



क्र./11938/क्रेडा/नि.क्र10370/2018-19

रायपुर दिनांक 10.08.2018

सूचना पत्र

क्रेडा द्वारा सोलर हाई मास्ट संयंत्रों के प्रदाय व स्थापना हेतु दरों के निर्धारण हेतु निविदा क्रमांक 10370 दिनांक 25.07.2018 के तहत दरें आमंत्रित की गई हैं। निविदा अंतर्गत निविदा की शर्तों/मापदण्ड एवं निविदा जमा करने की तिथि में निम्नानुसार संशोधन किया जाता है:-

S. No.	Tech. Specification	Amendment
1	12 meter long, 20 sided polygonal raising lowering mast in two sections, which should be telescopically joined together with a minimum length of overlap of 500 times the diameter. The dimensions of two sections should be as follows: (a)- Lower section_ bottom dia. 420 mm A/F & top dia.321 mm A/F (b)- Top section _ bottom dia. 299 mm A/F & top dia. 200 mm A/F. Thickness of section should be 3mm. (Page No.21)	12 meter long, 20 sided polygonal raising lowering mast in two sections, which should be telescopically joined together with a minimum length of overlap of 500 MM. The dimensions of two sections should be as follows: (a)- Lower section_ bottom dia. 420 mm A/F & top dia.299 mm A/F (b)- Top section _ bottom dia. 321 mm A/F & top dia. 200 mm A/F. Thickness of section should be 4 mm.
2	Double Drum; Gear Ratio 21:4C.D. ;SWL 750 Kg ; Manual ; Self Lubricating, Tested load per drum minimum 750 Kg (Page No.21)	Double Drum; Gear Ratio 53:1 C.D. ;SWL 750 Kg ; Manual ; Self Lubricating/ oil filled, Tested load per drum minimum 750 Kg
3	Bidders have to submit EN-50530/ IEC 61683 or equivalent BIS Standard test report for Solar MPPT charge controller. (Test certificates must be taken from NABL accredited lab). (Page No.23)	Bidders have to submit EN-50530/ IEC 61683/60068/62093 or equivalent BIS Standard test report for Solar MPPT charge controller. (Test certificates must be taken from NABL accredited lab).
4	Bidders have to submit the latest & relevant test reports of Cell confirming to BIS/IEC Standards and NABL test report of complete battery pack. (Page No.24)	Bidders have to submit BIS Certificate for LFP & LTO Cells and IEC Certificate for both the batteries.
5	12 Mtr High Mast 06 PV Module arrangement round of the mast (As per drawing in the bid document)	12 Mtr High Mast, 02 Sided PV Module arrangement with 03 Nos PV Module each side. (New Drawing Attached & Old Drawing is Not Valid Now)
6	Lighting Protection Finial – GI Single Spike of length 1200 mm (Page No. 21)	Not require earthing not in scope and L.A shade lay in the panel
7	Thickness of base plate (MM) – 20 mm (Page No.21)	Thickness of base plate(MM) –25 mm
8	Stainless Steel Wire Rope - Wire rope of Grade AISI 316 grade , 7/19 construction, with two SS ropes continues 6 mm diameter and braking load capacity 2200 kg x 5. 3 Nos. from transition plate to LC and 2 Nos. from winch to transition plate. The breaking load test report obtained from govt. laboratory of the wire rope should justify the desired the breaking load capacity. (Page No. 21)	Stainless Steel Wire Rope - Wire rope of Grade AISI 316 grade, 7/19 or 6/19 construction of 10 mm diameter and braking load capacity of 3750 Kg minimum. The breaking load test report obtained from govt. laboratory of the wire rope should justify the desired the breaking load capacity.
9	Discharging Current: 18 A – Rated Discharge Current 30 A – Maximum Discharge Current (Page No. – 22)	Discharging Current: 18 A – Rated Discharge Current 20 A – Maximum Discharge Current
10	Bidder should have experience of supply, installation and commissioning of 01 no. of Solar High Mast System with Lithium Battery on or before 10-08-2018.	Bidder should have experience of supply, installation and commissioning of 01 no. of Solar High Mast System 9 Meter 900Watt with Lithium Battery on or before 24-08-2018.

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S. No.	Tech. Specification	Amendment
11	The luminary efficacy should be minimum 100 lm/w of each luminary. (Page No. 20)	The luminary efficacy should be minimum 110 lm/w of each luminary.
12	Detailed Battery Specifications of Lithium Iron Phosphate Batteries (LFP): Nominal Capacity – 100 Ah (Page No. 22)	Nominal Capacity – 120 Ah
13	Battery Voltage Settings Boost Charging - 14.70V± 0.20V Float Charging - 14.00 V± 0.20V (Page No. 23)	Battery Voltage Settings Charging Voltage – 14.6 V
14	The Luminous flux should be min. 6000 lumens (Page No. 20)	The Luminous flux should be min. 4950 lumens
15	Trailing Cable Copper Conductor, 5 Core, 4 sq mm. Insulation – EPR Insulated PCP sheathed One circuit per mast (Page No. 21)	It is not required

Apart from above amendments in the clause, there needs some other clause/amendments to be added in this bid. They are:-


1. A three section pole drawing and design specifications have been added in this bid for more safety measurements. (Drawing & Specifications attached)
2. Foundation base / Column base dimensions should be 1500x1500x200 mm.
3. Vendor Authorization Certificate is mandatory to be submitted by the bidder from whom they are buying the products.
4. It is mandatory for the bidder to submit the FEA report for the pole, Winch type test and Wire Rope Test Report. Also they have to submit the FEA report of the pole along with the carriage in the fully loaded condition.
5. SPV Module, Battery and Structure should be of 10 years warranty and Light & Electronics should be of 05 years warranty.
6. If the system remains closed for some days then the warranty will be extended automatically for the number of days the system remains closed.
7. For healthy monitoring of the systems RMS/ Bluetooth/ Data Logger Technology must be used by the bidder in the system.

The due date of the bid is hereby extended as per following details:-

S. No	Particulars	Date	Time	Place
1	Submission of Bid Documents, Technical Bid	31-08-18	Till 11.30 AM	Office of Chief Engineer (RE – III), Head Office, CREDA, Raipur.
2	Submission of Samples	31-08-18	Till 11.30 AM	Energy Education Park, VIP Road, Raipur
3	Examination of Bid Documents, Technical Bid	31-08-18	From 12.30 PM	Office of Chief Engineer (RE – III), Head Office, CREDA, Raipur.
4	Submission of Price Bid through http://cspc.co.in	31-08-18	Till 11.30 AM	http://cspc.co.in Web Portal
5	Opening of Price Bid	31-08-18	After Technical Bid or the next day	At Bio Diesel Conference Hall, Near Energy Education Park, VIP Road, Raipur.

निविदा की शेष नियम व शर्तें यथावत् रहेगी।

संलग्न:-उपरोक्तानुसार


(राजीव खरे)
मुख्य अभियंता



PRICE BID – A (Amended).

Schedule of Rates for Solar High Mast Systems.

(As per Specifications & Scope of Work of

E.Bid Document No.10370/CREDA/HOR/RE-3/Solar High Mast/2018 Date 25-07-2018)

Design, Supply, Installation and Commissioning of **Solar High Mast Systems** including civil work foundation and other allied works with five years on site unconditional warrantee at various sites of Chhattisgarh State as per scope of work.

No.	Description	Rate/ Unit (without GST)
A-1	Supply of Solar High Mast System 12 meter high with 1200 Wp Module/ LFP Batteries -(120AH at 12.8V x 6 sets) 45W-LED Luminary x 6nos with RMS arrangement	
	Installation and Commissioning at site	
	Comprehensive Operation and Maintenance of Systems for five years	
TOTAL		

No.	Description	Rate/ Unit (without GST)
A-2	Supply of Solar High Mast System 12 meter high with 1200 Wp Module/ LFP Batteries -(120AH at 12.8V x 6 sets) 45W-LED Luminary x 6nos with Bluetooth arrangement	
	Installation and Commissioning at site	
	Comprehensive Operation and Maintenance of Systems for five years	
TOTAL		

No.	Description	Rate/ Unit (without GST)
A-3	Supply of Solar High Mast System 12 meter high with 1200 Wp Module/ LFP Batteries -(120AH at 12.8V x 6 sets) 45W-LED Luminary x 6nos with Data Logger arrangement.	
	Installation and Commissioning at site	
	Comprehensive Operation and Maintenance of Systems for five years	
TOTAL		

Certified that rates quoted above are as per the requirement, specifications, and terms & condition mentioned in the bid document.

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, insurance, duties and any other job required to properly execute the work with 5 years warrantee as mentioned in the bid document. The GST payable on the bill produced for payment to CREDA shall be paid in addition to above quoted price as per rate of GST applicable at the time of billing.

(No other cost will be claimed above the price quoted)

Name of the authorized Signatory:

Signature of the Authorized Signatory:

Seal of Company:

Date:



PRICE BID – B (Amended).

Schedule of Rates for Solar High Mast Systems.

(As per Specifications & Scope of Work of

E.Bid Document No.10370/CREDA/HOR/RE-3/Solar High Mast/2018 Date 25-07-2018)

Design, Supply, Installation and Commissioning of **Solar High Mast Systems** including civil work foundation and other allied works with five years on site unconditional warrantee at various sites of Chhattisgarh State as per scope of work.

No.	Description	Rate/ Unit (without GST)
B-1	Supply of Solar High Mast System 12 meter high with 1200 Wp Module/ LTO Batteries -(120AH at 11.5V x 6 sets) 45W-LED Luminary x 6nos with RMS Arrangement	
	Installation and Commissioning at site	
	Comprehensive Operation and Maintenance of Systems for five years	
TOTAL		

No.	Description	Rate/ Unit (without GST)
B-2	Supply of Solar High Mast System 12 meter high with 1200 Wp Module/ LTO Batteries -(120AH at 11.5V x 6 sets) 45W-LED Luminary x 6nos with Bluetooth Arrangement	
	Installation and Commissioning at site	
	Comprehensive Operation and Maintenance of Systems for five years	
TOTAL		

No.	Description	Rate/ Unit (without GST)
B-3	Supply of Solar High Mast System 12 meter high with 1200 Wp Module/ LTO Batteries -(120AH at 11.5V x 6 sets) 45W-LED Luminary x 6nos with Data Logger Arrangement	
	Installation and Commissioning at site	
	Comprehensive Operation and Maintenance of Systems for five years	
TOTAL		

Certified that rates quoted above are as per the requirement, specifications, and terms & condition mentioned in the bid document.

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, insurance, duties and any other job required to properly execute the work with 5 years warrantee as mentioned in the bid document. The GST payable on the bill produced for payment to CREDA shall be paid in addition to above quoted price as per rate of GST applicable at the time of billing.

(No other cost will be claimed above the price quoted)

Name of the authorized Signatory:

Signature of the Authorized Signatory:

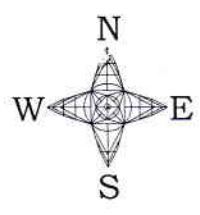
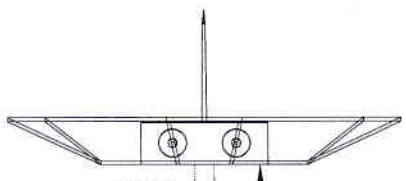
Seal of Company:

Date:

DETAIL SPECIFICATION OF 3-SECTION POLE DRAWING

Pole	<p>12 meter long, 20 sided polygonal raising lowering mast in three sections, which should be telescopically joined together with a minimum overlap of 500 mm of the two sections. The dimensions of two sections should be as follows:</p> <p>(a) Lower section bottom dia.500mm A/F & top dia. 362.5 mm A/F (b) Middle section bottom dia.375mm A/F & top dia. 27 mm A/F (c) Top section bottom dia. 287.5 mm A/F & top dia. 200 mm A/F</p> <p>Thickness of all sections should be 4mm. Mast must be hot dip galvanized. Mast design should be suitable for basic wind speed 180 km/hr complete with head frame, Luminaries carriage suitable to install 6 nos. Luminaries, Solar Panels & battery on the top of the mast. There should be provision to install the type tested Winch inside the mast for raising & lowering of complete solar lighting system.</p>
Material Construction	S 355 grade as per BS- EN10 025
Standard for of galvanization	As per BS EN ISO 1461 minimum 80 Micron
Size of opening and door at base (MM)	Min. 1200 x 250 mm. The Winch will be operated after opening this mast door for maintenance work/ Cleaning of solar panels. Locking arrangement should be provided in the access door to prevent theft & safety
Diameter of base plate (MM) - Thickness of base plate (MM)	700mm 25 mm
WINCH / POWER TOOL	<p>Winch: Mechanical device/arrangement to be provided to withstand the complete load of the luminary, PV Modules, Battery during raising lowering of the lighting system for panel cleaning in every week fortnight. Double Drum; Gear Ratio 53:1C.D.; SWL 750Kg; Manual; Self Lubricating / oil filled, Tested load per drum minimum750Kg</p>
Stainless Steel Wire Rope	Wire rope of Grade AISI 316 grade 7/19/ or 6/19 of 10 mm diameter and braking load capacity of 3750 kg minimum should be used for lowering and raising of the carriage. The test report of the wire rope should be obtained from govt. laboratory for the desired the breaking load capacity.
Number of foundation bolts - PCD of foundation bolts (MM) - Type - Diameter - Length of foundation bolts -	<p>8 nos. 508 mm PCD, TS 600 30mm in dia. 1000 mm long</p>
Module Mounting structure	Hot dip galvanized 80 micron.
Complete Raising Lowering mast	Both the Raising lowering mast structure and the DC flood lights should be of same vendor. The lighting design report of the solar raising lowering mast, Data sheet of mast, Type test report of winch & load test report of AISI 316 grade wire rope to be provided by the company for technical acceptance of the complete system.
Foundation	RCC Foundation at least 2 M deep (single column of 900 mm x900 mm x2500 mm) Suitable for mounting of Pole on a pedestal of 1.0 M height (above GL)
Decorative Pedestal	900 mm x 900 mm x 1000 mm

L. S. S.



200.00

3500.00

OVERLAP SECTION

500.00

4000.00

OVERLAP SECTION

500.00

5500.00

1200.00

350.00

500.00

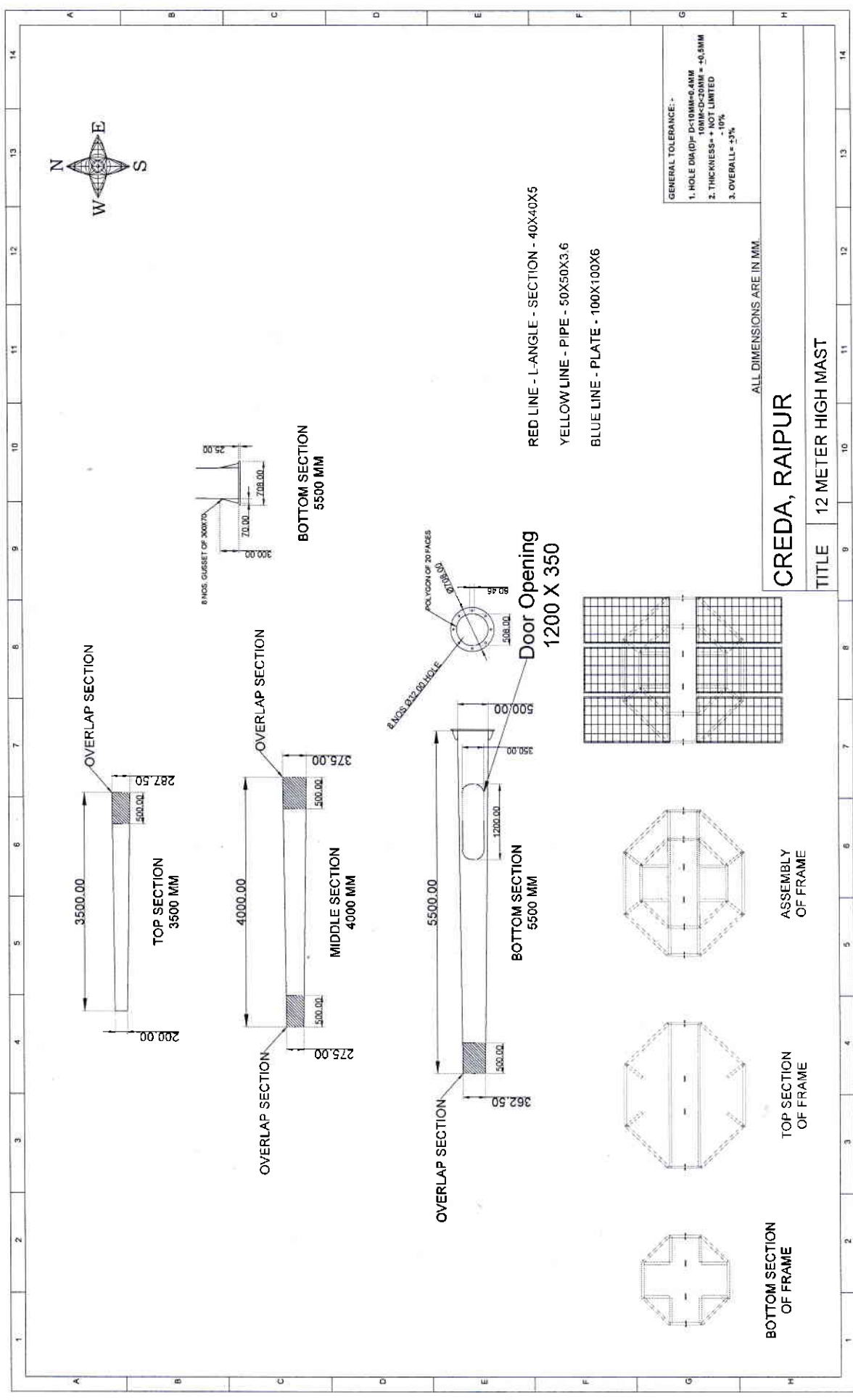
GENERAL TOLERANCE: -
 1. HOLE DIA(D)= D<10MM=0.4MM
 10MM<D<20MM = +0.5MM
 2. THICKNESS= + NOT LIMITED
 - 10%
 3. OVERALL= +3%

ALL DIMENSIONS ARE IN MM.

CREDA, RAIPUR

TITLE 12 METER HIGH MAST

L.V.



GENERAL TOLERANCE :-

- HOLE DIA(D) - $\pm 0.10\text{MM} \leq \pm 0.4\text{MM}$
- THICKNESS - $\pm 0.10\text{MM} \leq \pm 0.30\text{MM} = \pm 0.5\text{MM}$
- OVERALL - $\pm 3\%$

ALL DIMENSIONS ARE IN MM.

CREDA, RAIPUR

TITLE 12 METER HIGH MAST

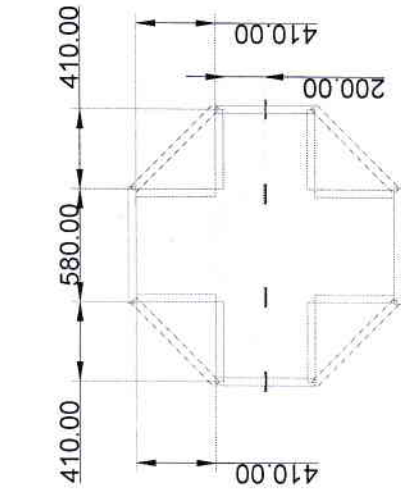
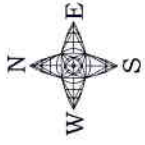
RED LINE - L-ANGLE - SECTION - 40X40X5
 YELLOW LINE - PIPE - 50X50X3.6
 BLUE LINE - PLATE - 100X100X6

ASSEMBLY OF FRAME

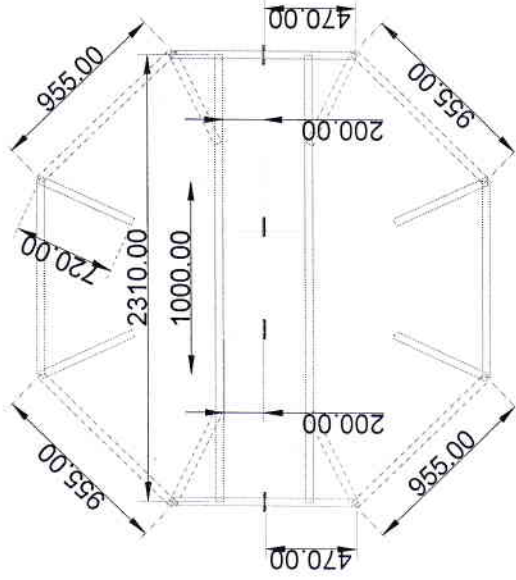
TOP SECTION OF FRAME

BOTTOM SECTION OF FRAME

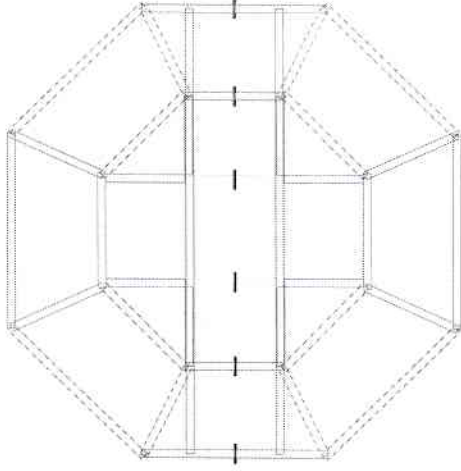
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BOTTOM SECTION
OF LANTERN CARRIAGE



TOP SECTION
OF LANTERN CARRIAGE



ASSEMBLY
OF LANTERN CARRIAGE

GENERAL TOLERANCE :-

1. HOLE DIA(D) = D_h - 0.10MM - 0.4MM
- 100MM < D < 20MM = -0.5MM
2. THICKNESS = ± 10% LIMITED
3. OVERALL = ± 3%

ALL DIMENSIONS ARE IN MM.

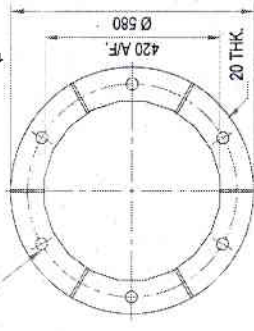
CREDA, RAIPUR

TITLE 12 METER HIGH MAST



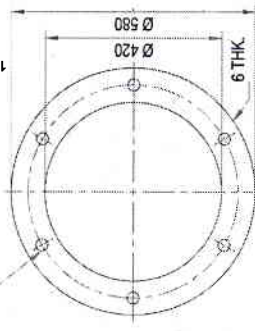
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6 NOS. HOLES Ø28 THRU.
ON 500 P.C.D. EQUISPACED
FOR M24 x 1 LG. BOLTS
1000 mm Bolt

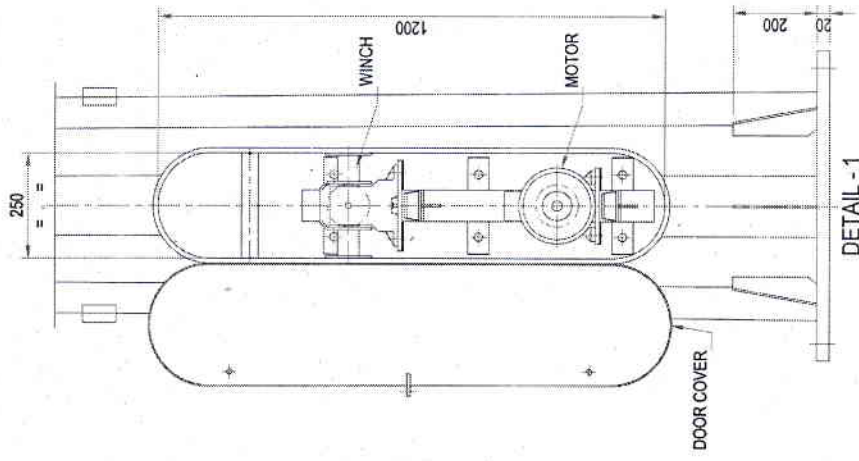


BASE PLATE
SCALE - 1 : 12

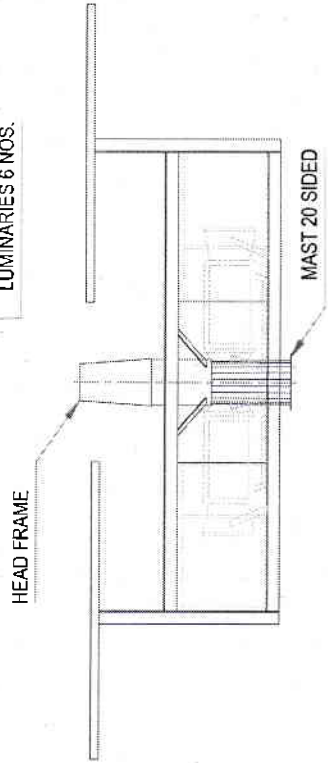
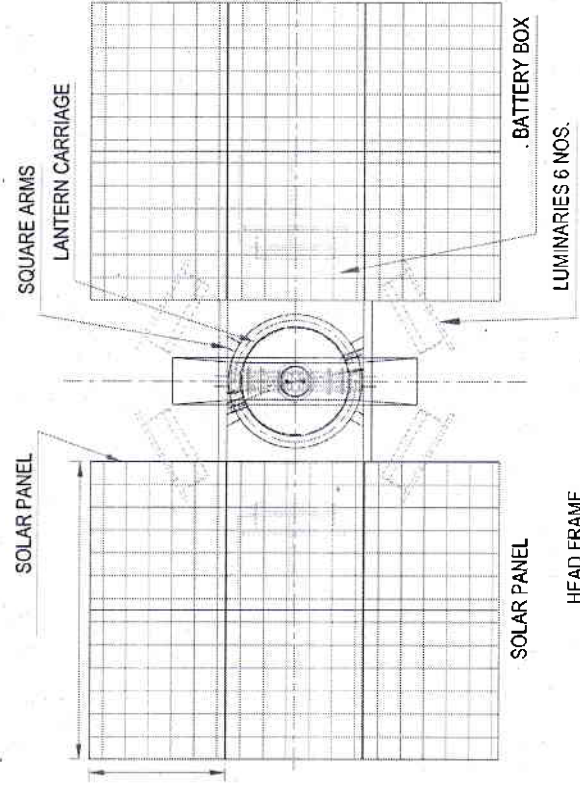
6 NOS. HOLES Ø26 THRU.
ON 500 P.C.D. EQUISPACED
FOR M24 x 1 LG. BOLTS
1000 mm Bolt



ANCHOR PLATE
SCALE - 1 : 12

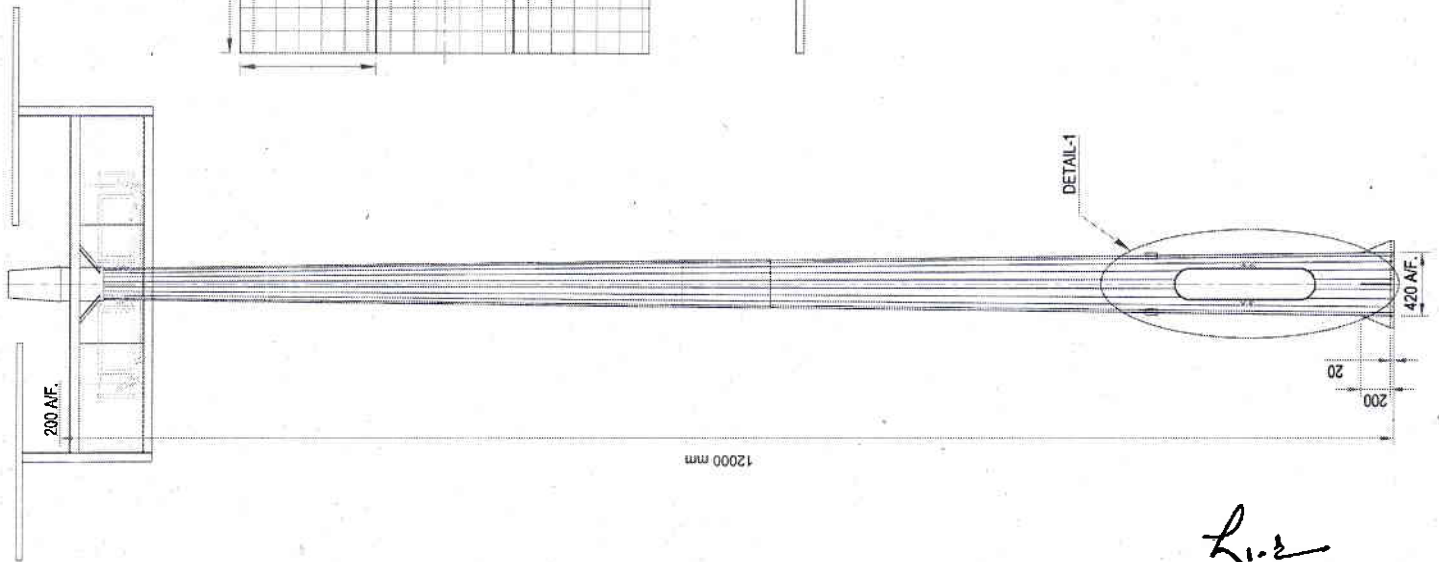


DETAIL - 1
SCALE - 1 : 12



NOTES :-

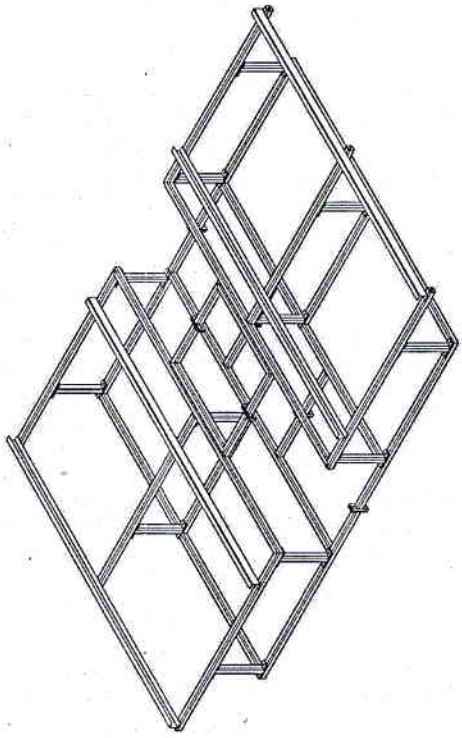
1. ALL DIMENSION ARE IN MM.
2. DESIGN STANDARD : ILE TECHNICAL REPORT - 7
3. MATERIALS :
 - 3.1 SHAFT : S355 AS PER BSEN 10025
 - 3.2 DOOR & FLANGE AS PER IS : 2062.
4. FINISH : HOT DIP GALVANISED TO BSEN 1461 (MIN. 80 MICRON).
5. DESIGN WIND SPEED : 50 M/SEC AS PER IS : 875
6. WELDING : SUBMERGED ARC WELDING FOR SHAFT.
7. THERE SHALL BE ONE OR MORE LONGITUDINAL WELDS DEPENDING ON THE AVAILABILITY OF SHEET.
8. FOUNDATION BOLTS SHALL BE OF TS-600 GRADE CONFIRMING TO IS : 1367 PART III.
9. IN CASE OF NON AVAILABILITY OF MATERIALS OF DESIRED SIZE / THICKNESS, MATERIAL OF HIGHER SIZE/THICKNESS MAY BE USED.



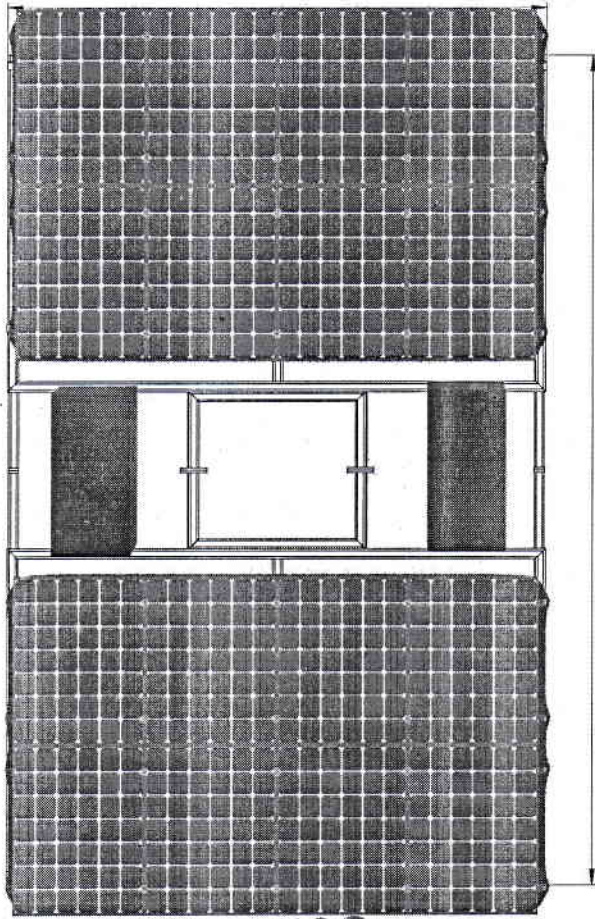
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2-Section Pole Drawing

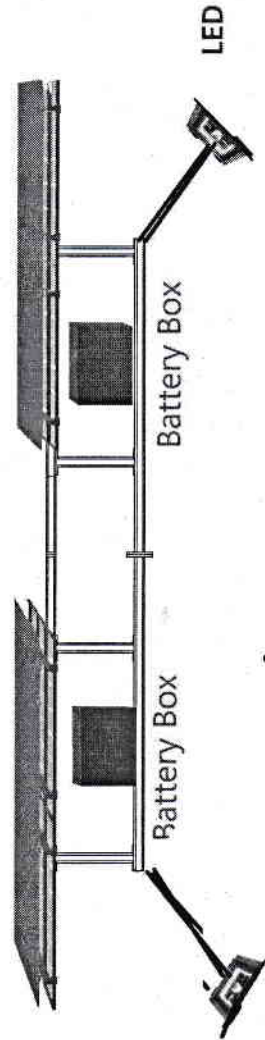
CREDA, Raipur



Solar Panel



Solar Panel



CREDA, Raipur

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