



Chhattisgarh State Renewable Energy Development Agency (CREDA)

(Dept. of Energy, Govt. of Chhattisgarh)

Near Energy Education Park, Village Fundhar

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TENDER DOCUMENT No. 28100/CREDA/SPV-PUMPS/SSY-IV/2019

Dated 27.02.2019

**FOR SURVEY, DESIGN, SUPPLY, INSTALLATION & COMMISSIONING OF
SOLAR PHOTO VOLTAIC IRRIGATION PUMPS
OF VARIOUS CAPACITIES WITH FIVE YEARS ON SITE WARRANTEE,
COMC & INSURANCE ANYWHERE IN THE STATE OF CHHATTISGARH**

• Pre-bid meeting	15-03-2019	at 11:00 AM
• Inspection of Materials by Tender Committee as per Valid Test Report (Approved by MNRE accredited lab)	16-05-2019	01:00 PM to 05:00 PM
• Submission of Technical Bid and samples for inspection	16-05-2019	till 05:00 PM
• Submission of e-Price Bid through http://www.cspc.co.in	16-05-2019	till 05:00 PM
• Opening of Technical Bid	17-05-2019	from 01:00 PM
• Declaration of eligible tenderer	22-05-2019	After 03:00 PM
• Opening of e-Price Bid	25-05-2019	from 12:00 noon

Tender Document Cost– Rs.20,000.00 + 18% GST = Rs.23,600.00

(in words Rupees Twenty Three Thousand Six Hundred Only)

Document can also be downloaded from our website www.creda.co.in with the cost of tender as mentioned in NIT, which shall have to be deposited along with the tender document.

CHATTISGARH STATE RENEWABLE ENERGY DEVELOPMENT AGENCY
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NOTICE INVITING TENDER

CREDA invites sealed tenders for design, supply, installation, and commissioning of Solar Photovoltaic Irrigation Pumps with five years COMC onsite warrantee, Insurance FOR anywhere in the State of Chhattisgarh, as per following detail:

Sl.No.	Item Description	Approximate Quantity (AC/DC)	Cost of Tender Document	EMD	Essentials
01	SPV Pump 2 HP (Submersible)	20,000 Nos.	Rs 20,000.00 +18% GST = Rs.23,600.00	Rs.25,00,000.00	<p>1-Tenderers of Chhattisgarh state should have minimum direct experience of Supply and Installation of 200 Nos. and that of other state should have minimum direct experience of Supply and Installation of 500Nos. of SPV Pumps under a Govt. Scheme of any State or Market Mode Scheme of CREDA. (Experience in terms of works done for Other Private / Non Govt. Companies/Firms etc. shall not be considered).</p> <p>2- Tenderer must have valid test report of 03HP & 05HP submersible and surface AC and DC SPV Pumps in their names for which tenderer must make offer for installation. They will have to provide copy of such test report of SPV Pumps from Solar Energy Test Centre or any other test centre approved by Ministry of New & Renewable Energy (MNRE).</p>
02	SPV Pump 2 HP (Surface)				
03	SPV Pumps 3 HP(Submersible)				
04	SPV Pumps 3 HP(Surface)				
05	SPV Pumps 5 HP(Submersible)				
06	SPV Pumps 5 HP(Surface)				
Total					
Estimated Value of Tender Rs.450 Crore.					

Important Events and their schedule for this tender are as follows:

Particulars	Date	Time	Place
Pre Bid Meeting	15-03-2019	At 11:00 AM	Local Hotel
Inspection of Materials by Tender Committee as per Valid Test Report(Approved by MNRE accredited lab)	16-05-2019	01:00 PM to 05:00 PM	At Ground Near H.O. CREDA, VIP Road, Raipur
Submission of Technical Bid and samples for inspection	16-05-2019	Till 05:00 PM	CBDA Hall, Near Energy Education Park, VIP Road, Raipur
Submission of E-Price Bid through http://www.cspc.co.in	16-05-2019	Till 05:00 PM	---
Opening of Technical Bid	17-05-2019	From 01:00 PM	CBDA Hall, Near Energy Education Park, VIP Road, Raipur
Declaration of Eligible tenderer	22-05-2019	After 03:00 PM	CBDA Hall, Near Energy Education Park, VIP Road, Raipur
Opening of E-Price Bid	25-05-2019	From 12:00 noon	CBDA Hall, Near Energy Education Park VIP Road, Raipur



Price Bid shall be submitted online only at <http://www.cspc.co.in>,* however technical bid will have to be submitted in hard copy at Office of Chief Engineer (RE – IV) at CBDA Hall, Near Energy Education Park VIP Road, Raipur. Bidders are advised to follow the instructions provided for Registration and E-Submission Process accordingly.(for any query about e-bidding please visit user manual at <http://www.cspc.co.in>.)

Samples will be tested at Ground near Energy Education Park Raipur and Technical bid will be opened at CBDA Conference Hall, near Energy Education Park VIP Road Raipur (C.G).

Demonstration of Models and Standard Materials required as per this tender specification will be shown at Energy Education Park on **15thMarch2019**.

Details of this tender are mentioned at Tender Documents which can be downloaded from our website www.creda.co.in. The tenderer should have to deposit tender document cost, along with EMD as mentioned above through demand draft payable to CREDA Raipur while submitting tender.

Tenderers are requested to attend Pre Bid meeting with their suggestions/objections/reservations if any with details so as to avoid any confusion and to ensure clarity and transparency regarding the tender.

CREDA reserves all rights to accept/reject any or all tenders in full/part without assigning any reasons.

**Chief Engineer
RE-IV, H.O. CREDA
Raipur (CG)**

CHECK LIST

To ensure that your tender submitted to CREDA is complete in all respects, please go through the following checklist & tick mark for the enclosures attached with your tender -

S. No.	Description	Attached Not Attached	Page No. if Attached
1.	Earnest Money Deposit		
2.	Tender Document Fee (proof of submission)		
3.	The original document duly signed & with stamp on each page, as a confirmation of acceptance of Terms & Conditions (T&C)		
4.	Copy of Registration Certificate as System Integrator of CREDA in SPV Programme valid for FY 2018-19/2019-20		
5.	Copy of Approved Test Reports of SPV Pump in the name of Bidder		
6.	Net Worth Certificate duly signed by Chartered Accountant		
7.	List and Completion and Performance Certificates of SPV Pumps installed by the Bidder in Govt Scheme of any state or Market Mode Scheme of CREDA		
8.	Proof of being Eligible Manufacturer of Modules/ Pumps/ VFD / SPV Pump / Structure of SPV Pump		
9.	Copy of certificate for Last three years turnover of works done regarding SPV Pump		
10.	Assessment Sheet duly filled in prescribed format		
11.	Declaration of the supplier about any relatives working with CREDA.		
12.	Manufacture Authorisation certificates of major components of solar pumping system		

Details of EMD and Tender fee attached

Sl.No.	Description
1	<p><u>Earnest Money Deposit</u> Earnest Money Deposit of Rs. Twenty Five Lakh, submitted in the form of Demand on Draft/Banker's Cheque, drawn Bank ... date Branch, bearing DD/BC No..... date _____ is attached herewith.</p>
2	<p><u>Tender Document Fee</u> Tender Document Fees of Rs. Twenty Three Thousand Six Hundred, submitted in the form of Demand on Bank, Branch, bearing DD/BC No..... Dated..... is attached herewith.,</p>

(Sign & Seal of the Manufacturer)



UNDERTAKING OF THE TENDERER

I/We have read carefully and examined the notice inviting tender, schedule, General Rules and terms and conditions of the contract, special conditions, Schedule of Rates and other documents and Rules referred to in the tender document for the supply.

I/We hereby tender my rates for the execution of the work for CREDA as specified within the time stipulated in the schedule in accordance with all aspects with the specifications, designs, drawings and instructions with such conditions so far as applicable.

I/We agree to keep the tender valid for **One Hundred Eighty (180) days** from the due date of submission thereof and not to make any modifications in its terms and conditions.

A sum of **Rs.25.00 Lacs** is hereby forwarded as **Earnest Money** in the form of crossed demand draft payable to CREDA at Raipur (C.G.). If I/We, fail to commence or complete the sanction ordered in specified time I/We agree that the CREDA shall, without prejudice to any other right or remedy, be at liberty to forfeit the said Earnest Money absolutely. The said Earnest Money shall be retained by CREDA towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be required by CREDA.

I/We hereby declare that I/We shall treat the tender documents, specifications and other records connected with the work as secret/confidential and shall not communicate information derived there- from to any person other than a person to whom I/We have authorized to communicate the same or use the information in any manner prejudicial to the safety of CREDA/Government.

I/We shall abide to all the laws and shall be responsible for making payments of all the taxes, duties, levies and other Govt. dues etc. to the appropriate Govt. departments.

Our GST Registration No._____. The PAN No. under the Income Tax Act is _____.

I/We shall be responsible for the payment of the respective taxes to the appropriate authorities and should I/we fail to do so, I/we hereby authorize CREDA to recover the taxes due from us and deposit the same with the appropriate authorities on their demand.

Dated:

Signature

Place :

Name of Tenderer with seal

Witness :

Signature:

Name:

Postal Address:

.....

INSTRUCTIONS FOR TENDERERS

1. Eligibility Criteria:

- A. Tenderers of Chhattisgarh should have minimum direct experience of Supply and Installation of **200 Nos.** and that of other state should have minimum direct experience of supply and installation of **500 Nos.** of SPV Pumps under a Govt. Scheme of any state or Market Mode Scheme of CREDA. (Experience in terms of works done for other private / non Govt. companies/ firms etc. shall not be considered).
- B. Experience Certificates attached should be in attached format (as per annexure-“B”) only. Work order, L.O.I. / L.O.A. and experience certificates in other format will not be acceptable.
- C. Tenderer should have minimum effective assessed capacity of **300 pumps** (as per Clause 30).
- D. Tenderers must have a Positive Net worth of **Rs.1.00 Crore** on **31st March 2018**. They shall have to submit a certificate duly signed by a qualified and registered Chartered Accountant as a proof.
- E. Tenderers should have an aggregate turnover of minimum **5 crores** in last three years i.e. 2017-18, 2016-17 & 2015-16 in SPV Projects.
- F. Tenderer must have valid test report of all **8 categories** for **3HP & 5HP** Submersible & Surface AC and DC Solar pumping systems in their names for which tenderer must make offer for installation. They will have to provide copy of such test report of their SPV Pumps from Solar Energy Test Centre or any other test centre approved by Ministry of New & Renewable Energy (MNRE). For **02 HP** Pumps acknowledgement of submission of materials along with fee receipt from MNRE approved Test Centres may also be submitted with Bid.
- G. Tenderer who are debarred from business by Govt. /Govt. Agency in any state would not be eligible to participate in this bid. A self-declaration should be submitted by the bidder to this effect, failing which bid shall be rejected.

Important Events and their schedule for this tender are as follows:

Particulars	Date	Time	Place
Pre Bid Meeting	15-03-2019	At 11:00 AM	Local Hotel
Inspection of Materials by Tender Committee as per Valid Test Report (Approved by MNRE accredited lab)	16-05-2019	01:00 PM to 05:00 PM	At Ground Near H.O. CREDA, VIP Road, Raipur
Submission of Technical Bid and samples for inspection	16-05-2019	Till 05:00 PM	CBDA Hall, Near Energy Education Park VIP Road, Raipur
Submission of e-Price Bid through http://www.cspc.co.in	16-05-2019	Till 05:00 PM	---
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Declaration of Eligible Tenderer	22-05-2019	After 03:00 PM	CBDA Hall, Near Energy Education Park VIP Road, Raipur
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2. Joint venture/ Consortium will not be allowed in this Tender.

3. **Bidding Process** : for ease of accessing the e-bidding website and registration the following is to be done by bidder:

- A. Visit <http://www.cspc.co.in>
 - B. Click on e-bidding button on right hand side of the page.
 - C. The user will be directed to e-bidding page where all information regarding registration is available along with helpline details.
 - D. Price Bid shall be submitted online only at <http://www.cspc.co.in> however technical bid will have to be submitted in hard copy. Bid Documents (including Technical Bid and samples) must reach at CBDA Hall, Near Energy Education Park VIP Road, Raipur latest by **05.00 PM on 16.05.2019**. Tenders submitted after scheduled time and date shall not be considered.
4. Document Fee, EMD, Technical Bid, Samples of Pumps, Controllers, LA & Earthing and Structures should be submitted for examination before **01:00 PM dated 16-05-2019** at Ground near CREDA Head office Raipur. These will be examined by Technical Committee of CREDA on **16-05-2019** and tenderers will be shortlisted on the basis of approval of the technical bids and samples along with Test Report for opening of price bids. Documents should be submitted in prescribed manner in separate envelops as follows- (A) Tender Fees and EMD, (B) Eligibility Documents as per point 1A to 1G mentioned above. (C) Technical Details of their product samples being submitted. (D) Complete tender document in original duly signed by authorized signatory on each & every page of the tender document.
 5. Each envelope must be clearly marked as Envelope-(A) Tender Fees and EMD, Envelope - (B) Eligibility Documents, Envelope-(C) Technical Details of Samples & Test Reports and Envelope-(D) Original Tender Document.
 6. The Specifications of SPV Pumps should be as per prevailing MNRE & CREDA norms, as Specified in the tender.
 7. If any amendments are issued by MNRE/CREDA in due course of time, in this context, then those shall be applicable under this tender.
 8. Bidder shall have to submit copies of GST registration number and PAN numbers issued by the appropriate authority.
 9. The bidder shall submit along with bid document copy of Certificate of Net worth of **Rs.1.00 Crore**.
 10. The documentary evidence for meeting the eligibility criteria must mandatorily be submitted along with tender in prescribed manner as mentioned earlier.
 11. Each offered solar module should have **RFID & I-V curve** measured with a reputed sun simulator with record of suitable calibration reference, as per guidelines of MNRE.
 12. Login ID & Password of RMS must be submitted to CREDA as and when required.
 13. Technical Bid must be deposited in the tender box only kept in the office of the Chief Engineer, CREDA, H.O., Raipur in RE-IV Section on or before **05:00 PM dated 16-05-2019** nobody is authorized to receive or grant receipt for tender delivered on behalf of CREDA. Tender received through any other means shall not be considered.
 14. Tenderer should quote their rates considering variation of site conditions, variation in price of different components and keeping the quantum and quality of work in mind. If CREDA anticipates that rate is abnormally low or high, CREDA shall have liberty to amend the rates or reject the tender.
 15. Bidders who are not registered with CREDA, upon allocation of work shall register itself as system integrator of CREDA within **30 days** of such allocation failing which work allocation shall stand cancelled without any further notice in this regard and allocated work shall be re-allocated to other parties as per tender condition.

16. VALIDITY :

Full descriptive particulars and complete specifications should accompany the offer. Offers should be kept open for acceptance for at least **180 days** from the date of opening. After finalization of this tender the approved rates shall be valid till one year from the date of award; however CREDA shall have liberty to increase or decrease this validity if needed.

17. The terms, conditions and specifications mentioned in tender document shall be binding on the tenderers and no condition or stipulation contrary to the conditions shall be acceptable. It may please be noted that the tenderers who do not accept terms and conditions stipulated in this tender documents, their offers shall be liable to be rejected out-rightly without assigning any reason whatsoever.

18. Each page of tender document & enclosures shall be signed by the tenderer and seal affixed. All the pages of the documents issued must be submitted along with the technical offer. In case of any corrections / alterations in the tender, the tenderer should attest the same; otherwise tenders may not be considered.

19. Tenderers are also instructed to submit their tenders in properly arranged manner (with index, proper paging and with flags on important documents). Incomplete, lose, conditional or improper arranged tenders will not be accepted.

20. CREDA reserves the right (i) to reject or accept any or all tenders wholly or partly without assigning any reason on the grounds considered advantageous to CREDA, whether it is the lowest tender or not and (ii) to split the quantities against the tender further for the same items/work. No reason will be assigned by CREDA for this and will be binding on the tenderers. Due to large quantum of work & limitation of the time period for completion of the work CREDA may take consent from other tenderers if they agree to work on rates standardized by CREDA. CREDA may undergo agreement with those eligible tenderers who give consent to work on rates standardized by CREDA and may allocate work to them. Rates approved through this tender may be standardized for all eligible tenders to work in **year 2019-20** and shall be valid till **30-06-2020**. However CREDA reserves right to curtail or extend this period.

21. Offers through Telegraph/Fax/Emails/Post/Courier or open offers etc. received shall be summarily rejected.

22. TENDER DOCUMENT FEE AND EARNEST MONEY:

Each tenderer should submit Tender Document Fee and earnest money in the form of Demand Draft/Pay Order or RTGS/NEFT as mentioned in the NIT vide no.28100/CREDA/SPV-PUMPS/SSY-IV/2019 Date: **27-02-2019**, in a separate envelope as prescribed at **point no.2 of page 5** else they will summarily be rejected and returned. Tender Document Fee, EMD submitted in any other form e.g. **Cash/Bank Guarantee/FDR/TDR etc. shall not be accepted.**

23. SUBMISSION /DISPLAY OF SAMPLES FOR EXAMINATION & PRE-BID MEET:

Tenderers will have to provide samples of their Pump, Controller, LA & Chemical Earthing Kit, Module and Structure etc. should be submitted for examination before **01:00PM dated 16-05-2019** at Ground near H.O. CREDA, VIP Airport Road, Raipur. These samples shall be examined by Technical Committee of CREDA.

24. A pre-bid meeting shall be organized on **15-03-2019 at 11:00 AM** at Local Hotel, Raipur to explain the terms & conditions of the tender and to clarify doubts of the tenderers so that all doubts and confusions are resolved before the tender is submitted. Only one authorized representative of the parties who fulfils the primary eligibility conditions as mentioned in NIT and desire to purchase/download the tender document shall be allowed to participate in the said meeting. Amendments/clarifications, if any arising during pre-bid meet, shall be uploaded on **www.creda.co.in**. It is mandatory for all tenderers to attend this Pre Bid Meeting else they may not be treated eligible for this tender.

25. All suggestions, doubts, confusion, request, queries etc., shall have to be presented to CREDA on or before **25-03-2019 till 5:00 PM**. After that any representation in this regard shall not be considered.

26. TECHNICAL CRITERIA :

- 1) The eligible SI should have their own service unit cum office in Chhattisgarh state.
- 2) Tenderer must have valid test report of all **8 categories** for **3HP&5HP** Submersible & Surface AC and DC Solar pumping systems in their names for which tenderer must make offer for installation. They will have to provide copy of such test report of their SPV Pumps from Solar Energy Test Centre or any other test centre approved by Ministry of New & Renewable Energy (MNRE). In case tenderers have not submitted test report of **02 HP** Pump at the time of Bid, they will be allowed to work in that category only upon submission of acknowledgement of complete SPV Pumping system along with fee receipt from MNRE approved Test Centres, if he fails to submit the Test report no payment shall be made for installation of such systems.
- 3) The Tenderers should have sufficient technically qualified and well-experienced manpower for execution of the project and after sales service of the systems. These details may be called by CREDA and in case there is any deficiency found the SI may be debarred.

27. FORFEITURE OF EARNEST MONEY DEPOSIT :

It should be clearly understood that in the event of tenderer failing to enter into the agreement in the prescribed format on their quoted rates and also fails to execute assigned works under any Scheme of CREDA, within stipulations, if he is so communicated within the validity period of the offer, the full amount of earnest money will be forfeited and tenderer shall be debarred from future business with CREDA. CREDA's decision in this respect will be final and binding on the tenderer.

28. PRICE OF SUPPLY OF SOLAR PUMPING SYSTEM :

- (I) The prices quoted for solar pumping systems for all models of each category (Solar pump, Controller, MMS, PV Modules, Lightning arrester and Bus) should be firm and F.O.R. destination inclusive of packing, forwarding freight, transit insurance, COMC for five years, insurance for Solar Pumping for five years. The GST shall be indicated extra as per the GST regulation. The prices shall be filled exactly as per **e-Price Bid- I** enclosed.
- (II) Any change in GST shall be become applicable during the period of contract.
- (III) Price will be submitted online by e-bidding as per **clause-3**.

29. PRICE OF INSTALLATION, COMMISSIONING AND TESTING OF SOLAR PUMP SET :

- (I) The prices quoted for Installation, Commissioning and Testing of solar pumping system at site includes required Civil material, MS Steel frame {cage} (as per tender Specification) and all other required material. The GST shall be indicated extra as per the GST regulation. The prices shall be filled exactly as per **e-Price Bid- II** enclosed.
- (II) Any change in GST shall be become applicable during the period of contract.
- (III) Price will be submitted online by e-bidding as per **clause-3**.

30. ENGINEERING DOCUMENT :

Tenderers will have to submit Engineering Documents with technical details, drawings, Specifications of components and make etc. to CREDA for approval, as and when asked by CREDA. Works may only be started out only after approval of the Engineering Document and their samples.

31. SAMPLES :

Samples of the components shall have to be submitted to the CREDA in prescribed manner on scheduled date.

32. INSPECTIONS :

CREDA reserves right to inspect the material at Godowns / Temporary Stores before dispatch and also at works sites.

33. TAX OBLIGATIONS :

CREDA shall deduct TDS for Income Tax, applicable cess on Civil Work etc. under various acts and deposited with the appropriate authority. Costs and taxes before execution of agreement with CREDA so as to ensure tax deposition as per Government Rules accordingly.

34. JURISDICTION OF THE COURT :

Any dispute arising out of the contract shall be subject to the jurisdiction of Hon'ble High Court of Chhattisgarh.

GENERAL CONDITIONS OF CONTRACT

1. DEFINITIONS :

In writing General Conditions of Contract, the specifications and bill of quantity, the following words shall have the meanings hereby indicated, unless there is something in the subject matter or content inconsistent with the subject.

- CREDA shall mean the Chhattisgarh State Renewable Energy Development Agency represented through the Chief Engineer.
- Work shall mean any work entrusted to the tenderer as mentioned in the scope of work and sanction order.
- The "Engineer in charge" shall mean the Engineer or Engineers authorized by CREDA for the purpose of this contract. Inspecting Authority shall mean any Engineering person or personnel authorized by CREDA to supervise and inspect the erection of the SPV Pump.
- "The Eligible SI/Tenderer" shall mean the tenderer awarded with the contract or their successors and permitted assigns. Contract Price shall mean the sum named in or calculated in accordance with the provisions of the contract as the contract price. General Conditions shall mean the General conditions of Contract.
- "Specifications" shall mean the specifications annexed to these General Conditions of contract and shall include the schedules and drawings attached thereto or issued to the eligible SI from time to time, as well as all samples and pattern, if any,
- "Month" shall mean calendar month. "Writing" shall include any manuscript, typewritten, printed or other statement reproduced in any visible form whether under seal or written by hand.

2. Those tenderers who are also manufacturers of an important component of SPV Pump such as SPV Modules, Surface or Submersible Pump, VFD or Structures of SPV Pumps shall have to submit proof of their factory, SSI Registration and list of Machineries and Equipment's.

3. CONTRACT DOCUMENT:

The term "Contract" shall mean and include the General conditions, specifications, schedules, drawings and sanction orders etc., issued against the contract schedule of price or their final general conditions, any special conditions applying to the particular contract specification and drawings and agreement to be entered into. Terms and conditions not herein defined shall have the same meaning as are assigned to them in the Indian contract Act or any other Act in vogue or by any person of common knowledge and prudence.

4. MANNER OF EXECUTION:

Execution of work shall be carried out under Market Mode Scheme of CREDA in an approved manner as outlined in the technical specifications or where not outlined, in accordance with desired Specifications laid down by CREDA, to the reasonable satisfaction of the Engineer.

- i) The eligible SI shall conduct a detailed survey of site and submit Application of Beneficiary along with Processing Fee, after due verification and signature by Deputy Director of Agriculture. All necessary documents and survey details shall have to be submitted in concerned District Office of CREDA in prescribed manner.
- ii) District Office CREDA shall examine these applications and forward these applications to Executive Engineer of concerned Regional office of CREDA for approval, if found correct.
- iii) Executive Engineer of concerned Regional office of CREDA shall issue the sanction order of subsidy to eligible SI for installation of SPV Pump.

- iv) The SI shall start work within **15 days** after the date of sanction of work.
- v) All the materials required for the installation of SPV Pumps as per Sanction Order issued shall be kept at site in the custody of the SI. CREDA shall not be responsible for any loss or damage of any material during the installation.
- vi) All the electrical works should be done as per various provisions of Indian Electricity Act. The persons engaged for carrying out electrical works should have a valid **B-class** license or above issued by licensing board of Chhattisgarh.
- vii) SI will collect beneficiary contribution at rate as notified by the State Govt. and processing fee (fixed by Government) directly from beneficiaries. The processing fees will be submitted in CREDA with the application. After installation joint inspection will be done in presence of beneficiary, SI and CREDA and after successful commissioning of SPV Pumps and its approval from CREDA a JCC will be signed and the subsidy claim will be forwarded for payments as per guidelines and procedures of CREDA. SI will retain the beneficiary's contribution, but the same amount would be deducted from quoted price while making final payment.
- viii) Sanction order will be given to the chosen System Integrator only after execution of the agreement with CREDA.

5. VARIATIONS, ADDITIONS & OMISSIONS :

CREDA shall have the right to alter, amend, omit, split or otherwise vary the quantum of work, by notice in writing to the SI. The eligible SI shall carry out such variation in accordance with the rates specified in the contract so far as they may apply and where such rates are not available; those will be mutually agreed between CREDA and the eligible SI.

6. INSPECTION :

- A. The Engineer in Charge or his authorized representative (s) shall be entitled at all reasonable times to inspect and supervise and test during installation and commissioning. Such inspection will not relieve the eligible SI from their obligations under this contract.
- B. Material can be inspected before dispatch or in transit by the authorized representatives of CREDA at the factory at the cost of the eligible SI, if desired by CREDA.

7. COMPLETION OF WORK:

Time being the essence of contract, the installation of the SPV Pumps shall be completed within the time schedule prescribed in the Sanction order. The SI must complete **30%** of work allocated to time work within **5 months time** and balance **70%** in last **5 months time** from the date of LOI, including rainy season.

8. ELIGIBLE SYSTEM INTEGRATOR'S DEFAULT LIABILITY :

CREDA may by written notice of default to the eligible SI, terminate the contract in circumstances detailed hereunder:

- (a) If in the opinion of the CREDA, the eligible SI fails to complete the work within the time specified in the sanction order or within the period for which extension has been granted by CREDA to the eligible SI.
- (b) If in the opinion of CREDA, the eligible SI fails to comply with any of the provisions of this contract.
- (c) In the event of CREDA terminating the contract in whole or in part as provided in paragraph (a) above, CREDA reserves the right to engage another eligible SI or agency upon such terms and in such a manner as it may deem appropriate and the eligible SI shall be liable to CREDA for any additional costs or any losses caused to CREDA as may be required for the completion of erection of the SPV Pumps and or for penalty as defined under this tender document until such reasonable time as may be required for the final completion of the work.

- (d) In the event CREDA does not terminate the contract as provided in paragraph (a) the eligible SI shall continue performance of the contract, in which case he shall be liable to CREDA for penalty for delay as set out in this tender document until the work is completed.

9. FORCE MAJEURE :

The eligible SI shall not be liable for any penalty for delay or for failure to perform the contract for reasons of FORCE MAJEURE such as of God, acts of public, enemy, LWE problems, acts of government, cyclone, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes provided that if SI shall submit delay notice with appropriate cause of delay to the CREDA in writing within **15 days** of force majeure. CREDA shall verify the facts and may grant such extension as facts justify. Delay in supply of any accessories of Solar Pumps etc. by the related vendors, to whom the tenderer has placed order, shall also not be treated as force majeure.

10. REJECTION OF WORKS:

In the event of any of the material supplied/ work done by the eligible SI is found defective in material or workman ship or otherwise not in conformity with the requirements of this contract specifications, CREDA shall either reject the material and/ or work and advise the eligible SI to rectify the same. The eligible SI on receipt of such notices shall rectify or replace the defective material and rectify the work free of cost. If the eligible SI fails to do so CREDA may -

- a) At its option replace or rectify such defective materials and/or work and recover the extra cost so involved from the eligible SI plus **15%** service charges of the cost of such rectification, from the eligible SI and/ or terminate the contract for balance work/ supplies with enforcement of penalty as per contract
- b) Defective materials/ workmanship will not be accepted under any conditions and shall be rejected outright without compensation. The eligible SI shall be liable for any loss/ damage sustained by CREDA due to defective work.

11. EXTENSION OF THE TIME :

If the completion of installation is delayed due to any reason beyond the control of the eligible SI, the eligible SI shall without delay give notice to the CREDA in writing of his claim for an extension of time. CREDA on receipt of such notice may or may not agree to extend the contract/delivery date of the Solar System as may be reasonable but without prejudice to other terms and conditions of the contract.

12. MAKES OF EQUIPMENTS TO BE USED IN THE WORK :

- (I) The eligible SI has to ensure that equipment's as per Technical Requirements of guidelines of CREDA as complied with. The eligible SI has also to ensure that he will use only components of approved vendors of CREDA. The material/works for which CREDA/MNRE or BSI or ISI specification is not available, engineer-in-charge of the works will examine and approve the material/works, preferably of all makes on which CREDA has report of satisfactory performance. Test certificates for all major equipment's should be submitted to the engineer-in-charge of the works before installation of the same.
- (II) Successful Bidder upon issue of LOI must submit Manufacture Authorization Form (MAF) From manufacture of Solar pump/ Controller/ Module which it is intending to use during installation guarantee at least five year warrantee of pump and controller and at least 10 year warrantee on module, before installation of pump, **no payment shall be made if he fails to do so.**

- (III) SI Should submit O&M Agreement of **at least 5 year** for major components i.e. SPV pumps, Modules, VFD/ Controller and Structures with manufacturer or distributors certified by the manufacturer before installation of Pumps.

13. WARRANTEE PERIOD AND POST INSTALLATION SERVICES:

- The work done/material supplied by the eligible SI should be warranted for satisfactory operation and against any defect in material and workmanship including Pumps, Controllers and other balance of equipment's, at least for a period of **5 (five) years**, from the date of commissioning of the SPV Pumps including other works as per scope of work.
- Warrantee on SPV Modules shall be for **10 (ten) years** from the date of commissioning of the SPV Pumps must be warranted for their output peak watt capacity, which should not be less than **90%** at the end of **10 years** and not less than **80%** at the end of **25 years**.
- The above warrantee certificates shall be furnished to the CREDA for approval. Any defect noticed during this period should be rectified by the supplier free of cost upon written notice from CREDA provided such defects may be due to bad workmanship or bad materials used.
- The warrantee period shall be extended by the period during which the plant remains non-operative due to reasons within control of the eligible SIs.
- This warrantee must be an unconditional onsite warrantee and the eligible SI will have to replace the defective material within **7 days** positively from the date of information given to him.
- Care should necessarily be taken to make the SPV Pumps operational, once the reporting of the fault/non-operational status is done, within a week. If the SPV Pumps is not made operational within **7 days** CREDA may rectify the same at the cost of SI and the warrantee period shall be extended for a month for the same.
- This warrantee must be an unconditional onsite warrantee and the eligible SI will have to replace the defective material within **7 days** positively from the date of information given to him.
- System Integrators shall have to establish their service stations in the allocated area and shall have to keep sufficient quantity of spares and man power to ensure proper service network for taking care of smooth functioning of SPV Pumps installed by them. SI shall have to give a toll free number to register complaints.

14. TERMS OF PAYMENT :

The following terms of payment shall apply for the tender -

- a) **95%** of the eligible subsidy as per the sanction order after satisfactory supply, installation, commissioning & performance test of the SPV Pumps at site with proper handing over.
- b) Balance **5%** of the eligible subsidy shall be retained by CREDA as Security Deposit for a period of **60 months**. However the same may be released to SI on submission of bank guarantee/FDR in favour of CREDA of equivalent amount in prescribed format issued by any scheduled bank.
- c) In case MNRE rejects a particular case of settlement of CFA, the same may be recovered from concerned SI accordingly from their pending claims / payments in CREDA.

15. PENALTY FOR DELAY IN COMPLETION OF CONTRACT :

If the eligible SI fails to complete the assigned work within the schedule time specified in the sanction order or any extension granted there to, CREDA will recover from the SI as penalty a sum of **One per cent (1%)** of the system price for every delayed system per month. For this purpose, the date of taking over shall be reckoned as the date of completion. The total penalty shall not exceed **5% (Five Per cent)** of the cost.

Review of the progress of installation of pump allocated to SIs shall be done time to time by CREDA and if the progress of installation is found unsatisfactory, the allocation of entire remaining uninstalled pumps or their part of can be re-allocated to other SI as per discretion of CREDA.

16. SECURITY DEPOSIT (SD) :

- The Earnest Money shall be retained by CREDA as additional SD for five years after agreement is done to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be required by CREDA.
- Beside this **5%** of the cost shall also be retained as SD during the five years of warrantee period. In case the Security Deposit is in form of a Bank Guarantee/TDR and in the event of extension of completion date, the validity of the Bank Guarantee/TDR shall also be suitably extended. The Bank Guarantee shall be executed in stamp paper worth **Rs.250.00** or as per the prevailing norms. No interest shall be payable on the Security Deposit.

17. INSURANCE :

- (a) The eligible SI shall arrange insurance coverage for the materials and SPV Pumps at his/ beneficiary's custody for the work under execution and successful commissioning and subsequent handover to the beneficiary. The eligible SI shall take up insurance or such other measures for the manpower so as to cover the claim for damage arising under workmen's compensation Act and other applicable State/Central laws. CREDA shall not bear any responsibility on this account.
- (b) Eligible SI shall arrange for insurance coverage for SPV pumps and module during COMC period i.e. for **05 year** from the date of installation. Insurance should cover for damage and theft. In case of such incidence, SI must replace the lost/damaged part within **7 days** from the date of intimation.

18. PENALTY DUE FROM THE ELIGIBLE SI :

All costs of damages and delays for which the eligible SI is liable to the CREDA will be deducted from any money due to the eligible SI including the security deposit of any project under CREDA.

19. ELIGIBLE SI'S RESPONSIBILITY :

Notwithstanding anything mentioned in the specifications of subsequent approval or acceptance of the SPV Pump by CREDA, if any, the ultimate responsibility for satisfactory performance of the entrusted work shall rest with the eligible SI. If in any case the eligible SI does not complete the work as per the sanction orders issued to them then CREDA may take over the task & complete the project at the risk and cost of eligible SI.

20. RESPONSIBILITY TO RECTIFY THE LOSS AND DAMAGE :

If any loss or damage occurs to the work or any part thereof or materials/plant/equipment's for incorporation therein the period for which the eligible SI is responsible for the cause thereof or from any cause whatsoever, the eligible SI shall at his own cost rectify/replace such loss or damage, so that the permanent work confirms in every respect with the provision of the contract to the satisfaction of the Engineer. The eligible SI shall also be liable for any loss or damage to the work/equipment's occasioned by him in course of any operation carried out to him during performing the contract.

21. RESPONSIBILITY TOWARDS THE WORKMAN OR OUTSIDERS :

- **The eligible SI shall have to take insurance coverage from any authorized Insurance Company against Workmen compensation due under Workmen Compensation Act and submit copy of the insurance document before issuance of Sanction order.**
- The eligible SI shall ensure all safety measures during execution and repairs of the work. CREDA, will, in no case be responsible for any accident fatal or non-fatal, caused to any workman or outsider in course of transport or execution or repairs of work.

- All the expenditure including treatment or compensation will be entirely borne by the eligible SIs. The eligible SI shall also be responsible for any claims of the workers including PF, Gratuity, ESI & other legal obligations.

22. NON-ASSIGNMENTS :

The eligible SI shall not assign or transfer the sanction orders issued as per this contract or any part thereof without the prior approval of CREDA.

23. CERTIFICATES NOT TO AFFECT RIGHTS OF CREDA :

The issuance of any certificate by CREDA or any extension of time granted by CREDA shall not prejudice the rights of CREDA in terms of the contract nor shall they relieve the eligible SI of his obligations for due performance of the contract.

24. SETTLEMENT OF DISPUTES THROUGH ARBITRATION :

- Except as otherwise specifically provided in the contract, all disputes concerning questions of fact arising under the contract shall be decided by the Chief Executive Officer (CEO), CREDA provided a written appeal by the eligible SI is made to CREDA. The decision of the CEO, CREDA shall be final and binding to the all concerns.
- Any dispute or difference including those considered as such by only of the parties arising out of or in connection with the contract shall be to the extent possible be settled amicably between the parties. If amicable settlement cannot be reached then all disputed issues shall be settled by arbitration.

25. LAWS GOVERNING CONTRACT :

The contract shall be constituted according to and subject to the Laws of India and jurisdiction of the High Court of Bilaspur, Chhattisgarh.

26. LANGUAGE AND MEASURES :

All documents pertaining to the Contract including specifications, schedules, notice correspondences, operating and maintenance instructions, drawings or any other writings shall be written in English / Hindi language. The metric system of measurement shall be used in this contract.

27. CORRESPONDENCE :

- Any notice to the eligible SI under the terms of the contract shall be served by registered mail to the registered office of the eligible SI or by hand to the authorized local representative of the eligible SI and copy by post to the eligible SI's principal place of business.
- Any notice to CREDA shall be served to the Chief Engineer, CREDA Raipur in the same manner.

28. SECRECY :

The eligible SI shall treat the details of the specifications and other documents as private and confidential and they shall not be reproduced without written authorization from CREDA.

29. AGREEMENT :

The successful eligible SI shall have to enter into an agreement with the CREDA in the approved contract agreement form within **07 days** of the receipt of call from CREDA.

30. CAPACITY ASSESMENT OF THE BIDDER :

The bidder's maximum capacity for installation of solar pumps (in nos.) under this bid shall be assessed as –



- | | | | |
|----|---|-------|----------|
| 1. | No. of 3HP to 5HP (both inclusive) capacity SPV Pumps installed in year 2016-17, 2017-18& 2018-19 | ----- | a |
| 2. | No. of greater then 5HP capacity SPV pumps installed in year 2016-17, 2017-18& 2018-19 | ----- | b |
| 3. | No. of less than 3HP capacity SPV pumps installed in year 2016-17, 2017-18& 2018-19 | ----- | c |
| 4. | No. of Off grid SPVPP capacity (minimum1 KW) installed in year 2016-17, 2017-18& 2018-19 | ----- | d |

Assessed maximum capacity for installation of pumps in this bid—{a+ (bX2) +(c/2) + (d/3)}

- (a) For installation carried out in Chhattisgarh the above determined assessed capacity shall be further doubled.
- (b) System Integrator having pending work of installation of pumps as on **25-02-2019** under work awarded to them under **bid no.30500 date 26.03.2018**. The above capacity shall be reduced by **1.5 times** the nos. of pumps not installed by them as on **25-02-2019** out of award of work.

31. TENDER EVALUATION CRITERIA :

- Offers of only those parties, who are found qualified based on Eligibility Criteria and Technical Bid, will be taken into further consideration and financial bid of only those parties who are qualifying the criteria of Technical Bid will be opened.
- Offers, where nos. of pumps offered for installation exceeds the assessed capacity as in **30, allocation** shall be made only up to assessed capacity.
- Other things being equal, the lowest rates shall normally be preferred, but CREDA shall have rights and liberty to amend/lower the rates.
- **Conditional tenders shall not be accepted.**
- However CREDA shall have rights and liberty to call any /other parties to work on approved rates as and when requires in accordance with quantum of work and scheduled time limits for completion of targets.

32. EVALUTION OF PRICE BID :

Effective price shall be calculated as per following formula to decide the order of offered rates for allocation as clause 33.

Effective price=

(Unit price of (Unit price of 2HP DC Surface X W1) + (Unit price of 2HP AC Surface X W2) + (Unit price of 2HP DC Submersible X W3)+ 2HP AC Submersible X W4) +) + (Unit price of 3HP Dc Surface X W5) + (Unit price of 3HP AC Surface X W6 + (Unit price of 3HP DC Submersible X W7) + (Unit price of 3HP AC Submersible X W8) + (Prise of 5HP DC Surface X W9) + (Unit price of 5HP AC Surface X W10) + (Unit price of 5HP DC Submersible X W11) + (Unit price of 5HP AC Submersible X W12)

$$W1+W2+W3+W4+W5+W6+W7+W8+W9+W10+W11+W12$$

W1= 1.0, W2= 0.3, W3= 1.0, W4= 0.4, W5= 4.7, W6= 3.4, W7= 5.2, W8= 9.9, W9= 0.4, W10= 0.4, W11= 2.8, W12= 2.3

If a particular category price is not offered then corresponding weighted price & weight shall not be used to this formula. However bidder must offer rates of **02 HP, 3HP & 5HP AC& DC Submersible& Surface pumps**.

The effective price calculated above shall be used for determination of **L1, L2** and so on for work allocation alone. If two bidders have same effective price the one whose accessed capacity is higher, shall be considered better placed for above ordering.

33. ALLOCATION OF TARGETS AND AREA OF WORK :

Quantities once offered cannot be changed by the bidder.

Bidders who accept counter-offer of category wise lowest received/negotiated rates, work allocation shall be done on such rates only, shall be considered for allocation.

The allocation of quantities shall be done as per following formulae for each category of pumps:

L-1	1250 or quantity offered by the bidder or assessed capacity which-ever is lower
L-2 & L-3	750 or quantity offered by the bidder or assessed capacity which-ever is lower
L-4 & L-5	500 or quantity offered by the bidder or assessed capacity which-ever is lower
L-6& Others	Balance un-allocated quantity shall be allocated to the balance bidders being considered for allocation of target under till change in ratio of their assessed capacity

- (a) However CREDA shall have full discretionary rights and liberty to increase or decrease these allocations in order to match these allocations with target of district to the extent of **30%** variation in these numbers.
- (b) Allocation as per 'a' above can be further extended as per discretion of CREDA, in interest of expeditious work completion.
- (c) It is clarified that bidder would be eligible to install any category pump up to number of pumps allocated to him irrespective of whether he bid in the category or not subject to his submission of test report and acceptance of rates subsequently.
- (d) CREDA reserves all rights for allocation of works anywhere in Chhattisgarh.
- (e) Review of the progress of installation of pump allocated to SIs shall be done time to time by CREDA and if the progress of installation is found unsatisfactory, the allocation of entire remaining uninstalled pumps or their part of can be re-allocated to other SI as per discretion of CREDA.

34. START-UP CHHATTISGARH:

- A. CREDA may consider to award work of installation up to **20 pumps** on **L-1** price to Start-up companies registered in Chhattisgarh state only in area of Solar PV modules/ Motor-pump Sets/Solar Motor Pump Controller/Solar Pump inverters and/PV System integrator, if it produces certificate of being a Start-up entities as given by Government of India or Government of Chhattisgarh.
- B. EMD **Rs.2 lacs** in the form of D.D.
- C. Start -up Chhattisgarh tenderer must have valid test report of at least 02 categories for 03 & 05 HP Submersible/Surface, AC/DC Solar Pumping Systems in their names. They will have to provide copy of such Test reports of their SPV Pumps from Solar Energy Test Centre or any other test centre approved by Ministry of New and Renewable Energy (MNRE).
- D. Start -up Chhattisgarh Companies are not allowed to Quote Prices.
- E. Maximum **1%** of the total work may be reserved for start-up companies.

We (on behalf of Eligible SI/Tenderer) have read all the above stated details & accept to comply with it in total.

(Name, Signature & Seal of the Tenderer)

SCOPE OF WORK

General Scope of Work for this tender shall be in accordance with the Guidelines of Market Mode of CREDA. The scope in brief will be as follows-

1. Survey of Sites, designing, supply, installation & commissioning of SPV Pumps of various capacities as per design and specifications approved by CREDA & MNRE, on turnkey basis. Tenderer shall have to take approval of the engineering documents, Bill of Materials and samples from CREDA prior to commencement of the work. Five years unconditional onsite warrantee for manufacturing defects shall be required for each of the system after successful commissioning and proper handing over.
2. The scope of work shall also include the followings :
 - Survey of Sites, estimation of yield of bore well/water source, Right Selection of Pump Size & Type, Submission of site clearance certificate and yield report where the SPV Pumps are to be installed. A layout plan of the site should also be submitted clearly indicating the identified location for installation of SPV Modules, Structures and other components shall be installed. Sanction order shall be issued only after receipt of satisfactory reports suitable for system installation. SI shall furnish all necessary information to beneficiary for SPV Pump, Rates, Subsidy, Beneficiary Contribution, Processing Fee, Warrantee, Do & Don'ts etc. so as to avoid further misunderstandings and disputes.
 - Collection of Beneficiary Share and Processing Fee (Fixed by Government)
 - Submission of Application Form in CREDA in prescribed manner along with necessary documents and processing fee.
 - Detailed planning of time bound smooth execution of project.
 - Design, supply, installation & commissioning of SPV Pumps of required capacities and type as per design and specifications approved by CREDA & MNRE, on turnkey basis.
 - Providing User Manuals and Warrantee Cards to beneficiaries.
 - SI shall have to submit JCCs within **60 days** of Installation and Commissioning of SPV Pumps in District Office of CREDA.
 - Unconditional onsite warrantee for manufacturing defects for Five years faultless operation, assure inventory for maintenance.
 - SI/Supplier has to provide quarterly monitoring report of actual ground conditions for every installation.
 - Providing Prompt Service Facilities to customers/beneficiaries.
 - Risk liability of all personnel associated with implementation and realization of the project.

- Training of at least two persons nominated by user, on the various aspects of design and maintenance of the offered system after commissioning of the system.
 - The eligible SI shall maintain sufficient inventory of the spares to ensure that the system can be made functional within **7 days** from the communication of breakdown of the system during currency of the warrantee period.
 - The eligible SI shall run the system on trial basis and shall closely monitor the performance of the system before handing over the system, so that the assured water discharge can be estimated for monitoring of the performance of the system. CREDA shall examine the water discharge and ascertain if the discharge is adequate with reference to the capacity of the SPV Pump.
 - Performance Guarantee Test: Successful performance guarantee test to demonstrate the rated capacity of SPV Pump as per CREDA's norms shall have to be conducted by SI in presence of representatives of CREDA, if required.
 - System Integrators shall have to establish their service stations in the allocated area and shall have to keep sufficient quantity of spares and man power to ensure proper service network for taking care of smooth functioning of SPV Pumps installed by them. SI shall have to give a toll free number to register complaints.
3. Upon submission of proposal to division office work sanction shall be issued upon fulfilment of following conditions-
- i. Bidder has registered itself as SI.
 - ii. Bidder has submitted valid test report of the pump category or has submitted acknowledgment from authorised test lab.
 - iii. Irrespective of category in which bidder had made offer for installation work sanction can be issued of as category of pumps subject to (ii) above.

SPECIFICATIONS OF SOLAR PUMP

General Specifications of SPV Pumping Systems shall be in accordance with prevailing guidelines of MNRE; however the specifications of some components are also mentioned as follows –

1. SPV MODULES

1.1 Type and Quality –

The total Solar PV array capacity shall be as specified in price schedule and shall be assembled with minimum **300 Wp** (with minimum of **24 V**) Multi/Mono Crystalline/MNRE approved solar modules with **72 cells** with minimum **15%** Module Efficiency. The modules should be tested and certified by a Govt. of India authorized test centers or should conform to relevant IEC standard as per MNRE guidelines. Offered module shall have a power discharge warranty of **90%** of the rated power for 10 years. The rated discharge power and Efficiency of any supplied module shall not be less than the specified power rating and Efficiency of the modules, in any case. Every module should have suitable by-pass diode at its terminal box. The SPV Modules must be installed in such a way so as to deliver proper voltage and current to ensure desired power discharge as per specifications of CREDA for the size of SPVPP ordered. Modules with Cut Cells shall not be permitted.

1.2 The modules used shall have following specifications:

Type	:	Mono crystalline/ Multi crystalline/ MNRE approved Solar Modules
Specification and standard	:	Confirming to Prevailing MNRE guidelines

1.3 The PV modules must conform to the latest edition of any of the following IEC/ equivalent BIS Standards for PV module design qualification and type approval: Crystalline Silicon Terrestrial PV Modules: **IEC 61215 / IS14286**.

1.4 IDENTIFICATION AND TRACEABILITY –

Each PV module must use a RF identification tag (RFID), which must contain the following information:

- (i) Name of the manufacturer of PV Module
- (ii) Name of the Manufacturer of Solar cells
- (iii) Month and year of the manufacture (separately for solar cell and module)
- (iv) Country of origin (separately for solar cells and module)
- (v) I-V curve for the module
- (vi) Peak Wattage, I_m , V_m and FF for the module
- (vii) Unique Serial No and Model No of the module
- (viii) Date and year of obtaining IEC PV module qualification certificate
- (ix) Name of the test lab issuing IEC certificate
- (x) Other relevant information on traceability of solar cells and module as per ISO 9000 series.

The RFID must be inside of module lamination. The module laminate, but must be able to withstand harsh environmental conditions.

1.5 The panel should be supplied with CREDA Logo in the form of sticker on the back of SPV panel or duly laminated inside the glass of solar module with the remark "Manufactured for CREDA". Inter connections of solar modules should be through good quality male female joint. Name of manufacturer, S.No. of Module & manufacturing year should be clearly fixed inside the glass lamination of every module. Back label should be affixed behind every module which should clearly state the specifications & capacity of the module.

- 1.6 **The size of Module Frame and the thickness of Glass, Back Sheet and EVA Sheet must be of the maximum size with only positive tolerance of applicable IEC standards. Modules should be of indigenous make and the efficiency of SPV Modules must be above 15%.**
- 1.7 **During PID test of the module, it will be subjected to conditioning for 3 rounds at 85°C and 85% RH for a period of 96 hours.**

The total capacity of the Solar Photovoltaic Array mentioned in the Rate Sheets is the minimum capacity in wattage of the total SPV modules to be installed in the SPV pumps.

2. SOLAR PUMPS :

MNRE Technical Specifications for various combinations of Solar pumps are given as Solar deep well (Submersible) DC pumping system (**Annexure -I**), Shallow well (Surface)DC pumping system (**Annexure -II**), Shallow well (Surface) AC pumping system (**Annexure -III**), Solar deep well (Submersible) AC pumping system (**Annexure -IV**).

3. MODULE MOUNTING STRUCTURE (MMS) :

MMS as per drawings (**which is given as annexure "A"-A1 to A39**) should be installed along with the hot dipped galvanized (minimum **80 microns**) array support structure for mounting of SPV modules at site. The panel frame structure should be capable of withstanding a minimum wind load of **150 Km.** per hour, after grouting and installation. MMS should be sturdy & designed to assist SPV Modules to render maximum discharge. The hardware (fasteners) used for installation of SPV Modules & MMS should be of suitable Stainless Steel (**SS 304**). Each MMS should be grouted on pedestals & Foundation as per drawings. Each module should be fastener by four theft proof nut built.

Module Mounting Structures should have theft proof arrangements with the use of GI Steel C-channel along with the array support structure for locking arrangement of SPV modules for protecting them from theft. Its size should be with reference to the specifications of the SPV modules such that modules can comfortably slide in the channel while installation. It should not hide any portion of the photovoltaic circuit encapsulated in the lamination of the SPV module, there by un-affecting the efficiency & rating of the SPV modules. Anti-Theft Nut Bolts of SS (with washers) should also be used for better theft proofing along with "C" Channel MMS.

4. Surge Protection Mechanism :

Internal surge protection shall consist of three MOV type arrestors connected from +ve and -ve terminals to earth (via Y arrangement) for higher withstand of the continuous PV-DC voltage during earth fault condition. SPD shall have safe disconnection and short circuit interruption arrangements through integrated DC in built bypass fuse (parallel) which should get tripped during failure mode of MOV, extinguishing DC arc safely in order to protect the installation against fire hazards. Nominal discharge current (In) at **8/20 micro** seconds shall be minimum **10 KA** with maximum discharge (Imax) at **8/20 micro** seconds minimum **20 KA** with visual indication (through mechanical flag) in modules to monitor the life of SPD. Internal surge protection should be connected to the earthing.

5. EARTHING PROTECTION :

Each array structure of the PV yard shall be grounded properly. In addition the lightning arrestor/masts shall also be provided inside the array field. Provision shall be kept for shorting and grounding of the PV array at the time of maintenance work. All metal casing/shielding of the plant shall be thoroughly grounded in accordance with Indian Electricity Act/IE rules as amended up to date. The earthing pit shall be made as per IS: 3043. All the array structures, equipment's& control systems shall be compulsorily connected to the

earth. Number of earthing shall vary with the capacity of SPV Power Plant & location. G.I. /Copper strips should be used for earthing instead of G.I. wires. LA should be installed to protect the array field & machines installed in the ground not in the structure with separate earthing. Number of LA shall vary with the capacity of SPV Power Plant & location. The LA installations should be getting approved from CREDA prior to installation.

6. CABLES/WIRE:

All cables should be of copper as per IS and should be of suitable grade as per requirement. All connections should be properly made through suitable lug/terminal crimped with use of suitable proper cable glands. The size of cables/wires should be designed considering the line losses, maximum load on line, keeping voltage drop within permissible limit and other related factors. The cable/wire should be of ISI/ISO mark for overhead distribution, with prior approval of CREDA.

7. CONTROLLER :

Controller should be of the approved make and it should be in accordance with the electrical parameters of the Motor/Pump. Controllers should be fixed in suitable **IP 54 Box** with the provision of SPD as per norms of CREDA. Controller must have Remote Monitoring Arrangement as per MNRE & CREDA guidelines. System Integrators shall have to provide a link for monitoring of installed SPV Pumps and on-site data storage sufficient to log & store **1 year data** from date of download. Other detailed specifications of Controller are as per **Annexure-“C”**.

8. JUNCTION BOXES :

Junction Boxes (SJB / AJB / MJB) shall be mounted on poles of array support structure. The junction boxes should be made of FRP (Hansel or equivalent make **(IP65)**, with prior approval of CREDA). It should be provided with proper locking arrangements.

9. Detailed Specifications of BOS:

They are given as per **Annexure- “D”**.

Other details regarding specifications & performance of SPV Pumping Systems may be downloaded from MNRE website. In case of difference/ ambiguity of indicative specifications in MNRE and Specifications of CREDA, specifications laid down by CREDA shall be considered.

Report of Ministry of New and Renewable Energy

MNRE has released detailed report of the decisions taken at Quarterly review meeting of test labs empanelled under Solar off Grid Programme. The quarterly meeting was held during **27th September and 23rd December 2016**.

At the meeting it was decided to make Potential Induced Degradation (PID) test for solar modules mandatory from **1st April 2017**. In order to simulate the Indian operating conditions, it was decided that during PID test of the module, it will be subjected to conditioning for **3 rounds at 85°C and 85% RH** for a period of **96 hours**. In case the degradation is more than **5%** after the test, the module will be treated as failed the PID test. The system voltage details of the module to be provided by the module manufacturer. PID test is mandatory in case the array voltage is more than **600 VDC**.

Here are other decisions taken at the meeting –

1. The test centres to stop the OEM and co-certification testing of modules with immediate effect. The modules of the manufacturers who are having OEM and co certification will not be considered as qualified modules under MNRE programmes.
2. The latest version of **IEC 61215** has been published and all the test labs should upgrade themselves for the same. The latest version will become mandatory from **1st June 2017**.

3. It was decided that instead of RFID tag, the manufacturer should provide the following minimum information laminated inside the module :
 - Made in India (to be subscribed in words).
 - Company name/logo.
 - Model number (It should indicate the voltage and rated wattage of the module)
 - Serial number.
 - Year of make.
4. The inverters should be tested as per IEC standards. The following criteria should be followed:
 1. The benchmarking efficiency criteria for the Grid Tied (string inverters) inverter –
 - At nominal voltage and full load is $\geq 95\%$.
 - For load $\geq 25\%$ is $\geq 92\%$.
 2. In case of standalone / grid interactive inverter the benchmarking efficiency criteria –
 - At full load is **85%**
 - For the load $\geq 25\%$ is **80 %**.
 3. No load losses should not be more than **5%**.

The following tests are to be conducted on the inverters –

 - a) Efficiency measurement as per **IS/IEC 61683** (for system with no MPPT).
 - b) Overall efficiency for Grid Tied inverter as per **EN50530**.
 - c) Islanding Prevention test as per **IS 16169/ IEC 62116**.
 - d) PV system characteristics of utility interface as per **IEC 61727** (the system should meet all the clauses as per the standard except the **clause 5.2.2 of IEC 61727**. In case of **clause 5.2.2**, It should withstand the over/ under frequency in the range of **47 to 52 Hz**).
 - e) Overall charge controller efficiency should be $\geq 85\%$ at $\geq 10\%$ load and $\geq 92\%$ at full load, with Battery voltage at $\leq 2V/\text{cell}$.
 - f) System should have **IP65 certification** for outdoor use and **IP 21 and 22** for indoor use.
 - g) Environmental testing as per **IEC 60068-2-(1, 2, 14 & 30)**.
5. In case of batteries following decisions were taken:
 - a) BIS standard testing number should be put in the battery tests.
 - b) A separate guidelines for testing of Li-Ion batteries will be provided by MNRE.
 - c) Presently the PV systems having the test report for the following tests on the batteries are being accepted for testing.
 - Capacity test (**as per IS 1651**).
 - Watt hour efficacy measurement (**as per IS 1651**).
 - Charge retention test (**as per IS 1651**).

For lead acid battery endurance test (**as per IS13369** for flooded batteries and as per **IS 15549 for VRLA batteries**) certification for batteries will be made mandatory with effect from **15th July 2017**. While accepting the system for testing the test laboratory should ask for a copy of the test certificate of the battery as per BIS standard from the client.

6. In case of Solar Pumps following decisions were taken:
 - a) The water pump should be tested for the summer and winter radiation profile. In order to pass the pump it should meet the requirement as per MNRE specs, for both the profiles. NISE would provide profiles details to all the test centers.

- b) Suction head with realistic physical head of **7 meter** only should be used for testing the pump. No simulation of suction heads is allowed for testing of the pump.
 - c) A test report must have a concluding remark i.e. qualifies or does not qualify as per the MNRE specifications.
 - d) The report should include the module wattage and number of the modules. A maximum variation of $\pm 3\%$ in the module to module wattage and $+5\%$ in the overall capacity of the total array should be allowed.
 - e) All the test labs should provide the details of the remote monitoring parameters observed in the test report.
 - f) NISE will provide the test report format to all the test laboratories.
7. No solar home system/power pack up to **300 Wp** will be considered for testing if the loads (e.g. Luminaries and Fans etc.) are not provided with the system. Luminaries should be provided with the system considered for testing. The other load like fan is optional.
- a) It was decided that in case of all the specified luminaries the tolerance of $+5\%$ in wattage and -5% in lux output will be acceptable. However the maximum $\pm 5\%$ non-uniformity in light output will be acceptable.
 - b) It was also decided that the **300 W** inverter should have minimum **90%** efficiency under full load condition whereas from **25%** to full load condition the efficiency should have minimum **85%**.
 - c) NISE will provide the test report format to all the test laboratories.
8. All the test laboratories should provide a clear cut verdict in the end of the test report regarding the conformity / non conformity of the system against the standard / specifications for which it has been tested. Any discrepancy in the specifications of sample submitted, the test labs should specify the same in the report.
9. From **1st July 2017**, all test laboratories should start the data logging of all the test parameters during testing and a soft copy of the same will be maintained for a period of **5 years**.
10. The Ministry is introducing of Micro Solar Pumps of **0.25 HP and 0.5 HP**. The specifications of micro pumps are enclosed in Annexure for information/comments.
11. All SNAs will cross check the test reports submitted by the companies for the systems to be supplied under various tenders with concerned testing laboratory.

ANNEXURE – I**Indicative Technical Specifications of Solar Deep well (submersible) Pumping Systems :**

With D.C. Motor Pump Set with Brushes or Brush Less D.C.(B.L.D.C.)

Description	Model-II	Model-III	Model-IV	Model-V	Model-VI	Model-VII	Model-VIII
PV array	1800 Wp	3000 Wp	3000 Wp	3000 Wp	4800 Wp	4800 Wp	4800 Wp
Motor capacity	2 hp submersible with controller	3 hp submersible with controller	3 hp submersible with controller	3 hp submersible with controller	5 hp submersible with controller	5 hp submersible with controller	5 hp submersible with controller
Shut off Dynamic Head	45 metres	45 metres	75 metres	100 metres	70 metres	100 metres	150 metres
Water Output	63,000 litres per day from a total head of 30metres	105,000 litres per day from a total head of 30metres	63,000 litres per day from a total head of 50metres	42,000 litres per day from a total head of 70metres	100,800 litres per day from a total head of 50metres	67,200 litres per day from a total head of 70 metres	45,600 litres per day from a total head of 100 metres

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of **7.15 KWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules)**.

Notes :

1. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause II. (I.e. performance specifications and requirements) specified earlier.
2. If surface pumps are used in lieu of submersible pumps, the water output must match that of the submersible pumps as specified in this table.
3. Module mounting structure shall be MS hot dipped galvanised, with a facility of manual tracking at least three times a day.

ANNEXURE – II**Indicative Technical Specifications of Shallow Well (Surface) Solar Pumping Systems :**
With D.C. Motor Pump Set with Brushes or Brushless D.C. (B.L.D.C.).

Description	Model-II	Model-III
PV array	1800 Wp	2700 Wp
Motor capacity	2 hp	3 hp
Shut Off Dynamic Head	12 metres	25 metres
Water output *	1,80,000 litres per day from a total head of 10 metres	1,35,000 litres per day from a total head of 20 metres

- * Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of **7.15 KWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules)**.

Notes :

1. Suction head, if applicable, minimum 7 metres.
2. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause II. (i.e. performance specifications and requirements) specified earlier.
3. If submersible pumps are used in lieu of surface pumps, the water output must match that of the surface pumps as specified in this table.
4. Module mounting structure shall be MS hot dipped galvanized, with a facility of manual tracking at least three times a day.

ANNEXURE - III**Indicative Technical Specifications of Shallow Well (Surface) Solar Pumping Systems :**
With A.C. Induction Motor Pump Set and a suitable Inverter –

Description	Model-II	Model-III	Model-IV	Model- V	Model- VI
PV array	1800 Wp	2700 Wp	2700 Wp	4800 Wp	4800 Wp
Motor capacity	2 hp	3 hp	3 hp	5 hp	5 hp
Shut Off Dynamic Head	15 metres	15metres	25 metres	15metres	30 metres
Water output *	1,62,000 litres per day from a total head of 10 metres	2,43,000 litres per day from a total head of 10 metres	1,21,500 litres per day from a total head of 20 metres	4,32,000 litres per day from a total head of 10 metres	2,16,000 litres per day from a total head of 20 metres

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the "Average Daily Solar Radiation" condition of **7.15 KWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules)**.

Notes :

1. Suction head, if applicable, minimum 7 metres.
2. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause II. (i.e. performance specifications and requirements) specified earlier.
3. If submersible pumps are used in lieu of surface pumps, the water output must match that of the surface pumps as specified in this table.
4. Module mounting structure shall be MS hot dipped galvanised, with a facility of manual tracking at least three times a day.

ANNEXURE – IV

Indicative Technical Specifications of Solar Deep well (submersible) Pumping Systems :

With A.C. Induction Motor Pump Set and a suitable Inverter:

Description	Model-II	Model-III	Model-IV	Model-V	Model-VI	Model-VII	Model-VIII
PV array	1800 Wp	3000 Wp	3000 Wp	3000 Wp	4800 Wp	4800 Wp	4800 Wp
Motor capacity	2 hp submersible with controller	3 hp submersible with controller	3 hp submersible with controller	3 hp submersible with controller	5 hp Submersible with controller	5 hp Submersible with controller	5 hp Submersible with controller
Shut Off Dynamic Head	45 metres	45 metres	75 metres	100 metres	70 metres	100 metres	150 metres
Water output*	57,600 litres per day from a total head of 30 metres	96,000 litres per day from a total head of 30 metres	57,000 litres per day from a total head of 50 metres	39,000 litres per day from a total head of 70 metres	91,200 litres per day from a total head of 50 metres	62,400 litres per day from a total head of 70 metres	40,800 litres per day from a total head of 100 metres

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of **7.15 KWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules)**.

Notes :

1. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause II. (i.e. performance specifications and requirements) specified earlier.
2. If surface pumps are used in lieu of submersible pumps, the water output must match that of the submersible pumps as specified in this table.
3. Module mounting **structure shall** be MS hot dipped galvanised, with a facility of manual tracking at least three times a day.

SCHEDULE - I**PART 'A': GENERAL INFORMATION**

(Strike off whichever is not applicable. Separate sheets should be used, wherever necessary)

01. Name & Address of the Bidder :
02. Name & Address of the firm/Company etc. :
- a) Registered office :
- b) Factory/works address :
- c) Fax Nos. :
- d) Telephone / Mobile Nos. :
- e) Email id :
03. Confirm whether tenderer is Manufacturer : Yes/No
04. Only manufacturer to give following particulars
- a) Address of factory :
- b) Year of starting manufacture :
- c) Whether same/similar materials Manufactured earlier (if yes, give reference) :
- d) Yearly/monthly production capacity :
- e) Maximum yearly production Achieved so far :
05. Whether the firm is SSI Unit of Chhattisgarh State: : Yes/No
- a) If yes, write registration No. :
- b) Whether documentary evidence Regarding registration enclosed :
- c) Items for registration :
- d) Period of registration :
- d) Whether latest copy Competency/ Certificate furnished : Yes/No
06. Whether the firm is 100% owned by
- a) State Government : Yes/No
- b) Central Government : Yes/No
- If yes, Notification/certificate issued from : Yes/No
- The competent authority to this effect is Enclosed
07. a) Whether the bidder is old participant with CREDA : Yes/No
- b) If yes, whether documentary Evidence is enclosed. : Yes/No
08. Any other information that bidder may like to give in order to highlight his bid : If yes, give details

PLACE :

SIGNATURE OF TENDERER

NAME IN FULL

DATE :

DESIGNATION/STATUS

FIRM/COMPANY SEAL



SCHEDULE - I

PART 'B' : COMMERCIAL INFORMATION

(Strike off, whichever is not applicable. Separate sheets should be used. Wherever necessary)

01. i) Earnest Money Details : Bank draft/Bankers cheque payable to "CREDA", Raipur
- ii) Amount of E.M.D. & full details : ₹
- iii) If exempted, state whether the bidder i / Fully Owned State/Central Govt. Unit : SSI Unit of C.G.
- iv) Reference of documentary evidence regarding exemption enclosed. : Yes/No
02. Whether the offer is valid for 6 months from the date of opening of commercial/technical bid. : Yes/No
03. Rate of Sales Tax on the date of bid (exclusive in the rate quoted) :
04. **DISCOUNT:**
- a) Whether any rebate/discount is offered. : Yes/No
- b) If yes, whether the rebate is un-conditional/conditional Rate/amount of rebate/discount : Yes/No
- c) If conditional State condition : Yes/No
05. **PAYMENT TERMS:**
Whether CREDA's terms of payment is acceptable to tenderer : Yes/No
06. **COMPLETION PERIOD OF WORK:**
Whether tenderer is agreeing for completion period of work as Specified in the tender : Yes/No
07. **PENALTY CLAUSE:**
Whether agreeable to CREDA's Penalty Clause : Yes/No
08. Whether agreeable to CREDA's clause of warrantee period : Yes/No
09. **SECURITY DEPOSIT:**
Whether Security Deposit clause is understood : Yes/No
10. Indicate State, Central Sales Tax Registration Number State : Yes/No
Central:
- (Please Note that in case of non-registration with Commercial Tax, Department Purchase Tax as admissible shall be deducted by the Purchaser from the Bills of the supplier)
11. Please mention whether rates offered are applicable for part quantities. : Yes/No

PLACE :

SIGNATURE OF TENDERER

DATE :

NAME IN FULL

DESIGNATION/STATUS

FIRM/COMPANY SEAL

SCHEDULE - II

PART 'C' : TECHNICAL INFORMATION

(Strike off whichever is not applicable. Separate sheets should be used. Wherever necessary)

01. Whether material offered is exactly as per technical specification : Yes/No
02. Whether the copies of orders received during last 3 years from other State Nodal Agency or from other Organization for similar materials enclosed. : Yes/No
(if yes, give details)
03. Whether performance certificate from such Organization regarding supplies is enclosed. : Yes/No
(if yes, give details)
04. Whether pamphlets/technical details literatures along with drawing etc. furnished with the offer : Yes/No
(if yes, give details)
05. Whether the tenderer agrees to furnish material test certificates in respect of chemical composition and physical properties from Govt./ Govt. approved lab with each batch of supplies. : Yes/No
06. Whether the tenderer has furnished details of manufacturing equipments and short history of plant : Yes/No
(if yes, give details)
07. Whether details of manufacturing process furnished with offer. : Yes/No
(if yes, give details)
08. a) Whether all testing facilities are available. : Yes/No
If so, give details and in case of non-availability of facilities indicate approved lab available in surrounding areas where tests are proposed to be conducted.

PLACE

SIGNATURE OF TENDERER

DATE

NAME IN FULL

DESIGNATION/STATUS

FIRM/COMPANY

SEAL



SCHEDULE - III
TECHNICAL DEVIATIONS

From,
Tenderer Name & Address -

To,
The CE,
CREDA, HO,
Raipur

Sub - Technical Deviations.

Dear Sir,

The technical deviations & variations to the specifications stipulated in the tender, for the item quoted are as under -

Sl.No.	Condition	Clause No. of Tender document	Page No. of Tender document	Statement of deviations and variations

2. Except aforesaid deviations, the entire order, if placed, on us shall be executed in accordance with your specifications and other conditions. Variation/deviations etc. if found, elsewhere in our offer should not be given any considerations while finalizing the tender.

PLACE

DATE

SIGNATURE OF TENDERER

NAME IN FULL

DESIGNATION/STATUS

FIRM/COMPANY SEAL

* **NOTE** - Continuation sheet of like size & format may be used as per bidder's requirements and shall be annexed to this schedule.



SCHEDULE - IV

PAST EXPERIENCE

From :

Bidder's Name & Address -

To,

The CE,

CREDA, HO,

Raipur

Sub - Performance/Past Experience.

Dear Sir,

We furnish herewith the record of our performance and experience as follows -

Sl.No.	Purchaser's Name & Address	Order No. Date	Ordered Quantity	Qty. supplied (Nos.)	Value of Order
---------------	---	---------------------------	-----------------------------	---------------------------------	---------------------------

PLACE

SIGNATURE OF TENDERER

DATE

NAME IN FULL

DESIGNATION/STATUS

FIRM/COMPANY SEAL

***NOTE-**Photocopy of the orders & performance reports received from other State Agencies/Govt. Undertakings etc. should be enclosed.



DRAFT OF AGREEMENT

This agreement made on this day _____ of month _____ (year) 2019 between M/s _____ (NAME OF COMPANY) herein after called as "Contractor" (Which expression shall unless excluded by or repugnant to the context , include its successor Rs , heir, executors, administrative representative and assignee) through Shri son of Shri, duly authorized by the contractor to sign this agreement on its behalf, of the one part & Chhattisgarh State Renewable Energy Development Agency, Raipur hereinafter referred to as the "CREDA", through Shri _____ son of Shri _____ of other part on the following covenants:

Whereas the contractor has offered to enter into contract with the said CREDA for the Design, Supply installation, commissioning & comprehensive operation & maintenance of Solar Pumps of following capacities: 1Hp to 5Hp.

Wide Tender No 28100 date 27.02.2019 on the terms and conditions herein contained and the rates approved by the CREDA have been duly accepted and where as the necessary security deposit shall be furnished in accordance with the provisions of the tender document and whereas no interest will be claimed on the security deposits.

Now these presents witness and it is hereby agreed and declared by and between parties to these presents as follows -

- 1) The Contractor shall, during the period of this contract, that is to say fromtoor completion thereof, until this Contract shall be determined by such notice as is hereinafter mentioned, safely carryout, by means of labors employed at his own expenses and by means of tools, implements and equipment etc. to be supplied by him to his labour at his own expenses, for installation of "Solar Pumps" as described in tender documents. (Annexed to the agreement), .
2) The NIT (Notice Inviting Tender), Corrigendum to NIT, Bid documents (Qualifying and Financial), approved rates annexed hereto and such other additional particulars, instructions, engineering documents & drawings, so far they relate to the Tender No.28100 as may be found requisite to be given during execution of the work shall be deemed and taken to be an integral part of the contract and shall also be deemed to be included in the expression "The Agreement or "The Contract "wherever herein used.
3) The contractor shall also supply the requisite number of workmen with means & materials as well as tools, appliances, machines, implements, vehicles for transportation, cartage etc. required for the proper execution of work within the time prescribed in the work orders and /or as per the tender conditions.
4) Contractor shall provide 05 year warranty in installed solar pump from the date of commissioning as per the terms & conditions prescribed in the Tender N.28100
5) The contractor hereby declares that nobody connected with or in the employment of CREDA is not/shall not ever be admitted as partner in the contract.
6) The contractor shall abide by the terms and conditions, rules, guidelines, construction practices, safety precautions etc. stipulated in the tender document including any correspondence between the contractor and the CREDA having bearing on execution of work and payments of work to be done under the contract.
7) The contractor shall be responsible to follow all the laws including Workmen Compensation Act and all other laws in force & shall be responsible for all the obligations towards labour including EPF,ESI, etc.
8) All the taxes deductible at source as per Acts in vogue shall be recovered by CREDA and deposited with the appropriate authorities

In witness whereof the parties present today have hereby entered into agreement.

Signed &sealed on behalf of the above named contractor.

Signed on behalf of CREDA

Name :

Name :

Designation :

Designation :

Witness:

1. Name:-

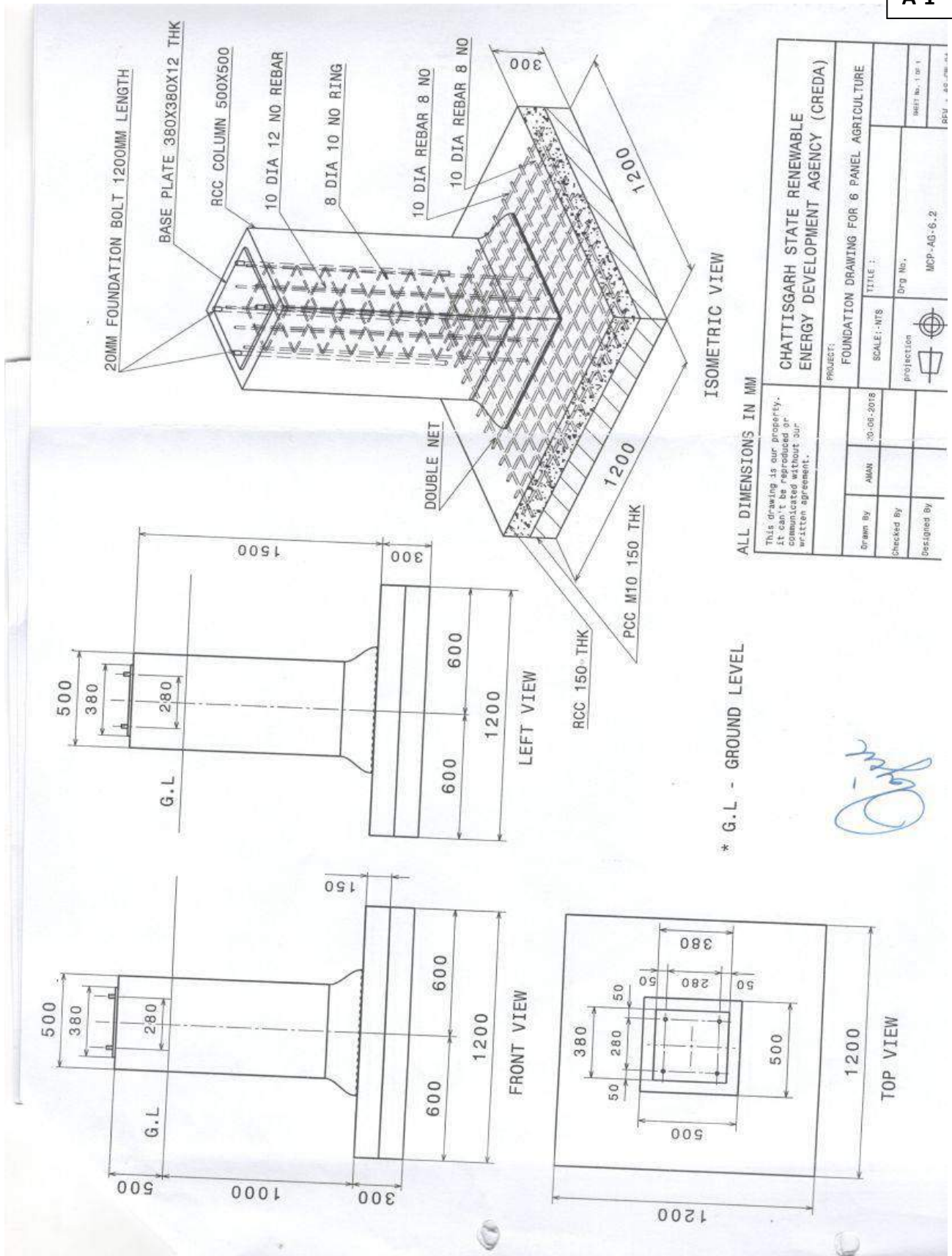
2. Name:-

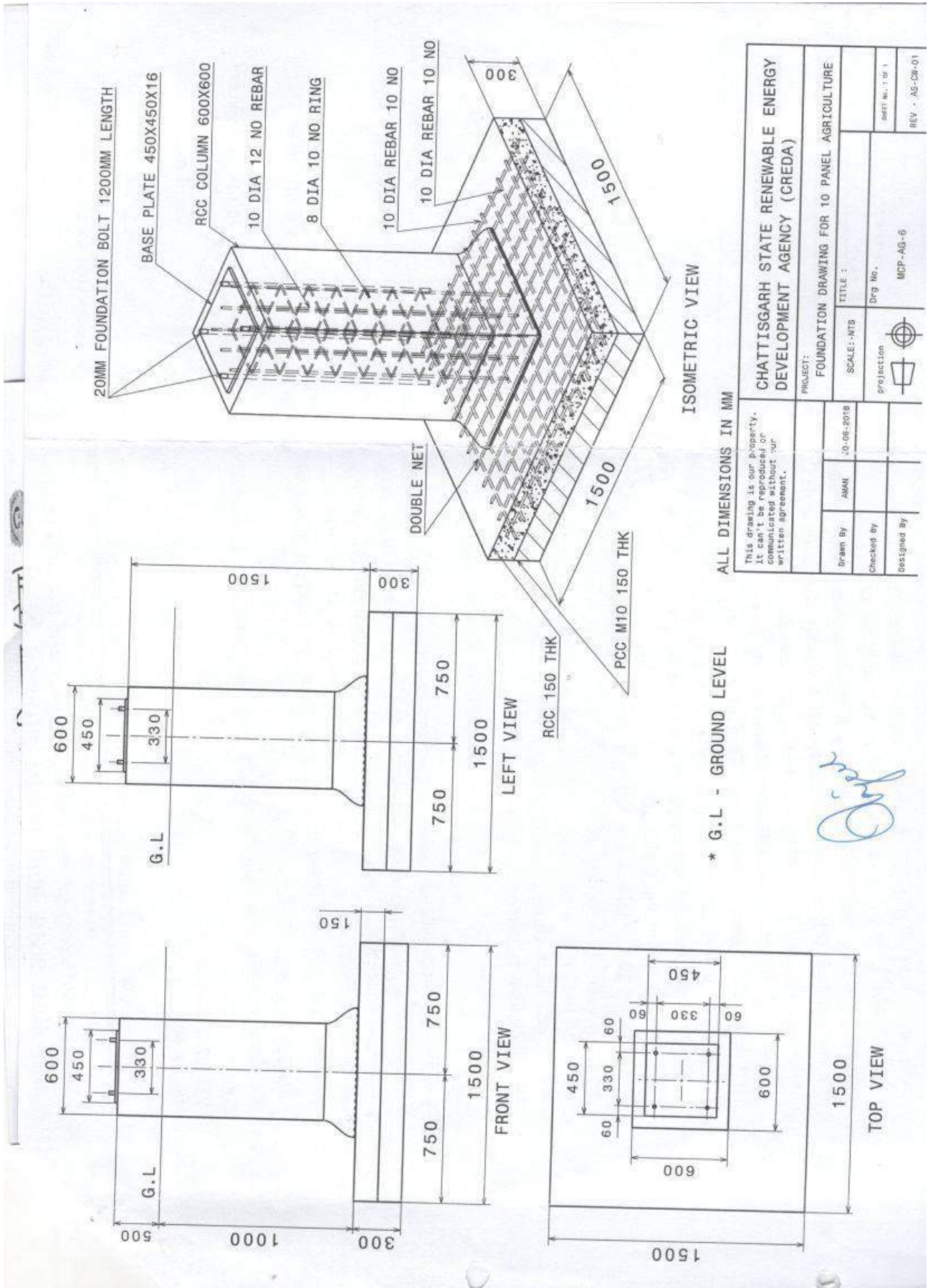
Address:-

Address:-

ANNEXURE - "A" Complete Drawing of Module Mounting Structure & Civil Works

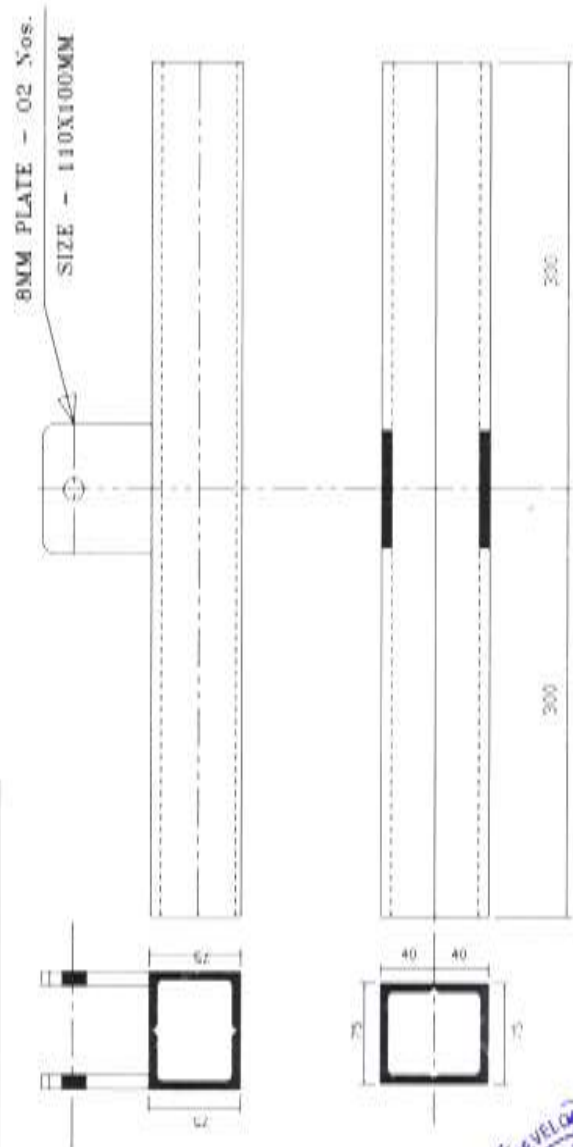
A-1





CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE . RAIPUR (C.G.)	SPV PUMP 10NDS. OF 300WP MODULE

NAME OF MEMBER - LADDER SUPPORT



CHANNEL 75 X 40 - 600MM LENGTH

MARK NO. -> S5-1
QTY./STR. -> 01 No



NOTE: ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY						
REF. DOC. NUMBER: SH						
					SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	17/17

CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE , RAIPUR (C.G.)	TYPE OF STRUCTURE SPV PUMP 10NOS. OF 300WP MODULE
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NAME OF MEMBER - " U " CLAMP

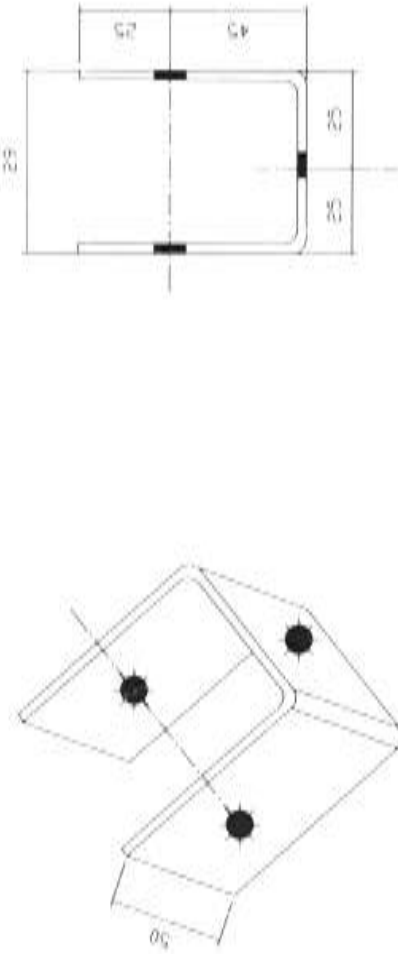



PLATE 6MM - 50 X 190MM LENGTH

MARK NO. -> S4-6
QTY./STR. -> 04 Nos



NOTE :- ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE			SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	16/17
SKETCH CORRECTED AS PER MODEL. - QA						
APPROVED BY						
REF. Dwg. NUMBER: SH						

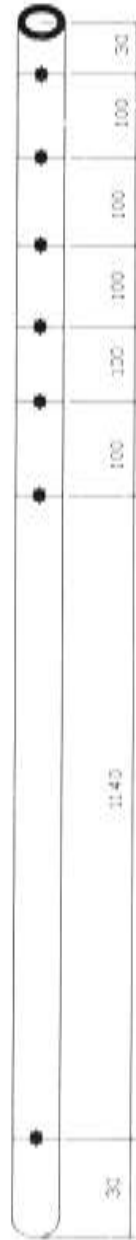
CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE		
CREDA HEAD OFFICE , RAIPUR (C.G.)	SPV PUMP 10NOS. OF 300WP MODULE		
<div style="border: 1px solid black; padding: 5px; display: inline-block;">NAME OF MEMBER - SUPPORTING PIPE</div>			
			
<p>32 NB PIPE - 1500 MM LENGTH</p>			
<div style="border: 1px solid black; padding: 2px; display: inline-block;"> MARK NO. -> S4-5 QTY./STR. -> 04 Nos </div>			
<p>NOTE :- ALL DIMENSION IN MM</p>			



PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL. - QA		13.5mm ± 17.5mm	18 mm ± 24mm	28 mm		
APPROVED BY					SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	15/17
REF. DRG. NUMBER: SH						

CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE - RAIPUR (C.G.)	TYPE OF STRUCTURE SPV PUMP 10NOS. OF 300WP MODULE
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NAME OF MEMBER - SUPPORTING PIPE



25 NB PIPE - 1700 MM LENGTH

MARK NO. -> S4-4
QTY./STR. -> 04 Nos

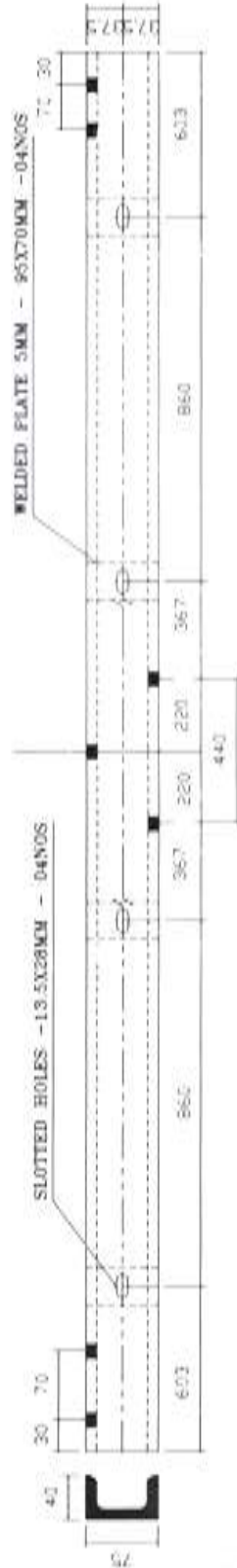


NOTE -- ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY						
REF. DOC. NUMBER: SH						
					SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	14/17

CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE - RAIPUR (C.G.)	SPV PUMP 10NOS. OF 300WP MODULE

NAME OF MEMBER - RAFTER



CHANNEL 75 X 40 - 4100MM LENGTH

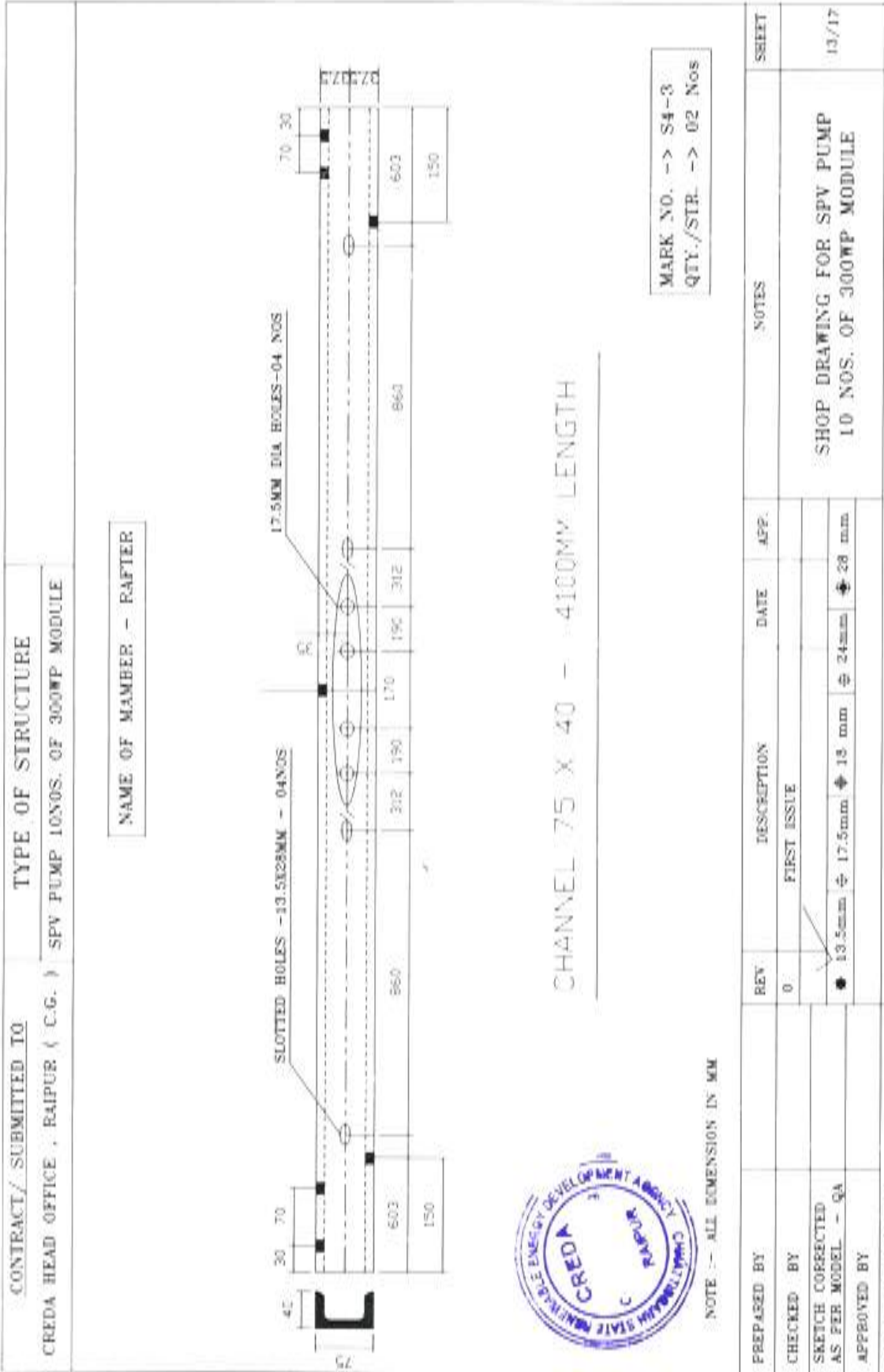
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QTY./STR. -> 01 No

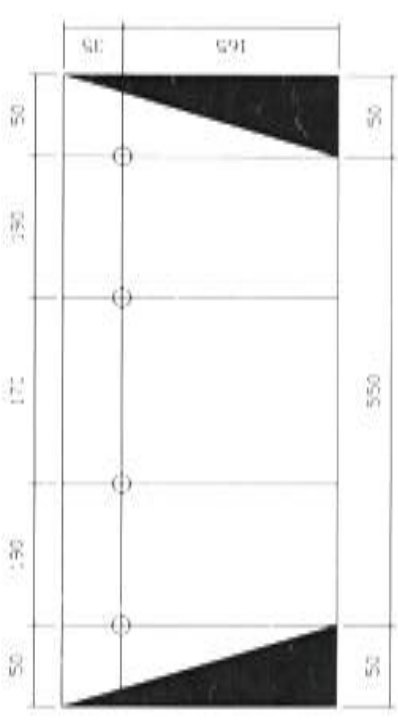



NOTE :- ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				13/4/19
SKETCH CORRECTED AS PER MODEL - QA	●	13.5mm ϕ 17.5mm ϕ 18 mm ϕ 24mm ϕ 28 mm				
APPROVED BY						
REF. DES. NUMBER: SH						

SHOP DRAWING FOR SPV PUMP
10 NOS. OF 300WP MODULE




<p>CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE, RAIPUR (C.G.)</p>	<p>TYPE OF STRUCTURE SPV PUMP 10NOS. OF 300WP MODULE</p>		
<p>NAME OF MEMBER - MAIN BEAM PLATE</p>			
			
<p>NOTE :- ALL DIMENSION IN MM</p>			
<p>MARK NO. -> S4-2 QTY./STR. -> 02 Nos</p>			
<p>PLATE 10MM -> 200 X 650MM LENGTH</p>			
			
PREPARED BY	REV	DESCRIPTION	DATE
CHECKED BY	0	FIRST ISSUE	APP.
SKETCH CORRECTED AS PER MODEL - QA		13.5mm ± 17.5mm ± 18 mm ± 24mm ± 28 mm	
APPROVED BY			
REF. DRG. NUMBER-SB.			
<p>SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE</p>			<p>SHEET 12/17</p>

<p>CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE - RAIPUR (C.G.)</p>	<p>TYPE OF STRUCTURE SPV PUMP 10NOS. OF 300WP MODULE</p>
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NAME OF MEMBER - MAIN BEAM ASSEMBLY

SIDE VIEW



CHANNEL - 75X40 (TYP)

TOP VIEW

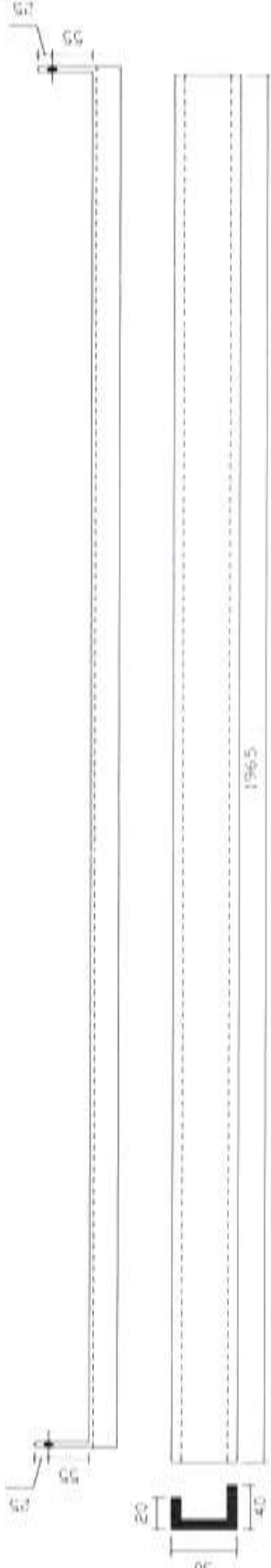



MARK NO. -> S4-1
QTY./STR. -> 01 No

CHANNEL 75 X 40 - 3500MM LENGTH

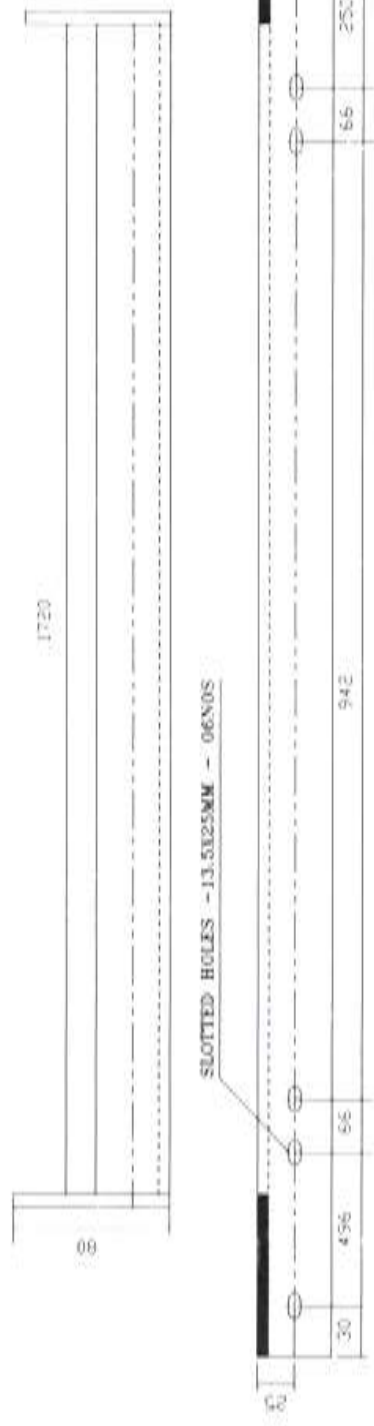
NOTE :- ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - Qa						
APPROVED BY	● 13.5mm	● 17.5mm	● 18 mm	● 24mm	● 28 mm	
REF. DRG. NUMBER: SE					SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	11/17

<p>CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE , RAIPUR (C.G.)</p>	<p>TYPE OF STRUCTURE SPV PUMP LONGS. OF 300WP MODULE</p>					
<p>NAME OF MEMBER - SIDE LOCKING CHANNEL</p>						
						
<p>C-CHANNEL 40X50X20X2.5 - 2130 MM LG</p> <p>1965 +80+80 - 2130 MM LG</p>						
						
<p>MARK NO. -> S3-3 QTY./STR. -> 04 Nos</p>						
<p>NOTE :- ALL DIMENSION IN MM</p>						
<p>PREPARED BY</p>	<p>REV</p>	<p>DESCRIPTION</p>	<p>DATE</p>	<p>APP.</p>	<p>NOTES</p>	<p>SHEET</p>
<p>CHECKED BY</p>	<p>0</p>	<p>FIRST ISSUE</p>				
<p>SKETCH CORRECTED AS PER MODEL - QA</p>	<p>13.5mm</p>	<p>17.5mm</p>	<p>18 mm</p>	<p>24mm</p>	<p>26 mm</p>	<p>10/17</p>
<p>APPROVED BY</p>						
<p>SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE</p>						
<p>REF. DRG. NUMBER: SH.</p>						

CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE , RAIPUR (C.G.)	SPV PUMP 10NOS. OF 300WP MODULE

NAME OF MEMBER - INNER PERLIN



MARK NO. -> S3-2
QTY./STR. -> 04 Nos

MARK NO. -> S3-2A (OPP. FAB.)
QTY./STR. -> 04 Nos

L-45X45X5 - 1880MM LENGTH

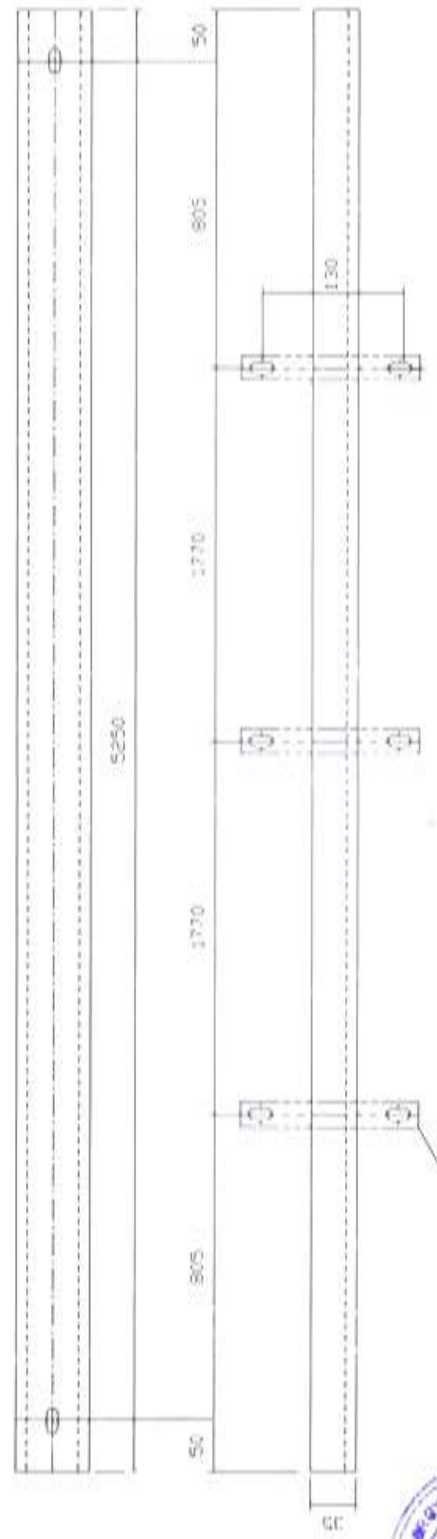
NOTE - ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY						
REF. DRG. NUMBER: SH.						
					SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	9/17

CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE , RAIPUR (C.G.)	SPV PUMP 10NOS. OF 300WP MODULE



NAME OF MEMBER - OUTER PURLIN



FLAT 50X6-130MM LG. (TYP)
QTY. - 03 Nos.

C-CHANNEL 35X50X25X2.5 - 5250MM LENGTH

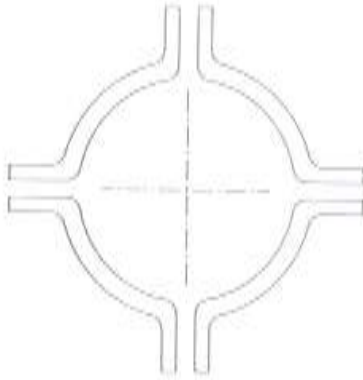
MARK NO. -> S3-1
QTY./STR. -> 02 Nos

NOTE :- ALL DIMENSION IN MM

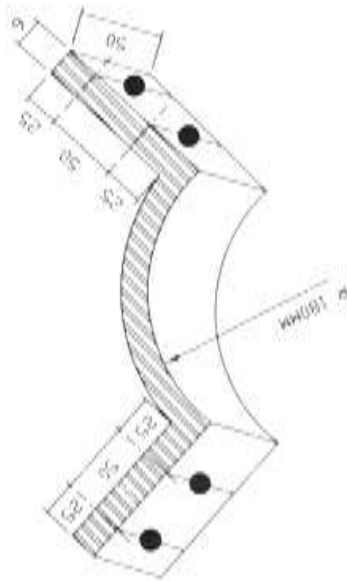
PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY		13.5mm ± 17.5mm ± 18 mm ± 24mm ± 28 mm				6/17
REF. DRG. NUMBER:SH					SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	

CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE, RAIPUR (C.G.)	TYPE OF STRUCTURE SPV PUMP 10NOS. OF 300WP MODULE
--	--

NAME OF MEMBER - LOWER ' U ' CLAMP



TOP VIEW OF 'U' CLAMP



SIDE VIEW OF 'U' CLAMP

PLATE 6MM THK. - 50 X 310MM LENGTH

MARK NO. -> S2-B
QTY./STR. -> 04 Nos

NOTE :- ALL DIMENSION IN MM



PREPARED BY	REV	DESCRIPTION	DATE	APP	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY	● 13.5mm	● 17.5mm	● 18 mm	● 24mm	● 28 mm	
REF. DRG. NUMBER-S/E						
SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE						7/17

CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE , RAIPUR (C.G.)	SPV PUMP 10NOS. OF 300WP MODULE

NAME OF MEMBER - UPPER BASE PLATE

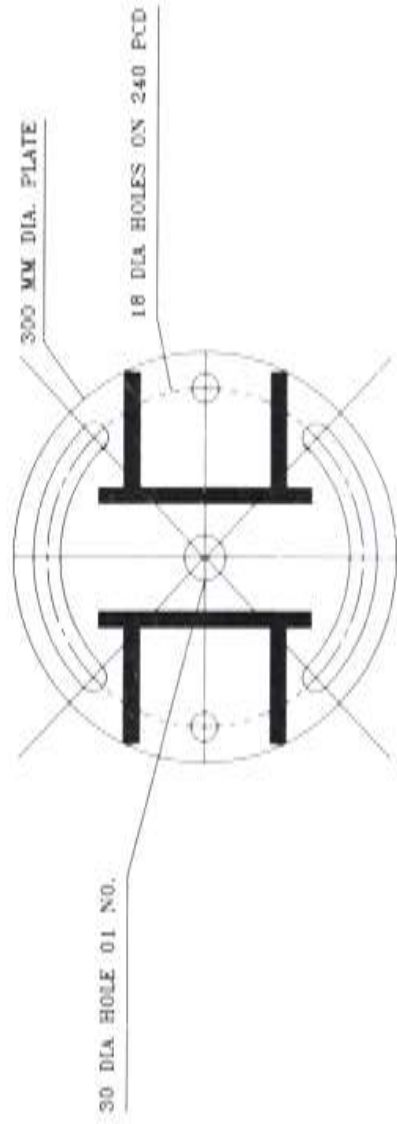


PLATE 10MM THK - 300 X 300MM LENGTH

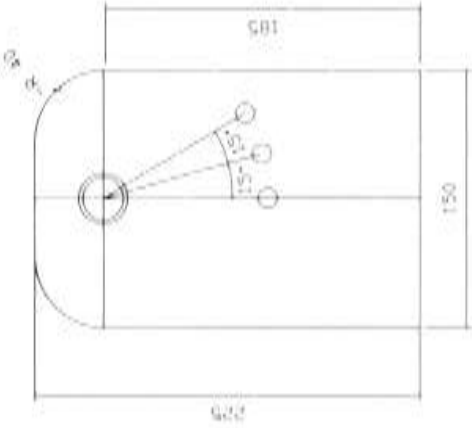
MARK NO. -> S2-7
QTY./STR. -> 01 No



NOTE: ALL DIMENSION IN MM

PREPARED BY	REY	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	◇	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA	●	13.5mm ± 17.5mm ± 18 mm ± 24mm ± 28 mm				6/17
APPROVED BY						
REF. DRG. NUMBER: SE						

SHOP DRAWING FOR SPV PUMP
10 NOS. OF 300WP MODULE

<p>CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE, RAIPUR (C.G.)</p>	<p>TYPE OF STRUCTURE SPV PUMP 10 NOS. OF 300WP MODULE</p>					
<p>NAME OF MEMBER - UPPER SUPPORT PLATE</p>						
		<p>MARK NO. -> S2-6 QTY./STR. -> 02 Nos</p>				
<p>NOTE :- ALL DIMENSION IN MM</p>						
<p>PLATE 10MM THK - 150 X 225MM LENGTH</p>						
PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
	0	FIRST ISSUE				
<p>SKETCH CORRECTED AS PER MODEL - QA</p>		<p>13.5mm ϕ 17.5mm ϕ 18 mm ϕ 24mm ϕ 28 mm</p>			<p>SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE</p>	5/17
APPROVED BY						
REF. Dwg. NUMBER: SH.						

CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE - RAIPUR (C.G.)	SPV PUMP 10NOS. OF 300WP MODULE

NAME OF MEMBER - UPPER BASE PLATE

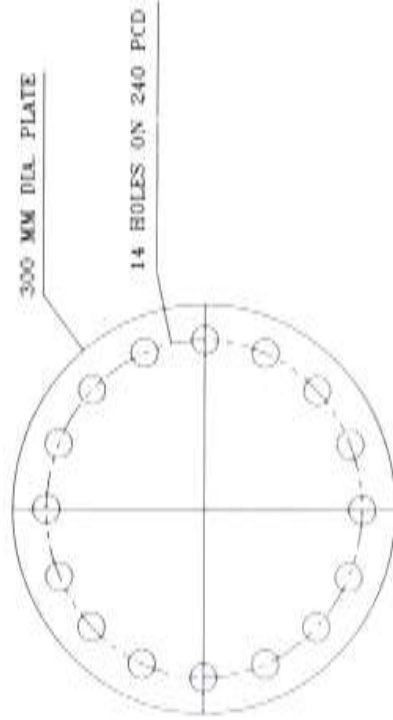
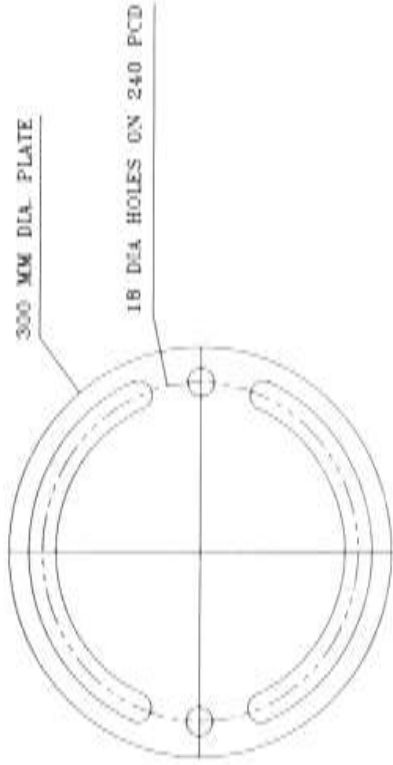


PLATE 10MM THK - 300 X 300MM LENGTH

MARK NO. -> S2-4
QTY./STR. -> 01 No



NOTE: ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY		13.5mm ϕ 17.5mm ϕ 18 mm ϕ 24mm ϕ 28 mm				
REF. DRG. NUMBER-SH.					SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	4/17

CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE , RAIPUR (C.G.)	SPV PUMP LONGS. OF 300WP MODULE

NAME OF MEMBER - STIFFENER PLATES

LOWER STIFFENER PLATES



PLATE 10MM THK. - 125 X 250MM LENGTH

UPPER STIFFENER PLATES

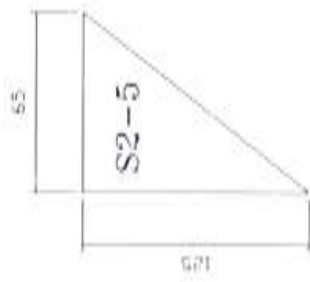


PLATE 8MM THK - 65 X 125MM LENGTH

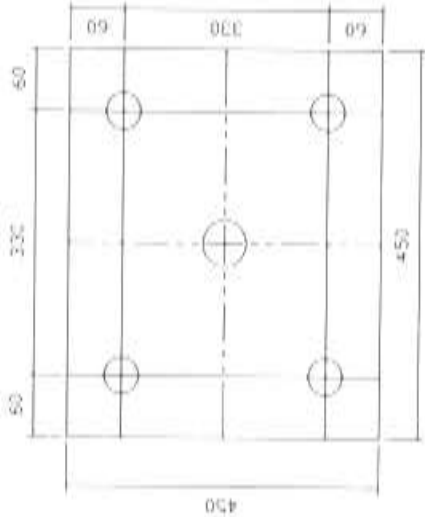
MARK NO. -> S2-3
QTY./STR. -> 04 Nos

MARK NO. -> S2-5
QTY./STR. -> 08 Nos

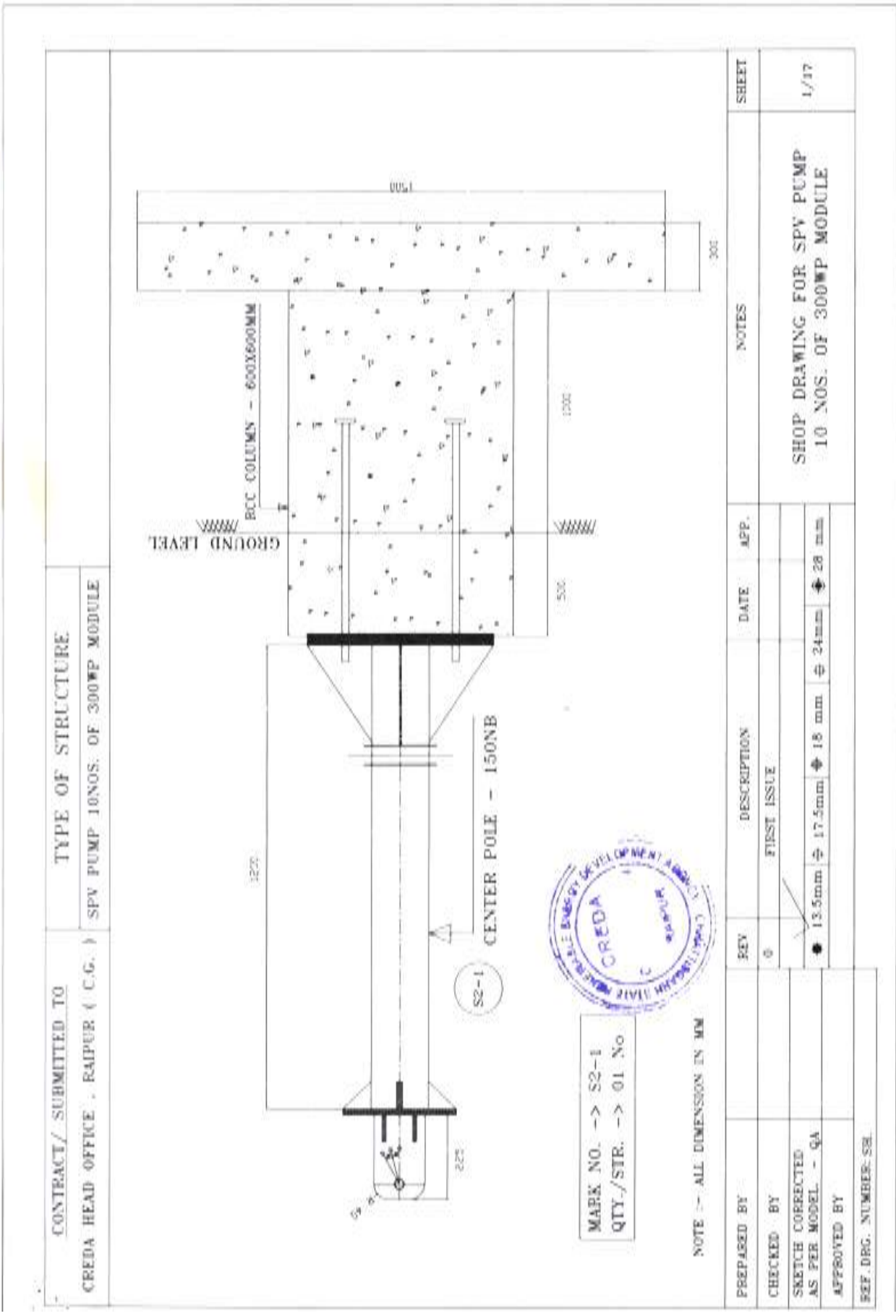


NOTE -> ALL DIMENSION IN MM

PREPARED BY	KEY	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	⊙	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA	●	13.5mm ⊕ 17.5mm ⊕ 18 mm ⊕ 24mm ⊕ 28 mm			SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	3/17
APPROVED BY						
REF. DRG. NUMBER-SB						

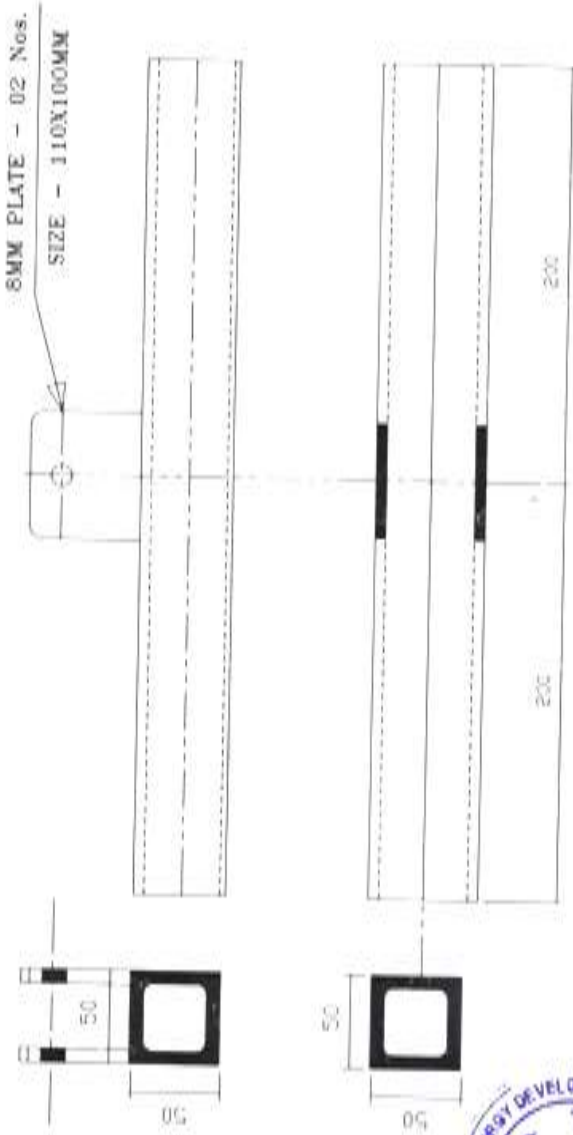
<p>CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE, RAIPUR (C.G.)</p>	<p>TYPE OF STRUCTURE SPV PUMP 10NOS. OF 300WP MODULE</p>	<p>NAME OF MEMBER - LOWER BASE PLATE</p>	
		<p>MARK NO. -> S2-2 QTY./STR. -> 01 No</p>	
<p>NOTE :- ALL DIMENSION IN MM</p>		<p>PLATE 16MM THK - 450 X 450MM LENGTH</p>	
<p>PREPARED BY</p>	<p>REV</p>	<p>DESCRIPTION</p>	<p>DATE</p>
<p>CHECKED BY</p>	<p>0</p>	<p>FIRST ISSUE</p>	<p>APP.</p>
<p>SKETCH CORRECTED AS PER MODEL - QA</p>	<p>●</p>	<p>13.5mm ϕ 20mm ϕ 18 mm ϕ 24mm ϕ 28 mm</p>	<p>2/17</p>
<p>APPROVED BY</p>	<p>SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE</p>		
<p>REF. DOC. NUMBER: SH.</p>	<p>10 NOS. OF 300WP MODULE</p>		





CONTRACT/ SUBMITTED TO: TYPE OF STRUCTURE
 CREDA HEAD OFFICE, RAIPUR (C.G.) SPV PUMP 6 NOS. OF 300WP MODULE

NAME OF MEMBER - LADDER SUPPORT



CHANNEL 75X40 - 400MM LENGTH

MARK NO. -> S5-1
 QTY./STR. -> 01 No



NOTE :- ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - qa						
APPROVED BY						
REF. DRG. NUMBER-SH.						
SHOP DRAWING FOR SPV PUMP 6 NOS. OF 300WP MODULE						17/17

CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE, RAIPUR (C.G.)	TYPE OF STRUCTURE SPV PUMP 6 NOS. OF 300WP MODULE
--	--

NAME OF MEMBER - " U " CLAMP

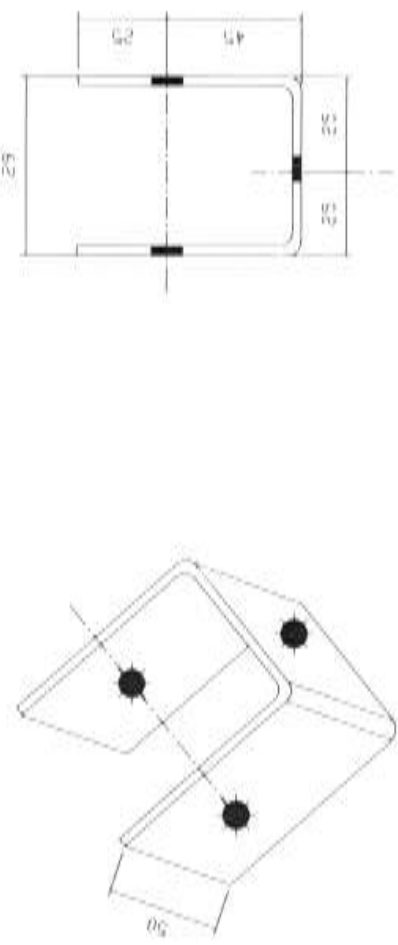


PLATE 6MM - 50 X 190MM LENGTH



MARK NO. -> S4-6
QTY./STR. -> 04 Nos

NOTE :- ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
	0	FIRST ISSUE			SHOP DRAWING FOR SPV PUMP 6 NOS. OF 300WP MODULE	16/17
	1	13.5mm ϕ 17.5mm ϕ 18 mm ϕ 24mm ϕ 28 mm				
SKETCH CORRECTED AS PER MODEL - QA APPROVED BY						
REF. DRG. NUMBER: SE						

CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE , RAIPUR (C.G.)	SPV PUMP 10NOS. OF 300WP MODULE

NAME OF MEMBER - SUPPORTING PIPE



32 NB PIPE - 1500 MM LENGTH

MARK NO. -> S4-5
QTY./STR. -> 04 Nos

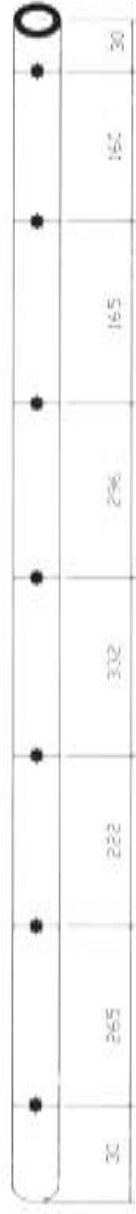


NOTE :- ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY		<ul style="list-style-type: none"> 13.5mm ϕ 17.5mm ϕ 18 mm ϕ 24mm ϕ 28 mm 			SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	15/17
REF. DRG. NUMBER: SH						

CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE , RAIPUR (C.G.)	SPV PUMP 6 NOS. OF 300WP MODULE

NAME OF MEMBER - SUPPORTING PIPE



25 NB PIPE - 1500 MM LENGTH

MARK NO. -> S4-4
QTY./STR. -> 04 Nos

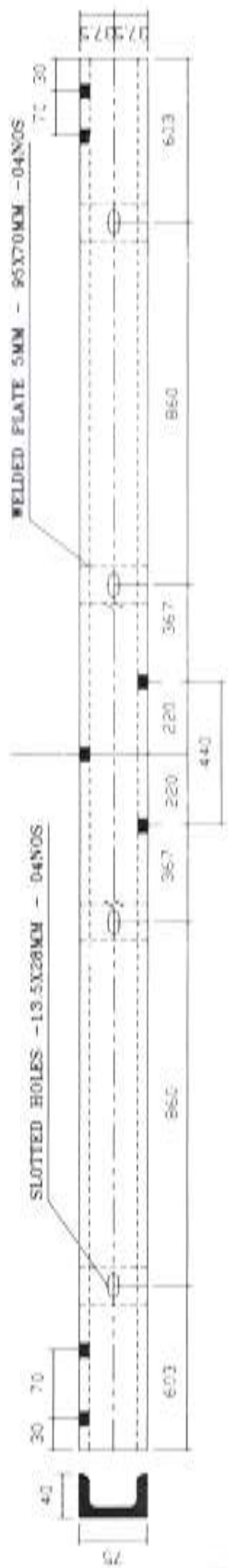
NOTE - ALL DIMENSION EN MM



PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY						
REF. DRG. NUMBER: SE						
					SHOP DRAWING FOR SPV PUMP 6 NOS. OF 300WP MODULE.	14/17

CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE, RAIPUR (C.G.)	SPV PUMP 10NOS. OF 300WP MODULE

NAME OF MEMBER - RAFTER



CHANNEL 75 X 40 - 4100MM LENGTH

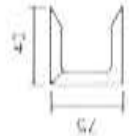


NOTE :- ALL DIMENSION IN MM

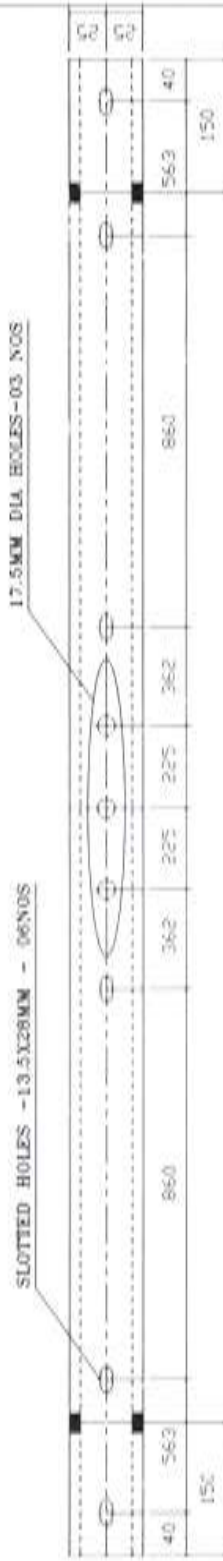
MARK NO. -> S4-3A
QTY./STR. -> 01 No

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA	1	13.5mm ϕ 17.5mm ϕ 18 mm ϕ 24mm ϕ 28 mm				
APPROVED BY						
REF. DES. NUMBER: SH						
					SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	13/17

<p>CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE , RAIPUR (C.G.)</p>	<p>TYPE OF STRUCTURE SPV PUMP 6 NOS. OF 300WP MODULE</p>	<p>NAME OF MEMBER - RAFTER</p>
--	---	---------------------------------------




40
150
40



SLOTTED HOLES -13.5X28MM - 06NOS
17.5MM DIA HOLES-03 NOS

CHANNEL 75X40 - - 4100MM LENGTH



NOTE :- ALL DIMENSION IN MM

MARK NO. -> S4-3
 QTY./STR. -> 03 Nos

PREPARED BY	REF	DESCRIPTION	DATE	APP.	NOTES	SHEET
	0	FIRST ISSUE			SHOP DRAWING FOR SPV PUMP 6 NOS. OF 300WP MODULE	13/17
		● 13.5mm ϕ 17.5mm ϕ 18 mm ϕ 24mm ϕ 28 mm				

REF. Dwg. NUMBER: SH

CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE , RAIPUR (C.G.)	SPV PUMP 6 NOS. OF 300WP MODULE

NAME OF MEMBER - MAIN BEAM PLATE

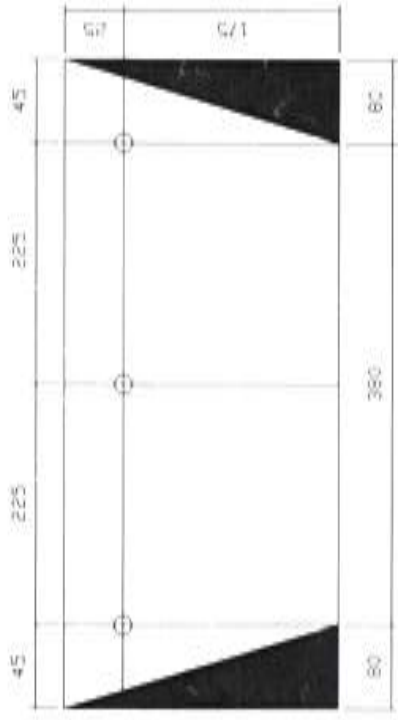



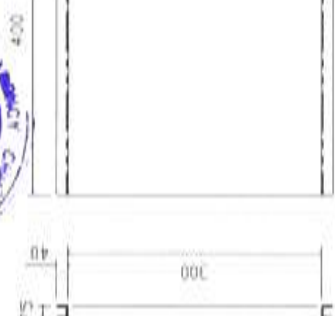
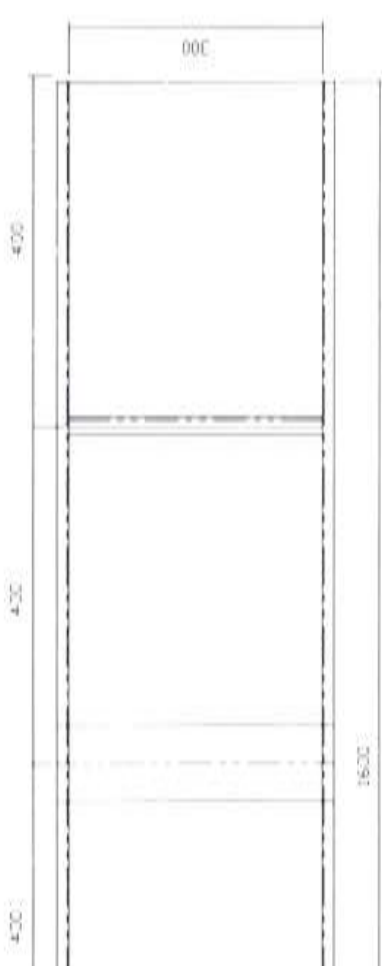
PLATE 8MM - 200 X 540MM LENGTH

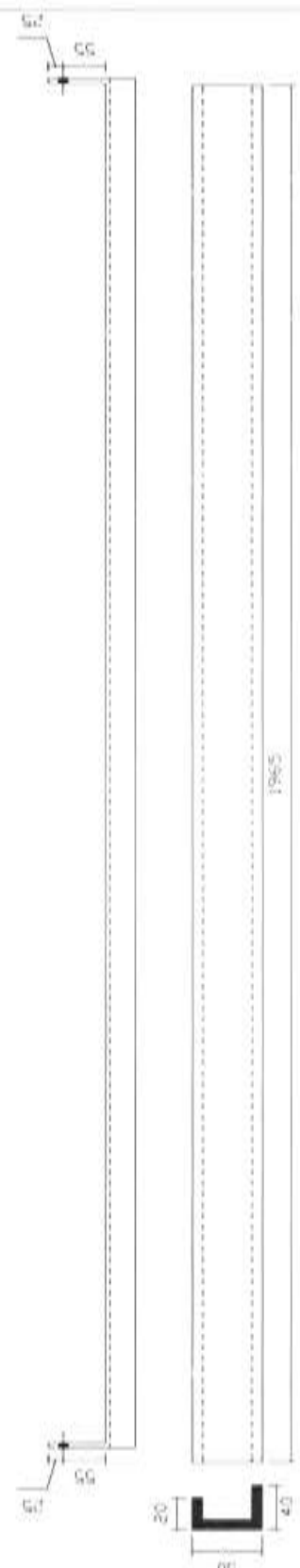

MARK NO. -> S4-2
QTY./STR. -> 02 Nos



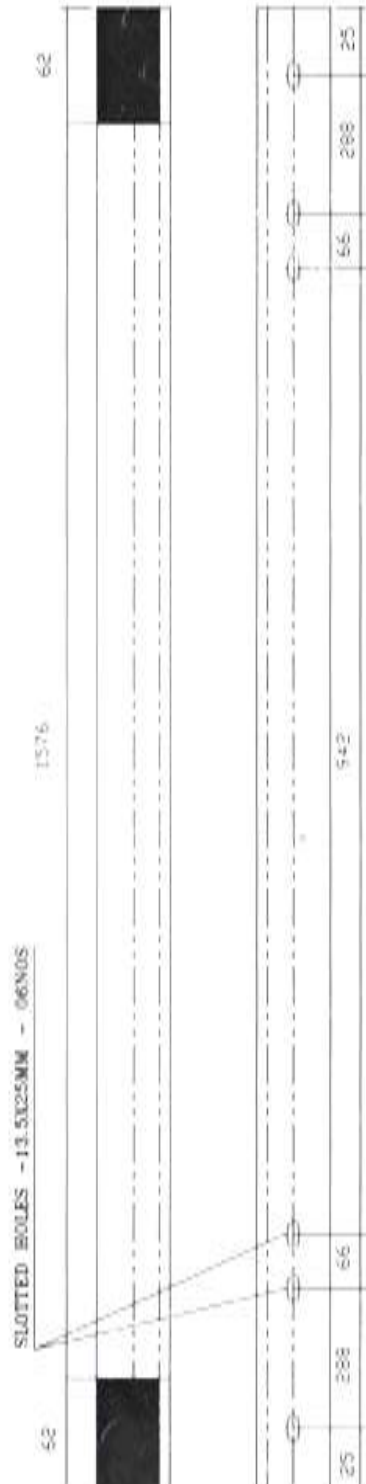
NOTE -- ALL DIMENSION IN MM

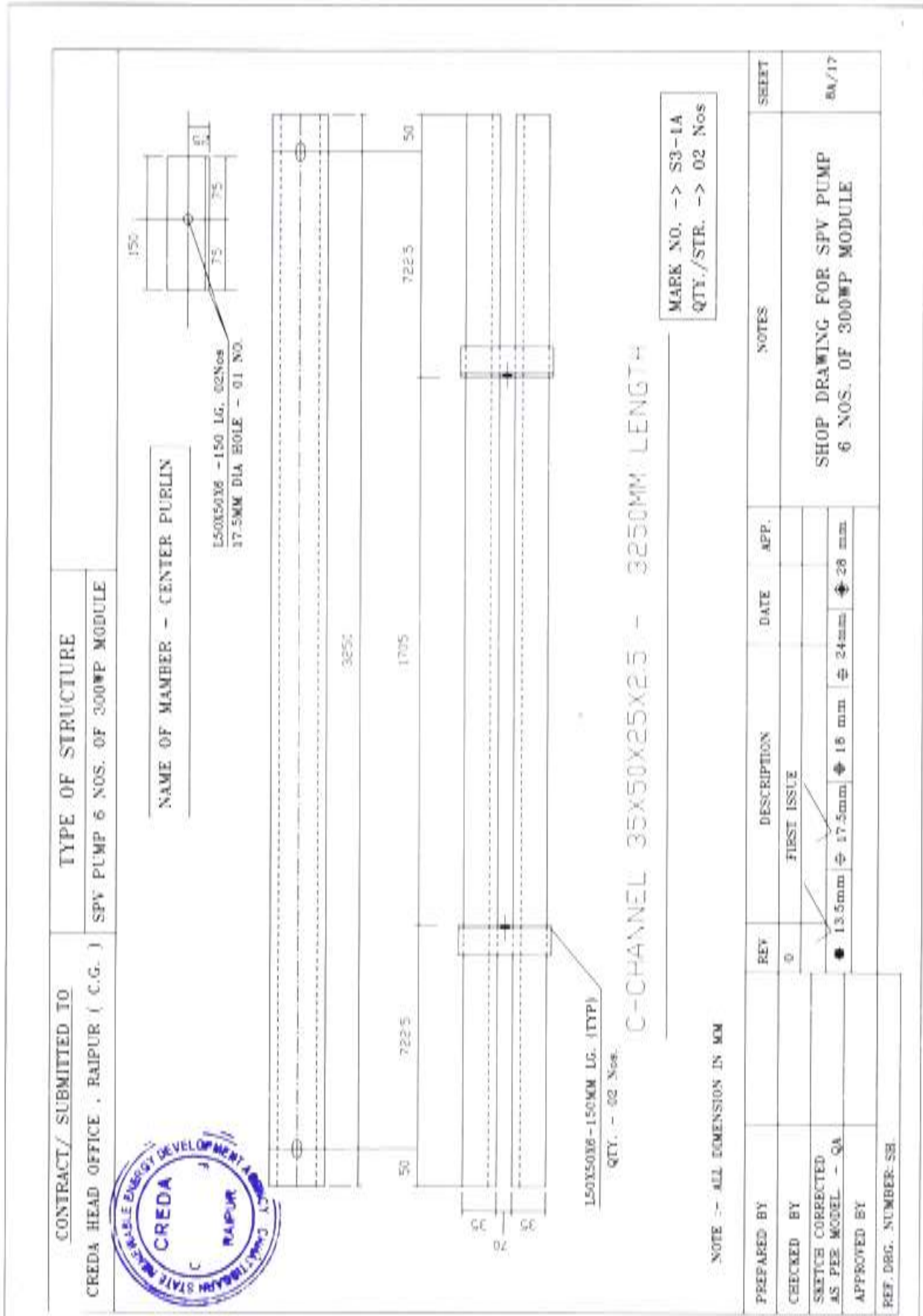


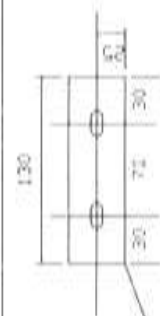
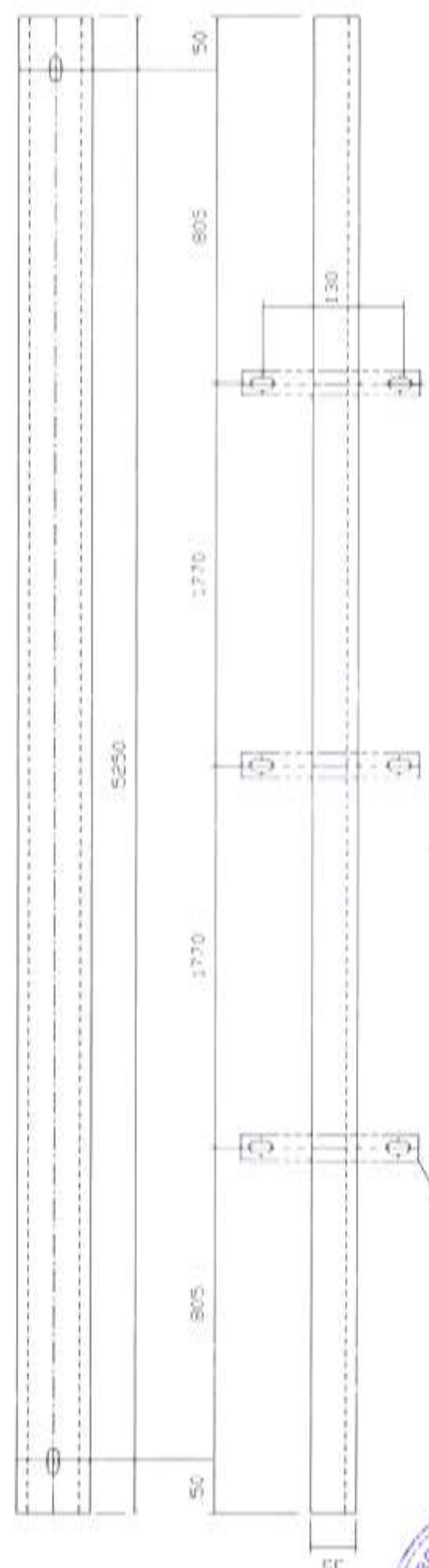
REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
0	FIRST ISSUE				12/17
●	13.5mm ϕ 17.5mm ϕ 18 mm ϕ 24mm ϕ 28 mm				
SKETCH CORRECTED AS PER MODEL - QA APPROVED BY					
SHOP DRAWING FOR SPV PUMP 6 NOS. OF 300WP MODULE					
REF. DRG. NUMBER: SB.					


<p>CONTRACT / SUBMITTED TO CREDA HEAD OFFICE - RAIPUR (C.G.)</p>	<p>TYPE OF STRUCTURE SPV PUMP 6 NOS. OF 300WP MODULE</p>				
		<p>NAME OF MEMBER - MAIN BEAM ASSEMBLY</p>			
<p>SIDE VIEW</p> 	<p>TOP VIEW</p> 				
<p>ANGLE BOX - 1. 50x50x4 (TYP)</p>					
<p>CHANNEL 75X40 - 1600MM LENGTH</p>					
<p>MARK NO. -> S4-1 QTY./STR. -> 01 No</p>					
<p>NOTE :- ALL DIMENSION IN MM</p>					
PREPARED BY	REV	DESCRIPTION	DATE	APP.	SHEET
CHECKED BY	0	FIRST ISSUE			<p>SHOP DRAWING FOR SPV PUMP 6 NOS. OF 300WP MODULE</p> <p>11/17</p>
SKETCH CORRECTED AS PER MODEL - QA		● 13.5mm ± 17.5mm ± 18 mm ± 24mm ± 28 mm			
APPROVED BY					
REF. DOC. NUMBER-SH					

<u>CONTRACT/ SUBMITTED TO</u>	<u>TYPE OF STRUCTURE</u>				
CREDA HEAD OFFICE - RAMPUR (C.G.)	SPV PUMP 6 NOS. OF 300WP MODULE				
<u>NAME OF MEMBER - SIDE LOCKING CHANNEL</u>					
					
<p>C-CHANNEL 40X50X20X2.5 - 2130 MM LG</p> <p>1965 +80+80 - 2130 MM LG</p>					
					
NOTE :- ALL DIMENSION IN MM					
MARK NO. -> S3-3 QTY./STR. -> 04 Nos					
<u>PREPARED BY</u>	<u>REV</u>	<u>DESCRIPTION</u>	<u>DATE</u>	<u>APP</u>	<u>NOTES</u>
	0	FIRST ISSUE			
<u>CHECKED BY</u>					
<u>SKETCH CORRECTED AS PER MODEL - QA</u>					
<u>APPROVED BY</u>					
<u>REF. DRG. NUMBER-SR</u>					
					10/17
SHOP DRAWING FOR SPV PUMP					
6 NOS. OF 300WP MODULE					

<p>CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE, RAIPUR (C.G.)</p>	<p>TYPE OF STRUCTURE SPV PUMP 6 NOS. OF 300WP MODULE</p>					
		<p>NAME OF MEMBER - INNER PERLIN</p>				
						
<p>1576</p>						
<p>SLOTTED BOLTS - 13.5X25MM - 06NOS</p>						
						
<p>62</p>						
<p>1576</p>						
<p>542</p>						
<p>25 288 66</p>						
<p>25 288 25</p>						
<p>MARK NO. -> S3-2 QTY./STR. -> 08 Nos</p>						
<p>NOTE :- ALL DIMENSION IN MM</p>						
<p>L 45X45X5 - - 1700MM LENGTH</p>						
PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY		13.5mm ϕ 17.5mm ϕ 16 mm ϕ 24mm ϕ 28 mm				
REF. DRG. NUMBER: SH					SHOP DRAWING FOR SPV PUMP 6 NOS. OF 300WP MODULE	9/17

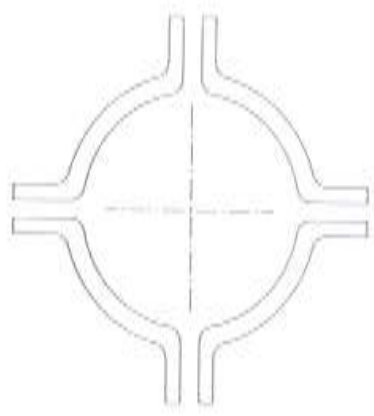


<p>CONTRACT/ SUBMITTED TO</p> <p>CREDA HEAD OFFICE, RAIPUR (C.G.)</p>	<p>TYPE OF STRUCTURE</p> <p>SPV PUMP LONDS. OF 300WP MODULE</p>					
<p>NAME OF MEMBER - OUTER PURLIN</p>						
<p>FLAT 50X16 -130 EG. 03Nos</p>						
<p>C-CHANNEL 35X50X25X2.5 - 5250MM LENGTH</p>		<p>MARK NO. -> S3-I QTY./STR. -> 02 Nos</p>				
<p>NOTE :- ALL DIMENSION IN MM</p>						
<p>PREPARED BY</p>	<p>REV</p>	<p>DESCRIPTION</p>	<p>DATE</p>	<p>APP.</p>	<p>NOTES</p>	<p>SHEET</p>
	0	FIRST ISSUE				8/17
<p>SKETCH CORRECTED AS PER MODEL - QA</p>		<p>● 13.5mm ± 17.5mm ± 18 mm ± 24mm ± 28 mm</p>				
<p>APPROVED BY</p>						
<p>REF. DRG. NUMBER: SEE</p>						

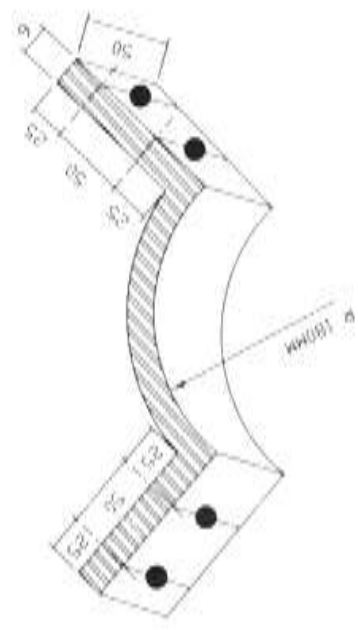


CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE, RAIPUR (C.G.)	TYPE OF STRUCTURE SPV PUMP 10NOS. OF 300WP MODULE
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NAME OF MEMBER - LOWER ' U ' CLAMP



TOP VIEW OF "U" CLAMP



SIDE VIEW OF "U" CLAMP

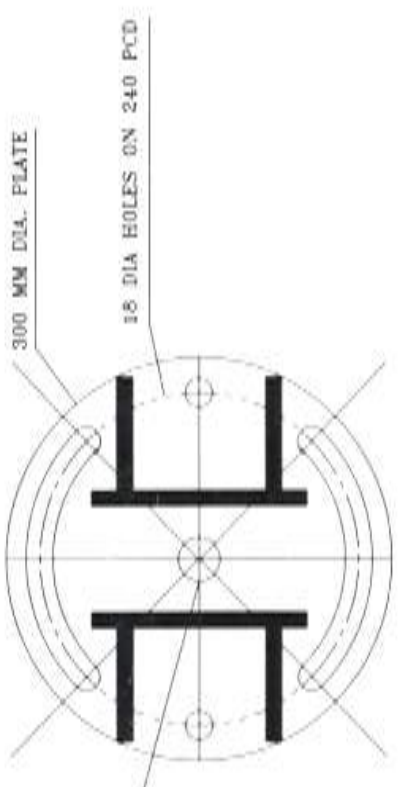
PLATE 6MM THK. - 50 X 310MM LENGTH

MARK NO. -> S2-B
QTY./STR. -> 04 Nos

NOTE :- ALL DIMENSION IN MM



PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY						
REF. DRG. NUMBER: SH						
					SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	7/17

<p>CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE , RAIPUR (C.G.)</p>	<p>TYPE OF STRUCTURE SPV PUMP 6 NOS. OF 300WP MODULE</p>	<p>NAME OF MEMBER - UPPER BASE PLATE</p>	
		<p>MARK NO. -> S2-7 QTY./STR. -> 01 No</p>	
<p>NOTE :- ALL DIMENSION IN MM</p>			
<p>PLATE 10MM THK. - 300 X 300MM LENGTH</p>			
<p>PREPARED BY</p>	<p>REV 0</p>	<p>DESCRIPTION FIRST ISSUE</p>	<p>DATE</p> <p>APP.</p>
<p>CHECKED BY</p>	<p>13.5mm ϕ 17.5mm ϕ 18 mm ϕ 24mm ϕ 28 mm</p>	<p>DATE</p>	<p>NOTES</p>
<p>SKETCH CORRECTED AS PER MODEL. - QA</p>	<p>APPROVED BY</p>	<p>SHOP DRAWING FOR SPV PUMP 6 NOS. OF 300WP MODULE</p>	
<p>REF. DRG. NUMBER: SH</p>			



CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE, RAIPUR (C.G.)	TYPE OF STRUCTURE SPV PUMP 6 NOS. OF 300WP MODULE
--	--

NAME OF MEMBER - UPPER SUPPORT PLATE

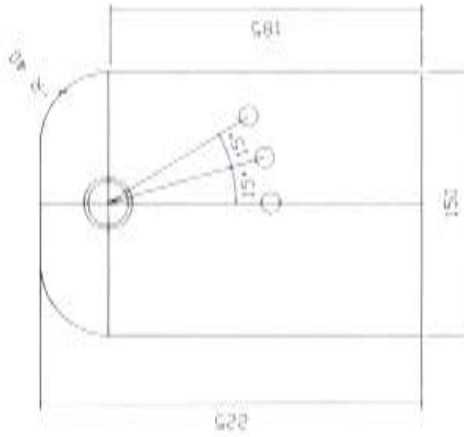


PLATE 10MM THK. - 150 X 225MM LENGTH

MARK NO. -> S2-6
QTY./STR. -> 02 Nos



NOTE :- ALL DIMENSION IN MM

PREPARED BY	DESCRIPTION	DATE	APP.	NOTES	SHEET
0	FIRST ISSUE				
	SKETCH CORRECTED AS PER MODEL. - QA				
	APPROVED BY				
	REF. DRG. NUMBER: SH				
				SHOP DRAWING FOR SPV PUMP 6 NOS. OF 300WP MODULE	5/17

CONTRACT/ SUBMITTED TO	TYPE OF STRUCTURE
CREDA HEAD OFFICE , RAIPUR (C.G.)	SPV PUMP 10NOS. OF 300WP MODULE

NAME OF MEMBER - UPPER BASE PLATE

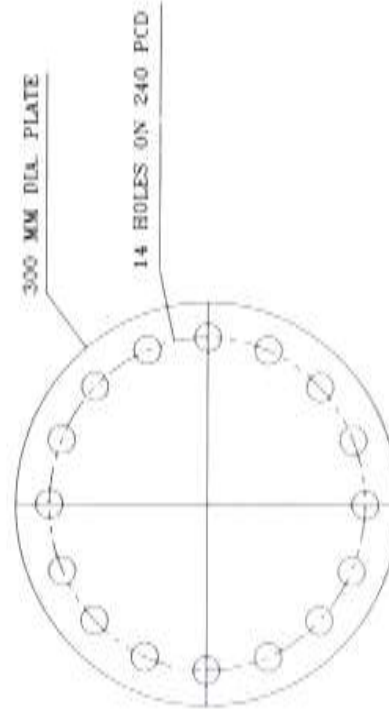
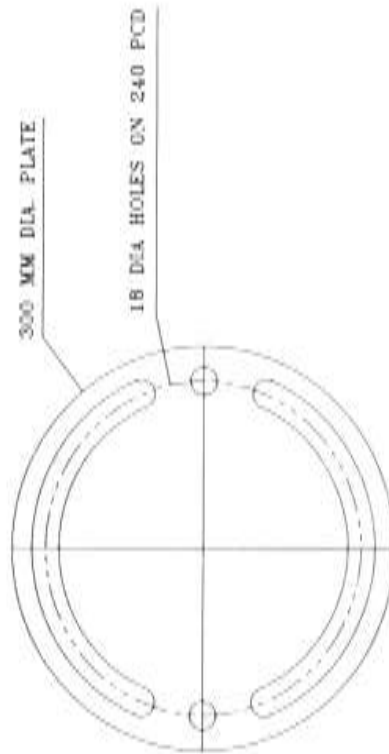



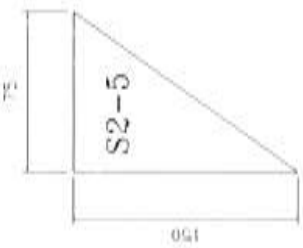
PLATE 10MM THK - 300 X 300MM LENGTH

MARK NO. -> S2-4
QTY./STR. -> 01 No



NOTE: ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY		<ul style="list-style-type: none"> 13.5mm ϕ 17.5mm ϕ 19 mm ϕ 24mm ϕ 28 mm 				
REF. DRG. NUMBER: SH					SHOP DRAWING FOR SPV PUMP 10 NOS. OF 300WP MODULE	4/17

<p>CONTRACT/ SUBMITTED TO: CREDA HEAD OFFICE, RAIPUR (C.G.)</p>	<p>TYPE OF STRUCTURE SPV PUMP 6 NOS. OF 300WP MODULE</p>					
<p>NAME OF MEMBER - STIFFENER PLATES</p>						
<p>LOWER STIFFENER PLATES</p>  <p style="text-align: center; font-weight: bold;">S2-3</p>	<p>UPPER STIFFENER PLATES</p>  <p style="text-align: center; font-weight: bold;">S2-5</p>	<p>MARK NO. -> S2-3 QTY./STR. -> 04 Nos</p> <p>MARK NO. -> S2-5 QTY./STR. -> 08 Nos</p>				
<p>PLATE 8MM THK - 100 X 200MM LENGTH</p>						
<p>PLATE 8MM THK - 75 X 150MM LENGTH</p>						
<p>NOTE :- ALL DIMENSION IN MM</p>						
<p>PREPARED BY</p> <p>CHECKED BY</p> <p>SKETCH CORRECTED AS PER MODEL - QA</p> <p>APPROVED BY</p> <p>REF DRG. NUMBER: SH.</p>	<p>REV</p> <p>0</p> <p>● 13.5mm ± 17.5mm ± 18 mm ± 24mm ± 28 mm</p>	<p>DESCRIPTION</p> <p>FIRST ISSUE</p>	<p>DATE</p>	<p>APP.</p>	<p>NOTES</p> <p>SHOP DRAWING FOR SPV PUMP 6 NOS. OF 300WP MODULE</p>	<p>SHEET</p> <p>3/17</p>

CONTRACT/ SUBMITTED TO CREDA HEAD OFFICE, RAIPUR (C.G.)	TYPE OF STRUCTURE SPV PUMP 6NOS. OF 300WP MODULE
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NAME OF MEMBER - LOWER BASE PLATE

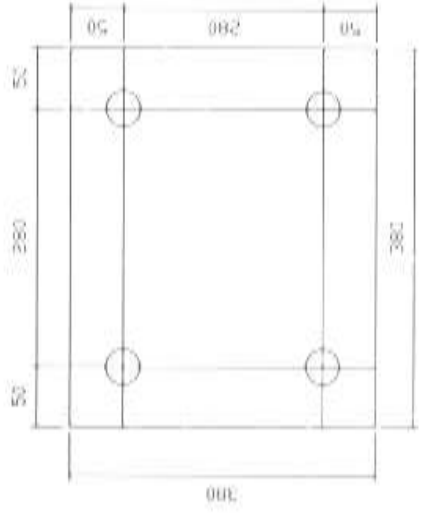


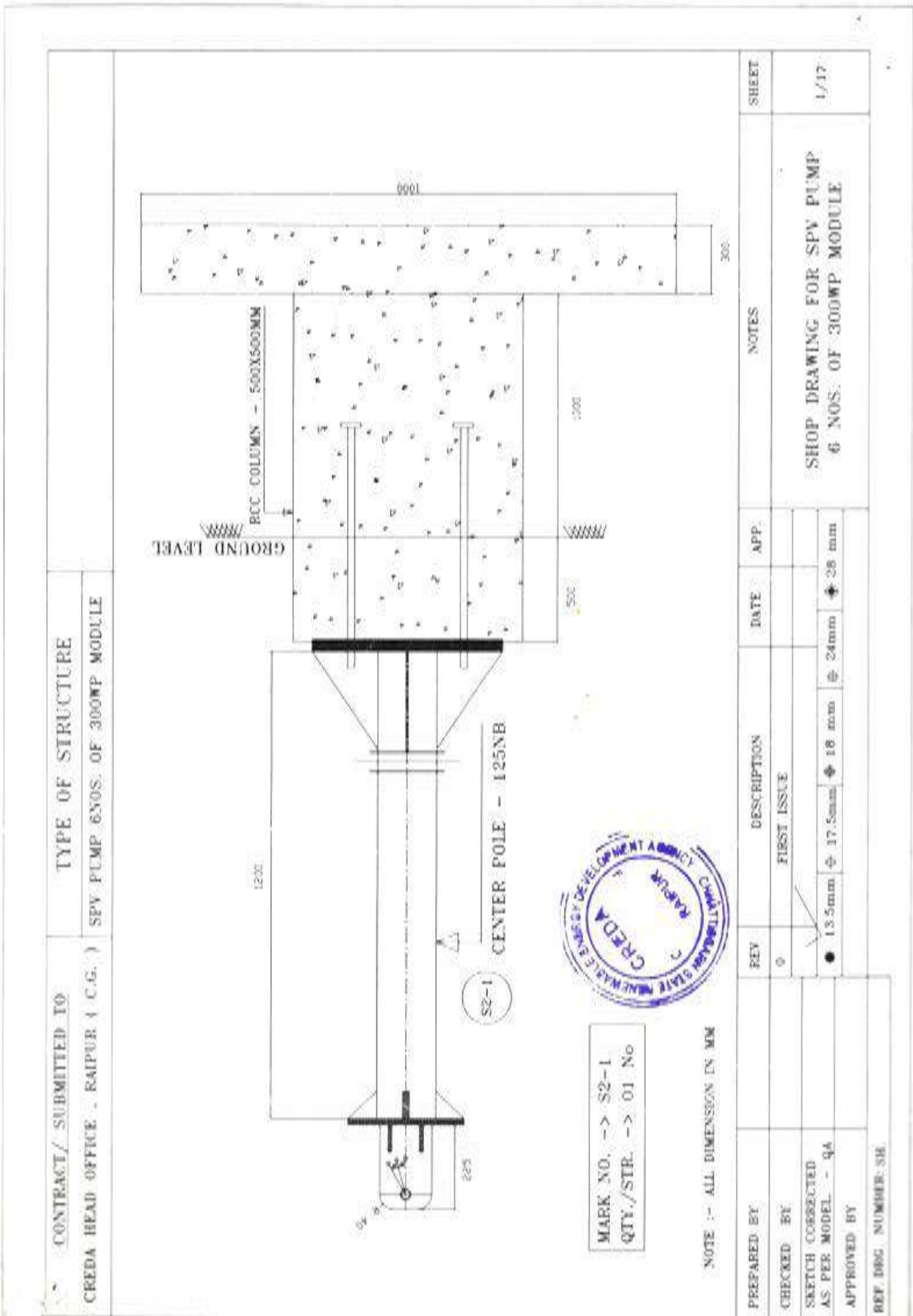
PLATE 12MM THK - 380 X 380MM LENGTH

MARK NO. -> S2-2
QTY./STR. -> 01 No



NOTE :- ALL DIMENSION IN MM

PREPARED BY	REV	DESCRIPTION	DATE	APP.	NOTES	SHEET
CHECKED BY	0	FIRST ISSUE				
SKETCH CORRECTED AS PER MODEL - QA						
APPROVED BY		● 13.5mm ∅ 22mm ∅ 18 mm ∅ 24mm ∅ 28 mm			SHOP DRAWING FOR SPV PUMP 6 NOS. OF 300WP MODULE	2/17
REF. DRG. NUMBER: SH						



ANNEXURE - "B"
Experience Certificate

Ref. No.....

Date.....

Certificate of Completion

This is to certify that **Name of Bidder, Address of Registered Office** has successfully completed the work of design supply, installation & commissioned ofNos. Offgrid SPV Pumps (.....Scheme) against various Sanction of **Name of Agency** at various locations in.....State, as per following details –

Cap. of SPV Pump	Name of Scheme 1	Name of Scheme 2	Total no. of Pump
03HP/ AC Submersible	----	----	----
03HP DC Submersible	----	----	----
03HP AC Surface	----	----	----
05HP AC Submersible	----	----	----
05HP DC Submersible	----	----	----
Total -	----	----	----
Total Order Amount -	----	----	----

This workmanship and performance of the systems are found satisfactory.

Seal & Sign
(Authorised Signatory)

ANNEXURE – “C”

Specifications of Controller/Drive for Solar Water Pumping Systems

Sl. No.	Requirement	Specifications
1.	<i>Controller Power Capacity to drive the Pump</i>	Controller Power Capacity should match to Solar Panels Power Capacity, not Pump Capacity. Example: For 5HP Project, As per MNRE Specs, Panels should be minimum 4800W , Controller capacity also should be minimum 4800W only Operating frequency: 50Hz± 10% .
2.	<i>Point Tracking (MMPT)</i>	Should track power only and not Voltage at Maximum power point
3.	<i>Enclosure</i>	The inverter must have IP54 protection or must be housed in a cabinet having at least IP54 protection.
4.	<i>DC Circuit Breaker Disconnect Switch</i>	Should be between Solar panels and controller
5.	<i>GSM/GPRS</i>	Controller shall be integrated with GSM/GPRS Gateway with Geo tagging. GSM/ GPRS Charges to be included in the Costing till the end of Warranty period of the Pump set
6.	<i>Protections</i>	<ul style="list-style-type: none"> • Dry Run • Open Circuit • Short Circuit • Reverse Polarity • Over Load • Over Temperature • Motor Jam Detection and Automatic Unjam with minimum 1.5 times of rated motor current for at least 30sec.
7.	<i>Display of Controller/Drive</i>	Controller must have LCD Display . All Parameters and Faults/Protections should be clearly indicated on Display such as if controller shutdown with short circuit, it must clearly indicate on display as "Short Circuit" (No short cuts such as F1, F2 or any other indications). Below parameters must be appear on Display ON/OFF Status - <ul style="list-style-type: none"> • Solar DC Voltage in Volts • Solar DC Current in Amps • DC Power in W/KW • DC Energy in Kwh • Output AC Voltage in Volts • Output Currents in Amps (minimum 2-Phases) • Rotating Frequency in Hz • All Faults/Protection Status
8.	<i>Data maintenance</i>	All parameters (as detailed above) from the Controller shall be pushed to Integrators/Bidder's cloud/web server for every 15minutes and the same to be maintained for the entire CMC Period.

ANNEXURE-“D”

Detailed Specifications of BOS

Sl.No.	Components	Specification
1	Surface/Submersible cables	4 sq.mm. 3 core flat ISI mark copper cable
2	Cable for Panel	Wiring with MC4 connector 6/4 sq.mm. copper flexible universal DC cable with MC4 connector.
3	HDPE pipe for Submersible	Pump set- ISI 100% virgin with minimum PE80, DN63, PN6 as per IS 4984 of 1995 for 3HP & PE 80, DN63, PN 6 on the IS 4984 of 1995 for 5HP Pump set.
4	Suction and delivery pipe for surface pump	IS 15265 PVC pipes hoses for suction line for agriculture pumps.
5	Rope wire	Stainless steel 6mm rope wife standard make.
6	EarthingKit-1 and lighting arrestor	Chemical earthing as per IS 3043/IEC 60364-5-54/62561-2 standard make. LA 14 ft. GI pipe with 6sq.mm. Copper cable wire or 30mm GI strip.
7	EarthingKit-2	Chemical earthing with tested compound IEC 6235-3 of standard make.
8	SS theft proof Nut Bolt	SS304 anti theft Nut bolt with washer.
9	MS and SS Nut bolt and washer	MS with SS polish nut bolt and washer for main pole and other are SS nut bolt.
10	Conduit pipe/ black drip pipe	2mm thick PVC conduit pipe ISI make or black drip pipe for covering panel wiring.
11	Cable Tie	UV protected cable tie.
12	Foot Valve, Coupler	ISI/standard make PVC foot valve and standard make clamp.
13	Bend and Union	ISI B Class
14	Clamp, Bore clamp	Bore clamp good quality, standard, B class.
15	Instruction manual	DO & Don'ts, O&M instruction after Installation with SI,DO and CREDA toll free number etc.
16	Sticker	As per CREDA design

Note: Selection of Pump should be as per bore testing and for maximum discharge and pump also support minor irrigation system minimum drip irrigation system positively.

e-Price Bid-I (For supply of Pump)

Schedule of Rates for SPV DC- AC Surface/ Submersible Pumps

(e-bidding As per Specifications & Scope of Work of Tender no. 28100 Dt. 27.02.2019)

Supply of **Solar Photovoltaic Pumps (all types of MNRE Models)** anywhere in the State of Chhattisgarh.

Sl.No.	Particulars	Rates of Solar Pumping System with Solar Module, Solar Pump, Controller, M.M Structure, L.A, Earthing-02 Nos., Rope wire, Cable, PVC Pipes and other required BOS and with five years warrantee, System insurance and COMC Excluding GST (A)
1	1800 Wp SPV Modules & 2 HP DC (Surface Pump)	
2	1800 Wp SPV Modules & 2 HP AC (Surface Pump)	
3	1800 Wp SPV Modules & 2 HP DC (Submersible Pump)	
4	1800 Wp SPV Modules & 2 HP AC (Submersible Pump)	
5	2700 Wp SPV Modules & 3 HP DC (Surface Pump)	
6	2700 Wp SPV Modules & 3 HP AC (Surface Pump)	
7	3000 Wp SPV Modules & 3 HP DC (Submersible Pump)	
8	3000 Wp SPV Modules & 3 HP AC (Submersible Pump)	
9	4800 Wp SPV Modules & 5 HP DC (Submersible Pump)	
10	4800 Wp SPV Modules & 5 HP AC (Submersible Pump)	
11	4800 Wp SPV Modules & 5 HP DC (Surface Pump)	
12	4800 Wp SPV Modules & 5 HP AC (Surface Pump)	

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, 5 years warrantee, insurance and COM as mentioned in the tender document. Above rates applicable for all types of pump models for each category as per MNRE Specifications 2015-16 and Tender Annexure- I,II,III,IV (Page 28-30). GST applicable on (A) @ 5% shall be paid in addition to the above quoted rates. No other cost will be claimed other than above quotes price & the applicable GST.

Signature of the Authorized Signatory:

Seal of Company :

Date :

e- Price Bid-II (Installation, Commissioning & Testing)

Schedule of Rates for SPV DC- AC Surface/ Submersible Pumps

(e-bidding As per Specifications & Scope of Work of Tender no. 28100 Dt. 27.02.2019)

Survey, formulation of proposal, Installation and Commissioning of **Solar Photovoltaic Pumps (all types of MNRE Models)** anywhere in the State of Chhattisgarh.

Sl. No.	Particulars	Rates of Civil work, installation, commissioning and testing Excluding GST (B)
1	1800 Wp SPV Modules & 2 HP DC (Surface Pump)	
2	1800 Wp SPV Modules & 2 HP AC (Surface Pump)	
3	1800 Wp SPV Modules & 2 HP DC (Submersible Pump)	
4	1800 Wp SPV Modules & 2 HP AC (Submersible Pump)	
5	2700 Wp SPV Modules & 3 HP DC (Surface Pump)	
6	2700 Wp SPV Modules & 3 HP AC (Surface Pump)	
7	3000 Wp SPV Modules & 3 HP DC (Submersible Pump)	
8	3000 Wp SPV Modules & 3 HP AC (Submersible Pump)	
9	4800 Wp SPV Modules & 5 HP DC (Submersible Pump)	
10	4800 Wp SPV Modules & 5 HP AC (Submersible Pump)	
11	4800 Wp SPV Modules & 5 HP DC (Surface Pump)	
12	4800 Wp SPV Modules & 5 HP AC (Surface Pump)	

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, insurance and with **5 years** warrantee, insurance and COM as mentioned in the tender document. Above rates applicable for all types of pump models for each category as per MNRE Specifications 2015-16 and Tender Annexure- I, II, III, IV (Page 25-27). GST applicable on (B) @ **18%** shall be paid in addition to the above quoted rates. No other cost will be claimed other than above quotes price & the applicable GST.

Signature of the Authorized Signatory:

Seal of Company :

Date :



ACCESSMENT SHEET

Sl.No.	Name of System Integrator	MNRE Channel Partner	Registered with NABARD Scheme	Registered with CREDA as System Integrator	Pump Test Certificate 1-5HP Submersible and Surface	Net worth (Crore)	Last 3 Years Turnover in SPV Projects (Crores)	Last 3 years Solar Pump Progress		Choice of Area (Choice for Max 3 districts may be given) (District)	SPV Pumps offered for installation (nos.)	Manufacture of Solar Pump component					
								Other State	In C.G			Pump	Solar Module	Structure	VFD		
1	2	3	4	5	6	7	8		9	10	11						
1					2 HP DC Surface												
2					2 HP AC Surface												
3					2 HP DC Submersible												
4					2 HP AC Submersible												
5					3 HP DC Surface												
6					3 HP AC Surface												
7					3 HP DC Submersible												
8					3 HP AC Submersible												
9					5 HP DC Submersible												
10					5 HP AC Submersible												
11					5 HP DC Surface												
12					5 HP AC Surface												

Name of the authorized Signatory :

Signature of the Authorized Signatory :

Seal of Company :

Date :