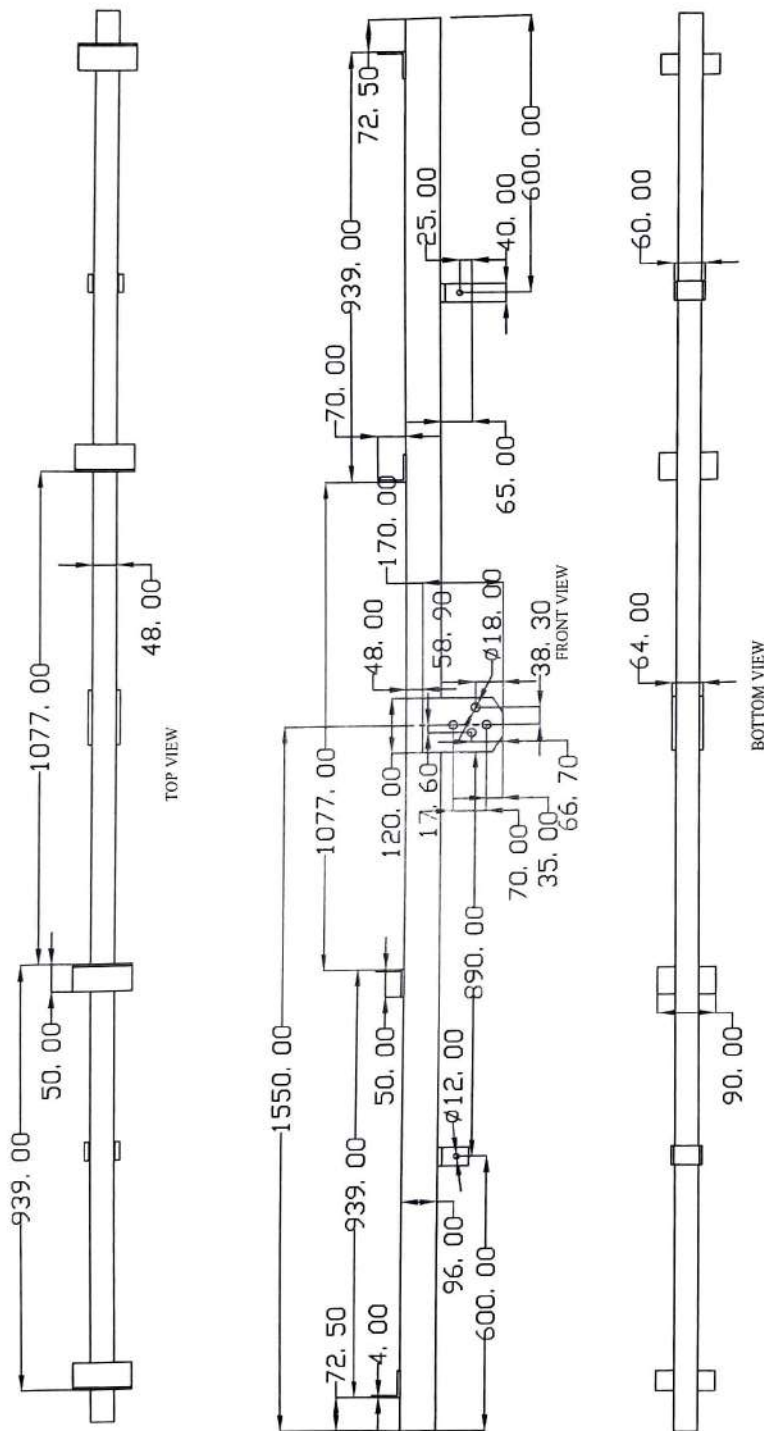
BOTTOM VIEW



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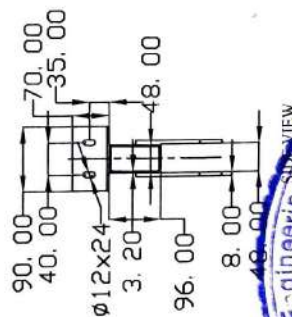
MAIN TUBE



Rec. Pipe = 96x48x 3.2

ITEM - 04

QTY - 1 NO.





NOTES: -

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ALL PART SHOULD BE GALVANIZED

GAUTAM SOLAR PVT. LTD.

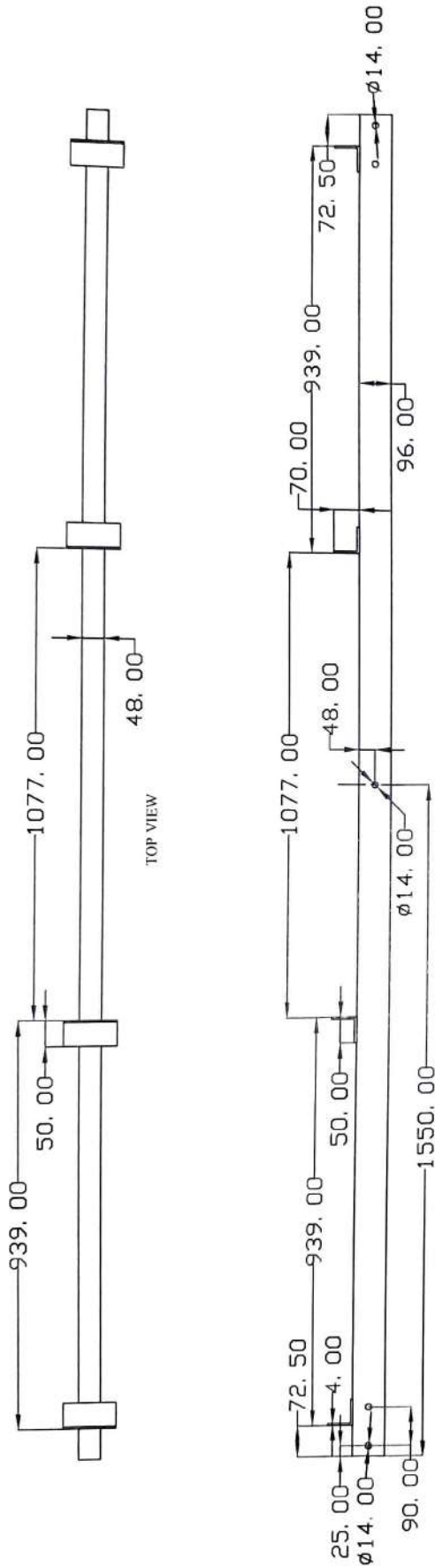
Plot No. 114, Sector-6A, IIE Ranipur
SIDKUL, Haridwar - 249403 (UTTRAKHAND)
Ph. 01334315551, Mob. 9810041987, 9310141982
www.goutamsolar.com

✓	TITLE	MATERIAL - MS	DATE
✓	STRUCTURE DRAWING FOR SPV	SCALE	NTS
✓	PUMP, 10 NO.s OF 300 MODULE	DRAWN BY	SHEET - 5/13-
✓	SR. NO	CHECKED BY	--SUNIL--
✓	CHANGE RECORD	APPROVED BY	--HEMANT--
✓			
✓			
GAUTAM SOLAR PVT. LTD.			
Plot No. 114, Sector-6A, IIE Ranipur			
SIDKUL, Haridwar - 249403 (UTTRAKHAND)			
Ph. 01334315551, Mob. 9810041987, 9310141982			
www.gautamsolar.com			
		PART NAME	- - - - -
		PART NO.	- - - - -
		DRAWING NO.	GSPL/10-SPV/MMS

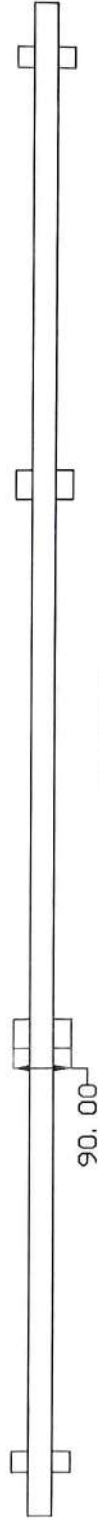
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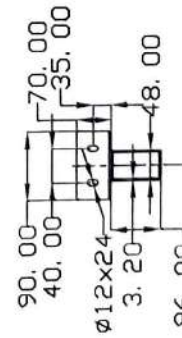
SIDE TUBE



FRONT VIEW



BOTTOM VIEW



Rec. Pipe = 96x48x 3.2
ITEM - 05
QTY - 2 NO.



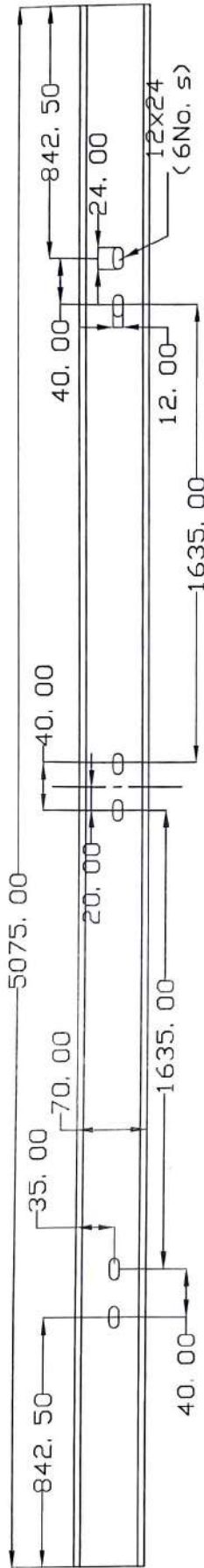
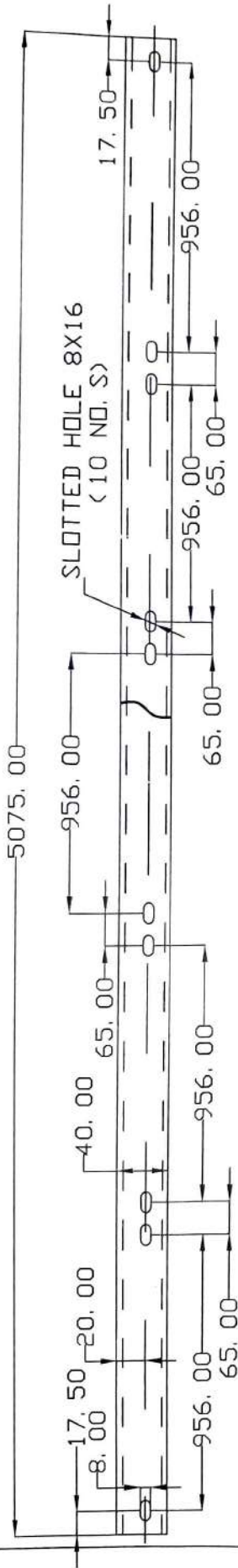
NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

△ TITLE	MATERIAL - MS	DATE
△ STRUCTURE DRAWING FOR SPV	SCALE	SHEET - 6/13-
△ PUMP, 10 NO.s OF 300 MODULE	NTS	
△ SR.NO	DRAWN BY	---SUNIL---
△ CHANGE RECORD	CHECKED BY	---HEMANT---
	APPROVED BY	---ANIRUDH---
GAUTAM SOLAR PVT. LTD.		PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur		PART NO.
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		DRAWING NO.
Ph. 01334315551, Mob. 9810041987, 9310141982		GSPL/10-SPV/MMS
www.gautamsolar.com		

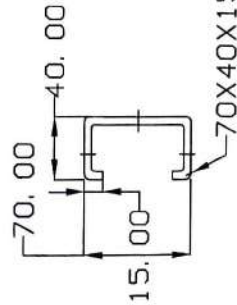
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TOP VIEW



FRONT VIEW



SIDE VIEW

PURLIN - FOR 5 PANEL

ITEM - 06
QTY - 4 NO.

PURLIN - C 70x40x15x2

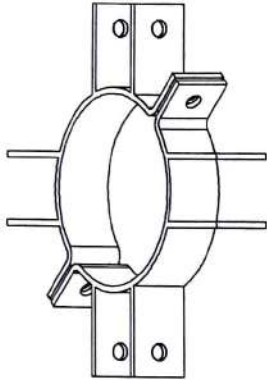
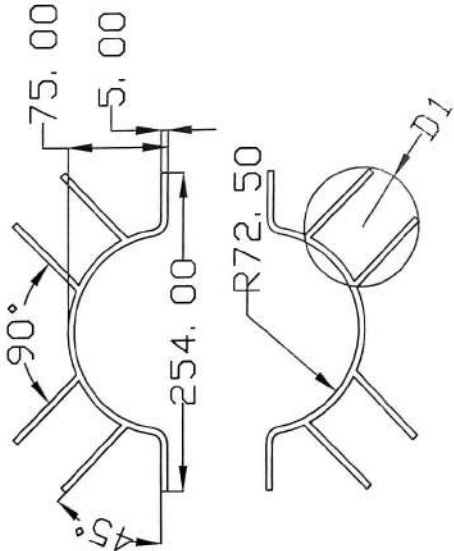


NOTES
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MATERIAL - MS	SCALE	NTS	DATE
TITLE STRUCTURE DRAWING FOR SPV PUMP, 10 NO.s OF 300 MODULE	DRAWN BY	--SUNIL--	SHEET--7/13--
CHANGE RECORD	CHECKED BY	--HEMANT--	
DATE	APPROVED BY	--ANIRUDH--	
GAUTAM SOLAR PVT. LTD. Plot No. 114, Sector-6A, IIE Ranipur SIDKUL, Haridwar - 249403 (UTTRAKHAND) Ph. 01334315551, Mob. 9810041987, 9310141982 www. gautamsolar. com			
S.R. NO	PART NAME	- PURLIN	
	PART NO.	-	
	DRAWING NO.	- GSPL/10-SPV/MMS	

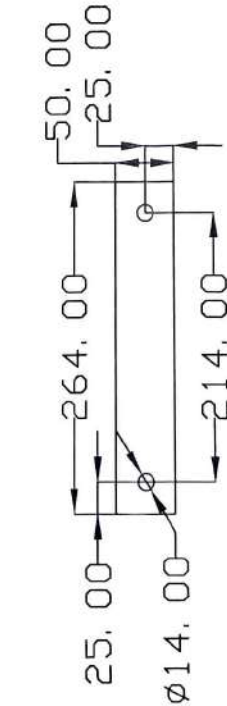
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TOP VIEW

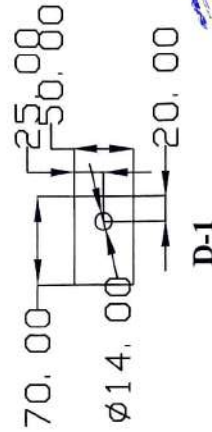


ISOMETRIC VIEW

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FRONT VIEW



ROTATION CLAMP

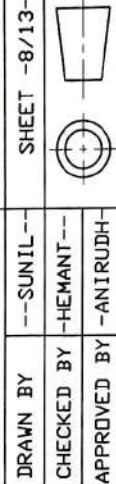
ITEM - 07

QTY - 1 Set

NOTES: -

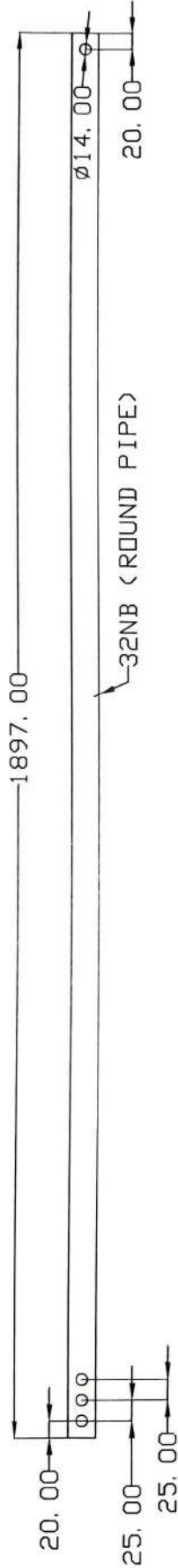
DE BURR ALL SHARP EDGES
ALL ANGLE SHOULD BE GALVANIZED

MATERIAL - MS	SCALE	NTS
TITLE	DRAWN BY	---SUNIL---
STRUCTURE DRAWING FOR SPV PUMP, 10NO.s OF 300 MODULE	CHECKED BY	---HEMANT---
CHANGE RECORD	APPROVED BY	---ANIRUDH---
DATE	PART NAME	---
GAUTAM SOLAR PVT. LTD.	PART NO.	---
Plot No. 114, Sector-6A, IIE, Ranipur SIDCUL, Haridwar - 249403 (UTTRAKHAND) Ph. 01334315551, Mob. 9810041987, 9310041987, 9310141982 www. gautamsolar. com	DRAWING NO.	---GSP/L/10-SPV/MMS---



SUPPORTING PIPE (FOR SIDE)

DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM



25NB (ROUND PIPE)
ITEM - 08
QTY - 2 NO.S



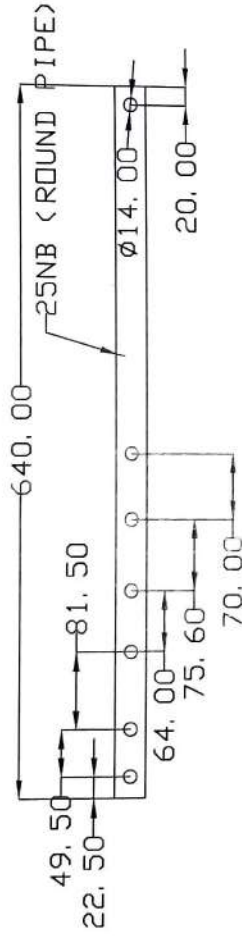
NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

△ TITLE	MATERIAL - MS	DATE
△ STRUCTURE DRAWING FOR SPV	SCALE NTS	---
△ PUMP, 10NO.s OF 300 MODULE	DRAWN BY --SUNIL--	SHEET -9/13-
△ SR.NO	CHECKED BY --HEMANT--	
△ CHANGE RECORD	APPROVED BY --ANIRUDH--	
GAUTAM SOLAR PVT. LTD.		PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur		PART NO. -
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		DRAWING NO. GSPL/10-SPV/MMS
Ph. 01334315551, Mob. 9810041987, 9310141982		
www.gautamsolar.com		

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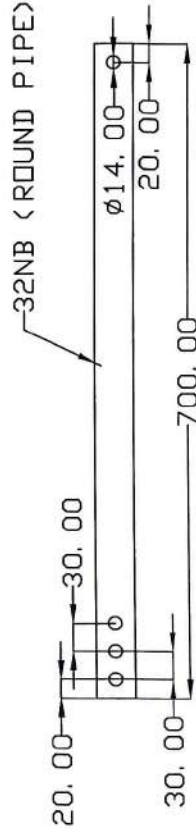
DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM

SUPPORTING PIPE JOINT (FRONT)



25NB (ROUND PIPE)
ITEM - 09
QTY - 1 NO.

SUPPORTING PIPE (FRONT)



32NB (ROUND PIPE)

ITEM - 10

QTY - 1 NO.S



NOTES: -

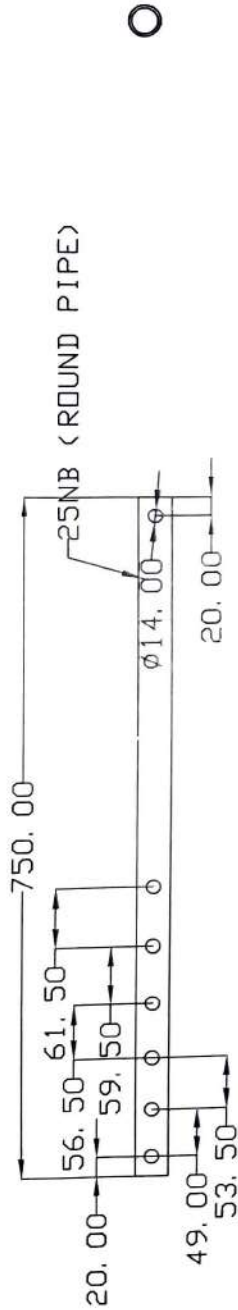
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

TITLE	MATERIAL - MS	DATE
STRUCTURE DRAWING FOR SPV	SCALE NTS	SHEET-10/13-
PUMP, 10NO.s OF 300 MODULE	DRAWN BY --SUNIL--	
SR.NO	CHECKED BY --HEMANT--	
CHANGE RECORD	APPROVED BY --ANIRUDH--	
GAUTAM SOLAR PVT. LTD.		PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur		PART NO. -
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		DRAWING NO. GSPL/10-SPV/MMS
Ph. 01334315551, Mob. 9810041987, 9310141982		
www.gautamsolar.com		

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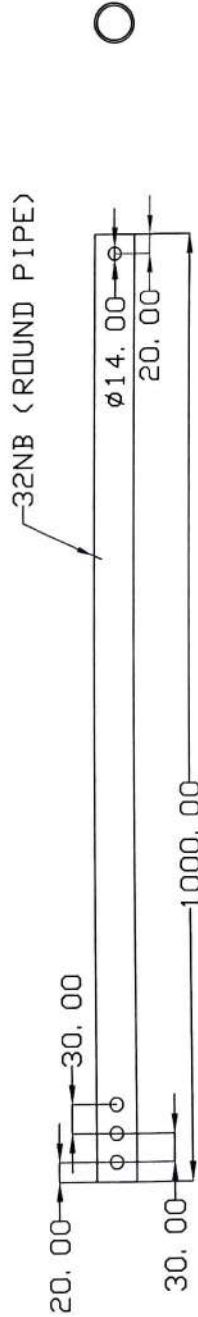
SUPPORTING PIPE JOINT (BACK)

DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM



25NB (ROUND PIPE)
ITEM - 11
QTY - 1 NO.

SUPPORTING PIPE (BACK)



32NB (ROUND PIPE)
ITEM - 12
QTY - 1 NO.S



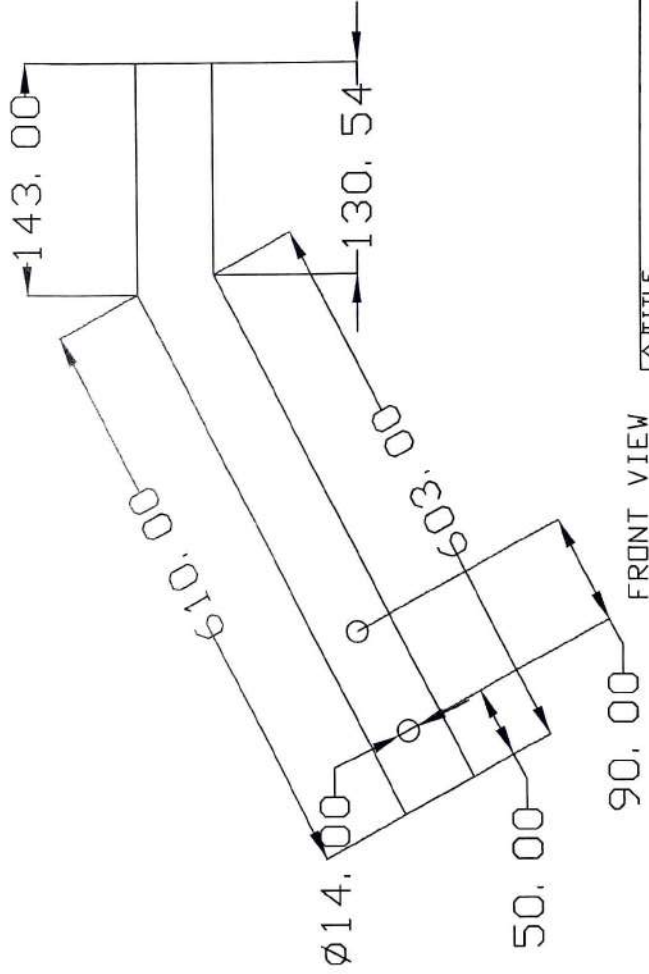
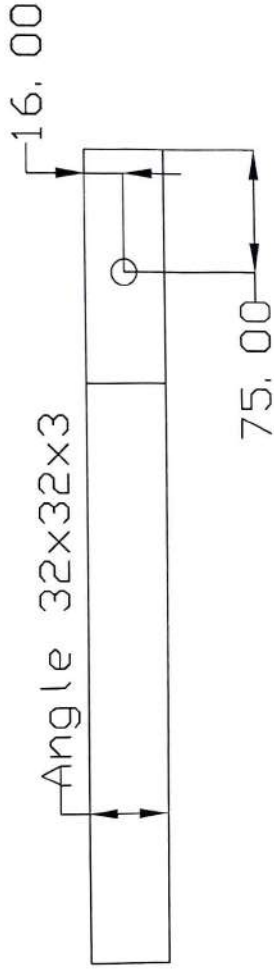
NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

TITLE	MATERIAL - MS	DATE
STRUCTURE DRAWING FOR SPV	SCALE NTS	SHEET -11/13-
PUMP, 10NO.s OF 300 MODULE	DRAWN BY	---
SR.NO	CHECKED BY	---
CHANGE RECORD	APPROVED BY	---
GAUTAM SOLAR PVT. LTD.		PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur		PART NO. -
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		DRAWING NO. GSPL/10-SPV/MMS
Ph. 01334315551, Mob. 9810041987, 9310141982		
www.gautamsolar.com		

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ALL DIMENSIONS ARE IN MM

LA HOLDER



ANGLE- 32x32x3

ITEM - 13

QTY - 1

NOTES: -

DE BURR ALL SHARP EDGES

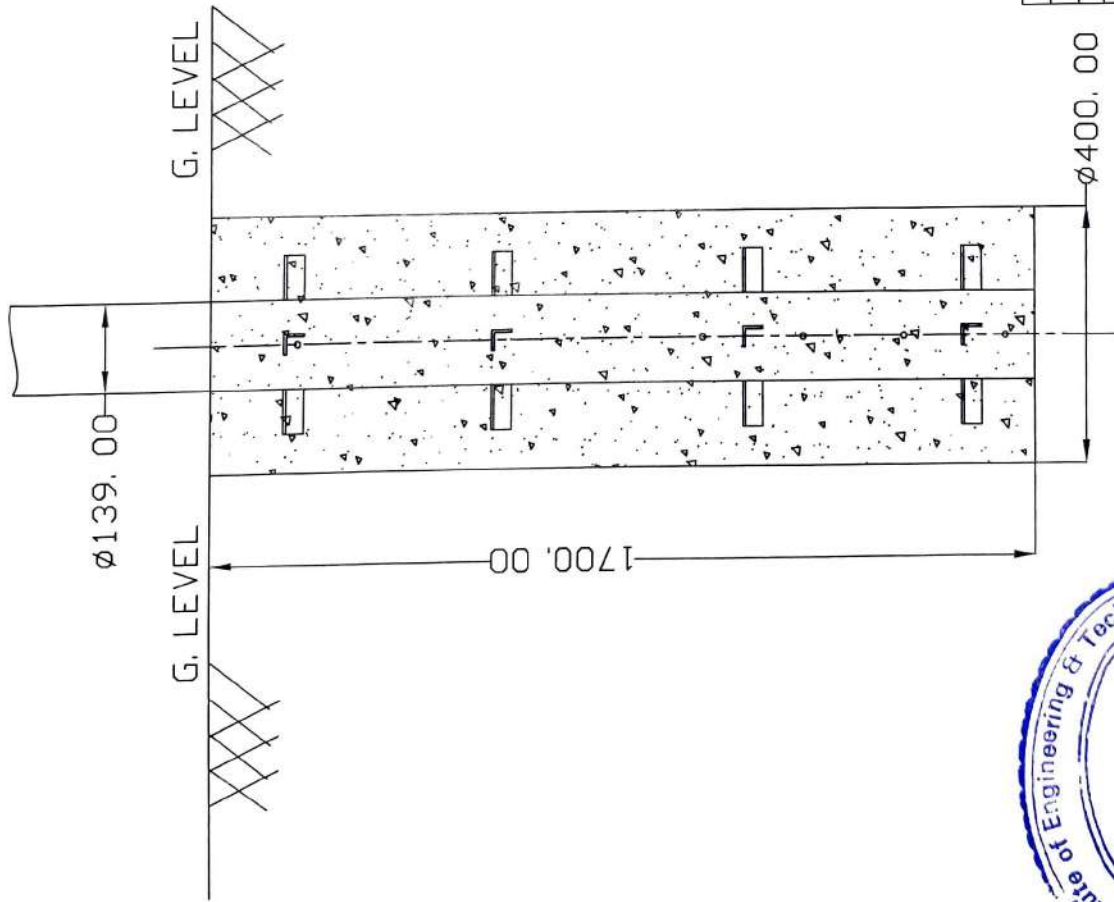
ALL PART SHOULD BE GALVANIZED

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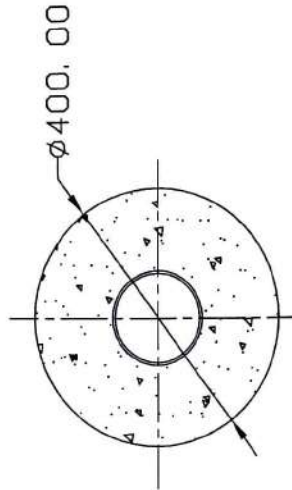


TITLE	MATERIAL - MS	DATE
STRUCTURE DRAWING FOR SPV PUMP, 10NO.s OF 300 MODULE	SCALE NTS	SHEET -12/13-
SR.NO	DRAWN BY --SUNIL--	
CHANGE RECORD	CHECKED BY --HEMANT--	
	APPROVED BY --ANIRUDH--	
	PART NAME -	
	PART NO. -	
	DRAWING NO. GSPL/10-SPV/MMS	

DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM



FRONT VIEW



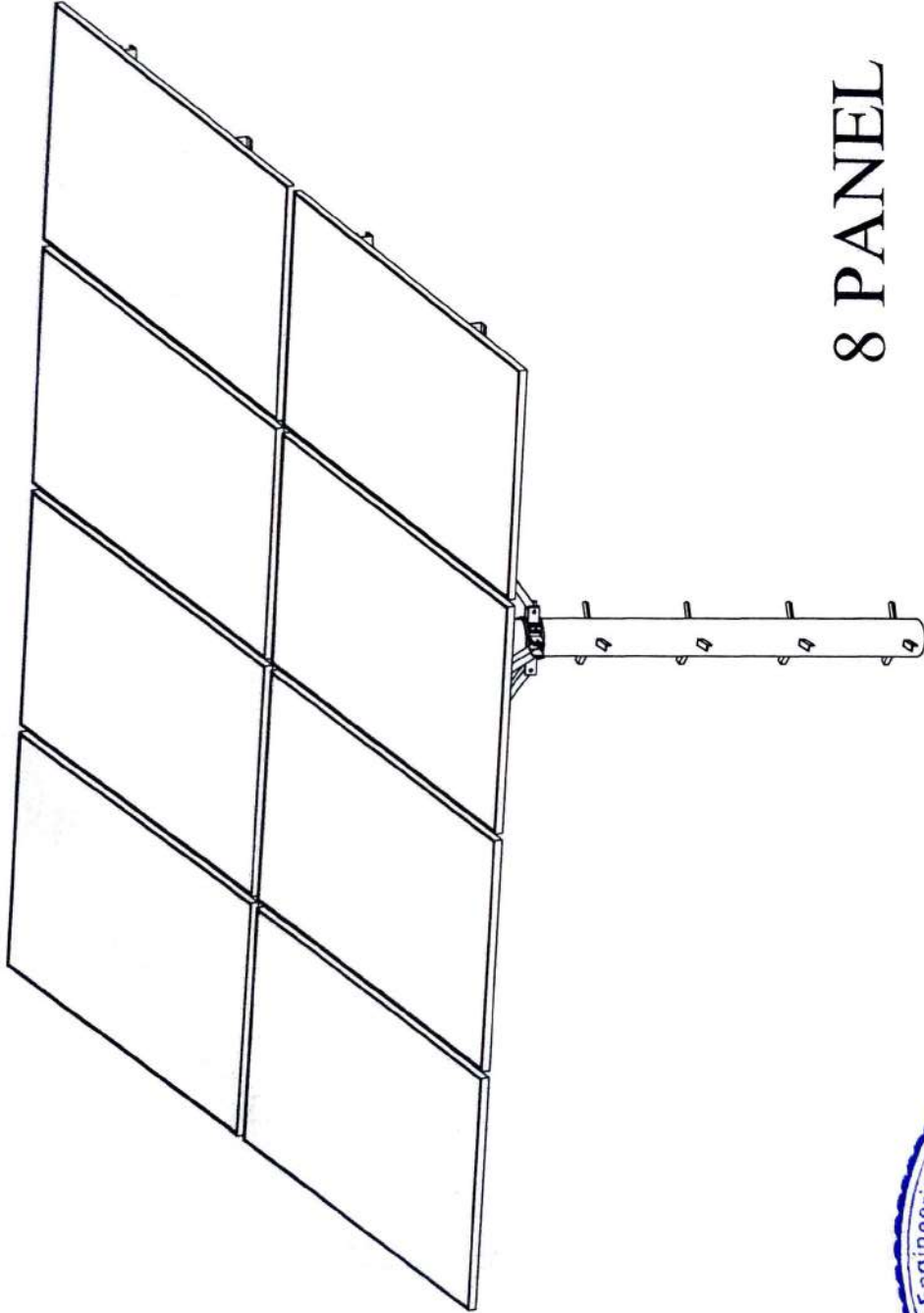
TOP VIEW



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TITLE	MATERIAL	DATE
STRUCTURE DRAWING FOR SPV	SCALE	SHEET -13/13-
PUMP, 10 NO.s OF 300W MODULE	DRAWN BY	---
SR.NO	CHECKED BY	---
CHANGE RECORD	APPROVED BY	---
GAUTAM SOLAR PVT. LTD.		
Plot No. 114, Sector-6A, IIE Ranipur		
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		
Ph. 01334315551, Mob. 9810041987, 9310141982		
www. gautamsolar. com		
PART NAME		
PART NO.		
DRAWING NO.		

DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM



8 PANEL

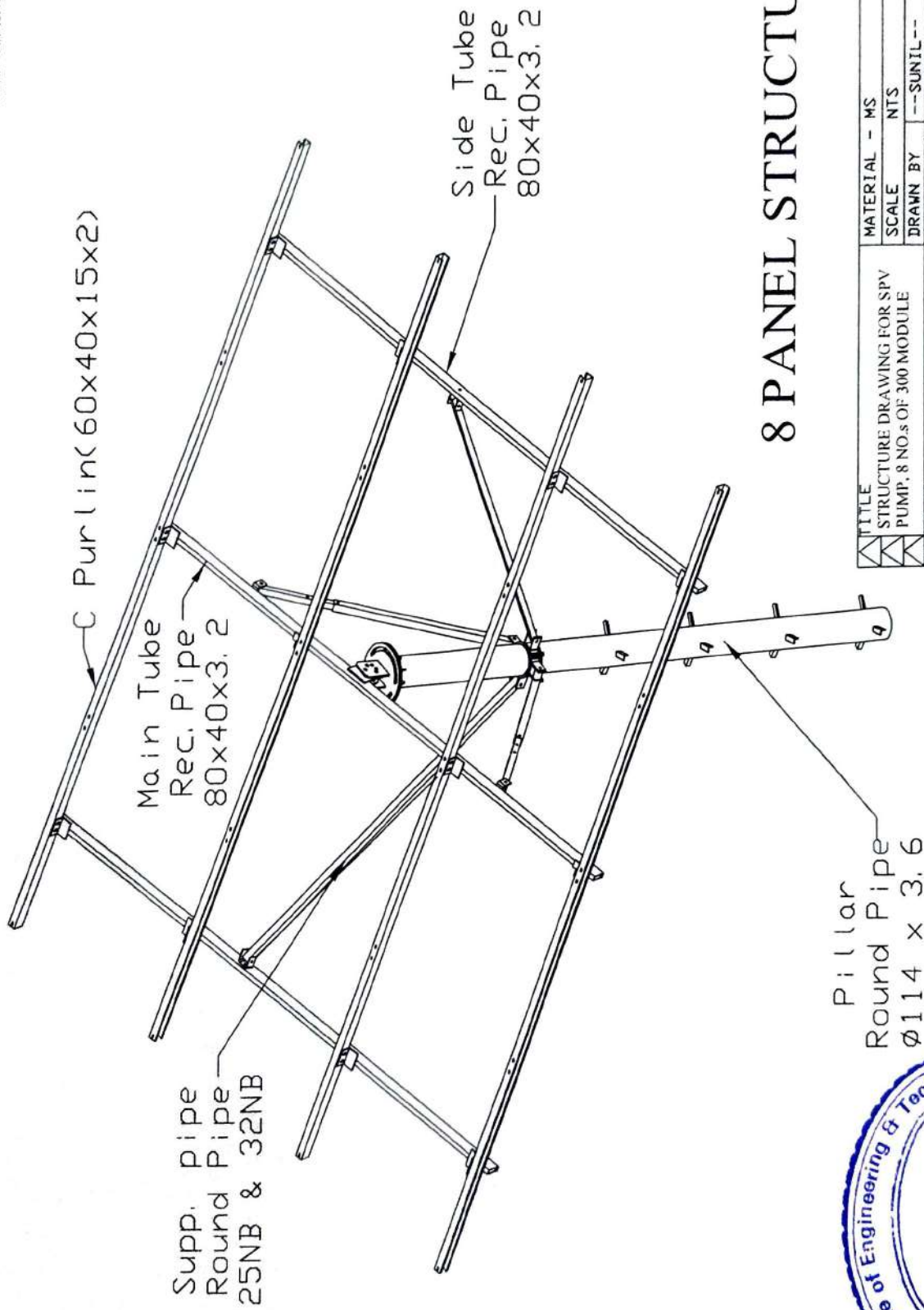
STRUCTURE DRAWING FOR SPV PUMP, 8 NO.s OF 300 MODULE	MATERIAL - MS	DATE
NO	SCALE NTS	SHEET -1/13-
CHANGE RECORD	DRAWN BY --SUNIL--	
	CHECKED BY --HEMANT--	
	APPROVED BY --ANIRUDH--	
GAUTAM SOLAR PVT. LTD.		PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur		PART NO. -
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		DRAWING NO. -
Ph. 01334315551, Mob. 9810041987, 9310141982		GSPL/SSPV/MMS
www.gautamsolar.com		

NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED



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DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM



8 PANEL STRUCTURE

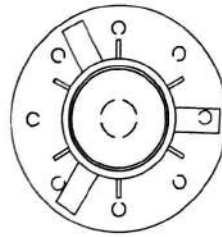
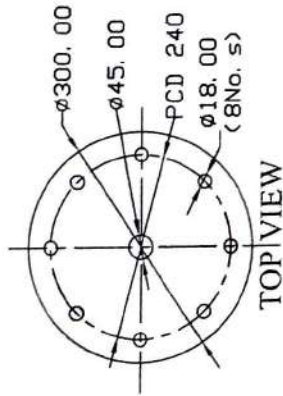
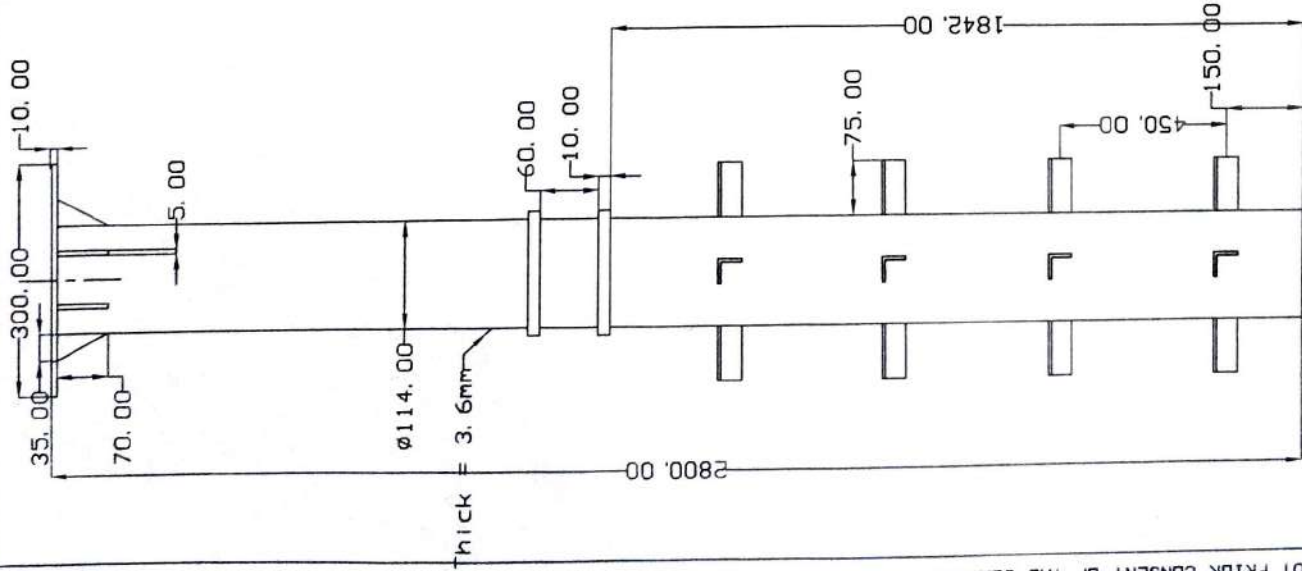
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STRUCTURE DRAWING FOR SPV PUMP, 8 NO.s OF 300 MODULE	SCALE NTS	SHEET -2/13-
SR.NO	DRAWN BY --SUNIL--	
CHANGE RECORD	CHECKED BY --HEMANT--	
	APPROVED BY --ANIRUDH--	
GAUTAM SOLAR PVT. LTD.		PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur		PART NO. -
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		DRAWING NO. -
Ph. 01334315551, Mob. 9810041987, 9310141982		
www.gautamsolar.com		

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PILLAR




BOTTOM VIEW

DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM

ITEM - 01
QTY - 1 NO.S



ISOMETRIC VIEW

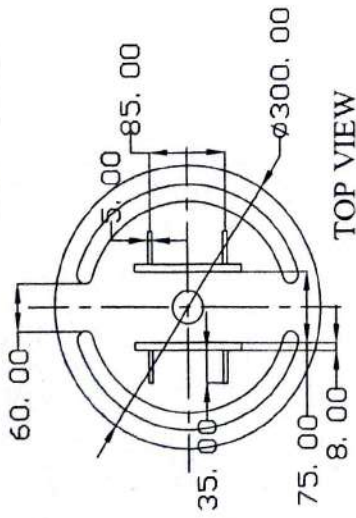
TITLE		MATERIAL - MS		DATE
STRUCTURE DRAWING FOR SPV PUMP, 8 NO.s OF 300 MODULE		SCALE		SHEET - 3/13-
		DRAWN BY		
		CHECKED BY		
SR.NO		APPROVED BY		
CHANGE RECORD		PART NAME		---
GAUTAM SOLAR PVT. LTD.		PART NO.		---
Plot No. 114, Sector-6A, IIE Ranipur		DRAWING NO.		---
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		GSPL/8-SPV/MMS		---
Ph. 01334315551, Mob. 9810041987, 9310141982				
www.gautamsolar.com				

NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

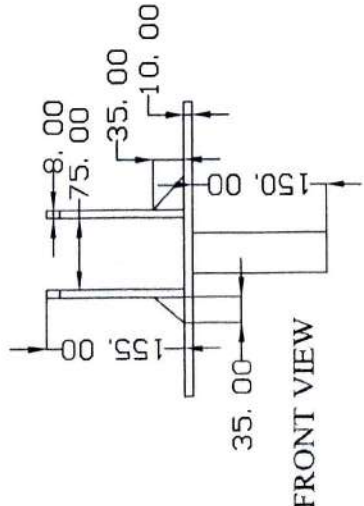
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UPPER ROTATION PLATE

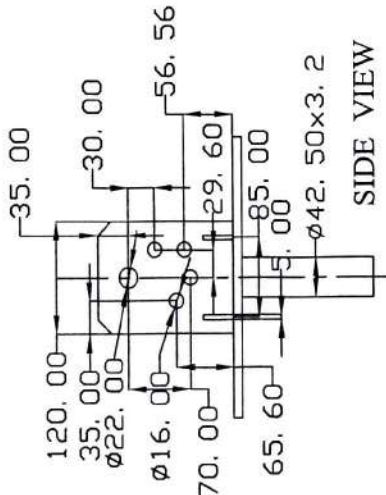
DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM



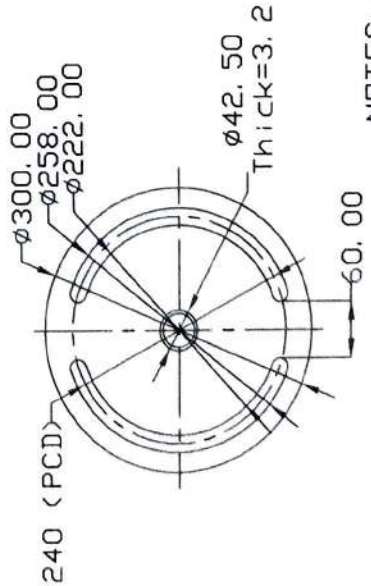
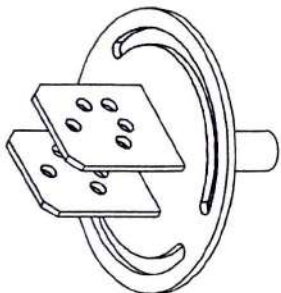
TOP VIEW



FRONT VIEW



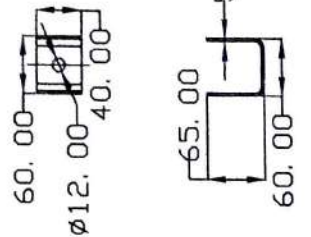
SIDE VIEW



BOTTOM VIEW

NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

U CLAMP



ITEM - 03
QTY - 2 NO.S

ITEM - 02
QTY - 1 NO.S

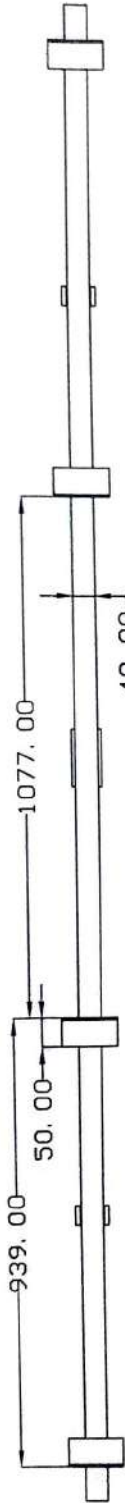


TITLE	MATERIAL - MS	DATE
STRUCTURE DRAWING FOR SPV	SCALE	SHEET - 4/13-
PUMP, 8 NO.s OF 300 MODULE	NTS	
SR. NO	DRAWN BY	--SUNIL--
CHANGE RECORD	CHECKED BY	--HEMANT--
	APPROVED BY	--ANIRUDH--
	PART NAME	--
	PART NO.	--
	DRAWING NO.	GSPL/SSPV/MNS

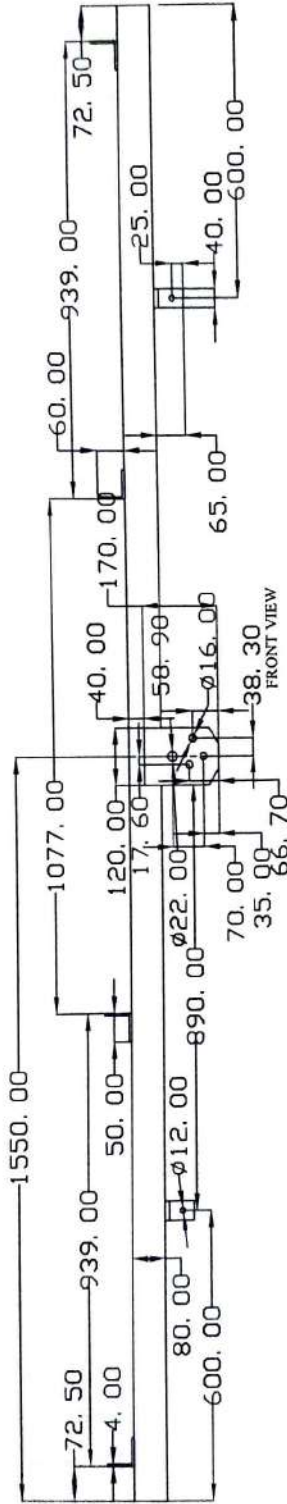
GAUTAM SOLAR PVT. LTD.
Plot No. 114, Sector-6A, IIE Ranipur
SIDKUL, Haridwar - 249403 (UTTRAKHAND)
Ph. 0134315551, Mob. 9810041987, 9310141982
www.gautamsolar.com

DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM

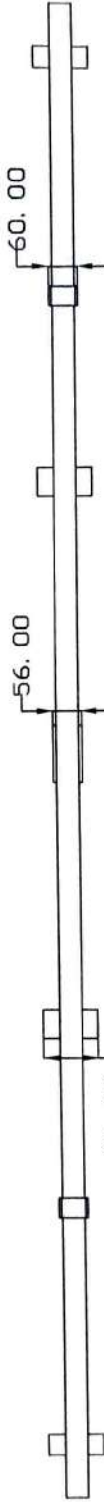
MAIN TUBE



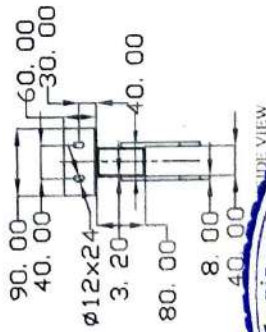
TOP VIEW



FRONT VIEW



BOTTOM VIEW

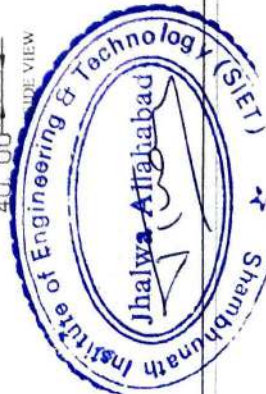


SIDE VIEW

Rec. Pipe = 80x40x 3.2
ITEM - 04
QTY - 1 NO.

NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

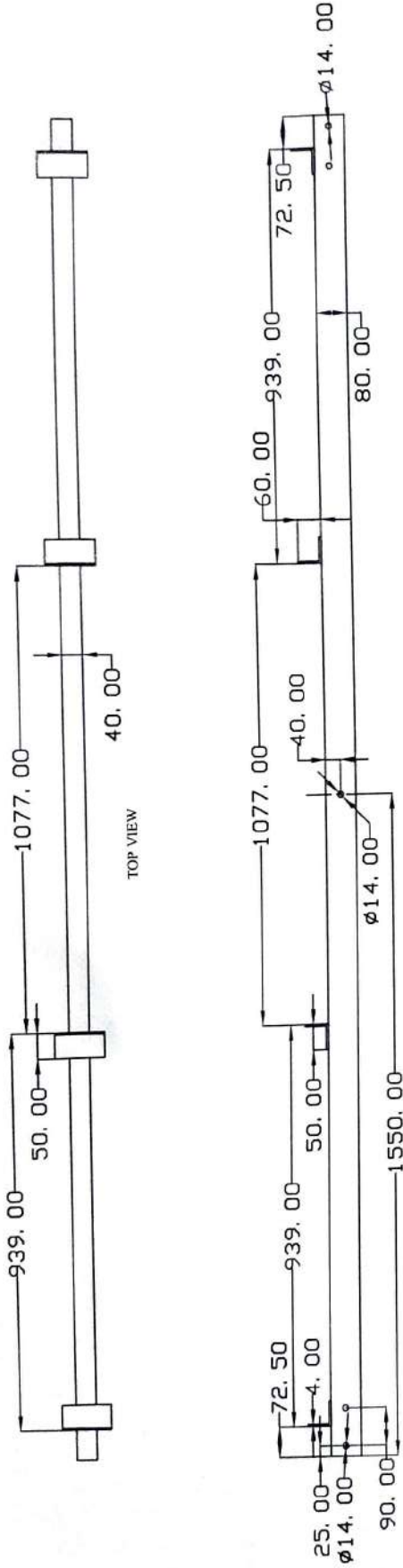
TITLE	MATERIAL - MS	DATE
STRUCTURE DRAWING FOR SPV	SCALE NTS	SHEET -5/13-
PUMP, 8 NO.s OF 300 MODULE	DRAWN BY --SUNIL--	
SR.NO	CHECKED BY --HEMANT--	
CHANGE RECORD	APPROVED BY --ANIRUDH--	
GAUTAM SOLAR PVT. LTD.		PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur		PART NO. -
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		DRAWING NO. - GSPL/8SPV/MMS
Ph. 01334315551, Mob. 9810041987, 9310141982		
www.gautamsolar.com		



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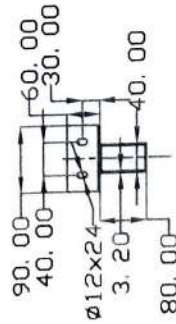
SIDE TUBE



FRONT VIEW

BOTTOM VIEW


Rec. Pipe = 80x40x3.2
ITEM - 05
QTY - 2 NO.



SIDE VIEW



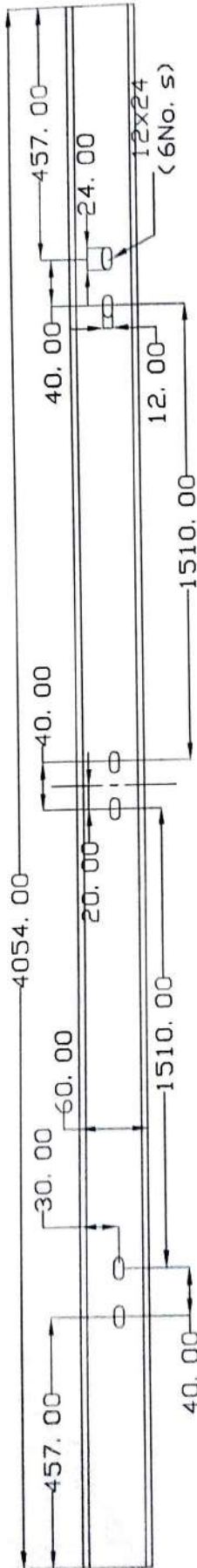
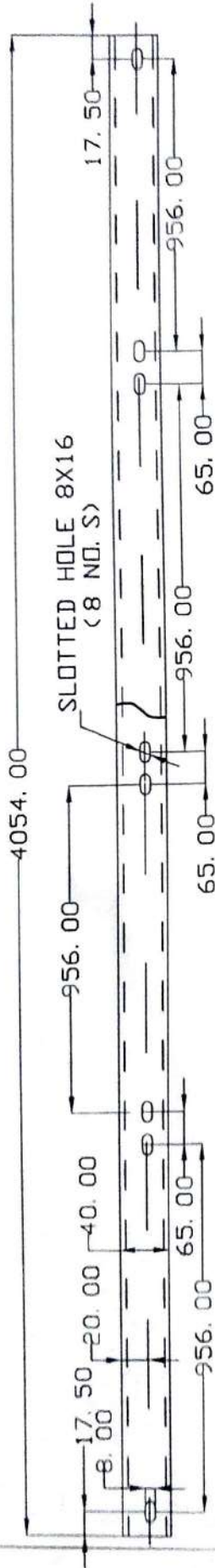
NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

✓	TITLE	MATERIAL - MS	DATE
✓	STRUCTURE DRAWING FOR SPV	SCALE NTS	SHEET -6/13-
✓	PUMP, 8 NO.s OF 300 MODULE	DRAWN BY --SUNIL--	
✓	SR.NO	CHECKED BY --HEMANT--	
✓	CHANGE RECORD	APPROVED BY --ANIRUDH--	
GAUTAM SOLAR PVT. LTD.			
Plot No. 114, Sector-6A, IIE Ranipur			
SIDKUL, Haridwar - 249403 (UTTRAKHAND)			
Ph. 01334315551, Mob. 9810041987, 9310141982			
www.gautamsolar.com			
		PART NAME -	
		PART NO. -	
		DRAWING NO. -	GSPL/8SPV/MMS

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TOP VIEW



FRONT VIEW

PURLIN - FOR 4 PANEL

ITEM - 06
QTY - 4 NO.

PURLIN - C 60x40x15x2

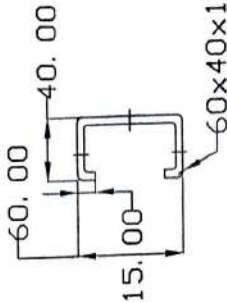


NOTES: -

DE BURR ALL SHARP EDGES
ALL ANGLE SHOULD BE GALVANIZED

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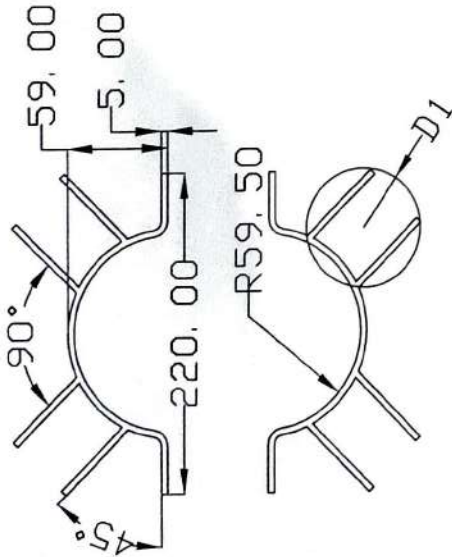
SIDE VIEW



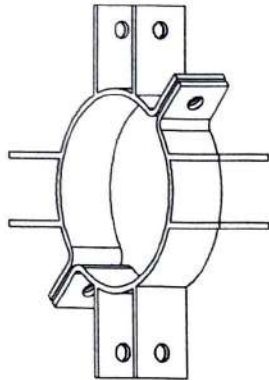
MATERIAL - MS		SCALE NTS		DATE	
TITLE STRUCTURE DRAWING FOR SPV PUMP, 8 NO.s OF 300 MODULE		DRAWN BY	--SUNIL--	SHEET--7/13-	
		CHECKED BY	--HENANT--		
		APPROVED BY	--ANIRUDH--		
SR. NO		CHANGE RECORD		DATE	
		GAUTAM SOLAR PVT. LTD.		PART NAME	
		Plot No. 114, Sector-6A, IIE Ranipour		PART NO.	
		SIDKUL, Haridwar - 249403 (UTTRAKHAND)		DRAWING NO.	
		Ph. 01334315551, Mob. 9810041987, 9310041987, 9310141982			
		www.gautamsolar.com			

DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM

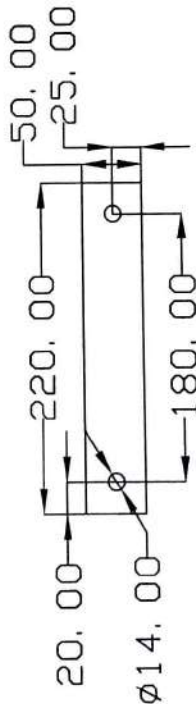
TOP VIEW



ISOMETRIC VIEW



FRONT VIEW



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ROTATION CLAMP
ITEM - 07
QTY - 1 Set

NOTES: -
DE BURR ALL SHARP EDGES
ALL ANGLE SHOULD BE GALVANIZED

MATERIAL - MS

TITLE STRUCTURE DRAWING FOR SPV
PUMP, 8 NOS OF 300 MODULE

CHANGE RECORD DATE

GAUTAM SOLAR PVT. LTD.

Plot No. 114, Sector-6A, IIE Ronipur
SIDCUL, Haridwar - 249403 (UTTRAKHAND)
Ph. 01334315551, Mob. 9810041987, 9310141982
www.gautamsolar.com

SCALE NTS

DRAWN BY --SUNIT--

CHECKED BY --HEMANT--

APPROVED BY --ANIRUDH--

PART NAME

PART NO.

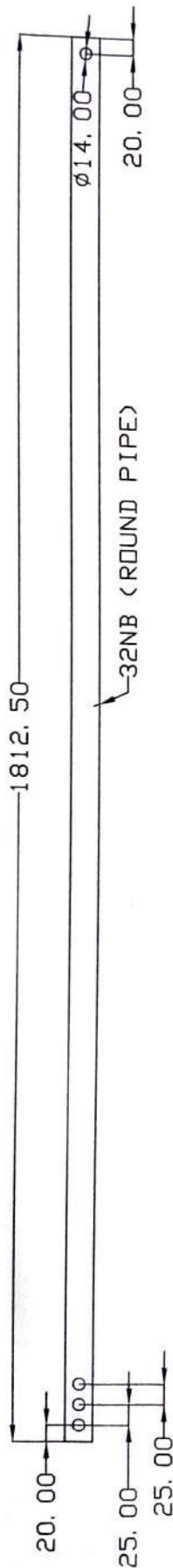
DRAWING NO.

SHEET -08/13-



SUPPORTING PIPE (FOR SIDE)

DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM



25NB (ROUND PIPE)
ITEM - 08
QTY - 2 NO.s



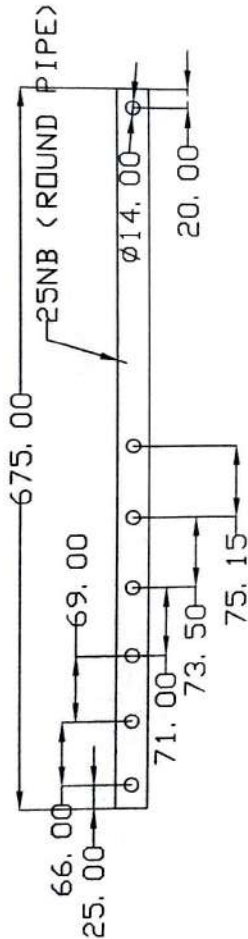
NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

✓	TITLE	MATERIAL - MS	DATE
✓	STRUCTURE DRAWING FOR SPV	SCALE	SHEET -09/13-
✓	PUMP, 8 NO.s OF 300 MODULE	DRAWN BY	---
✓	SR. NO	CHECKED BY	---
✓	CHANGE RECORD	APPROVED BY	---
✓	GAUTAM SOLAR PVT. LTD.	PART NAME	---
✓	Plot No. 114, Sector-6A, IIE Ranipur	PART NO.	---
✓	SIDKUL, Haridwar - 249403 (UTTRAKHAND)	DRAWING NO.	---
✓	Ph. 01334315551, Mob. 9810041987, 9310141982		---
✓	www.gautamsolar.com		---

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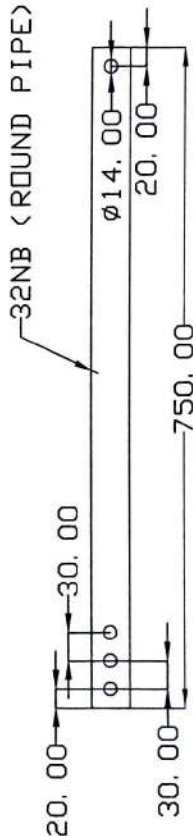
DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM

SUPPORTING PIPE JOINT (FRONT)



25NB (ROUND PIPE)
ITEM - 09
QTY - 1 NO.

SUPPORTING PIPE (FRONT)



32NB (ROUND PIPE)
ITEM - 10
QTY - 1 NO.S



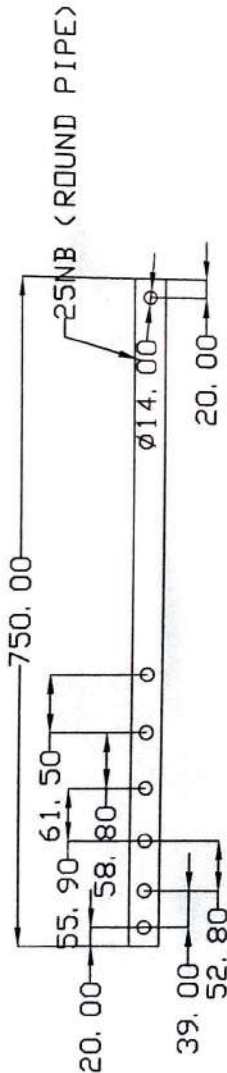
NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

TITLE	MATERIAL - MS	DATE
STRUCTURE DRAWING FOR SPV	NTS	SHEET-10/13-
PUMP, 8 NOS OF 300 MODULE	DRAWN BY --SUNIL--	
SR.NO	CHECKED BY --HEMANT--	
CHANGE RECORD	APPROVED BY --ANIRUDH--	
GAUTAM SOLAR PVT. LTD.		PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur		PART NO. -
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		DRAWING NO. - GSPL/8SPV/MMS
Ph. 01334315551, Mob. 9810041987, 9310141982		
www.gautamsolar.com		

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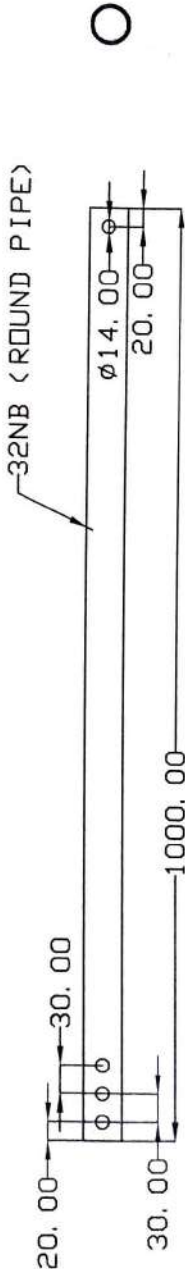
SUPPORTING PIPE JOINT (BACK)

DO NOT SCALE DRAWING
ALL DIMENSIONS ARE IN MM



25NB (ROUND PIPE)
ITEM - 11
QTY - 1 NO.

SUPPORTING PIPE (BACK)



32NB (ROUND PIPE)

ITEM - 12
QTY - 1 NO.s

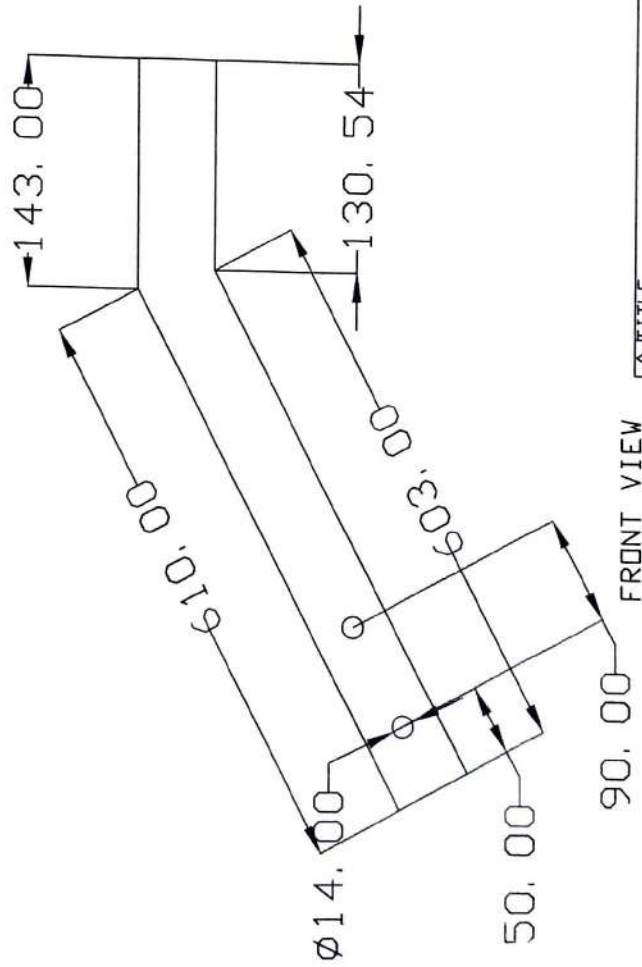


NOTES: -
DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED

△ TITLE	MATERIAL - MS	DATE
△ STRUCTURE DRAWING FOR SPV	SCALE NTS	SHEET -11/13-
△ PUMP, 8 NO.s OF 300 MODULE	DRAWN BY --SUNIL--	---
△ SR. NO	CHECKED BY --HEMANT--	---
△ CHANGE RECORD	APPROVED BY --ANIRUDH--	---
GAUTAM SOLAR PVT. LTD.		PART NAME -
Plot No. 114, Sector-6A, IIE Ranipur		PART NO. -
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		DRAWING NO. -
Ph. 01394315551, Mob. 9810041987, 9310141982		GSPL/8SPV/MMS
www.gautamsolar.com		---

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ALL DIMENSIONS ARE IN MM

LA HOLDER



ANGLE- 32x32x3



ITEM - 13

QTY - 1

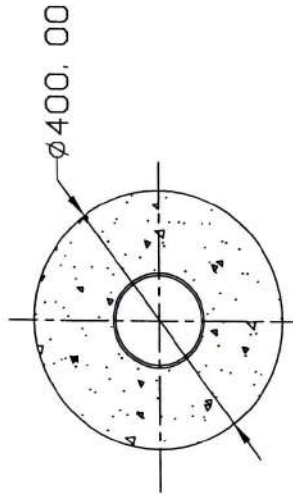
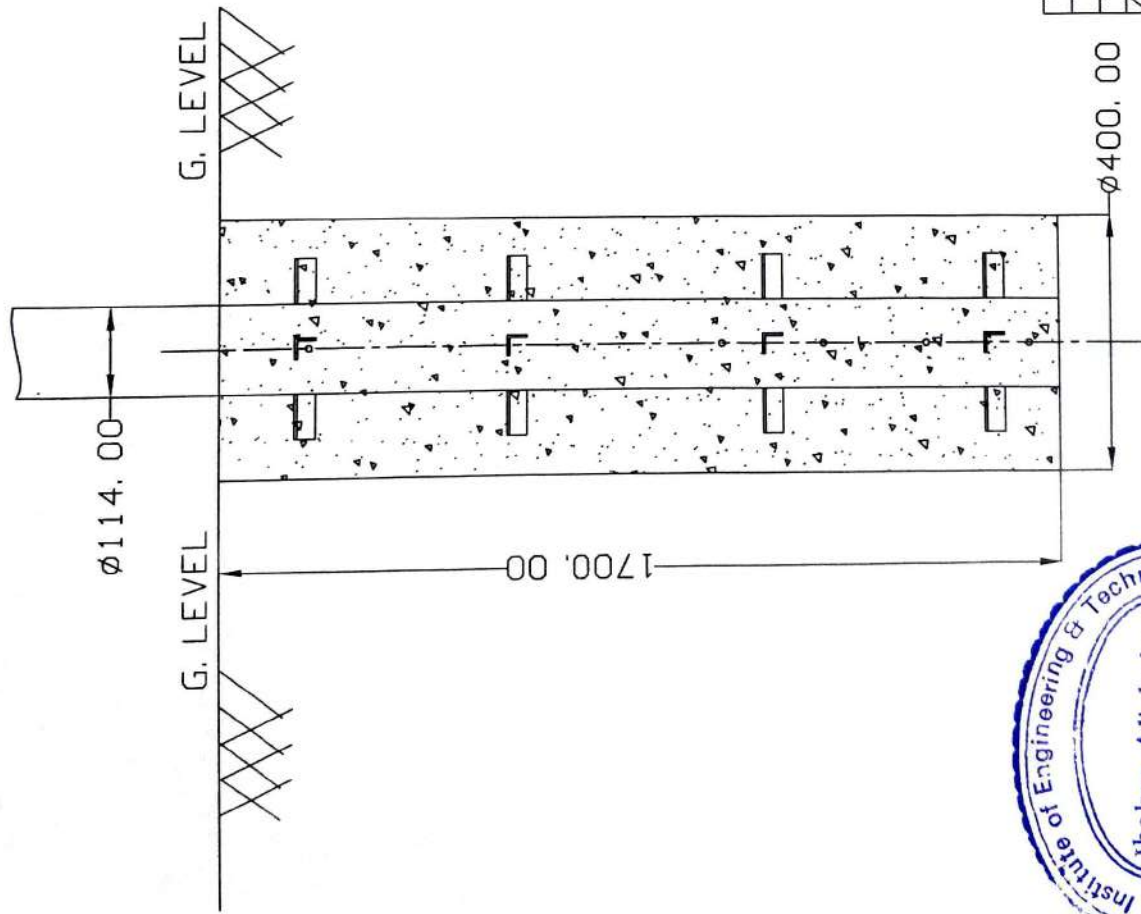
NOTES: -

DE BURR ALL SHARP EDGES
ALL PART SHOULD BE GALVANIZED



TITLE	MATERIAL - MS	DATE
STRUCTURE DRAWING FOR SPV PUMP, & NO.s OF 300 MODULE	SCALE NTS	
	DRAWN BY --SUNIL--	SHEET -12/13-
SR.NO	CHECKED BY --HEMANT--	
CHANGE RECORD	APPROVED BY --ANIRUDH--	
GAUTAM SOLAR PVT. LTD. Plot No. 114, Sector-6A, IIE Ranipur SIDKUL, Haridwar - 249403 (UTTRAKHAND) Ph. 01334315951, Mob. 9810041987, 9310141982 www.gautamsolar.com		
	PART NAME	
	PART NO.	
	DRAWING NO.	GSPL/8SPV/MMS

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ALL DIMENSIONS ARE IN MM



TOP VIEW

FRONT VIEW

TITLE	MATERIAL	DATE
STRUCTURE DRAWING FOR SPV PUMP, 8 NO.s OF 300W MODULE	SCALE	SHEET -13/13-
SR. NO	DRAWN BY	NTS
CHANGE RECORD	CHECKED BY	---
	APPROVED BY	---
GAUTAM SOLAR PVT. LTD.		
Plot No. 114, Sector-6A, IIE Ranipur		
SIDKUL, Haridwar - 249403 (UTTRAKHAND)		
Ph. 01334315551, Mob. 9810041987, 9310141982		
www.gautamsolar.com		
PART NAME		
PART NO.		
DRAWING NO.		



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