

C.M. – 6

D. No. _____

INDIAN INSTITUTE OF TECHNOLOGY (ISM)
DHANBAD – 826 004

CAMPUS MAINTENANCE UNIT

No. : Maint/958015/17-18

Date : 20.04.2017

Name of work - A/R & maintenance work (Inside) at Emerald Hostel.

Issued to M/s _____ of _____
_____ on deposit of cost of **₹500/-** vide

C.R. No. _____ dated _____

The tender documents carrying following papers :-

- (1) Notice Inviting Tenders
- (2) Item Rate Tender for works
- (3) Schedule of Materials/Qtty.
- (4) Terms & Conditions of Contractor


Campus Engineer


NOTICE INVITING TENDER

No. Maint/958015/17-18

Date : 20.04.2017

1. Tenders in the prescribed form are hereby invited from the Registered contractors of Indian Institute of Technology (ISM) for **“A/R & maintenance work (Inside) at Emerald Hostel.”.**

Estimated cost ₹ 4,54,838.00

2. The form of tenders consisting of the details plans, complete specifications, the schedule of quantity of the various works to be done and the set of “conditions of contract” to be complied with by the person whose tenders may be accepted, which will also be found in the form of tenders, can be obtained at the office of CMU between 10 am to 4 pm every day except on Holidays and can be download from ISM website WWW.ISMDhanbad.ac.in on payment of **₹ 500.00** in cash counter of IIT (ISM).Demand Draft to a Nationalised Bank in favour of “Registrar, IIT (ISM) Dhanbad”.
3. The site of the work is available/or the site of the work will be made available in parts as specified below.
4. Tender which should always be placed in sealed cover with the name of the work written on the envelopes will be received by Campus Engineer and opened in his office as per details given below.

Last date of receipt/submission of Tender 08.05.2017 up to 3.00 P.M.

Date and time of opening of Tender 08.05.2017 at 4.00 P.M.

5. The time allowed for the work will be **45 (Forty five) DAYS** from the 10th day after the date of written order to commence the work.
6. **CPWD specification will be followed strictly during execution.**
7. The contractors should quote in figures as well as in words the rate and amount tendered by them. The amount for each item should be worked out and requisite total given.
8. The last date for issue/purchase of tender is **05.05.2017** up to 3.00 PM (Generally stopped two days before the date fixed for the opening of tenders).
9. **Earnest money amounting to ₹11,400.00** deposited at the ISM cash counter/ Demand Draft to a Nationalised Bank in favour of “Registrar, IIT (ISM) Dhanbad.” Must accompany each tender to be in a sealed cover superscribed “Tender for the above work” and addressed to Campus Engineer, IIT (ISM), Dhanbad.
10. The contractor whose tender is accepted will be required to furnish by way of security deposit for the due fulfillment of the contract. Such sum will amount to 10% of the total cost of works awarded.
11. The acceptance of a tender will rest with the Campus Engineer who does not bind himself to accept the lowest tender and reserve to himself the authority to reject any or all the tenders received without assignment of any reason. All tenders in which any of the prescribed conditions are not fulfilled or are incomplete in any respect are liable to be rejected.
12. Canvassing in connection with the tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
13. An item rate tender containing percentage below/above will be summarily rejected, however a tender voluntarily offers a rebate, this may be considered.

14. On acceptance of the tender the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Campus Engineer shall be communicated to the Campus Engineer.
15. Special care should be taken to write the rates in figures as well as in words and the amounts in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures the word "Rs." Should be written before the figures or rupees and word "p" after the decimal figure e.g. Rs. 2.15 p and case of words the word Rupees should precede and the word "paise" should be written at the end, unless the rate is in whole rupees and followed by the word "only". It should invariably be up to two decimal places. While quoting the rate in schedule of quantities the word "only" should be written closely following the amount and it should not be written in the next line.
15. The Director/Registrar does not bind himself to accept the lowest or any tender and reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
16. Sales Tax, Service Tax, Labour Cess, Purchase Tax, Turnover Tax or any other tax on material as applicable in respect of this contract shall be payable by the contractor and ISM will not entertain any claim whatsoever in this respect.
17. The tender for the work shall remain open for acceptance for a period of 90 days from the date of opening of the tender. If any tenderer withdraws his tender before the said period or makes any modification in the terms and conditions of the tender which are not acceptable to the department, then the ISM without prejudice to any other right or remedy, be at liberty to forfeit of the said earnest money.
18. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found the rates which correspond with the amount worked out by the contractor shall be taken as correct.
19. If the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figure or in words then the rate quoted by the contractor in words shall be taken as correct.
20. Where the rates quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rate quoted by the contractor will be taken as correct and not the amount.



Campus Engineer
IIT(I.S.M), Dhanbad

M/s _____

Name of Work : A/R & maintenance work (Inside) at Emerald Hostel.

SCHEDULE OF WORK

Sl. No.	ITEM OF WORKS	QUANTITY	RATE	AMOUNT
1.	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shape and sizes in : Cement mortar 1:4 (1 cement : 4 coarse sand	1.5 cum		
2.	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in : Cement mortar 1:4 (1 cement : 4 coarse sand	5.00 sqm		
3.	Providing and fixing fly proof galvanized M.S. wire gauge to windows and clerestory windows using wire gauge with average width of aperture 1.4 mm in both directions with wire of dia 0.63 mm all complete. With 2nd class teak wood beading 62X19 mm	45.00 sqm		
4.	Providing and fixing ISI marked oxidized M.S. sliding door bolts with nuts and screws etc complete : 300 X 16	4.00 each		
5.	Providing and fixing ISI marked oxidized M.S. tower bolt black finish, (Barrel type) with necessary screws etc complete : 200x10 mm	8.00 each		
6.	Providing and fixing ISI marked oxidized M.S. handles conforming to IS : 4992 with necessary screws etc complete. 125 mm	5.00 each		
7.	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc complete. 40 mm thick with 20 mm nominal size stone aggregate.	6.00 sqm		

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8.	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.(i) Single socketed pipes. 110 mm diameter	5.00 mtr		
9.	Providing and fixing on wall face unplasticised- PVC moulded fittings/accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion. a) Single tee with door 110x110x110 mm	4.00 each		
b)	Bend 87.5 110 mm bend	4.00 each		
10.	12 mm cement plaster of mix : 1:6 (1 cement : 6 fine sand)	20.00 sqm		
11.	12 mm cement plaster finished with a floating coat of neat cement of mix : 1:4 (1 cement : 4 fine sand)	5.00 sqm		
12.	Applying one coat of water thiable cement primer of approved brand and manufacture on wall surface : Water thinable cement primer	1200.00 sqm		
13.	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	50.00 sqm		
14.	Repair to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq. meters and under including cutting the patch in proper shape raking out joints and preparing and plastering the surface of the walls complete including disposal of rubbish to the dumping ground within 50 meters lead : With cement mortar 1:4 (1 cement : 4 coarse sand)	5.00 sqm		

15.	White washing with lime to give an even shade : Old work (two or more coats)	13000.00 sqm		
16.	Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc complete.	5000.00 sqm		
17.	Distemping with oil bound washable distemper of approved brand and manufacture to give an even shade : Old work (one or more coats)	3300.00 sqm		
18.	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade : One or more coats on old work	60.00 sqm		
19.	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade : Old work (one or more coat applied @ 0.83 ltr/ 10 sqm)	200.00 sqm		
20.	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 meters lead as per direction of Engineer – in – charge. In cement mortar	2.00 cum		
21.	Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 meters lead : Of area 3 sq meters and below	3.00 each		
22.	Disposal of building rubbish/malba/similar unserviceable, dismantled or waste materials by mechanical means including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all loads including all lifts involved.	5.00 cum		
23.	Providing and fixing PVC low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete. 10 liter capacity – white	3.00 each		
24.	Providing and fixing PVC waste pipe for sink or wash basin including PVC waste fittings complete. Semi rigid pipe 32 mm dia	5.00 each		

25.	Providing and fixing 600X450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	4.00 each		
26.	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with C.P. brass screws with concealed fitting arrangement of approved quality and colour. 450 mm long towel rail with total length of 495 mm, 78 mm wide and effective height of 88 mm, weighing not less than 170 gms.	4.00 each		
27.	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc 15 mm dia nominal bore	3.00 mtr		
a)				
b)	20 mm dia nominal bore	5.00 mtr		
c)	25 mm dia nominal bore	7.00 mtr		
28.	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc complete. 25 to 40 mm nominal bore	3.00 each		
29.	Providing and fixing brass stop cock of approved quality : 15 mm nominal bore	5.00 each		
30.	Providing and fixing uplasticised PVC connection pipe with brass unions : 30 cm length 15 mm nominal bore	5.00 each		
31.	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931. 15 mm nominal bore	3.00 each		
32.	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS : 8931 15 mm nominal bore 15 mm nominal bore	2.00 each		

33.	Providing and fixing PTMT bib cock of approved quality and colour. 15 mm nominal bore, 86 mm long. Weighing not less than 88 gms.	4.00 each		
34.	Providing and fixing PTMT pillar cock of approved quality and colour. 15 mm nominal bore, 107 mm long, weighing not less than 110 gms	5.00 each		
35.	Providing and fixing PTMT, push cock of approved quality and colour. 15 mm nominal bore, 98 mm long, weighing not less than 75 gms	5.00 each		
36.	Providing and fixing PTMT ball cock of approved quality colour and make complete with Epoxy coated aluminium rod with L.P./H.P.H.D. plastic ball. 25 mm nominal bore, 152 mm long. Weighing not less than 440 gms.	2.00 each		
37.	Providing and fixing PTMT swiveling shower, 15 m nominal bore. Weighing not less than 40 gms.	6.00 each		
38.	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3 mm thick water proofing membrane black finished reinforced with non woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/ sqm by the same membrane manufacture of density at 250C, 0.87-0.89 kg/ltr and viscosity 70-160 cps. Over the primer coat the layer of membrane shall be laid using Butane Torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be : Joint strength in longitudinal and transverse direction at 230C at 650/450N/5 cm. Tear strength in longitudinal and transverse direction as 300/250N. Softening point of membrane not less than 1500C. Cold flexibility shall be upto -20C when tested in accordance with ASTM, D-5147. The laying of membrane shall be got done through the authorized applicator of the manufacturer of membrane : 3 mm thick	20.00 sqm		

39.	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge. 150 mm nominal size dia	2.00 mtr		
40.	Chessing the door/windows edge for easy opening and closing	30.00 mtr		
41.	Renewing acrylic seat with putty and nails wherever necessary including raking out the old putty. 4 mm thick acrylic seat as per approved make and as per direction of Engineer-in-charge.	3.00 sqm		
42	Cleaning, oiling existing rolling shutters for easy movement.	2.00 each		
43.	Providing and fixing M.S. door ring of 40 mm dia	42.00 each		
44.	Grainding and polishing with necessary chemicals etc on kota stone/mosaic/tiles flooring.	800.00 sqm		
45.	Cleaning PVC over head tank by using bleaching powder etc complete as per direction of Engg.-in-charge.	20.00 each		
46.	Repairing of PVC cistern by replacement of necessary fittings etc complete.	5.00 each		
47.	Providing and fixing connection pipe heavy duty for geyser.	4.00 each		
48.	Providing and fixing PVC water tank cover.	3.00 each		

49.	Taking out PVC over head water tank and re fixing the same complete job	1.00 each		
50.	Providing and fixing 25 mm thick PVC flush door shutters made out of a one piece Multi chamber extruded PVC section of the size 762 mm x 25 mm or less as per requirement with an average wall thickness of 1 mm (+ 0.3mm). PVC foam end cap of size 23 x 10 mm are provided on both vertical edges to ensure the overall thickness of 25 mm. an M.S. tube having dimensions 19 mm x 19 mm and 1.0 mm is inserted along the hinge side of the door. Core of the door shutter should be filled with High Density Polyurethane foam. The top & Bottom edges of the shutter are covered with an end-cap of the size 25 mm x 11 mm. Door shutter shall be reinforced with special polymeric reinforcement as per manufacturer's specification and direction of Engineer-in-charge to take up necessary hardware and fixtures. Stickers indicating the locations of hardware will be pasted at appropriate places.	8.00 sqm		

TOTAL – ₹

(Rupees in word _____)

SIGNATURE OF CONTRACTOR


Campus Engineer
IIT (I.S.M), DHANBAD

INDIAN INSTITUTE OF TECHNOLOGY, INDIAN SCHOOL OF MINES
DHANBAD - 826004
 (CAMPUS MAINTENANCE UNIT)

TERMS & CONDITIONS OF CONTRACTOR FOR WORKS

General Rules and Directions :

1. All works proposed for execution by contractor will be notified in a form of invitation to tender on Notice Board/Paper advertisements and signed by the Campus Engineer/Asstt. Campus Engineer.

This form will state the work to be carried out as well as the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender, and the percentage at which the Security Deposit shall be deducted from the bills of the successful tenderer. Copies of the Specifications, designs and drawing and the schedule of quantities and of rates on the various descriptions of work and any other documents required in connection with the work signed for the purpose of identification by the Campus Engineer/Asstt. Campus Engineer shall also be opened for inspection by the contractor of the office of the Campus Engineer/Asstt. Campus Engineer during office hours.

2. In the event of the tender being submitted by a firm it must be signed separately by each partner thereof or in the event of the absence of any partner it must be signed on his behalf by a person holding a power of attorney authorized him to do so, such power of attorney to be produced with the tender and it must disclose that the firm is duly registered under the Indian Partnership Act.
3. Receipt for payments made on account of work when executed by a firm must also be signed by the several partner except where the contractors are described in their tender as a firm which case the receipts must be signed in the name of the firm by one of the partners on some other person; having authority to give effectual receipt for the firm.
4. Any person who submits a tender shall fill up the usual printed form stating at what rate he is willing to undertake each item of the work. Tender which proposes any alteration in the work specified in the said form of invitation; to the tender or in the time allowed by carrying out the work or which contain any other conditions of any sort will be liable to rejection. No single tender shall include more than one work but contractors who wish to tender for two or more works shall submit a separate tender for each. Tenders shall have the name and number of the work to which they refer written outside the envelope.
- 4A. The rate(s) and/or amount(s) must be quoted in decimal coinage.
5. The Campus Engineer/Asstt. Campus Engineer representative of RS/DT and from account section will open tenders in the presence of any intending contractors who may be present at the time of opening the tender.
6. The officer inviting tenders shall have the right of rejecting all or any of the tenders will not be bound to accept the lowest tender.
7. The receipt of an accountant or clerk for any money paid by the contractor will not be considered as any acknowledgement of payment to the Campus Engineer/Asstt. Campus Engineer and the contractor shall be responsible for seeing that he procures a receipt signed by the duly authorized cashier of ISM.
8. The memorandum of work tendered for and the schedule of materials to be supplied by the Indian School of Mines, and their issue rates shall be filled in; and completed in the office of the Campus Engineer/Asstt. Campus Engineer before the tender form issued to an intending tenderer without having been so filled in and completed the shall request the office to have this done before he completes and delivers his tender.
9. The tenderers shall sign a declaration under the official Secret Act, for maintaining secrecy of the tender documents drawing of other records connected with the work given to them, the unsuccessful tenderers shall return all the drawing given to them.

DECLARATION

I/Se hereby declare that I/We shall treat the tender documents drawings and the records connected with the work as secret/confidential documents and shall not communicate information derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the Indian School of Mines.

Seal

Item Rate Tender for works in figures as well as in words

CONTRACTOR'S SIGNATURE

I/We hereby tender for the execution for the Director, Indian School of Mines of the work specified in the underwritten memorandum at an amount of Rs..... (Rupees.....) Within time specified in such memorandum at the rates specified therein, and the accordance in all respects with the specification designs, drawings and instructions in writing referred to in Rules 1 hereof and in clause 11 of the conditions of contract and with such materials as one provided for, by and in all respects in accordance with such conditions so far as applicable.

Memorandum :

- | | | |
|------|---|-----|
| a) | General description | |
| b) | Estimated cost | Rs. |
| i) | Building work | Rs. |
| ii) | Sanitary installations, water supply & drainage | Rs. |
| iii) | Electrical work | Rs. |
| c) | Earnest money | Rs. |
| d) | Security Deposited | Rs. |

i) 10% of the tendered value of the work will be deducted as security deposits.

The security deposit will be collected by deduction from the running bills of the contractor of the rates mentioned above and the earnest money if deposited in cash at the time of tender will be treated as part of security deposit.

e) Time allowed for the work from the day after the date of written order to commence..... month(s)days

Should this tender be accepted in whole or in part, I/We hereby agree (i) to abide by and fulfill all the terms and provisions of the said conditions annexed hereto and all the terms and provisions contained in notice inviting tenders so far as applicable and/or in default thereof to forfeit and pay to the Director, ISM or his successors in office the sum of money mentioned in the said conditions. A sum of ₹..... is hereby forwarded in Treasury Challan/Deposit at Call Receipt of a Scheduled Bank guaranteed by the Reserve Bank of India as Earnest money. If I/we fail to commence the work specified in the above memorandum I/we agree that the said Director or his successors in office shall without prejudice to any other right or remedy be at liberty too forfeit the said Earnest Money absolutely, otherwise the said Earnest Money shall be retained by him towards security Deposit mentioned against clause (d) of the above mentioned Memorandum: (ii) to execute all the works referred to in the tender document upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered upto a maximum of 50 (fifty) percent herein after referred to as the deviation limit of tendered amount at the rates quoted in the tender documents and those excess of that limit at the rates to be determined in accordance with the provisions contained in Clause 12A of the tender form.

Dated: the day of 200

Witness: 1.
2.

Address.....Occupation

Signature of the Contractor

CONDITIONS OF CONTRACT

Definitions.

- 1) The "Contract" means the documents forming the tender and acceptance thereof and the formal agreement executed between the Registrar ISM and the Contractor together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer in charge and all these documents taken together shall be deemed to form on e contract and shall be complementary to on another.
 - 2) In the contract the following expression shall unless the context otherwise requires, have the meaning hereby respectively assigned to them.
 - a) The expression "Work" or Works shall unless there be something either in the subject or context repugnant to such construction be constructed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent and whether original, altered, substituted or additional.
 - b) The 'Site" shall mean the land and or other places on into or through which 'Work" is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose or carrying out the contract.
 - c) The 'Contractor' shall mean the individual or firm or company whether incorporated or not undertaking the works and shall include the legal personal representative or such individual or the persons composing such firm or company or the successors or such firm or company and the permitted assigns of such individual or firm of firms of company.
 - d) The Director means the Director, Indian School of Mines.
 - e) ISM or Indian School of Mines shall mean the Registrar Indian School of Mines.
 - f) The term Registrar includes Registrar, Indian School of Mines and who shall sign agreement on behalf of the School.
 - g) The "Engineer-in-Charge" means the Campus Engineer/Asstt. Campus Engineer in charge of the work and who shall sign and other documents connected with contract work on behalf of School.
- Words imparting the singular number include the plural number and vice versa.

Security Deposit:

CLAUSE – 1:

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit ISM at the time of making any payment of him for work done under the contract to deduct such sum as along with the sum already deposited as earnest money will amount 10% of the tendered value of the work.

Such deductions will be held by ISM by way of security deposit. Provided always that the ISM for this purpose shall be entitled to recover 10% percent the amount of each running bill till the balance of the amount of Security Deposit is realized.

Compensation for delay:

CLAUSE 2:

The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor for and shall be deemed to be of the essence of the contract on the part of the contractor and shall be reckoned from the tenth day after the date on which the order to commence the work is issued to the contractor. The work shall throughout the stipulated period of the contract be proceeded with all due diligence and the contractor shall pay as compensation an amount equal to on percent per day or such smaller amount as the Campus Engineer/Asstt. Campus Engineer (Whose decision in wiring shall be final) may decide on the amount of the tendered cost of the whole work as shown in the tender for every day that the work remains uncompleted or unfinished after the proper dates. and further to ensure good progress during the execution of the work. The contractor shall be bound in all cases in which the time allowed for any work (save for special jobs) to complete one eighth of the whole of the work before one fourth of the whole time allowed under the contract has elapsed three-eighths of the work, before one-half of such time has elapsed, the three-eighths of the work before one-half of fourths of such time has elapsed. However for special jobs if a time schedule has been submitted by the contractor and the same has been accepted by Engineer-in-charge the contractor shall comply with the said time schedule.

In the event of the contractor failing to comply with condition be shall be liable to pay as compensation an amount an amount equal to one percent or such smaller amount as the Campus Engineer/Asstt. Campus Engineer (Whose decision in writing shall be final) may decide on the said tendered cost of the whole work for everyday that the due quantity of work remains incomplete. Provided always that the entire amount of compensation to be paid under the provisions of the clause shall not exceed ten percent on the tendered cost of the work as shown in the tender.

CLAUSE – 3

The Campus Engineer/Asstt. Campus Engineer may without prejudice to his right against the contract in respect or any delay inferior work man ship or otherwise or to any claims for damage in respect of any breaches of

the contract and without prejudice to any rights of remedies under the any of the provisions of this contract or otherwise and whether the date for completion has or has not elapsed by notice in writing absolutely determine the contract in any of the following cases:

- i) If the contractor having been given by the Campus Engineer/Asstt. Campus Engineer a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in any inefficient otherwise improper or unworkman like manner shall omit to comply with the requirements of such notice for a period of seven days there after or if one contractor shall delay or suspended the execution of the work so that either in the judgment of the campus Engineer (which shall be final and binding) he will be unable to secure completion of the work, by the date for completion or he has already failed to complete the work by that date;
- ii) If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf or a creditor shall be appointed or if circumstances shall arise which entitle the court of creditor to appoint a receiver or a manager or which entitle the court to make a winding up order;
- iii) If the contractor commits breach of any of the terms and conditions of this contract;
- iv) If the contractor commits any acts mentioned in clause 18 thereof. When the contractor has made himself liable for action under any of the cases aforesaid, the Campus Engineer/Asstt. Campus Engineer on behalf of the Director Indian School of Mines shall have powers;
 - a) To determine or rescind the contract as aforesaid (of which termination or recession notice in writing to the contractor under the hand of the Engineer-in-charge shall be conclusive evidence). Upon such determination of rescission the security deposit of the contractor shall be liable to forfeit and shall be absolutely at the disposal of ISM.
 - b) To employ labour paid by the ISM and to supply material to carry out the work or any part of the work debiting the contractor with the cost of the labour and the price of the materials (of the amount of which cost and price certified by the Engineer-in-charge shall be final and conclusive against the Contractor) and crediting him with the value of the work done in all respects in the same manner and at the same rates as if it has been carried out by the contractor under the terms of his contract certificate of the Campus Engineer/Asstt. Campus Engineer as to the value of the work done shall be final and conclusive against the contractor, provided always that action under the sub-clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the department are less than the amount payable to the contractor at his agreement rates, the difference should not be paid to the contractor.

c) After giving notice in the contractor to measure up the work of the contractor and to take such part thereof as shall be unexecuted out of his hands and to give it to another contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor in the whole work has been executed by him (of the amount of which excess the certificate in writing of the Engineer-in-charge shall be final and conclusive, shall be borne and paid by the original contractor and may be deducted from any money due to him by ISM under this contract or an any other account whatsoever or from his security deposits.

In the event of any one or more of the above courses being adopted by the Engineer-in-charge the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereto for actually performed under this contract unless and until the Engineer-in-charge has certified in writing the performance of such work and the value payable in respect thereof and be shall only be entitle to be paid the value so certified.

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Contractor to remain liable to pay compensation in action not taken under clause 3 Powers to take possession of or require removal of or sell contractor's plant.

CLAUSE – 4

In any case in which any on the powers conferred upon the Engineer-in-charge by clause 3 thereof shall have become exercisable and the same shall not be exercised, the non exercise thereof shall not constitute a waiver of any of the conditions thereof and such powers shall not with standing be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensation shall remain unaffected. In the event of the Engineer-in-charge putting in force all or any or the powers vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the contractor take possession of or at the sole discretion of the Engineer-in-charge which shall be final al or any tools, plant, materials and stores, in or upon the works or the site thereof belonging to the contractor or procured by the contractor and intended to be used for the execution of the work of any part thereof paying of allowing for the same in account at the contractor rates, or in the case of these not being applicable at current market rates to be certified by the Engineer-in-charge whose certificate thereof shall be final otherwise Engineer-in-charge by notice in writing may order the contractor or his clerk of the works foreman or other authorized agent to remove such tools, plant materials or stores from the premises (with a time to be specified in such notice) and in the event of the contractor failing to comply with any such requisition the Engineer-in-charge may remove them at the contractor's expense of sell them by auction or private sale on account of the contractor and at his risk in respect and the certificate of the Engineer-in-charge as to the expense of any

such removal and the amount of the proceeds and expense of such sale shall be final and conclusive against the contractor.

EXTENSION OF TIME:

CLAUSE 5:

If the Contractor shall desire an extension of time for completion of the work on the grounds of his having been unavoidably hindered in its execution or on any other ground, he shall apply in writing to Engineer-in-charge of the date of hindrance on account of which he desires such extension as aforesaid and the Engineer-in-charge shall, if in his opinion (which shall be final) reasonable grounds be shown therefore authorize such extension of time if any, as may, in his opinion, be necessary or proper.

Completion Certificate:

CLAUSE 6:

Within ten days the completion of the work, the contractor shall give notice of such completion to the Engineer-in-charge and the receipt of such notice the Engineer-in-charge shall inspect the work, and if there is no defect in the work shall furnish the contractor with a certificate of completion otherwise a provisional certificate of completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued but no certificate of completion, provisional or otherwise, shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials rubbish and all huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the work as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all wood work, doors windows walls floors or other parts of any building in upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution thereof and not until the work shall have been measured by the Engineer-in-charge. If the contractor shall fail to comply with the requirements of this clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of the work, the Engineer-in-charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc; and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realised by the sale thereof.

CLAUSE – 6A

When the annual repairs and maintenance of works is carried out, the splashes and droppings from white washing, colour washing, painting, etc. on walls, floors, doors, windows, etc, shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms quarters or premises etc. Where the work is done without waiting for the actual completion of all the other items of work in the contract. In case the contractor fails to comply with the requirements of this clause the Engineer-in-charge shall have the right to get this done at the cost of the contractor either departmentally or through agency. Before taking such action, the Engineer-in-charge shall give ten days notice in writing to the contractor.

CLAUSE 7: Deleted.

CLAUSE 8:

Before taking any measurement of any work as has been referred to Clause 6,7 and 8 thereof, the Engineer-in-charge or a subordinate disputed by him shall give reasonable notice to the contractor if the contractor fails to attend at the measurements after such notice or fails to countersign or to record the difference within a week from the date of measurements in the manner required by the Engineer-in-charge then in any such event the measurements taken by the Engineer-in-charge or by the subordinate deputed by him as the case may be shall be final and binding on the contractor and the contractor shall have no right to dispute the same.

CLAUSE 9:

The Engineer-in-charge shall have full powers to require the removal from the premises of all materials which in his opinion not are in accordance with the specifications and in case of default the Engineer-in-charge shall be at liberty to employ other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-in-charge shall also have full powers to require other proper materials to be substituted thereof and in case of default the Engineer-in-charge may cause the same to be supplied and all costs which may attend such removal and substitution are to be borne by the contractor.

CLAUSE 10:

The contractor on signing an indenture in the form to be specified by the Engineer-in-charge shall be entitled to be paid during the progress of the execution of the work upto 75% of the tender value of any materials which are in the opinion of the Engineer-in-charge non perishable and are in accordance with the contract and which have been brought on the site in connection therewith and are adequately stored and/or protected against damage by weather or other causes but which have not at the time of advance has been made under this sub-clause are incorporated in the work the amount of such advance shall be deducted from the next payment made under any of the clause or clauses of this contract.

CLAUSE 10A:

The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work etc. as ISM property and such materials shall be disposed of to the best advantage of ISM according to the instruction in writing issued by the Engineer-in-charge.

CLAUSE 11:

The contractor shall execute the whole and every part of the work in the most substantial and workman like manner and both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also confirm exactly fully and faithfully to the designs, drawings and instructions in writing in respect of the work signed by the Engineer-in-charge and the contractor shall be furnished free of charge one copy of the specifications, such designs, drawings and instructions as are not included in the "Specifications for works" in force from time to time or any other printed publication on General Specification referred to elsewhere in the contract.

Alteration in Specifications and Designs

CLAUSE 12:

The Engineer-in-charge shall have power to make any alterations in omissions from additions to or substitution for, the original specifications that may appear to him to be necessary during the progress of the work and the contractor shall carry out the work in accordance with any instructions which may be given to him to writing by the Engineer-in-charge and such alterations omissions additions or substitutions shall not invalidate the contract and any altered, additional or substituted work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work. The time for the completion of the work shall be extended in the proportion that the altered, additional or substituted work bears to the original contract work, and the certificate of the Engineer-in-charge shall be conclusive as to such proportion over & above this a further period to the extend of 25% of such extension shall be allowed to the contractor.

Action and Compensation payable in case of bad work

CLAUSE- 13:

If it shall appear to the Engineer-in-charge or his subordinate in charge of the work that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of any inferior description or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted for or otherwise not a accordance with the contract, the contractor shall on demand in writing which shall be made within six months of the completion of the work from the Engineer-in-charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for, forthwith rectify, or remove and reconstruct the work so specified in whole or in part as the case may require or as the case may be remove the materials or articles so specified and provide other proper and suitable materials or articles at his own proper change and cost and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in his demand aforesaid then the contractor shall be liable to pay compensation at the rate of one percent on the tendered amount for every day not exceeding ten days while his failure to do so shall continue and in the case of any such failure, the Engineer-in-charge may rectify or remove and re-execute the work or remove and replace with others, the materials or articles complained of or as the case may be at the risk and expense in all respects of the contractor.

Works to be open to inspection

CLAUSE 14:

All work under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Engineer-in-charge and his authorized subordinates, and the contractor shall at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-charge or his subordinate to visit the works shall have been given to the contractor; or either himself be present to receive order and instructions or have a responsible agent duly accredited in writing present for that purpose. Orders given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself. The work during its progress can also be inspected by the Director/Registrar.

Notice to be given before work is covered up

CLAUSE 15:

The contractor shall give notice in writing to the Engineer-in-charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order the at the same may be measured and correct dimension thereof taken before the same is so covered up or placed beyond the reach of measurement and shall not cover up and place beyond the reach of measurement, any work without the consent in writing of the Engineer-in-charge or his authorized subordinate in charge of the work and the Engineer-in-charge of his authorized subordinate the work in charge shall within the aforesaid work and if any work shall be covered up or placed beyond the reach of measurement without such notice having been of the Engineer-in-charge consent being obtained the same shall be uncovered at the contractor's expense or in default thereof no payment or allowance shall be made for the such work of the materials with which the same was executed.

Contractor liable for damage done and for imperfections noticed within the prescribed maintenance period after the certificate.

CLAUSE 16:

If the contractor of his working people or servants shall break deface, injure or destroy part of building in which they may be working, or any building, road, road curb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grass land, or cultivated ground contiguous to the premises on which the work or any part of it is being executed, or if any damage shall happen to the work while in progress from any cause whatever or if any defect, shrinkage or other faults appear in the work after a certificate final or otherwise of its completion shall have been given by the Engineer-in-charge as aforesaid arising out of defective or improper materials or workmanship the contractor shall upon a receipt of a notice in writing on that behalf make the same good at his own expenses or in default the Engineer-in-charge may cause the same to be made good by other workmen and deduct the expense from any sums that may be then or at any time thereafter became due to the contractor or from security deposit. The security deposits of the contractor except the portion pertaining to asphaltic work.

Contractor to supply all plant, ladders, scaffoldings etc.

CLAUSE 17:

The contractor shall provide at his own cost all materials (except such special materials, if any as may in accordance with the contract be supplied from the Engineer-in-charge's stores) plant tools appliances, implements, ladders, cordage, tackle, scaffolding and temporary works requisite or proper for the proper execution of the work, whether original, altered or substituted and whether included in the specification or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefore to and from the work. The contractor shall also supply without charge the requisite number of setting out works and counting weighing and assisting in the measurement or examination at any time and from time to time of the work or materials. Failing his so doing the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted from any money due to the contractor under the contract and/or from his security deposit or the proceeds of sale thereof or of a sufficient portions thereof.

Work not to be sublet contract may be rescinded and security deposit forfeited for subletting. billing or if contractor becomes insolvent.

CLAUSE 18:

The contract shall not be assigned or sublet without the written approval of the Engineer-in-charge and if the contractor shall assign or sublet his contract or attempt so to do, or insolvent or commence any insolvency proceedings of make any composition with his creditors or attempt so to do, or if any bride gratuity, loan perquisite, regard or advantage pecuniary or otherwise, shall either directly, be given promised or offered by the contractor, or any of his servants or agent to any public officer of person in the employ of government in any way relating to his office of employment, or if any such officer of person shall become in any way directly or indirectly interested in the contractor, the Engineer-in-charge on behalf of the ISM shall have power to adopt any of the course specified in Clause 3 as he may deem best suited at the interest of ISM and in the event of any of these coursed being adopted the consequences specified in the said Clause 3 shall ensure sum payable by way of reference to actual loss.

CLAUSE 19:

Except where otherwise provided in the contract all questions and disputes relating to the meaning of specification, design, drawings and instructions here in before mention and as to the quality of workmanship or materials used on the work or as to any other question, claim, right matter or thing whatsoever in any way arising out of or relating to the contract, design, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the execution or failure to execute the same whether arising during the progress or the work or after the completion or abandonment thereof shall be referred to the sole arbitration of the person appointed by the Director/Indian School of Mines, in charge of the work at the time of dispute or if there be no director, the Administrative head Registrar of the said Indian School of Mines at the time of such appointment. If will be no objection to any such appointment that the arbitrator so appointment is a ISM Officer, that he has to deal with the matters to which the contract relates and that in the course of his duties as

ISM Officer he had expressed views on all or any of the matters in dispute or difference. The arbitratory to whom the matter is originally referred being transferred or vacating his office or being unable to act for any reason such Director or Administrative head as aforesaid at the time of such transfer, vacation of office of inability to act, shall appoint another person to act as arbitrator in accordance with the terms of the contract. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessors. It is also a term of this contract that no person other than a person appointed by such Director or Registrar, as aforesaid should act as arbitrator and if any reason that is not possible, the matter is not to be referred to arbitration at all. In all cases

where the amount of the claim in dispute is ₹ 55,000/- (Rupees Fifty five thousand) and above, the arbitrator shall give reason for the award.

Subject as aforesaid the provisions of the Arbitration Act, 1940, or any statutory modification or reenactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.

It is also a term of the contract that the party invoking arbitration shall specify the dispute to be referred to arbitration under this clause together with the amount or amounts claimed in respect of each such dispute.

It is also a term of the contract that if the contractor(s) do/does not make any demand for arbitration in respect of any claim(s) will be deemed to have been waived and absolutely beard and the ISM shall be discharged and released of all liabilities under the contract in respect of these claims.

The arbitrator(s) may from time to time with consent of the parties enlarge the time form making and publishing the award.

The decision of Campus Engineer/Asstt. Campus Engineer regarding the quantum of reduction as well as justification thereof in respect of rates for substandard work which may be decided to be accepted will be final and would not be open to arbitration.

Lump sum in estimates:

CLAUSE 20:

When the estimate on which a tender is made includes lump sums in respect of parts of the work the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates, as are payable under this contract for the such items, or if the part of the work in question is not, in the opinion of the Engineer-in-charge payable of measurement, the Engineer-in-charge may at his discretion pay the lump sums amount entered in the estimate, and the certificate in writing of the Engineer-in-charge shall be final and conclusive against the contractor with regards to any sum or sums payable to him under the provisions of the clause.

CLAUSE 21:

In the case of any class of work for which there is no such specification as is mentioned in Rule 1, such work shall be carried out in accordance with the local specification and in the event of there being no local specification, then in such case the work shall be carried out in all respect in accordance with the instructions and requirements of the Engineer-in-charge.

CLAUSE 22:

Withholding and lien in respect of sums claimed.

Whenever any claim or claims for payment of a sum of money arises out of or under the contract against the contractor, the Engineer-in-charge of the Government shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in apart from the security , if any deposited by the contractor and for the purpose aforesaid, the Engineer-in-charge or the Government shall be entitled to withhold the security deposit if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or no security has been taken from the contractor, the Engineer-in-charge or the Director shall be entitled to with hold and have a lien to retain to the extent of such claimed amount of amounts referred to above from any sum or sums found payable to the contractor under the same contract or any other contract with the Engineer-in-charge or ISM or any contracting person through the Engineer-in-charge pending finalization of adjudication of any such claim.

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It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above, by the Engineer-in-charge or Director fill the claim arising out of or under the contract is determined by the Arbitrator (if the contract is governed by the arbitration clause) by the competent court, as the case may be and that the contractor will have no claim for interest or damages whatsoever or any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause where the contractor is a partnership firm or a limited company, the amount or amounts whole or in part from any sum found payable to any partner/limited company as the case may be whether in his individual capacity or otherwise.

CLAUSE 23:

Lien in respect of claims in other contracts:

Any sum of money due and payable to the contractor (including the security deposit returnable to him) under the contract may be with held or retained by way of lien by the Engineer-in-charge or the Director or any other contracting persons through Engineer-in-charge or ISM or such other person or persons in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Engineer-in-charge or ISM or with such other person or persons.

CLAUSE 24 :

The whole work may be spilled up between two or more contractors or accepted in part on not in entirely, if considered expedient.

CLAUSE 25:

Sales Tax or any other tax on materials in respect of this contract shall be payable by contractor and ISM shall not entertain any claim whatsoever in this respect.

- ii) If pursuant to or under any law such notification or order any royalty, cess, fee or the like becomes payable by the Indian School of Mines and does not at any time become payable by the contractor to the State Govt./Local authorities in respect of any material used by the contractor on the works therein such a case, it shall be lawful to the Indian School of Mines and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from the dues of the contractor.

CLAUSE 26 :

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Executive Engineer on behalf of the ISM shall have the option of terminating the contractor without compensation to the contractor.

CLAUSE 27 :

Before start of the work all materials are to be deposited and got inspected by Engineer – in-charge in terms of quality and quantity.

CLAUSE 28 :

The contractor will comply with all the provisions of minimum wage Act 1948, contract labour (Regulation and abolition) Act. 1970 and rules framed there under and other labour laws effecting contract labour that may be brought into force from time to time.

CLAUSE 29 :

The contractor is to indemnify on keeping hardness the employer from all claims for accidents loss or damage to his workmen through the operation of this contract.

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CLAUSE 30 :

The Engineer-in-charge shall be at liberty to dismiss any person employed by the contractor who in his opinion is unskilful or incompetent.

CLAUSE 31 :

The work is to be stopped during unfavorable weather at the discretion of the Engineer-in-charge and the contractor is to make any allowance required to cover any costs of loss of profit incurred through such stoppage.

CLAUSE 32 :

Specification for structural steel work, galvanizing & Erection :-

1). Structural Steel work :

a) Steel :

All structural steel shall conform to IS : 2062 Grade A (latest) & shall be of tested quality, recent manufacture & free from mill scales, slag intrusions, laminations, pitting, flake rusts etc.

b) Zinc :-

The zinc required for galvanizing shall be of quality Zn 99.95 & shall conform to IS : 209 (latest).

c) Bolts & Nuts :-

All M.S. bolts & nuts shall conform to IS : 6639 (latest) & IS : 12427 (latest). The step bolts should conform to IS : 10238 (latest). The bolts shall be of property class 5.6 as specified in IS : 1367 (Pt.-3)-1979 & nuts shall be of property class 5 as specified in IS : 1367 (Pt.-6)-1980. All bolts & Nuts shall be galvanized & tested in accordance with IS : 2633 (latest) & shall have hexagonal heads & nuts, the heads being forged out of the solid, truly concentric & square with the shank which must be perfectly straight. Fully threaded bolts shall not be used. The length of bolts shall be such that the threaded portion will not extend into the plane of contact of the member. The threaded portion of each bolt shall project through the nut at least 6 mm when fully tightened. All nuts shall fit hand tight to the point where the shank of the bolt connects to the head. M/s GKW/TATA/ASP/BI make bolt & nuts shall be used. Diameter of bolt shall be 16 mm.

d) Washers :

All pack washers shall be made of steel conforming to IS : 2062 Gr.A (latest). The plain washers & heavy washers shall conform to IS : 2016 & IS : 6610 (latest) respectively. 3 mm square section spring washers of positive lock type shall be used with all bolts & nuts & shall conform to IS : 3063 (latest) and shall be electrogalvanized in accordance with service conditions 3 of IS : 1573 (latest).

e) Fabrication :-

- i) The fabrication of structures shall be in accordance with relevant clauses of IS : 800 & IS : 802 (Part-II) latest.
- ii) All parts of the structures shall be fabricated in accordance with drawing to be supplied ISM.
- iii) Structures shall be of bolted construction unless otherwise specified unless specially demanded welding at no point shall be permitted.
- iv) Structures shall be accurately fabricated, to bolt together easily at the site without any undue strain on the structural members or in the bolts. Otherwise the structure or parts of it will be rejected

- v) Structures demand accurate drilling/punching of holes with high standard of workmanship. No bolt holes shall be more than 1.5 mm larger than the corresponding bolt diameter. Holes shall be drilling or punched to jig, but drilled holes shall be preferred and any must be perfectly circular and no tolerance in this respect is permissible.
- vi) All steel sections, before any cutting work is started shall be carefully leveled, straightened and made true by methods which shall not injure the material. They shall again be trued up after being punched and drilled. No rough edges shall be left. Bends, if any shall be thoroughly cold straightened without injury. Shearing shall be neat & edges shall be planed & trimmed, as necessary.
- vii) Workmanship & finish shall correspond to the best & modern practice. All similar parts be made interchangeable. No rough edges shall be permitted any where throughout the work. The structure shall be so fabricated that all parts be accessible for inspection & cleaning. Drain holes shall be provided at all points where pockets or depressions are likely to hold water.
- f) Marking of Members :-
Each individual member shall carry a stamped mark (number) assigned to it in the approved Drawings. These stamping shall be done by a metal die before galvanizing and on optimum depth so as to be clearly legible after galvanizing. Further more, the mark No. should be stenciled in indelible ink on each member after galvanization.

2). Galvanisation :-

The galvanizing shall be as per IS : 2633 (latest). Zinc coating over galvanized surface of structure members and threaded fasteners shall not be less than 610 gms per sq.m. & 375 gms per sq.m respectively. Uniformity of galvanization shall be determined by the preece Test. The samples shall withstand four one minutes dips for passing the test. Contractor should submit regularly the result of all the tests performed to ISM for approval.

Campus Engineer/Asstt Campus Engineer or their authorized representative will witness the tests. Hot dip galvanizing of the structural members shall conform to IS : 2629 (latest) and IS – 4759 (latest) and that for bolts & other fasteners, shall conform to IS : 1367 (Part-XIII) latest. All galvanizing material shall withstand test as per IS 2633 (latest). The weight of Zn coating shall be determined as per method stipulated in IS – 2633 (latest).

3). Erection :

The complete erection of the steel work is a part of a contract and the contractor shall be responsible for determining the erection procedure as well as for providing temporary bracing and connections and shall be liable for loss or damage resulting from faulty erection. All materials shall be effectively protected from injury, while at the shop in transit, until erection complete and inspected & accepted.

The structural steel erection work shall commence only after the foundations have been checked and passed by the Engineer. The work shall include, besides the scope specified elsewhere in this specification, the following.

- a) Straightening and repairing on ground and materials damaged in transit and assembling, bolting, riveting or welding of all connections on ground or in position. Straightening of erected members will not be permitted. The structures shall be ground assembled in largest possible size which can be erected with the equipment available.
- b) Varnishing and applying the base coat of paint damaged in transit and/or site connection and splice.
The contractor shall erect all necessary guys and braces to ensure proper alignment and stability until all members are permanently connected. Such temporary guys and braces shall be maintained in place until, in the opinion of the Engineer they can be removed without danger to the stability of the structure.
As each part of the work is erected, it shall be passed by the Engineer. This particularly applies to accurate plumbing of all stanchions or columns, leveling, setting, aligning and fixing of the various parts and adjusting of bearings. Free movement shall be ensured where required for contractions and expansions. Variations from Engineer's drawings shall be checked, noted and reported to the Engineer immediately. Prior to erection the contractor shall ascertain from the Engineer as to which parts will be inspected and passed from time to time. Such passing will not, however, exonerate the contractor from this responsibility for proper erection.
The contractor shall furnish, at his own expense, necessary staging and hoisting of all materials or equipments required for the erection of the structure and shall remove and take away when the work is complete. Where directed, the staging and hoisting equipment and materials shall be non-inflammable.
All necessary cutting, punching, drilling, welding & fitting including cutting & making good concrete and or masonry or other adjacent work for installation of the structural & miscellaneous steel work shall be included. The contractor shall also make necessary modifications to the existing or already stated work (by other contractors) & make firm connections thereto of the structural & miscellaneous steel as directed or as approved by the Engineer.
Welding work shall be performed only by qualified welders who have passed qualification tests in accordance with the codes.

CLAUSE 33 :

A satisfactory work completion certificate from individual occupant/HODs may be obtained on completing the work by the contractor before measurement is taken.

I have read the whole content of the above conditions of contract understand and agreed to abide by the above terms and conditions.

Date :

(Signature of Contractor)

Occupation :

Address:

Witness :

1)

2)



Campus Engineer
IIT(ISM), Dhanbad