

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt.of India Undertaking)

High Pressure Boiler Plant, Tiruchirappalli 620 014, India

MAINTENANCE & SERVICES DEPARTMENT)

☎: (0431) 2575380 Fax: (0431) 2521416 CELL:9442631203

e-mail: kpvel@bheltry.co.in



39-300
ISO 9001

PREAMBLE

01. The scope of work includes Fabrication, erection, painting and commissioning of DSL lines at New Plant, New Shipping outer yard and RPS.
02. Time is the essence of the contract. Being a time bound work, the contractor should make all efforts to complete the work in the stipulated period of Four (4) months.
03. Usually, working hours are limited to day time only. In emergency cases to carryout work during nights, it may be done so with the specific prior permission of BHEL. In such case, it is to be carried out in the presence of BHEL officials or their authorized persons.
04. The tenderers are advised to visit BHEL Factory at Tiruchirappalli and get themselves acquainted with the site conditions before submitting the offer.
05. The following eligibility criteria shall be complied to fulfill the qualification bid:-
 - a) Contractor should have separate Registration Code No. for EPF & ESI.
 - b) Average annual turnover of firm in the last three years should be 30% value of the tender value .
 - c) Should have experienced in Fabrication, Erection and Commissioning of DSL Lines or Structural works and should be in this field for the past 3 years.
 - d) Solvency shall be produced for at least 40% of the tender value
06. PAN & ITCC for the past three years.
07. The works executed in the own name of the tenderer only will be considered for eligibility criteria.

CONTRACTOR

1

ACCEPTING OFFICER

08. Documentary evidences (Xerox copies – attested) for turnover, works experience, P.F. ESI registration etc., all as indicated & required in the tender document, Availability of all types of Fabrication & Erection equipment facility, Qualified staffs availability are to be furnished without which it will not be taken into account.
09. Tender value is only approximate and liable for variation without entitling the tenderer to any compensation, till the total value of contract vary by (+ / -) 20% (twenty percentage).
10. Quoted rate shall be firm throughout the contract period of 6 months and extended contract period also and no cost escalation is allowed on any account.
11. The quantity indicated in the Bill of quantity is only tentative. The contractor has to execute any item of work irrespective of the quantity without any reservation till the total value of contract exceeds by 20%.
12. The work shall be carried out as per the scope of work and related drawings.
13. After award of work the contractor has to furnish the security deposit, as per Clause 16 of THE GENERAL INSTRUCTIONS TO TENDERERS. Also it is to be noted that after award of work the contractor has to furnish 50% of security deposit before the commencement of work.
14. The contractor has to carryout the work in production shops without affecting the production by planning such work on holidays/ obtaining proper shut down.
15. The decision of Engineer-in-charge shall be final and binding on the contractor regarding clarification of items in this tender schedule.
16. The contractor shall strictly adhere to various labour laws in force.
17. The contractor shall follow norms of BHEL security system for movement of men & materials within the complex.
18. Since the responsibility for the quality, workmanship and accuracy of any work being carried out under this contract lies with the contractor, the contractor should ensure that no work is done without the presence of contractor's representative at the work spot.
19. The contractor has to submit the organization chart of their set up for the works and any change thereafter in the organization set up shall have the prior approval of BHEL.

20. The contractor should establish his own site office, handling facility, storage facility to stock installation materials, tools, machines etc., for which sufficient place will be allotted on specific request for which the rent will not be collected.
21. The tenderer has to deploy adequate labour of required categories such as, Fitters, Welders, Riggers, Electricians with B certificate, and Unskilled labours for field work. The technical persons with experience shall have to produce valid certificate for verification.
22. Separate non-technical persons should be engaged for arranging daily gate passes for labours entry in the gates of Factory complex.
23. The tenderer shall carryout health performance test at his cost for all the workmen engaged in the work through a registered medical practitioner and produce certificate on demand.
24. It shall be the responsibility of the contractor to see the workmen do not utilize the departmental canteen facilities. Contractor has to make his own arrangement to provide refreshment for the workmen.
25. All the works shall be executed as per the standard specifications as provided in Bill of quantities.
26. The contractor should maintain proper accounts for all mechanical/fitting accessories, other materials if any supplied by this organization and supply by the contractor and these should be available at the site of work for verification and check by the officials of this organization at any time.
27. All materials brought by the Contractor for incorporation in the work shall be got inspected and approved by the Engineer-in –charge before they are incorporated in the work.
28. The contractor should use only the materials of brand and quality as approved by BHEL.
29. The contractor should submit the programme for the completion of work and the list of equipments and laborers to be deployed for the work along with tender.

30. All materials and consumables brought by the contractor should have manufacturer's certificate.
31. Contractor's materials and tools & equipments shall have to be brought inside factory with proper invoice/voucher and make necessary entry in the security gate. They should maintain proper record for tools equipments, materials etc. brought inside the factory complex.
32. The contractor should extend fullest co-operation with the third party agencies engaged, if any by BHEL to adhere the Quality Control Procedures ensuring quality.
33. The contractor should extend fullest co-operation to the other contractors who may be doing other works in the same areas to enable them to execute their portions of work without any delay or difficulty.
34. Water, Electricity and compressed air will be provided by this organization at one point at the site of work at free of cost.
35. No advance / mobilization advance will be given.
36. Completion time and LD/Penalty clause are applicable as per General conditions of contract and enclosed annexure- I along with the general instructions to tenderers.
37. All the terms and conditions in the documents are binding on the tenderers and BHEL reserves its right to accept/ reject any or all the tenders and to award the work in full or parts to more than one agency without assigning any reasons.

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

High Pressure Boiler Plant, Tiruchirappalli 620 014, India

MAINTENANCE & SERVICES DEPARTMENT)

☎: (0431) 2575380 Fax: (0431) 2521416

e-mail: kpvel@bheltry.co.in



39-300
ISO 9001

BHE: M&S:MECH.CONT. PLNG: 01

Date:08.11.2008

Sub: Fabrication, Erection and Commissioning of DSL line at
New Plant, New Shipping outer yard and RPS.

Ref: Enquiry No. 9240800139 Dated 08.11.2008.

** **

Tender of the following work should be submitted in a sealed cover consisting of three inner sealed covers such as 1) EMD cover, ii) Qualification and technical bid cover & iii) Price bid cover, all super scribing the name of work, enquiry number etc.

- 1) EMD cover shall contain requisite EMD in the form of DD. Tenderers who had already remitted one time EMD should furnish the details of cash receipt No. date, on the top of EMD cover. Tender without EMD / one time EMD reference will be summarily rejected and the qualification bid & price bid shall not be considered.
- 2) Qualification bid cover shall contain duly filled in qualification bid document signed by the tenderer in all the pages with documentary evidences for pre-qualification such as experience, value of work executed in the similar nature of work etc. Any bid without proper documentary evidence for pre-qualification shall not be considered for further evaluation
- 3) Technical bid; One set of **un priced bid** of Contract Work Schedule duly signed by the tenderer for accepting the work content (BOM) should be submitted along with the qualification bid for technical evaluation

Regd. Office: BHEL House, Siri Fort, New Delhi - 110 049

CONTRACTOR

5

ACCEPTING OFFICER

- 4) The price bid cover shall contain price bid document duly filled in and signed by the tenderer in all the pages. The tenderer has to quote most competitive rates for all the items given in the Bill of Quantities in price bid. The completed qualification bid and price bid along with requisite EMD of Rs.60,000 /- for this work in the form of Demand Draft in favour of BHEL shall reach the office of the undersigned on or before 19.01.2009 at 14.30 Hrs. Tenderers who had already remitted one time EMD should furnish the details of cash receipt no..... date..... on the top of EMD cover. EMD in any other form will not be accepted. The qualification bid will be opened on the same day at 15.00 hrs. In case of opening day falls on holiday or happened to be declared as a holiday the receipt and opening of the tender shall automatically fall on the same timing of the next working day. Date and time of opening of the Price Bid shall be intimated only to the bidders those who have qualified after evaluation of the qualification bid. You / Your authorized representative may participate in the tender opening.

Clarification if any, can be obtained from the undersigned.

Kindly acknowledge the receipt of the entire set of tender document.

Thanking you,

Yours faithfully,
For Bharat Heavy Electricals Limited,

Encl:

- 1) General Instruction to tenderers
- 2) Price bid (BOM)

Deputy General Manager
Planning & Contracts
Maintenance & Services

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

High Pressure Boiler Plant, Tiruchirappalli 620 014, India

MAINTENANCE & SERVICES DEPARTMENT)

☎: (0431) 2575380 Fax: (0431) 2521416

e-mail: kpvel@bheltry.co.in



39-300
ISO 9001

NOTICE INVITING TENDER

01.	Name of work	Fabrication, Erection and Commissioning of DSL line at New Plant, New Shipping outer yard and RPS.
02.	Estimated Cost	Rs. 29.90 Lakhs.
03.	Earnest Money Deposit	Rs. 0.60 Lakhs.
04.	Completion Time	FOUR (4) MONTHS (From the date of commencement of the work which will be reckoned from the date handing over the site to the contractor)
05.	Last Date for Receipt of Tenders	14.30 Hrs on 19.01.2009
06.	Date of Qualification & Technical Bid Opening	15.00 Hrs on 19.01.2009
07.	Date of Price Bid Opening	Will be intimated to those who are qualified separately.
08.	Guarantee Period	12 (Twelve) Months from the date of actual completion of the entire work and handed over to Bharat Heavy Electricals Limited.

The Tender documents can be down loaded from BHEL website / govt. website at free of cost.

Tender document contains 16 Pages in qualification Bid and 24 pages in Price Bid including Bill of Quantities. Drawing etc.

ISSUING OFFICER

CONTRACTOR

7

ACCEPTING OFFICER



244-84

**BHARAT HEAVY ELECTRICALS LIMITED
HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI – 620 014
TAMILNADU / INDIA**

**M & S CONTRACTS (Mechanical)
GENERAL INSTRUCTIONS TO TENDERERS**

01. Sealed Tenders enclosed for the work are hereby invited from valid and experienced contractors. In similar kind of work.
02. Tenders should be addressed to the DGM / M&S. Bharat Heavy Electricals Limited. Tiruchirapalli- 620 014 the full name and address of the Tenderer and the name of the work being noted on the cover with tender No & due date of opening.
03. All entries in the tender documents should be made in one ink. Erasure and overwriting are not permitted. All cancellations and insertions should be duly signed by the Tenderer concerned.
04. Tenderers should fill in all the required particulars in the blank spaces provided for this purpose in the tender documents also sign each and every page of the tender document including the drawing attached there to while submitting their tender.
05. Unit rates should be quoted in figures as well as in words with reference to each item and for all the items shown in the attached schedule. These rates shall be for the furnished work in site. Amount of each item and the totals page by page as also the grand total amount of the whole contract should also be filled in by the Tenderers.
06. Rates for each item of the tender schedule should be quoted in Rupees and paise only, In case any difference in rates quoted to figures and in words, the lower of the rates will be taken as the tendered rate.
07. Quantities shown in the attached schedule are only approximate and are liable to variation without ending the contract to any compensation, provided the total value of the contract does not vary by more than 20% (Twenty percent)
08. In quoting their rates the tenderers are advised to take into account all factors including any fluctuations in market rates etc. No claim will be entertained on this account after acceptance of the tender or during the currency of the contract.
09. Before tendering, the tenderers are advised to inspect the site of work and its environments and be well acquainted with the actual working and other relevant conditions, position of materials and labour. , General Instructions to Tenderers, Drawings and specifications and all other documents which form part of the agreement to be entered into.

CONTRACTOR

8

ACCEPTING OFFICER

TENDERERS ARE REQUESTED TO COVER THEIR EMPLOYEE UNDER PF/ESI/CONTRACT LABOUR REGULATIONS ACT:

10. Rates quoted shall include all royalties, terminal taxes, Octroi duties, General or provincial Excise tax, Sales Tax and any other taxes livable under the state or Central Government Rules. The Bharat Heavy Electricals Limited, Tiruchirapalli will not entertain any claim what so ever in this respect.
11. Quoted rate shall be firm throughout the contract period of 6 months and extended contract period also and no cost escalation is allowed on any account.
12. Should a tenderer find discrepancies or omissions in the drawings or any of the tender documents should be in doubts as to their meaning, he should at once address the authority inviting the tender for clarifications. Every endeavor is made to avoid any error which can materially affect the basis of the tender but the successful tenderer shall taken upon himself to provide for the risk or any error which may be subsequently discovered and shall make no subsequent claim on account thereof.
13. In the event of tender being submitted by the firm, the tender must be signed separately and legibly by each partner or member of the firm or in their absence, by the person holding the power of attorney on behalf of the firm concerned. In the latter case, a copy of the power of attorney duly attested by a Gazetted Officer must accompany the tender.
14. Every tender must be accompanied by Demand Draft for the amount mentioned in this tender notice as Earnest Money Deposit, pledged to BHEL, Tiruvermbur in any of the forms mentioned in para 15 of the General Instructions to tenderers. This Earnest Money Deposit will be refunded to the unsuccessful tenderers within 15 days on finalizations of the award of work. In the case of successful tender, the earnest Money Deposit will be retained as part of the Security Deposits for satisfactory completion of the work in accordance with clause 16 of the General Conditions of contract as amended up to date.

Note : “Cheque, Currency Notes or Money Order will not be accepted in lieu of the Demand Draft referred to above”.

15. EARNEST MONEY DEPOSIT:

The Earnest Money Deposit shall be furnished in the form of Demand Draft only. EMD shall not carry any interest.

16. SECURITY DEPOSIT:

1. The amount of security Money to be deposited for proper fulfillment of the contract will be as follows:

- | | |
|--|---|
| a. For Contract Valued up to
Rs. 10.00 Lakh. | 10% of the Contract value |
| b. For Contract Valued above
Rs. 10.00 Lakh upto
Rs. 50.00 Lakhs | 1 lakh plus 7.5% on the balance of
the Contract value. |
| c. For Contracts valued above
Rs. 50.00 Lakhs | Rs.4 lakhs + Plus 5% on the
balance of the contract value. |

2. The contractor whose tender may be accepted shall, within seven days of receipt by him of the notification of acceptance of his tender, deposit with BHEL, Unit: Tiruverumbur, the prescribed sum as per Clause 16 (i) above towards Security Deposit.

- a. Shall be furnished in the form of Demand Draft in favour of BHEL.
- b. Securities available from Post offices such as National Savings Certificates, Kisan Vikas Patra etc. (Certificates should be held in the name of the contractor furnishing the security and duly pledged in favour of BHEL, Trichy and discharged on the back).
- c. Bank Guarantee from Nationalized, scheduled Banks / Public Financial Institutions as defined in the Companies Act subject to a maximum of 50% of the total security deposit value. The balance 50% has to be remitted either by cash or in the other form of security. The bank guarantee format should have the approval of BHEL.
- d. Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act . The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.
- e. Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit will be collected before start of the work and the balance 50% may be recovered from the running bills.
- f. EMD of the successful tenderer shall be converted and adjusted against the security deposit.

NO INTEREST SHALL BE ALLOWED ON SECURITY DEPOSITS. BHEL, shall not be responsible for any loss of securities due to liquidation or any other reason whatsoever or any depreciation in the value of the Securities while in their charge or for any loss of interest thereon.

NOTE: Acceptance of Security Deposit against Sl. No. (iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

3. All compensation or other sums of money payable by the contractor to BHEL under the terms of this contract or under any other contract with BHEL, may be deducted from the Security Deposit or realized by the sale of the securities or from the interest arising there from or from any sums which may be due or may become due to the contractor payable by BHEL, on any account whatsoever against this contract or any other contract with BHEL and in the event of his Security Deposit being reduced by reason of such deductions or sale as aforesaid, the Contractor shall within seven days thereafter make good in cash or in securities endorsed as aforesaid, any sum or sums by which the security Deposit has been so reduced.
4. Security Deposit may be refunded on completion of the work and after the expiry of the maintenance period. In case no maintenance period is applicable, then 100% of security Deposit will be refunded after payment of final prescribed format.
17. Unless the Contractor, whose tender is accepted, signs the contract agreement within seven days (7 days) of the date of the order directing him to do so, the amount of Earnest Money Deposit already deposited by him will be forfeited and acceptance of the tender withdrawn.
18. If after opening of tenders, a tenderer revokes his tender or increases his earlier quoted rates or after acceptance of his tender does not commence the work in accordance with the instructions of the Engineering-In-Charge, the Earnest Money Deposited by him will be forfeited and acceptance of his tender withdrawn. In only, a part of the work included in the tender withdrawn. In only, a part of the work included in the tender has been awarded to the tenderer and the tenderer refuses to take up the work the amount of Earnest Money to be forfeited will be based on the value of the contract so awarded.
19. The BHARAT HEAVY ELECTRICALS LIMITED, reserve the right to reject any or all the tenders received or accept any tender or part thereof without assigning any reason therefore. In the case of acceptance of the part of tender, time for completion may also be reduced to the extent considered appropriate by the accepting officer.
20. Tenders not submitted on the prescribed forms are liable to be rejected.

21. The Contractors not borne on the approved list of contractors of this organization must submit the following documents simultaneously with their super scribed .
Testimonials of Shri Messer's

In connection with tender, for the work of _____

1. A certificate to establish that the tender is an independent contractor working on his won.
2. At least 2 certificates from responsible officers of Govt. or firms of repute. Regarding the tenderer's capacity to undertake and carryout the work tendered for or similar work satisfactorily.
3. A certificate from a Bank of Standing of Magistrate regarding the tenderer's financial position.
4. License details of the firm and that of the contractor & his employees.

NOTE: a.) Copies of testimonials unless attested by a Gazetted Officer will be accepted.
b.) Non-submission of the above documents simultaneously with the tenders may result in the tender being rejected.

22. The tenders should be accompanied by a list of contracts already held by the contractor at time of submission of the tender and giving the following particulars:
a) The value of each contract.
b) The balance of work remaining to be done on the same.

23. Tenders submitted by Post should be sent by "Registered Post with Acknowledgement Due". These should be posted with due allowance for any delay in postal delivery. Tenders received after the due date of opening of tenders are liable to be rejected.

24. The Contractor's responsibility under this contract shall commence from the date of work order.

25. If a tenderer expires after the submission of his tender or after the acceptance of his tender, the BHEL may at their discretion cancel such tender.

26. The BHARAT HEAVY ELECTRICALS LIMITED, will not be bound by any power of attorney granted by the tenderer or by changes in the composition of the firm. We made subsequent to the execution of the contract. They may, however, recognize such power of attorney and changed after obtaining proper legal advice, the cost of which will be charge above to the contractor concerned.
27. If the tenderer deliberately gives wrong information in his tender BHEL, reserve the right to reject tender at any stage.
28. Words imparting the singular number shall also be deemed to include the plural number and vice the context so required.
29. The general and Special Conditions of Contract are complementary to each other and where they are in conflict, the special conditions shall prevail.
30. The expenses for completing and stamping the agreement shall be paid by the contractor.
31. Tenderers shall not increase their quoted rates, in case the BHEL, negotiable for reduction of rates. Such negotiations shall not amount to cancellation or withdrawal of the original offer and the rates originally quoted shall be binding on the tenders for the period of three months from the date of opening of tenders.
32. All contractors will have to produce PAN/income tax clearance certificate from the Income Tax concerned along with their tender. These contractors whose Income is not taxable will be required to give affidavit for their income on the prescribed form. If the successful tenderer fails to produce the PAN/income tax clearance certificate within the stated period, the earnest money deposit and the Security Deposit of the tenderer may be forfeited and the contract terminated.
33. The contractor shall insure the work against loss or damage to the contractor works, temporary work and materials erected in performance of the contract on “all risks” basis from the time of arrival on site until taken over by BHEL on completion of the contract.

The cover shall also include wherever necessary the risks of testing including breakdown or explosion of plant and machinery undergoing testing, trial and commissioning operations. The insurance shall also specifically cover removal of debris cost. The Sum insured shall represent the estimated full value of the contract works inclusive of value of free supply materials by BHEL, transport charges, customs dues, express freight, overtime charges, cost of erection, value of constructional plants and machinery, removal of debris and escalation of costs where the contract includes a maintenance period. The insurance cover shall specifically include the contractor liabilities during the maintenance period. The insurance shall be effected in the name of BHEL and the contractor shall submit to BHEL a draft of the insurance policy for approval. The insurance shall also be extended to cover third party personal injury and property damage for a sum to be specified by BHEL. The policy when issued will be lodged with BHEL together with receipts of premium for such insurance and the contractor shall maintain such policies in force until the obligations of the contractor are fully discharged.

If the contractor fails to comply with the term of this conditions the Accepting Officer may insure the work and may deduct the amount of premium from any money that may become payable to the contractor or may at his discretion refuse payment of any advances to the contractor until the contractor shall have complied with the terms of this condition. This provision does not, however absolve the contractor of his responsibility for taking up the insurances. The contractor is therefore, primarily responsible for taking up the insurance in time.

34. All the materials supplied by the contractor should conform to the relevant IS/BS Specifications and agreeable to the engineer-in-charge.

35. Any covering letter and comments of the contractor should be submitted in duplicate along with the offer.

36. For all sheet metal fabrication, pre-treatment of all metals with acid and rust preventing chemical has to be carried out and two coats of red oxide and one coat of stove enamelling paint has to be applied by spray painting.

37. Contractor should have separate Registration Code No. for EPF & ESI.

38. SAFETY MEASURES:

list containing the name of persons who are working, their age, designations, pay, nature of work is to be furnished immediately on receipt of work order, in triplicate.

- a. The work should be carried out in the presence of contractors Supervisor and prior permission should be obtained from the concerned supervisor and the section before starting the work.
- b. While erecting the,cranes, poles,etc. proper safety precautions such as supporting the poles, tying with ropes suitable lifting tackles etc. are to be adhered.
- c. While working at heights, proper platform ladder, safety belts, etc. should be used.
- d. The necessary safety equipments such as gloves, lineman's belts etc. should be used.
- e. Any other safety measure as necessitated by the nature of work should be strictly followed
- f. If Contractor's workmen are found to violate the safety regulations punitive action will be taken by with-holding a sum of Rs. 100/- to Rs. 500/- for each such violation.
- g. These safety measures shall be deemed to form an integral part of the work order/agreement.

05 THE GENERAL INSTRUCTIONS TO TENDERERS shall be deemed to form an integral part of the work to be entered into.

General instructions to Tenderers-(Annexure- I)

1.TIME:

Time is the essence of the contract and is specified in the tender document or in each individual work order.

As soon as possible after the contract is let or any substantial Work Order is placed and before work under it is begun, the Engineer –in-charge and the contractor shall agree to a Time and Progress Chart. The Chart shall be prepared in direct relation to the time stated in the Tender documents or the work order for the completion of the individual items thereof and/or the contract or Order as a whole. It shall indicate the forecast of the dates for the commencement of the various trade processes or sequences of the work, and shall be amended as may be required by agreement between the Engineer-in-charge and the Contractor within the limitation of the time imposed in the tender documents or order.

In the absence of any specific Time and Progress Chart to be agreed to between the Contractor and the Engineer –in – charge, the contractor shall ensure and maintain uninterrupted progress of the work such that the entire work shall be completed within the time imposed in the tender documents or Order and that the proportion of work completed upto any time in relation to the entire work to be done under the Contract or Order shall not be less than the proportion that the time elapsed bears to the total time of completion provided in the Tender documents or Order.

The Contractor shall suspend the execution of the work, or any part or parts thereof whenever called upon in writing by the Engineer-in-charge to do so, and shall not resume work thereon until so directed in writing by the Engineer-in-charge. The Contractor will be allowed on extension of time for completion not less than the period of suspension but no other claim in this respect for compensation or otherwise howsoever will be admitted. This may also be extended to allow for alteration of work made by the deviation order.

2. COMPLETION

The works shall be completed to the entire satisfactions of the Engineer-in-charge and in accordance with the Contractor's forecast of Time and Progress where operative, and all unused stores and materials, tools, plant, equipment, temporary Buildings, and things shall be removed and the site and work cleared or rubbish and all waste materials and delivered up clean and tidy to the satisfaction of the Engineer-in-charge at the Contractor's expense on/or before the Schedule date of completion.

The BHEL shall have power to take over from the Contractor from time to time such sections of the work as have been completed to the satisfaction of the Engineer-in-charge.

The Engineer-in-charge shall certify to the Contractor the date on which the work is completed and the state thereof.

The Engineer-in-charge shall also certify to the Contractor the state of the work at the end of the maintenance period, where applicable.

The Engineer-in-charge shall also certify to the Contractor the state of the work at the end of the maintenance period, where applicable.

3.COMPENSATION FOR DELAY

If the contractor fails to maintain the required progress in terms of condition 1(TIME) or to complete the work and clear the site on or before the contracted or extended date period of completion, he shall, without prejudice to any other right or remedy of the BHEL on account of such breach, pay as agreed compensation an amount calculated as stipulated below or such smaller amount as may be fixed by the BHEL on the contract value of the work for every week that the progress remains below that specified in condition 1(TIME) or that the work remains incomplete.

This will also apply to items or groups of items for which separate period of completion has been specified. For this purpose the term 'Contract Value' shall be the value at contract rates of the work as ordered.

- a) Completion period (as originally – @ 1 Percent per week.
Stipulated) not exceeding 6 months.
- b) Completion period (as originally- @ ½ percent per week.
Stipulated) exceeding 6 months and
Not exceeding 2 years.
- c) Completion period (as originally- @ ¼ percent per week
Stipulated) exceeding 2 years.

Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed the under noted percentage of the contract value or of the contract value of the item or group of items of work for which a separate period of completion is given:

- d) Completion period (as originally – @ 10 Percent.
Stipulated) not exceeding 6 months.
- e) Completion period (as originally- @ 7½ percent.
Stipulated) exceeding 6 months and
Not exceeding 2 years.
- f) Completion period (as originally- @ 5 percent
Stipulated) exceeding 2 years.

The amount of compensation may be adjusted or set-off against any sum payable to the contractor under this or any other contract with the BHEL.

ENQUIRY NO: 9240800139

I. Fabrication, erection, painting and commissioning of DSL line for outer yard gantry cranes at RPS.

SL.NO.	ITEMS	UOM	QTY	UNIT RATE in Rs.	VALUE in Rs.
10	Fabrication, erection, painting and commissioning of DSL line for outer yard gantry cranes at RPS. (Drg.No: 2M02G0004716)	MT	83.27		
20	DSL trolley (Drg.No: 1M02E0809)	NOs.	2		
	Total value in Rs.				

SCOPE:

Fabrication of DSL as per the following layout drawings:

- 1.DSL layout for New Plant-----2M02G0004716 ---- 83.27 MT
- 2.DSL trolley -----1M02E0809 ----- 2nos.

Note:

The gross weight of the DSL layouts (500m length) is 83.27 MT(approx)

For the above layouts the part drawings are:

- 1.DSL POST -----2M02G004697
- 2.DSL POST (ROAD SIDE)-----2M02G004698
- 3.DSL POST (10M ROAD CROSSING)-----2M02G004699
- 4.DSL BRIDGE (20M ROAD CROSSING) ----2M02G004715
- 5.FRAME -----2M02E1513
- 6.WHEEL ASSY.-----3M02G094857
- 7.TOP ROLLER ASSEMBLY-----4M02G0912889
- 8.LADDER -----3M02G0013606

1. After fabrication one coat red oxide primer shall be painted and after erection two coats of synthetic enamel paint of ash gray color shall be applied on all the DSL structures except the four full length 50x50x6 mm inverted 'V' shape DSL line angles.
2. At the bottom surface of line angles RED, YELLOW, BLUE & GREEN (top one is RED) color paint shall be applied. On top surface no paint including primer shall be applied.

3. All the posts shall be erected on the foundation made for this purpose.
4. All the weld joints top surface in item 7 shall be smoothly grouted for easy movement of current collector.
5. Also all the weld joints in top and bottom guide tails shall be grinded for easy movement of wheels and rollers.
6. DSL trolley is to be provided in between the top and bottom guide rails for each crane.
7. After completion of work trial run of the DSL trolley has to be done throughout the DSL line without derailment between its top and bottom guide rails.

BHEL scope:

1. BHEL shall supply / Carry out the following at free of cost for fabrication and erection of DSL line
 - a. Steel raw material for fabrication of DSL post /bridge / DSL angle /trolley etc.
 - b. Power (electricity), all fasteners, Insulators and lead washers.
 - c. DSL trolley's top and bottom roller assemblies (Wheel Assy. & Top roller assembly)
 - c. Civil foundation with bolts grouted.

Contractor Scope:

- a. All the consumables like Paints, Brushes, oxygen, acetylene gases welding electrode etc.
- b. Suitable welding machine so as to use Electrode E-7018 and cutting set with accessories.
- c. All hand tools and tackles for the fabrication and assembly.
- d. Suitable mobile crane for fabrication /erection.
- e. Fabrication /erection transportation.
- f. All laborers for the entire work.

Delivery:

The contractor has to complete the entire work within 120 days from the date of order.

Terms and conditions:

1. The fabrication and erection work shall be carried out inside BHEL Complex at RPS.
2. According to the site condition location of road crossing and width of road may vary. For this, separate drawings shall be issued later. The contractor shall also carry out this modified road crossing members and posts.
3. Payment will be made for the actual fabrication and erection weight only.
4. All safety precautions should be strictly followed.
5. The contractor should maintain attendance register. All the welding shall be carried out by using E-7018 electrodes only.

ii. Fabrication, erection, painting and commissioning of DSL line for outer yard gantry cranes at New Shipping outer yard.

SL.NO.	ITEMS	UOM	QTY	UNIT RATE in Rs.	VALUE in Rs.
10	Fabrication, erection, painting and commissioning of DSL line for outer yard gantry cranes at New Shipping outer yard. (Drg.No: 2M02G0004712)	MT	118.60		
20	DSL trolley (Drg.No: 1M02E0809)	NOs.	2		
	Total value in Rs.				

SCOPE:

Fabrication of DSL as per the following layout drawings:

- 1.DSL layout for New Plant-----2M02G0004712 ----118.60.MT
- 2.DSL trolley -----1M02E0809 ----- 2nos.

Note:

Two DSL layouts one of 370m length and another of 235m length and 10 nos. ladders are included in the gross weight of 118.60 MT.

For the above layouts the part drawings are:

- 1.DSL POST -----2M02G004697
- 2.DSL POST (ROAD SIDE)-----2M02G004698
- 3.DSL POST (10M ROAD CROSSING)-----2M02G004699
- 4.FRAME -----2M02E1513
- 5.WHEEL ASSY.-----3M02G094857
- 6.TOP ROLLER ASSEMBLY-----4M02G0912889
- 7.LADDER (10 nos.)-----3M02G0013606

- 1 After fabrication one coat red oxide primer shall be painted and after erection two coats of synthetic enamel paint of ash gray color shall be applied on all the DSL structures except the four full length 50x50x6 mm inverted 'V' shape DSL line angles.
- 2 At the bottom surface of line angles RED, YELLOW, BLUE & GREEN (top one is RED) color paint shall be applied. On top surface no paint including primer shall be applied.
- 3 All the posts shall be erected on the foundation made for this purpose.

- 4 All the weld joints top surface in item 7 shall be smoothly grouted for easy movement of current collector.
- 5 Also all the weld joints in top and bottom guide tails shall be grinded for easy movement of wheels and rollers.
- 6 DSL trolley is to be provided in between the top and bottom guide rails for each crane.
- 7 After completion of work trial run of the DSL trolley has to be done throughout the DSL line without derailment between its top and bottom guide rails.

BHEL scope:

1. BHEL shall supply / Carry out the following at free of cost for fabrication and erection of DSL line
2. Steel raw material for fabrication of DSL post /bridge / DSL angle /trolley etc.
3. Power (electricity), all fasteners, Insulators and lead washers.
4. DSL trolley's top and bottom roller assemblies (Wheel Assy. & Top roller assembly)
5. Civil foundation with bolts grouted.

Contractor Scope:

- a. All the consumables like Paints, Brushes, oxygen, acetylene gases welding electrode etc.
- b. Suitable welding machine so as to use Electrode E-7018 and cutting set with accessories.
- c. . All hand tools and tackles for the fabrication and assembly.
- d. Suitable mobile crane for fabrication /erection.
- e. Fabrication /erection transportation.
- f. All laborers for the entire work.

Delivery:

The contractor has to complete the entire work within 120 days from the date of order.

Terms and conditions:

1. The fabrication and erection work shall be carried out inside BHEL Complex at RPS.
2. According to the site condition location of road crossing and width of road may vary. For this, separate drawings shall be issued later. The contractor shall also carry out this modified road crossing members and posts.
3. Payment will be made for the actual fabrication and erection weight only.
4. All safety precautions should be strictly followed.
5. The contractor should maintain attendance register. All the welding shall be carried out by using E-7018 electrodes only.

III. Fabrication, erection, painting and commissioning of DSL line for outer yard gantry cranes at New Plant stores.

SL.NO.	ITEMS	UOM	QTY	UNIT RATE in Rs.	VALUE in Rs.
10	Fabrication, erection, painting and commissioning of DSL line for outer yard gantry cranes at New Plant stores: (Drg.No: 2M02G0004696)	MT	97.13		
20	DSL trolley (Drg.No: 1M02E0809)	NOs.	2		
	Total value in Rs.				

SCOPE:

Fabrication of DSL as per the following layout drawings:

- 1.DSL layout for New Plant-----2M02G0004696 ----97.130 MT
- 2.DSL trolley -----1M02E0809 ----- 2nos.

Note:

Two DSL layouts each of 250m lengths and 8 nos. ladders are included in the gross weight of 97.130 MT.

For the above layouts the part drawings are

- 1.DSL POST -----2M02G004697
- 2.DSL POST (ROAD SIDE)-----2M02G004698
- 3.DSL POST (10M ROAD CROSSING)-----2M02G004699
- 4.FRAME -----2M02E1513
- 5.WHEEL ASSY.-----3M02G094857
- 6.TOP ROLLER ASSEMBLY-----4M02G0912889
- 7.LADDER (8 nos.)-----3M02G0013606

1. After fabrication one coat red oxide primer shall be painted and after erection two coats of synthetic enamel paint of ash gray color shall be applied on all the DSL structures except the four full length 50x50x6 mm inverted 'V' shape DSL line angles.
2. At the bottom surface of line angles RED, YELLOW, BLUE & GREEN (top one is RED) color paint shall be applied. On top surface no paint including primer shall be applied.
3. All the posts shall be erected on the foundation made for this purpose.
4. All the weld joints top surface in item 7 shall be smoothly grouted for easy movement of current collector.
5. Also all the weld joints in top and bottom guide tails shall be grinded for easy movement of wheels and rollers.

6. DSL trolley is to be provided in between the top and bottom guide rails for each crane.
7. After completion of work trial run of the DSL trolley has to be done throughout the DSL line without derailment between its top and bottom guide rails.

BHEL scope:

BHEL shall supply / Carry out the following at free of cost for fabrication and erection of DSL line

- a. Steel raw material for fabrication of DSL post /bridge / DSL angle /trolley etc.
- b. Power (electricity), all fasteners, Insulators and lead washers.
- c. DSL trolley's top and bottom roller assemblies (Wheel Assy. & Top roller assembly)
- d. Civil foundation with bolts grouted.

Contractor Scope:

1. All the consumables like Paints, Brushes, oxygen, acetylene gases welding electrode etc.
2. Suitable welding machine so as to use Electrode E-7018 and cutting set with accessories.
3. All hand tools and tackles for the fabrication and assembly.
4. Suitable mobile crane for fabrication /erection.
5. Fabrication /erection transportation.
6. All labourers for the entire work.

Delivery:

The contractor has to complete the entire work within 120 days from the date of order.

Terms and conditions:

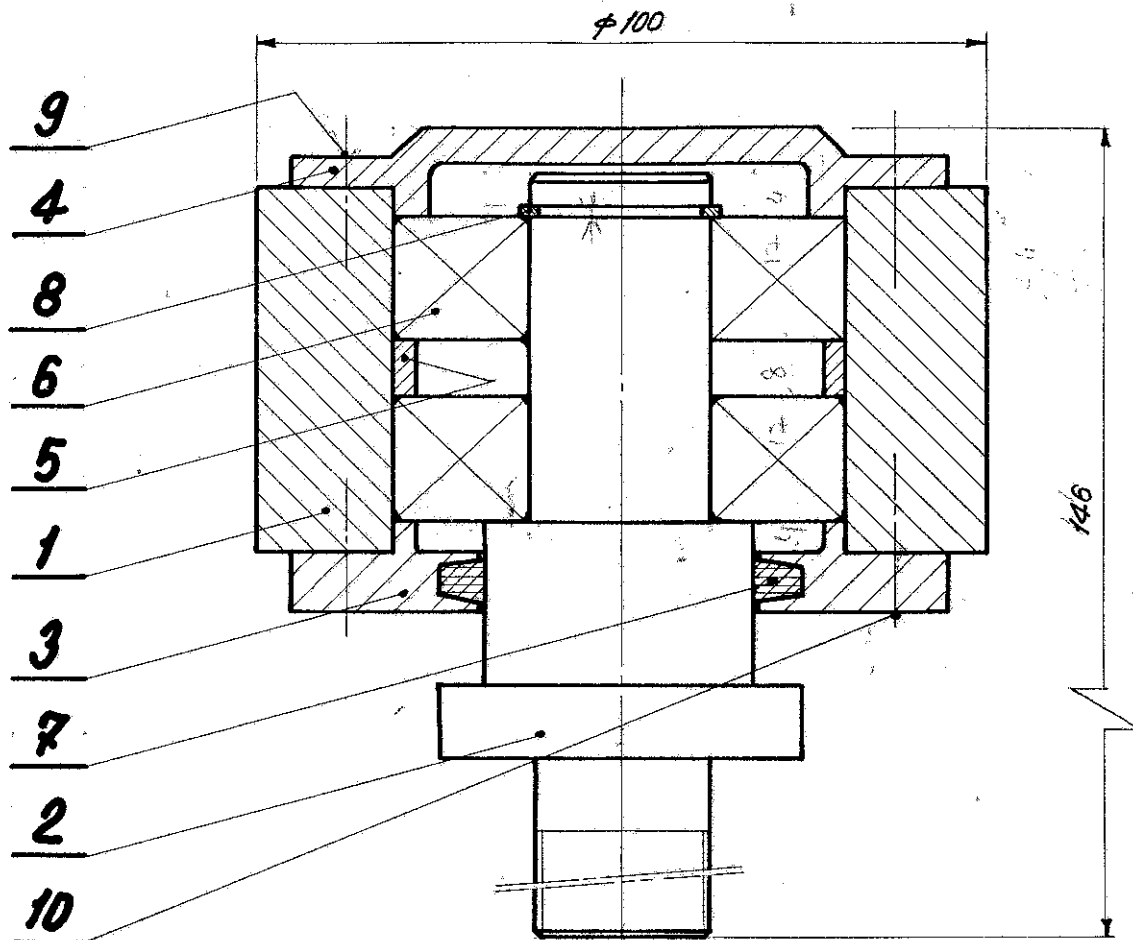
1. The fabrication and erection work shall be carried out inside BHEL Complex at RPS.
2. According to the site condition location of road crossing and width of road may vary. For this, separate drawings shall be issued later. The contractor shall also carry out this modified road crossing members and posts.
3. Payment will be made for the actual fabrication and erection weight only.
4. All safety precautions should be strictly followed.
5. The contractor should maintain attendance register. All the welding shall be carried out by using E-7018 electrodes only.

NOTE,; COMMON FOR ITEM NO. I,II and III

L1 OFFER WILL BE CONSIDERED FOR ALL THE ABOVE THREE ITEMS INDEPENDANTELY FOR PLACEING ORDERS.

CAUTION

THIS DRAWING IS OUR SOLE PROPERTY AND SHOULD NOT BE USED IN ANY FORM FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF
BHARAT HEAVY ELECTRICALS LTD.
TIRUCHIRAPALLI-14



4	CSK HEAD SCREW M6x16		BPS:412:05							10
4	CHEESE HEAD SCREW M6x16		BPS:412:01							9
1	CIRCLIP A25		IS:3075							8
1	FELT PACKING									7
2	BALL BEARING 6305	φ25xφ62x17								6
1	SPACER φ56x62x8L		BM-C20							5
1	CAP		BM-C20					4-M-02e-12888		4
1	CAP		BM-C20					4-M-02e-12887		3
1	PIN		BM-C30					4-M-02e-12886		2
1	ROLLER		BM-C45					4-M-02e-12885		1
								1-M-02e-0809		3

NO. OF PIECES	DESCRIPTION	SEMI-PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET Wt(kg)	GROSS Wt(kg)	DRAWING NO.	ITEM NO.
REMARKS				TOTAL NET Wt(kg)					
SCALE	DRAWN	REFERENCE	ALTERATIONS		DATE	SIGNATURE	INDEX		
1:1	CHECKED	<i>H. Narayana</i>							
	APPROVED		<i>Gajra</i>						
	STDS. OFFICER								
DATE	3-12-74								



MACHINE: **GANTRY CRANE** TYPE: **620T** INV. NO. _____

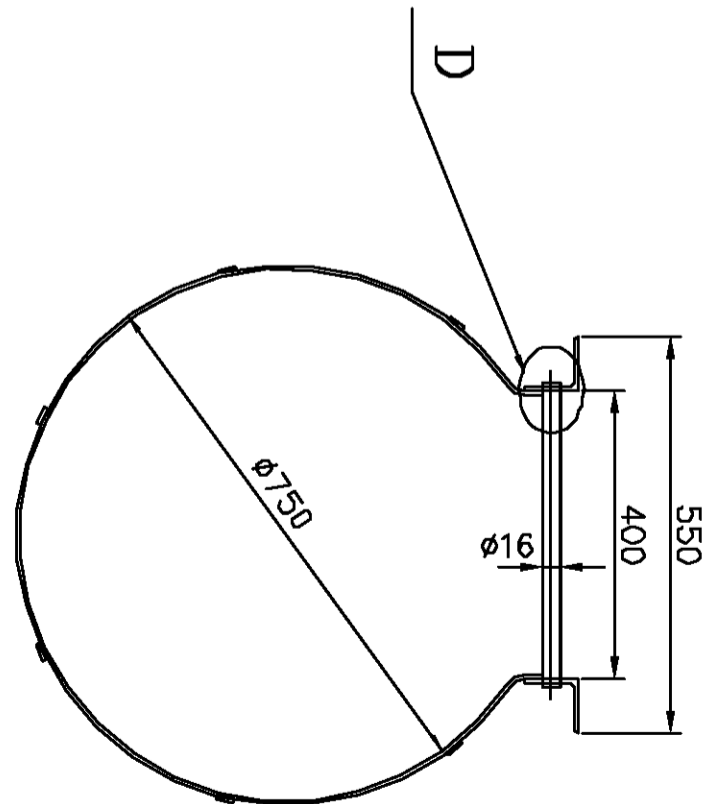
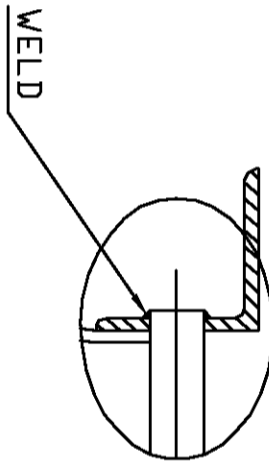
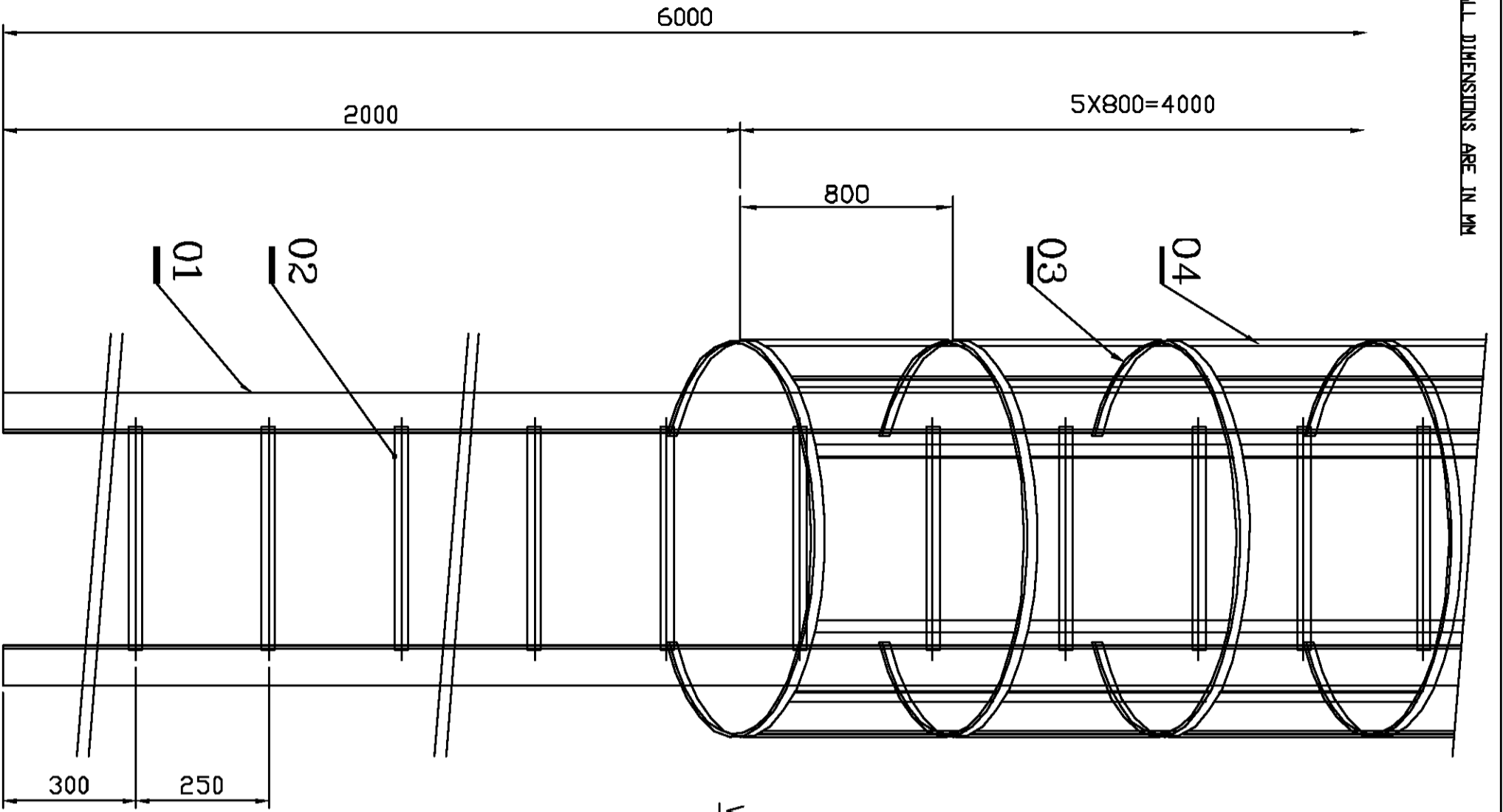
TITLE: **TOP ROLLER ASSY. (D.S.L. ARRANGEMENT)** DRAWING NO. **4-M-02G-12889** SHEET NO. _____

NO. OF SHEETS _____

INDEX NO. 39-607

CAUTION: THIS DRAWING IS OUR SOLE PROPERTY AND SHOULD NOT BE USED IN ANY FORM FOR ANY PURPOSE WITHOUT THE WRITTEN PERMISSION OF BHARAT HEAVY ELECTRICALS LIMITED TRICHIRAPPALLI - 620 014.

ALL DIMENSIONS ARE IN MM



DETAIL-D

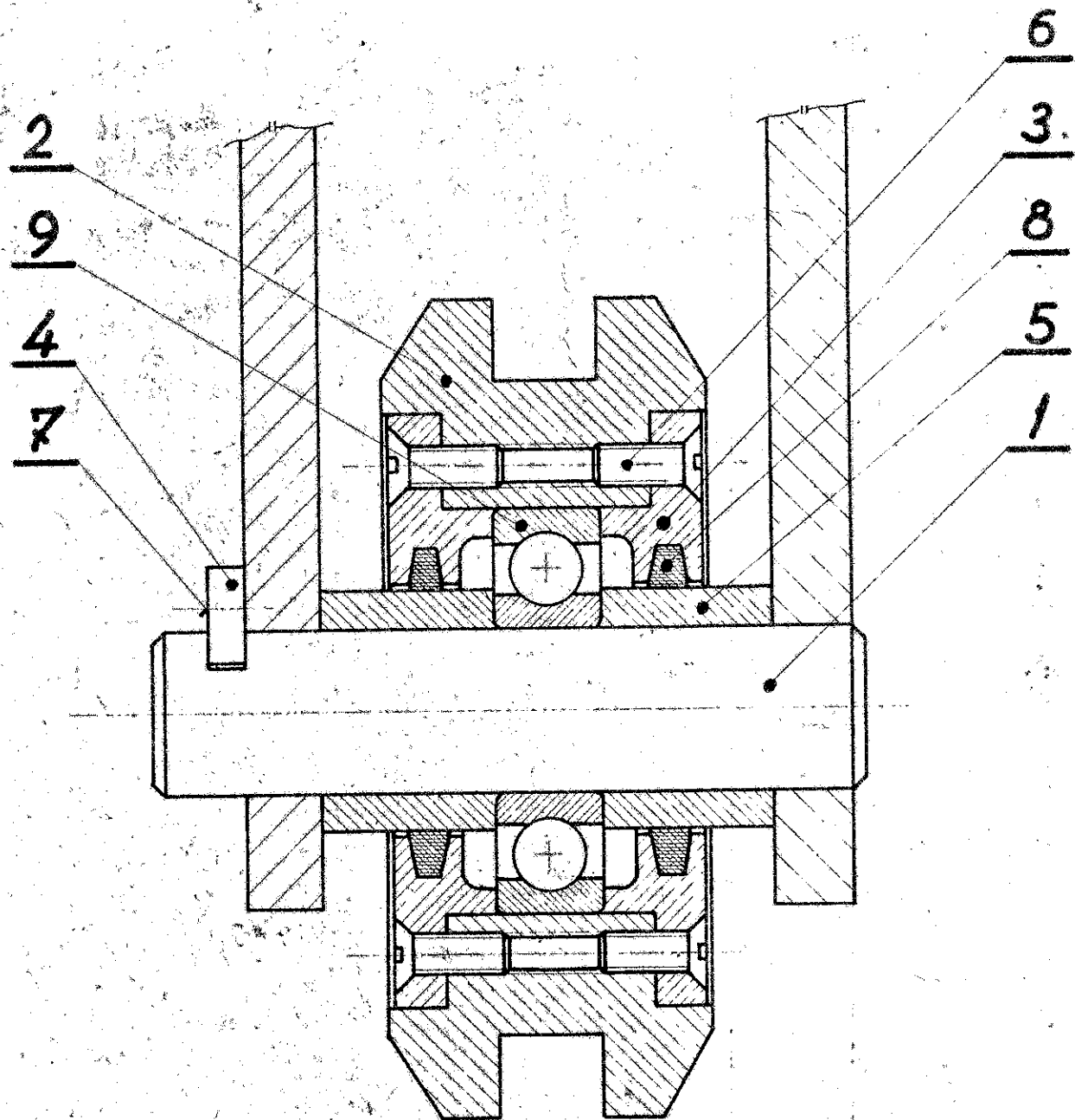
Sl. No.	DESCRIPTION	MATERIAL	STANDARD	NET WT IN KGS	DRAWING NO.	REV.
06	PL 5tX25X4000	F-410VA	IS:2062	2352		04
06	PL 5tX25X2000	F-410VA	IS:2062	1176		03
22	ROD $\phi 16 \times 425$	F-410VA	IS:2062	1460		02
02	ISA 75X75X6+X6000L	F-410VA	IS:2062	8160		01
				131.18		

SCALE	1:10	DRAWN	G.G.R
CHECKED		APPROVED	
DATE	03/08/08		
MACHINE	GANTRY CRANE	TYPE	ZOT/32M
TITLE	LADDER	DRAWING NO	3M02G0013606
		Sheet No	
		No of Sheets	

✓✓✓✓

CAUTION

THIS DRAWING IS OUR SOLE PROPERTY AND SHOULD NOT BE USED IN ANY FORM FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF BHARAT HEAVY ELECTRICALS LTD., TIRUCHIRAPALLI - 620 014



1	BALL BEARING 6305-φ25×φ52×17									9
2	FELT PACKING									8
2	CHEESE HD.SCREW M6×16 BPS:41201									7
8	CSK.HD.SCREW M6×16 BPS:41205									6
2	SPACER φ25×φ37×26,5									5
1	LOCK PLATE		Fe410S	IS 2062				4.M.02e.12893		4
2	CAP		Fe410S	IS:2062				4.M.02e.12892		3
1	WHEEL		45CB	IS:1875				4.M.02e.12891		2
1	PIN		30CB	IS:1875				4.M.02e.12890		1
								1.M.02e-0809		4

NO. OF PIECES	DESCRIPTION	SEMI-PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP SORT	NET. WT.(Kg)	GROSS WT.(kg)	DRAWING NO.	ITEM NO.
---------------	-------------	--------------	----------------	------------------	------------	--------------	---------------	-------------	----------

REMARKS				TOTAL NET WT. (kg.)			
SCALE	DRAWN	REFERENCE	ALTERATIONS	DATE	SIGNATURE	INDEX	
1:1	CHECKED						
	APPROVED						
	STDS. OFFICER						
	DATE	3.12.1976					

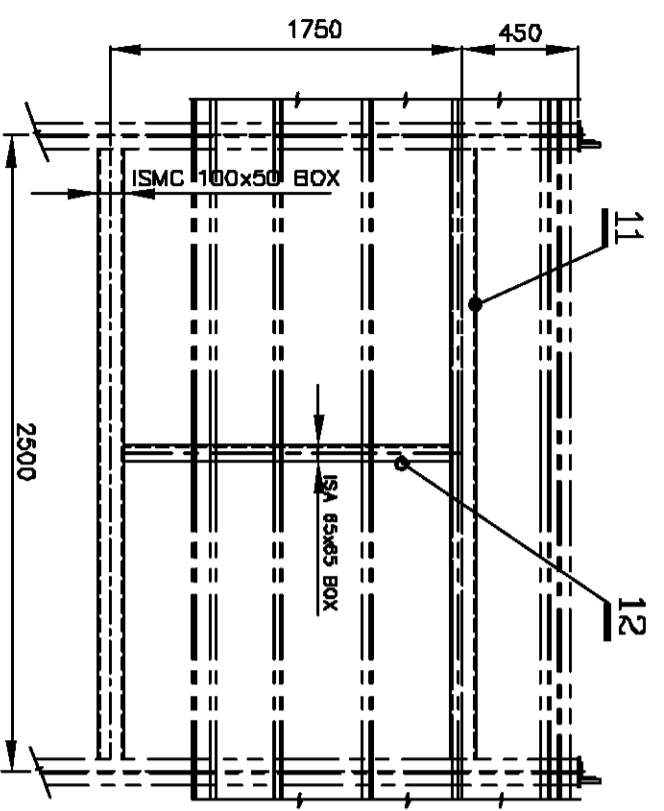
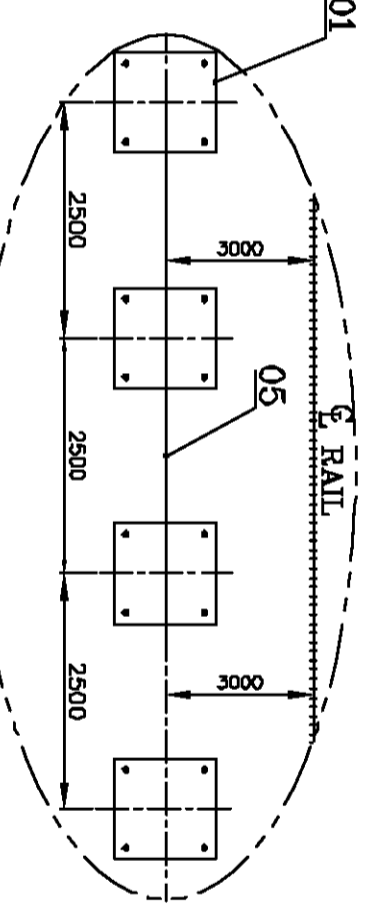
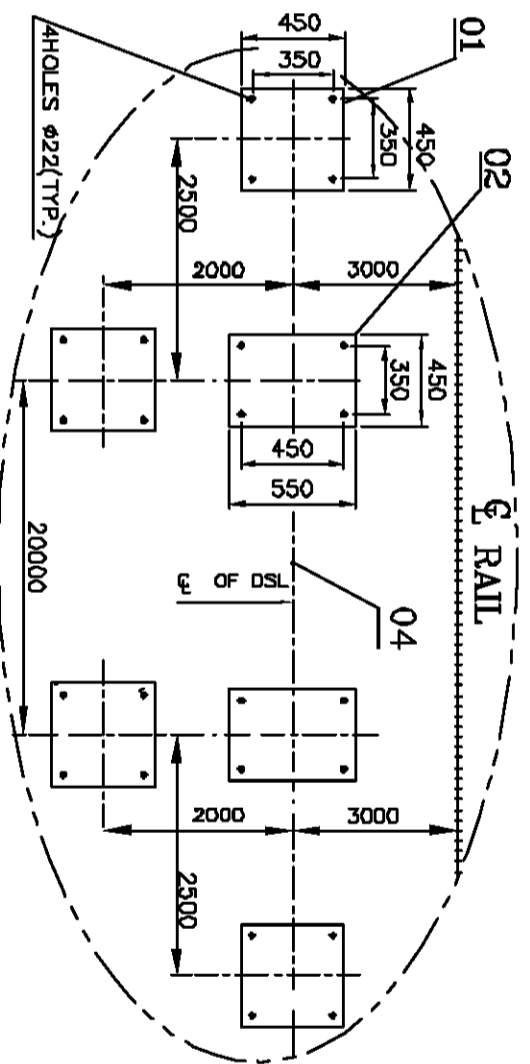
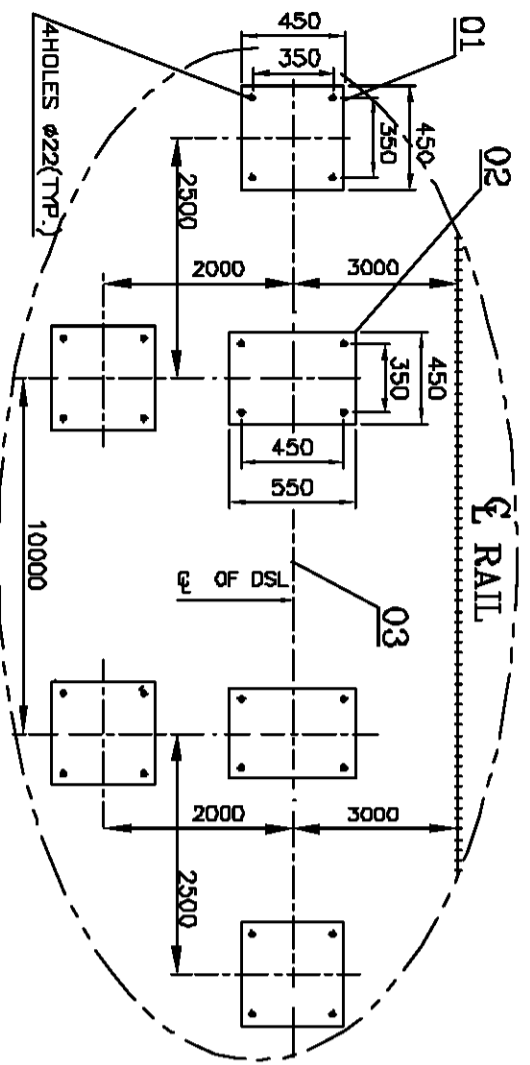
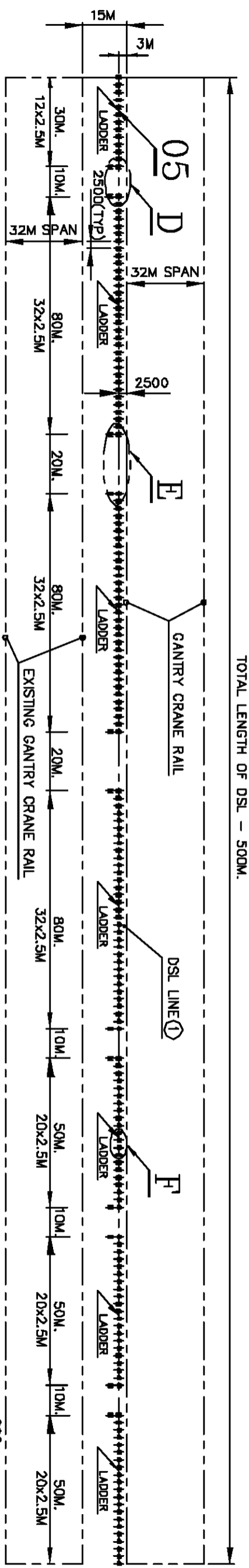
MACHINE: GANTRY CRANE
 TITLE: **WHEEL ASSY. (D.S.L.ARRANGEMENT)**
 TYPE: 620T
 DRAWING NO: **3.M.02G-4857**
 NO. OF SHEETS SHEET No: 1



CAUTION: THIS DRAWING IS OUR SOLE PROPERTY AND SHOULD NOT BE USED IN ANY FORM FOR ANY PURPOSE WITHOUT THE WRITTEN PERMISSION OF BHARAT HEAVY ELECTRICALS LIMITED, THE BHARAT WALL - 800 014.

ALL DIMENSIONS ARE IN MM

TOTAL LENGTH OF DSL - 500M.



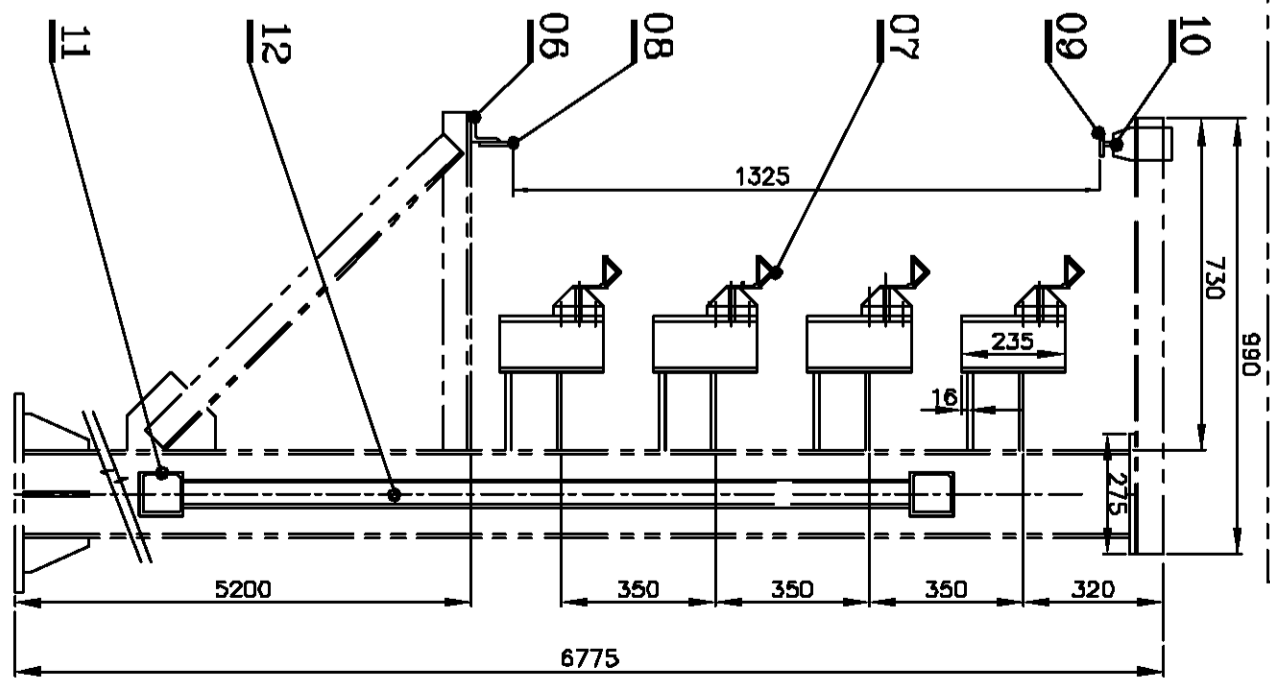
DETAIL BETWEEN POSTS

FOUNDATION DETAIL AT-F

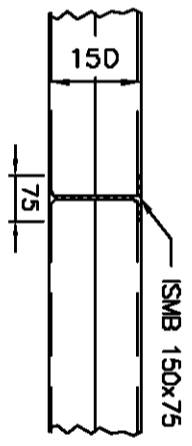
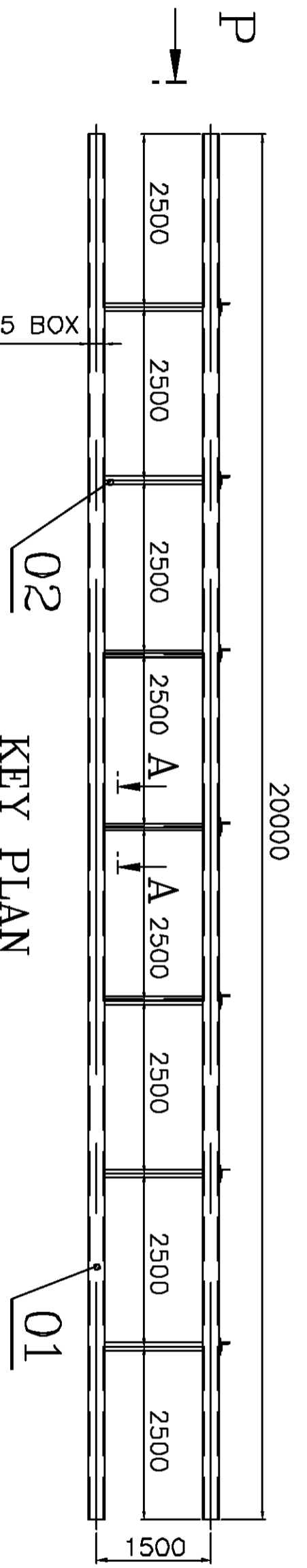
FOUNDATION DETAIL AT-E

FOUNDATION DETAIL AT-D

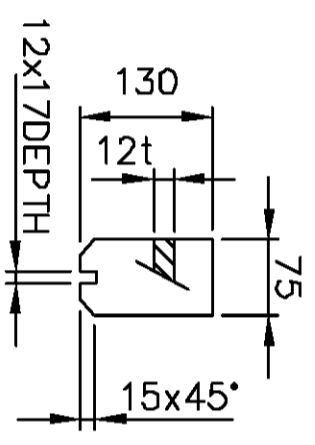
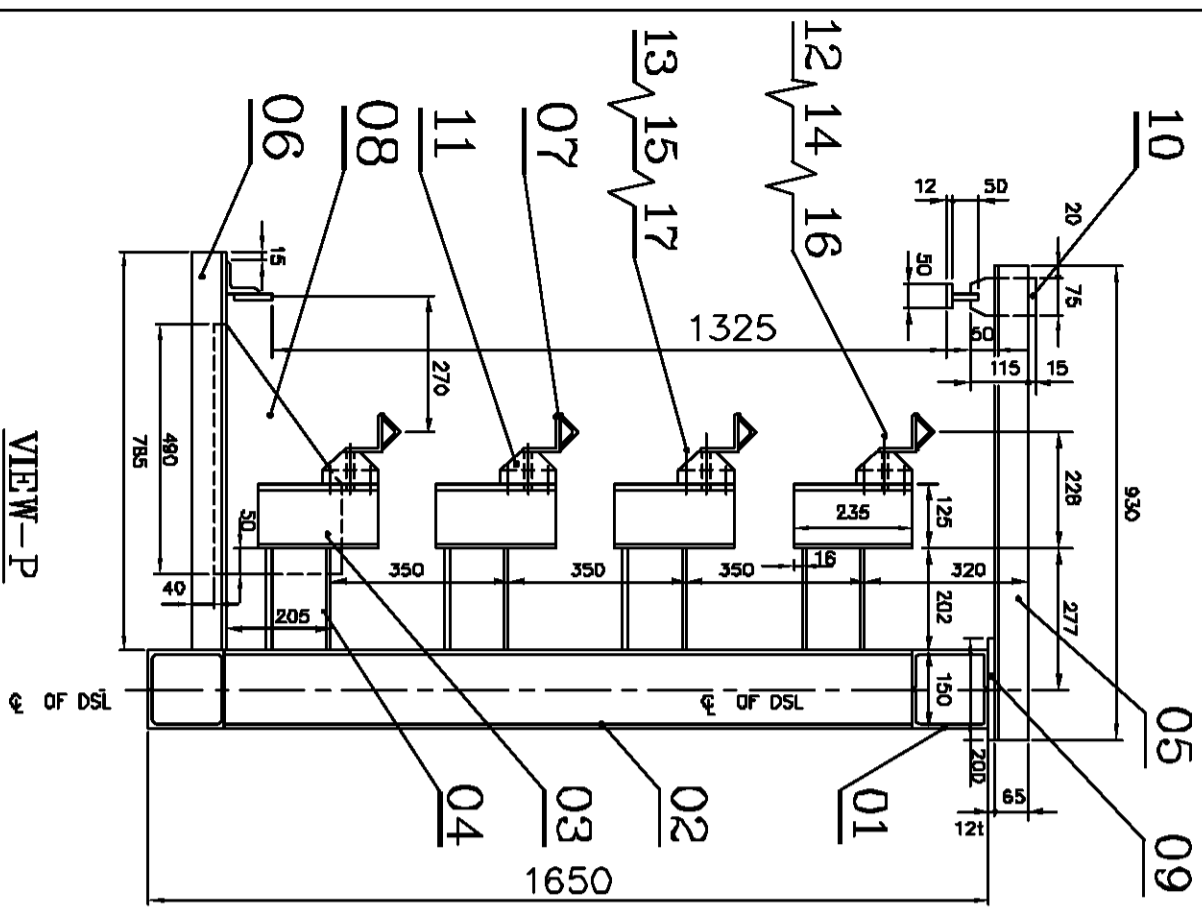
336	ISA 65x65x6x1867L	F-410MA	IS: 2082	3249-	12
188	ISMC 100x50-1650L	F-410MA	IS: 2082	2650-	11
1	PL12x50x500ML	F-410MA	IS: 2082	2340-	1D
1	PL12x50x500ML	F-410MA	IS: 2082	2340-	09
1	PL12x75x500ML	F-410MA	IS: 2082	3510-	08
4	ISA 65x65x6x1867L	F-410MA	IS: 2082	8000-	07
1	ISA 65x65x6x1867L	F-410MA	IS: 2082	2900-	06
7	LADDER			918-	05
2	DSL BRIDGE (20M/ROAD CROSSING)			3571-	04
4	DSL BRIDGE (10M/ROAD CROSSING)			3474-	03
12	DSL POST (ROAD SIDE)			8108-	02
168	DSL POST			41209-	01



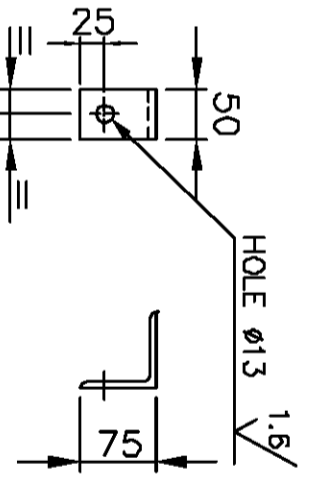
SCALE	DRAWN	G.G.R.
CHECKED		
APPROVED		
DATE	25/07/08	
TITLE	D.S.L. LAYOUT (AT RPS)	
DRAWING NO.	2M02G0004716	
DATE		
REV.		



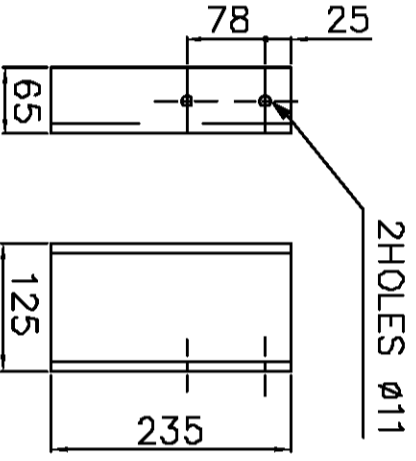
SEC-AA



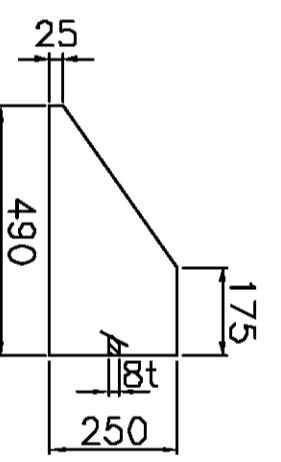
ITEM: 08



ITEM: 07



ITEM: 03



ITEM: 08

NOTE:-

ALL WELDED CONSTRUCTIONS

NO.	DESCRIPTION	MATERIAL	STANDARD	QTY	UNIT	REMARKS
56	HEX.NUT-M10	BPS: 41304	IS: 1383 PART-3			
28	HEX.NUT-M12	BPS: 41304	IS: 1383 PART-3			
56	WASHER-B10	BPS: 41445	IS: 3063.cd			
28	WASHER-B12	BPS: 41445	IS: 3063.cd			
56	HEX.BOLT-M10x45L	BPS: 41221	IS: 1383 PART-1			
28	HEX.BOLT-M12x50L	BPS: 41221	IS: 1383 PART-1			
28	PORCELAIN INSULATOR			4-M	02A03-00028	
7	PL 12x75x130	Fe410WA	IS: 2062	6.30		
7	PL 12x200x120	Fe410WA	IS: 2062	15.82		
7	PL 8tX250X490	Fe410WA	IS: 2062	38.22		
28	ISA 75x75x8tX50L	Fe410WA	IS: 2062	9.52		
7	ISA 65x65x6tX78.5L	Fe410WA	IS: 2062	31.87		
7	ISA 65x65x6tX93.0L	Fe410WA	IS: 2062	37.76		
28	ISMC 125x65x20.2L	Fe410WA	IS: 2062	74.09		
28	ISMC 125x65x23.5L	Fe410WA	IS: 2062	86.20		
7	ISMB 150x75x135.0L	Fe410WA	IS: 2062	141.75		
4	ISMC 150x75x20.00L	Fe410WA	IS: 2062	13.44		

SCALE: DRAWN: G.G.R. CHECKED: DATE: 25/07/08

TITLE: DSL BRIDGE (20M/ROAD CROSSING)

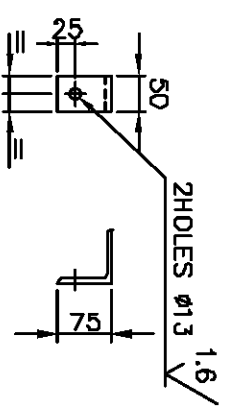
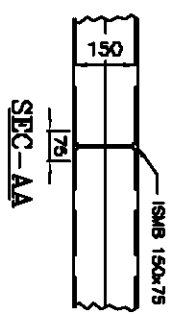
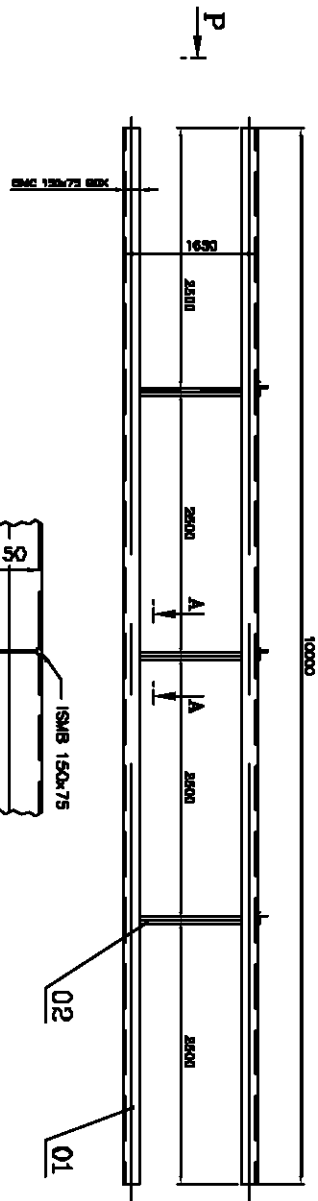
DRAWING NO: 2M02G0004715

DATE: 25/07/08

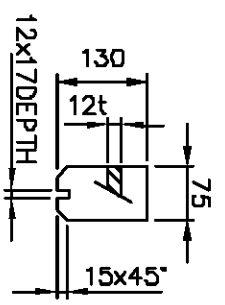
TYPE: 20T/32M

REV: 01

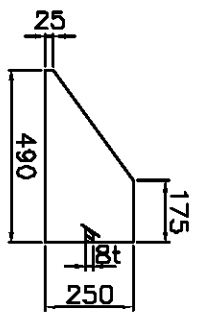
CAUTION: THIS BRIDGE IS NOT TO BE USED IN ANY FORM FOR ANY PURPOSE UNLESS THE DESIGNER HAS BEEN ADVISED BY THE USER AND THE USER HAS BEEN ADVISED BY THE DESIGNER. THE USER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE BRIDGE. THE USER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE BRIDGE. THE USER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE BRIDGE.



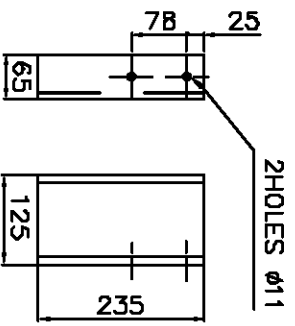
ITEM: 07



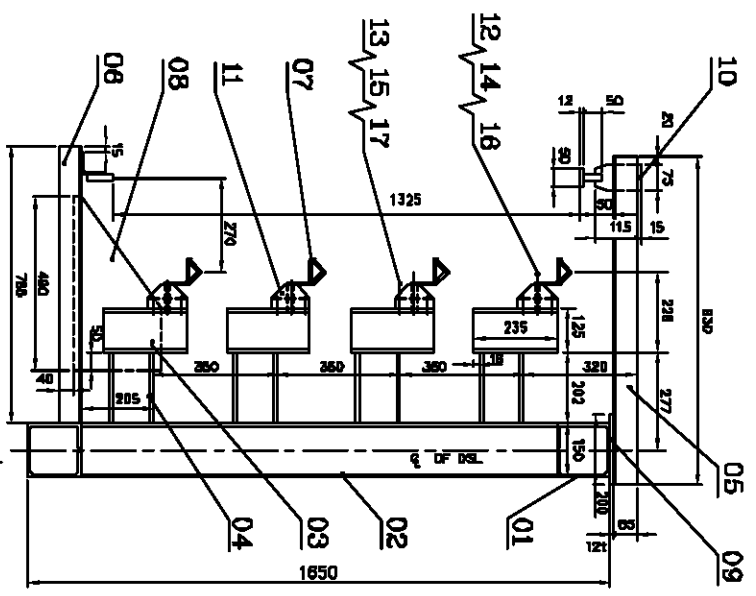
ITEM: 11



ITEM: 08



ITEM: 03



VIEW-P

ALL WELDED CONNECTIONS

24	HEX NUT-M10	BP-S:41304	BP-S:41304	IS: 2082	6.78
12	HEX NUT-M12	BP-S:41304	BP-S:41304	IS: 2082	2.70
24	WASHER-B10	BP-S:41445	BP-S:41445	IS: 2082	6.78
12	HEX BOLT-M10x45L	BP-S:41221	BP-S:41221	IS: 2082	2.70
12	HEX BOLT-M12x50L	BP-S:41221	BP-S:41221	IS: 2082	6.78
12	PORCELAIN INSULATOR				
3	PL12x75x130L	F-410VA	F-410VA	IS: 2082	2.70
3	PL12x200x120L	F-410VA	F-410VA	IS: 2082	6.78

3	PL12x250x490L	F-410VA	F-410VA	IS: 2082	16.38	06
12	ISA 75x75x8t+50L	F-410VA	F-410VA	IS: 2082	4.06	07
3	ISA 65x65x6x78L	F-410VA	F-410VA	IS: 2082	13.65	08
3	ISA 65x65x6x930L	F-410VA	F-410VA	IS: 2082	16.18	05
12	ISMIC 125x65x202L	F-410VA	F-410VA	IS: 2082	31.75	04
12	ISMIC 125x65x239L	F-410VA	F-410VA	IS: 2082	36.94	03
3	ISM8 150x75x1350L	F-410VA	F-410VA	IS: 2082	66.04	02
4	ISM8 150x75x10000L	F-410VA	F-410VA	IS: 2082	672.0	01

DSL BRIDGE
 (ROAD CROSSING)

TITLE: **DSL BRIDGE**
 (ROAD CROSSING)

DRAWING NO: **21021000014899**

DATE: **20/08/08**

SCALE: **1:100**

DRAWN BY: **J.A.A.V.B.F.**

CHECKED BY: **J.A.A.V.B.F.**

APPROVED BY: **J.A.A.V.B.F.**

DATE: **20/08/08**

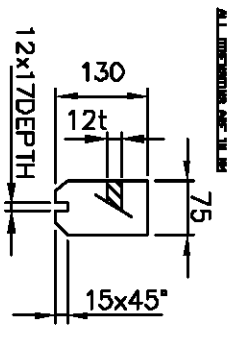
TYPE: **2D/20M**

BRIDGE NO: **21021000014899**

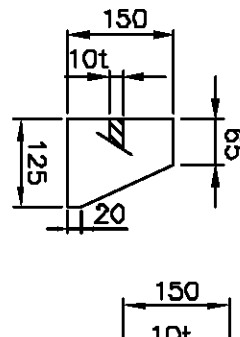
ROAD NO: **21021000014899**

CAUTION: THIS DRAWING IS THE PROPERTY OF THE CLIENT AND IS NOT TO BE REPRODUCED OR COPIED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF SANGHVI ENGINEERING & ARCHITECTURE PVT. LTD.

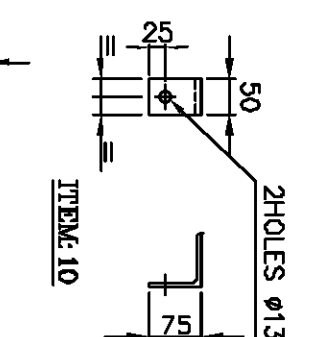
ALL DIMENSIONS ARE IN MM



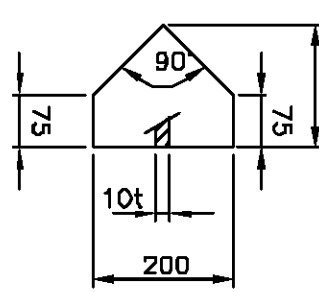
ITEM: 14



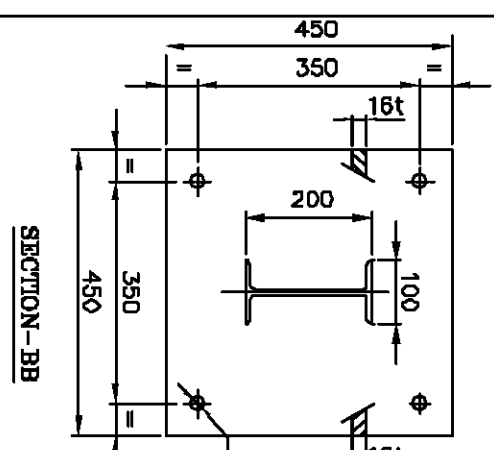
ITEM: 16



ITEM: 10

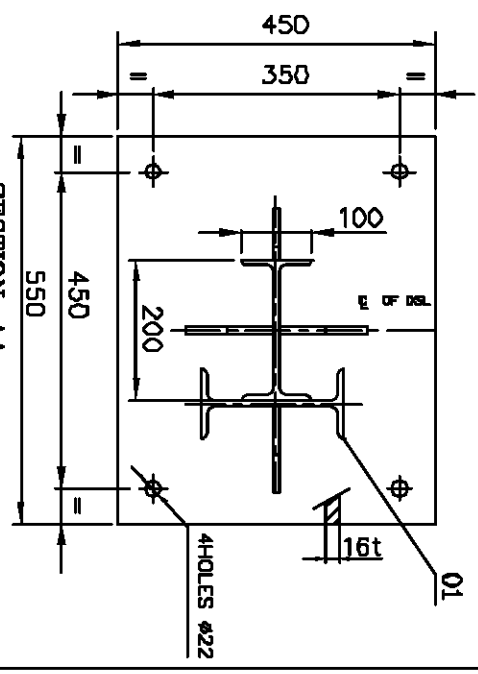
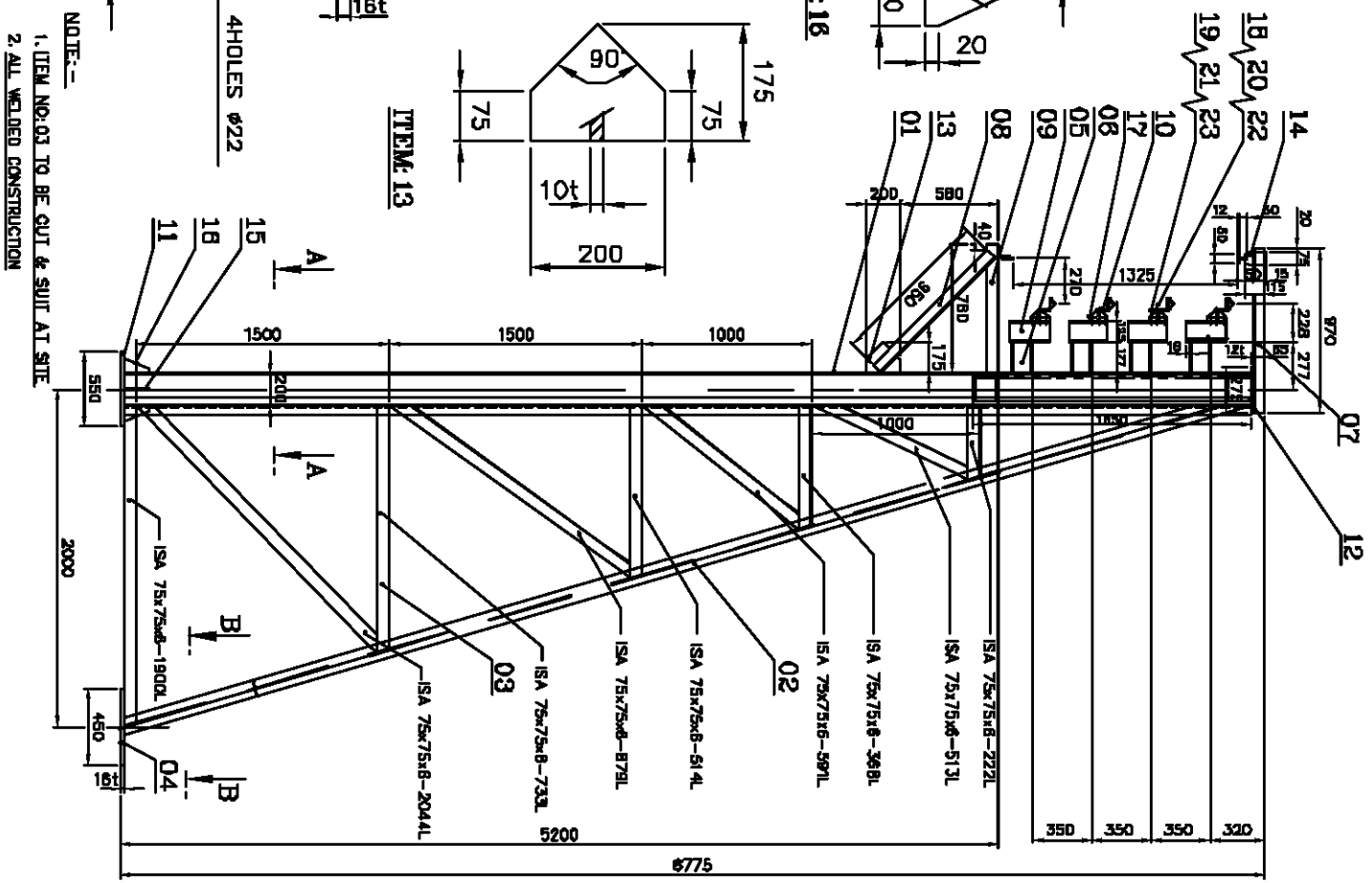


ITEM: 13



SECTION-BB

NOTE:-
1. ITEM NO.03 TO BE CUT & SUIT AT SITE
2. ALL WELDED CONSTRUCTION



SECTION-AA

ITEM NO.	DESCRIPTION	MATERIAL	QUANTITY	UNIT	REMARKS
0	HEX NUT - M10	BPS-41304	18	PCS	
4	HEX NUT - M12	BPS-41304	18	PCS	
4	WASHER - 812	BPS-41445	18	PCS	
4	HEX BOLT - M10x45L	BPS-41221	18	PCS	
4	HEX BOLT - M12x50L	BPS-41221	18	PCS	
4	PORCELAIN INSULATOR		18	PCS	
2	PL101x60x150L	Fe410WA	2.90	M	
2	PL101x125x150L	Fe410WA	0.90	M	
1	PL121x75x130L	Fe410WA	2.70	M	
1	PL101x75x200L	Fe410WA	3.10	M	
1	PL121x125x279L	Fe410WA	31.09	M	
4	ISA 75x75x8x50	Fe410WA	1.39	M	
1	ISA 85x85x8x1780L	Fe410WA	4.40	M	
1	ISA 85x85x8x950L	Fe410WA	5.51	M	
4	ISA 65x65x8x470L	Fe410WA	5.63	M	
4	ISMC 125x65x7.7L	Fe410WA	9.28	M	
4	ISMC 125x65x2.5L	Fe410WA	12.40	M	
1	PL 18x45x50x2	Fe410WA	25.43	M	
1	ISA 75x75x8x784L	Fe410WA	52.80	M	
1	ISM8 200x100-6962L	Fe410WA	178.83	M	
2	ISM8 200x100-6682L	Fe410WA	339.44	M	
	ASBY.		875.73	KG	

DSL POST
(ROAD SIGN)

DATE: 28/06/2018

SCALE: 1:20

DESIGNED BY: J. K. K. K.

CHECKED BY: J. K. K. K.

DATE: 28/06/2018

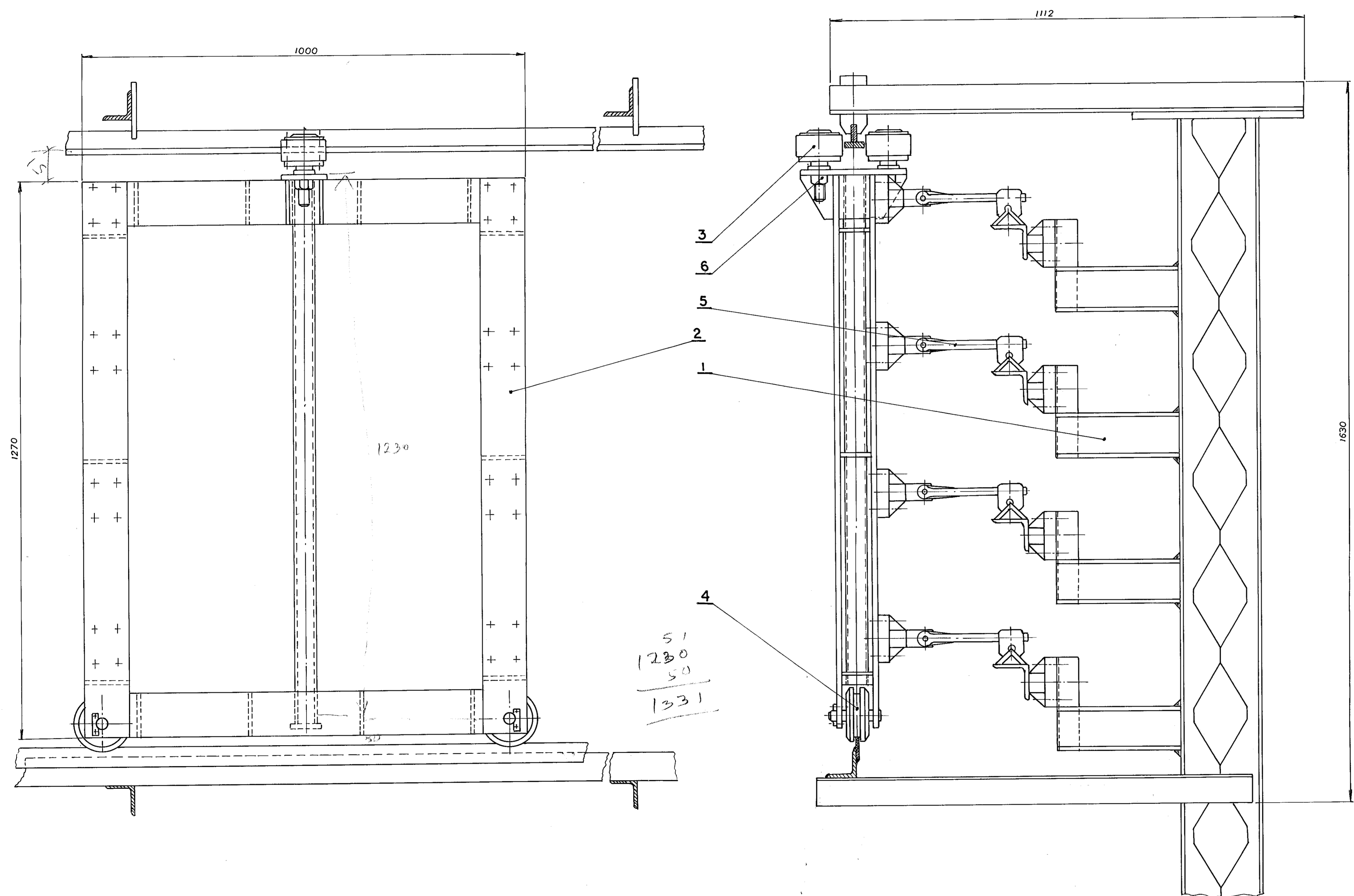
PROJECT NO: 2018060001418198

REV: 01

CAUTION: THIS DRAWING IS FOR SALE PURPOSES ONLY. IT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES WITHOUT THE WRITTEN PERMISSION OF BROWN HEAVY ELECTRICALS LIMITED. DISREGARD - USE PER.

ALL DIMENSIONS ARE IN MM

✓✓✓



51
1230
50

1331

No. of Pieces	DESCRIPTION	MATERIAL	STANDARD	NET.WT. IN KGS.	DRAWING No.	TYP No.
2	NUT M 24	BPS. 41304				6
4	COLLECTOR/RIGID CONDUCTOR					5
2	WHEEL ASSY				3-M-02E-4837	4
2	TOP ROLLER ASSY				4-M-02E-12889	3
1	FRAME				2-M-02E-1513	2
	SUPPORT FOR DSL ANGLES				2-M-02E-1514	1

SCALE	DRAWN/rev	CHECKED	APPROVED	DATE	ALTERATIONS	DCN REF	DATE	SIGN.	INDEX
1:5	005	R. Ramamoorthy		7.12.96					

MACHINE: GANTRY CRANE	TYP: G 207
TITLE: DSL ARRANGEMENT	DRAWING No: 1-M-02G-0809
No. of Sheets	Sheet No