

PART I

CHAPTER I

INSTRUCTIONS TO TENDERERS & CONDITIONS OF TENDERING.

TENDER PAPERS : 1.1.1

The instructions to Tenderers and conditions of Tendering, special conditions of Contract, Prices, Payment and Explanatory Notes, specification, Indian Railway standard General Conditions of contract 2022 (IRSGCC-2022) as amended/corrected upto latest correct slips, schedule of approximate quantities and forms for Tenders, included in part-I to V shall, hereafter, be collectively referred to as the Tender papers.

The intending Tenderer is advised to study the Tender Papers carefully. The tenderer shall also acquaint himself with the local conditions, means of access to the site of work, nature of work and all other matters pertaining thereto.

The submission of Tender shall be deemed to have been done after careful study and examination of the Tender papers with a full understanding of the implications thereof.

INTERPRETATIONS : 1.1.2

The following terms wherever occurring in the Tender Papers and wherever used throughout the execution of the work shall, unless excluded by or repugnant to the context, have the meaning attributed thereto as follows :

"CONTRACT"

Means the Contract resulting from the acceptance by the Purchaser of this Tender either in whole or in part.

"CONTRACTOR"

Means the person, firm or company whether incorporated or not who enters into the contract with the Railway and shall include their executors, administrators, successors and permitted assigns.

"CONTRACTOR'S AGENT"

Shall mean the person or persons authorised under a duly executed power of Attorney to take all actions relating to the work, as could be taken by the Contractor himself. In the case of a firm of Contractors, the Agent shall have the same powers as that of the Managing Director of the firm.

"CONTRACTOR'S REPRESENTATIVE"

Shall mean a person in supervisory capacity who shall be so declared by the Contractor and who shall be authorised under duly executed power of Attorney to receive materials issued by the Purchaser to the Contractor for the works. He shall be responsible for proper execution of works at each or all places and shall take orders from Purchaser's Engineers and carry out the same.

"ENGINEER"

Shall mean the Divisional /District Engineer/Electrical Engineer or the Executive Engineer in executive charge of the Railway Electrification works and shall include the superior officers of the Railway Electrification Project. He is responsible for ensuring that all field works covered by the contract are carried out in accordance with approved designs, drawings and specifications and conditions of contract as agreed to. He is also responsible for prices and terms of payment.

"EQUIPMENT"

Means all or any equipment considered necessary by the Purchaser's Engineers for the satisfactory operation, as a whole, of the Installations, including structures, foundations etc.

"GENERAL MANAGER"

Means the officer in Administrative charge of this Railway Electrification and shall mean and include the officers to whom the functions are delegated. His postal address shall be intimated to the successful Tenderers in due course.

"MONTH"-

Means any consecutive period of thirty days.

"MATERIALS"

Means all equipments components, fittings and other materials including raw materials required to complete the work.

"PURCHASER"

Means the President of India acting through his accredited officers or any one of them. The General Manager or Sr. Divisional Electrical Engineer, Traction distribution, Bangalore, In-charge of this for the general superintendence and control, South Western Railway shall be deemed to be one of such accredited officers.

"PURCHASER'S ENGINEERS"

Means the Engineers appointed by the Purchaser, as indicated in Part-III of the Tender Papers who will decide all matters relating to design, manufacture, installation and commissioning of the plant and equipment at site.

"RAILWAY"

Means the Railway(s) in whose territorial jurisdiction the work is to be carried out and includes the Government of India, Ministry of Railways (Railway Board) and/or General Manager/ CAO(CN) of the South Western Railway concerned.

"SITE"

Means the areas to be taken up by the permanent works, together with any other area or areas as shall be determined by the Purchaser's Engineers, which may be placed at the disposal of the Contractor for the purpose of the contract and also such area or areas used for store yards, works yards or workshop in proximity of the works as the Purchaser's Engineers may have authorised as an extension of the site, irrespective of the terms and conditions under which they are occupied by the Contractor.

"TENDERER"

Means and includes any firm of Engineers or Contractors or any company or body, corporate or otherwise, who submit the Tender which has been invited.

"WORK OR WORKS"

Means all or any of the items of the work for which the Tenderer/Contractor has Tendered/contracted according to the specifications, drawings and annexures hereto annexed or to be implied there from, or incidental thereto or to be hereafter specified or required in such explanatory instructions and drawings, being in conformity with the original specifications, drawings, annexures and schedules, and also such instructions and drawings additional to the aforementioned as may from time to time be issued by the Purchaser's Engineer during the progress of the contracted work.

"WRITING"

Includes all matters written, typewritten or printed either in whole or in part.

GENERAL : 1.1.3

- (a) All documents to be submitted in connection with this TENDER SHALL BE WRITTEN IN ENGLISH AND digitally signed then uploaded to www.ireps.gov.in
- (b) --- DELETED ---
- (c) **METRIC**

Dimensions, weights etc. SHALL BE QUOTED IN METRIC system. The term "tonne"=1,000 kg. shall be used to indicate a metric tonne (M.T).

- (d) The definitions of the technical terms used will be the same as given in the international electro technical vocabulary.

CLARIFICATIONS : 1.1.4

Any clarification required by the Tenderer may be obtained from the authority inviting the tender or his successor/nominee.

EARNEST MONEY : 1.1.5

Minimum Eligibility Criteria: 1.1.6

As per NIT.

FORM OF TENDER : 1.1.7

The Tender Bid shall be submitted online on www.ireps.gov.in along with the entire mandatory documents required.

(a) Tenders not uploaded with mandatory documents as per NIT are liable to be rejected.

All FORMs shall be uploaded as indicated on www.ireps.gov.in and shall be properly indexed.

(b) (i) Documents to be uploaded with tender as per the eligibility criteria and mandatory documents as prescribed in NIT of the tender.

(c) (ii) Commercial (Price elements) of the tender shall be quoted on IREPS Website.

(c) - Deleted –

All mandatory documents are to be submitted by the tenderer failing which their offer will be summarily rejected

(d) Alternative proposals

Should the Tenderers have alternative proposals for basic arrangements, typical designs and specifications drawings for components and materials (See Para 1.1.10) which the Tenderer considers would improve the operating performance of the equipment or would reduce the cost of the equipment, he shall incorporate them in the Tender for consideration by the Purchaser **Form-4**. He shall clearly indicate in detail the technical and /or financial advantages which would accrue to the Purchaser, specifically for each alternative proposal suggested by him.

PRICE : 1.1.8

This is a works Contract. The prices to be paid for supply and erection of various items of work or for materials and other amount payable, shall be in accordance with accepted schedules or prices or rates as governed by the terms and conditions of payment included in Part-I, Chapter- IIIA, IIIB & IIIC for OHE, TSS & SCADA - Prices and Payment.

1.1.9 -Deleted-

SPECIFICATIONS AND DRAWINGS : 1.1.10

(a) The Tenderer shall follow the standard general arrangement drawings and other drawings and specification relating to the equipment, components and fittings specified in the Tender paper. A list of standard drawings and specifications is enclosed as in Annexures in Part-IV. Copies of the above standard drawings are available for inspection in the drawing office of the Sr. Divisional Electrical Engineer, Traction Distribution, DRM office, Ground floor, Near city railway station, Bengaluru- 560023

or his successor/ nominee (whose address will be intimated in due course). If the Tenderer so desires he may purchase full sets of drawings and specifications from the office of The Director General (TI), Research Designs & Standard Organization, Manak Nagar, Lucknow 226011, on payment.

(b) Meaning and intent of specifications and drawings -

If any ambiguity arises as to the meaning and intent of any portion of the specifications and drawings or as to execution of quality of any work or material or as to the measurements of the works, the decision of the Engineer Incharge shall be final subject to appeal (within seven days of decision being intimated to the Contractor) to the Sr. Divisional Electrical Engineer, Traction distribution, DRM office, Ground floor, Near city railway station, Bengaluru- 560023 who shall have the power to correct any errors, omission or discrepancies in the specifications, drawings, classification of work or materials, and whose decision in the matter in dispute or doubt shall be final and conclusive.

Milestone for stages of completion for work (Schedule of work): 1.1.11

As per preamble for this work

Signing of Tenders: 1.1.12

Refer Preamble Clause 13.

TENDERER'S ADDRESS : 1.1.13

Every Tenderer shall state in the Tender his postal address with Email-Id and Mobile phone number fully and clearly. Any communication sent to the Tenderer by post at his address shall be deemed to have reached the Tenderer duly and in time notwithstanding the fact that the communication did not reach the Tenderer at all or in time for whatever reason. Important documents shall be sent by Registered Post, Fax and Email.

ERASURE OR ALTERATION : 1.1.14

No erasure or alteration in the text of the Tender Papers is permitted and any such erasure and /or alteration will either be disregarded or render the whole Tender void at the option of the Purchaser.

RESULT OF TENDER: 1.1.15

No tender shall be deemed to have been accepted unless such acceptance has been notified in writing to the successful Tenderer by the Purchaser.

PURCHASER NOT BOUND TO ACCEPT ANY TENDER: 1.1.16

The Purchaser shall not be bound to accept the lowest or any Tender or to assign any reason for non-acceptance or rejection of a Tender. The work load on tenderers shall only be considered at this stage. The Purchaser reserves the right to accept any Tender in respect of the whole or any portion of the work specified in the Tender Papers or to sub-divide the work among different Tenderers or to reduce the work or to accept any Tender for less than the tendered quantities without assigning any reason whatsoever.

TENDER AN AGREEMENT : 1.1.17

The fact of the submission to the Purchaser of a Tender shall be deemed to constitute an Agreement between the Tenderer and the Purchaser whereby such Tender shall remain open for acceptance either in part or in full, or as may be modified by negotiation, by the Purchaser for a period mentioned in the NIT from the date on which Tenders are opened, during which period the Tenderer shall not withdraw his offer nor amend, impair or derogate there from. The Earnest Money deposited shall be forfeited if the Tenderer unilaterally withdraws, amends, impairs or derogates from the Tender in any respect within the said period mentioned in NIT. The Tenderer shall be deemed to have agreed as aforesaid in consideration of his Tender being considered by the Purchaser in terms hereof provided the same has been duly submitted and is otherwise in order. When the successful Tenderer is notified in writing at his address given in the Tender within the said period mentioned in NIT of this Tender has

been accepted by the Purchaser either in whole or in part, he shall be bound by the terms of agreement constituted by Purchaser until a formal Contract has been executed between him and the Purchaser in replacement of such Agreement as provided for in para 1.2.16.

TENDERS CONFIDENTIAL : 1.1.18

The Tenderer (whether his tender be accepted or not) shall treat the contents of his tender as private and confidential. He shall treat the prices quoted by him as strictly confidential till the tenders are opened (See Para 1.1.23).

CANVASSING AND BRIBERY : 1.1.19

(a) No Tenderer shall canvass any Government official or the Purchaser's Engineers in respect of this or any other Tender. Contravention of this condition will involve rejection of the Tender. This clause shall not be deemed to prevent the Tenderer from supplying the Purchaser any information asked for by him.

(b) Any bribe, commission, gift or advantage given, promised or offered by the Tenderer, or his partner, Agent or servant or any one on his or their behalf, to any officer, servant, representative or Agent of the Purchaser or any person on his or their behalf, in relation to the obtaining of this or any other contract with the Purchaser, shall, in addition to the criminal liability he may incur under the Prevention of Corruption Act (1908), subject the Tenderer to the cancellation of this and all other Tenders. Any question or dispute as to the commission of any offence under the present clause shall be decided by the Purchaser, in such manner and on such evidence or information as may be thought fit and sufficient, and his decision shall be final and conclusive in the matter.

(c) Employment/Partnership etc. of Retired Railway Employees:

(i) Should a tenderer be a retired Engineer of the gazetted rank or any other gazetted officer working before his retirement, whether in the executive or administrative capacity or whether holding a pensionable post or not, in the Engineering or any other department of any of the railways owned and administered by the President of India for the time being, or should a tenderer being partnership firm / company / joint venture (JV) / registered society / registered trust etc have as one of its partners a retired Engineer or retired gazetted officer as aforesaid, or should a tenderer being an incorporated company have any such retired Engineer or retired officer as one of its directors or should a tenderer have in his employment any retired Engineer or retired gazetted officer as aforesaid, the full information as to the date of retirement of such Engineer or gazetted officer from the said service and in case where such Engineer or officer had not retired from government service at least 1 year prior to the date of submission of the tender as to whether permission for taking such contract, or if the Contractor be a partnership firm or an incorporated company, to become a partner or director as the case may be, or to take the employment under the Contractor, has been obtained by the tenderer or the Engineer or officer, as the case may be from the President of India or any officer, duly authorized by him in this behalf, shall be clearly stated in writing at the time of submitting the tender. Tenders without the information above referred to or a statement to the effect that no such retired Engineer or retired gazetted officer is so associated with the tenderer, as the case may be, shall be rejected.

(ii) Should a tenderer or Contractor being an individual on the list of approved Contractors, have a relative(s) or in the case of partnership firm/ company / joint venture (jv) / registered society / registered trust etc. one or more of his shareholder(s) or a relative(s) of the shareholder(s) employed in gazetted capacity in the Engineering or any other department of the railway, the authority inviting tenders shall be informed of the fact at the time of submission of tender, failing which the tender may be disqualified/rejected or if such fact subsequently comes to light, the contract may be rescinded in accordance with provision in clause 62 of Indian Railway standard general conditions of contract-2022.

(b) The Contractor shall not, if he is a retired Government Engineer of Gazetted rank, himself engage in or employ or associate a retired Government Engineer of Gazetted rank, who has not completed one year from the date of retirement, in connection with this contract in any manner whatsoever without obtaining prior permission of the President and if the Contractor is found to have contravened this provision it will constitute a breach of contract and administration will be entitled to

terminate the contract and forfeit Earnest Money Deposit (EMD), Performance Guarantee (PG) and Security Deposit (SD) of that contract.

INDIAN LABOUR AND MATERIALS : 1.1.20

(a) The Tenderer shall utilise Indian labour including supervisory staff, for the execution of this contract to the maximum possible extent.

(b) The Tender shall be prepared on the basis that all the materials required to complete the works including those indicated in schedule 3 are procured from indigenous sources in full.

TENDERER'S CREDENTIALS : 1.1.21

The Tenderer shall upload his credentials all details as required as per eligibility/ qualifying criteria as given in NIT.

SUBMISSION OF TENDER : 1.1.22

Details of Tender Notice, Tender document and corrigendum issued from time to time along with eligibility criteria are available on the web site <https://www.ireps.gov.in>. The necessary changes if required would be posted on this web site during advertisement period and may be seen on web site. Tenderers may participate in above E-tender electronically through website <https://www.ireps.gov.in> only, & submission of manual offers against E-tender is not allowed. Manual offers, if submitted shall neither be opened nor considered.

OPENING OF TENDER : 1.1.23

Tender will be opened at the time and date prescribed in NIT, online on the website www.ireps.gov.in and in the office of the Sr. Divisional Electrical Engineer, Traction Distribution, DRM office, Ground floor, Near city railway station, Bengaluru- 560023 or his successor / nominee (whose address will be intimated in due course). After the opening of the tender bids, it shall be scrutinized and analyzed. If found necessary by the purchaser, the tenderer shall be asked to furnish the clarifications and the purchaser shall also hold discussions with the tenderer(s) after giving due notice.

MISCELLANEOUS : 1.1.24: Not applicable for this work

Tender documents are not transferable. The Tender Document Cost(TDC) is not refundable.

OMISSIONS & DISCREPANCIES: 1.1.25

Should a tenderer find discrepancies in or omissions from the drawings or any of the Tender Forms or should he be in doubt as to their meaning, he should at once notify the authority inviting tenders who may send a written instruction to all tenders. It shall be understood that every endeavor has been made to avoid any error which can materially affect the basis of the tender and the successful tenderer shall take upon himself and provide for the risk of any error which may subsequently be discovered and shall make no subsequent claim on account thereof.

CARE IN SUBMISSION OF TENDERS: 1.1.26

(a) Before submitting a tender, the tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the works, that all conditions liable to be encountered during the execution of the works are taken into account and that the rates he enters in the tender forms are adequate and all-inclusive to accord with the provisions in Clause-37 of the Indian Railway General Conditions of contract-2022 for the completion of works to the entire satisfaction of the Engineer.

(b) When work is tendered for by a firm or company of contractors, the tender shall be signed by the individual legally authorized to enter into commitments on their behalf.

1.1.27 Right of Railway to deal with Tenders:

(a) The railway reserves the right of not to invite tenders for any of Railway work or works or to invite open or limited tenders and when tenders are called to accept a tender in whole or in part or reject any tender or all tenders without assigning reasons for any such action.

(b) If the tenderer(s) deliberately gives/give wrong information in his/their tender or creates/create circumstances for the acceptance of his/their tender, the Railway reserves the right to reject such tender at any stage.

ANNEXURE – II

TENDERER'S CREDENTIALS (BID CAPACITY)

For costing more than Rs.20 Cr, the tenderers who meet the minimum eligibility criteria will be qualified only if their available bid capacity is equal to or more than the total bid value of the present tender.

The available bid capacity shall be calculated as under:

$$\text{Available Bid Capacity} = (A \times N \times 2) - B$$

Where,

A= Maximum value of contractual payments received in any one financial year during the current and last three financial years immediately preceding the current financial year, upto date of opening of tender, taking into account the completed as well as works in progress (Value to be taken from Form 12 A sheet 5)

N= Number of years prescribed for completion of work for which bid has been invited.

B= Value of existing commitments and balance amount of ongoing works with the tenderer to be completed in next 'N' years.

STATEMENT OF VALUE OF EXISTING COMMITMENTS AND BALANCE AMOUNT OF ONGOING WORKS WITH THE TENDERER (B) TO BE COMPLETED IN NEXT 'N' YEARS

(Table As per Form 12 D)

Balance commitments during N years as per NIT (B) = Rs.-----

$$\text{BID CAPACITY} = [A \times N \times 2] - B =$$

I/We do hereby solemnly affirm that the above furnished information is true and correct. Nothing has been concealed.

SIGNATURE AND STAMP OF BIDDER

Duly verified and certified

Chartered Accountant

NOTE:

- (a) The Tenderer(s) shall furnish the details of all existing commitments and balance amount of ongoing works of any value with tenderer as per the above Pro forma for statement of all works in progress and also the works which are awarded to tenderer but yet not started upto the date of opening of tender. In case of no works in hand, a 'NIL' statement should be furnished. This statement should be submitted duly verified by Chartered Accountant.
- (b) In case of JV, the tenderer(s) must furnish the details of existing commitments and balance amount of ongoing works with each member of JV as per the above form 12 D for statement of all works in progress and also the works which are awarded to tenderer but yet not started upto the date of opening of tender. In case of no works in hand, a 'NIL' statement should be furnished. This statement should be submitted duly verified by Chartered Accountant.
- (c) Value of a completed work/work in progress/work awarded but yet not started for a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above-mentioned technical eligibility criteria in the tender under consideration.
- (d) The arithmetic sum of individual "bid capacity" of all the members shall be taken as JV's "bid capacity".
- (e) A Partnership Firm fulfilling the technical eligibility criteria by name and style as mentioned in clause 15.14 of preamble shall submit the details of existing commitments and balance amount of ongoing works in the above Proforma for the partnership firm and for its individual partners.
- (f) In case, an Individual/ Proprietary firm or Concern which submits the tender, claiming the credentials /experience as partner /member of another Partnership firm (s)/Joint Venture (s) for fulfilling the technical eligibility criteria as mentioned in clause 16.4.1 of preamble submit the following in the above Proforma:
 - I. Details of existing commitments and balance amount of ongoing works in other Partnership Firm /JV in proportion to his/her share in those firms.
 - II. Details of existing commitments and balance amount of ongoing works (if any) in the name and style of the Individual/ Proprietary firm or Concern under consideration for the tender.
- (g) In case, the limited Company which submits tender, claims the credentials/experience as a partner of another Partnership firm/Member of another Joint Venture (s) for fulfilling the technical eligibility criteria as mentioned in clause 17.2.1 of preamble shall submit the following in the above Proforma:
 - I. Details of existing commitments and balance amount of ongoing works in other Partnership /JV / Limited Company in proportion to its share in those Firms/Company.
 - II. Details of existing commitments and balance amount of ongoing works (if any) in the name and style of the Limited Company under consideration for the tender.
- (h) In case, the tenderer/s failed to submit the above statement along with offer, their/his offer shall be considered as incomplete and will be rejected summarily.

The available bid capacity of tenderer shall be assessed based on the details submitted by the tenderer. In case, the available Bid Capacity is lesser than estimated cost of work put to tender, his offer shall not be considered even if he has been found eligible in other eligibility criteria/tender requirement.

Joint Procedure order for undertaking digging work in the vicinity of underground Signalling, Electrical and Telecommunication Cables.

Ref: Letter No. 2021/Tele/5(2)/3-Part (1) (3425647) dated 12.06.2023

A joint Procedure order (JPO) for undertaking digging work in the vicinity of underground Signalling, Electrical and Telecommunication cables was issued last vide Board's Letter No. 2003/Tele/RCIL/1Pt.IX dated 24.06.2013 (Telecom Circular No. 17/2013). Notwithstanding the provision contained in the JPO for protection of cables, a significant number of cable cuts incidents and practical deficiencies in implementation of certain provisions of the said JPO were reported.

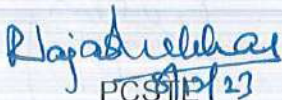
Railway Board, therefore, constituted a committee of SAG officers to revisit the JPO. Based on the recommendations of the committee, Board (MI) has approved broad guidelines for procedure to be adopted by Zonal Railways for protection of cables while undertaking digging work in their vicinity. These guidelines are in supersession of the JPO vide Telecom circular No. 17/2013. In addition, Board asked to issue local guidelines /JPOs based on the local conditions.

Based on these Railway boards guidelines, the following JPO is prepared for undertaking digging work in the vicinity of underground Signalling, Electrical and Telecommunication cables.

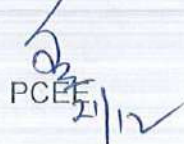
1.(a) Cable route plan for all types of cable of S&T and Electrical department must be made available block section wise on Railnet (http://10.205.49.30/swrintra_new/site/snt_home.php) which is accessible to all user departments. At present all the telecom cable route plans are available on SWR Railnet site. The signalling cable route plans are available in Sr. DSTE office. Progressively integrated cable route plan for signalling and Telecommunication and Electrical cables clearly showing Railway land boundaries shall be made available on Railnet (http://10.205.49.30/swrintra_new/site/snt_home.php) by the respective division. The cable route plans available on the website can be downloaded for getting a general idea of the cable route. However before taking up the work, permission of Sr.DSTE/Sr.DEE should be taken to ensure that the latest updated cable routes is advised to the contractor.

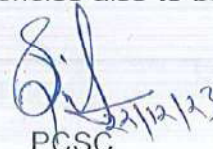
(b)Executing organisations like Construction/Project unit, KRIDE, RE, RITES, IRCON, RCIL, RVNL, GSU etc shall ensure that provision for cable locating and shifting of the cable/utility is kept in estimate while sanctioning any work involving digging in the vicinity of the cable. State Govt authorities and other agencies also to be advised by respective coordinating department to do so. Such provision should also be kept in works being executed by various departments in the Divisions. In case of sanctioned estimates where such provision is not there, contingency provisions may be utilised or estimate may be revised to provide for locating and shifting the cables.

(c) Local instruction/ JPO/ guidelines regarding protection of cables and penalty clauses for damages to cable should form part of tender documents. All project execution agencies State Govt authorities and other agencies also to be advised by respective coordinating department to do so.


PCSE


PCE


PCEE


PCSC


PFA

(d) Provision for tracing and marking of cable route must be included in contract agreement. Executing agency shall trace and mark the cable route with the help of S&T / Electrical department before undertaking the digging work. If Cable Route Plan is not available, Executing Agency for works shall carry out Joint survey with open line staff using Cable Route Tracer to identify the existing cables in the section. Cross trenches may also be done for identification of cable route. After identification of existing cables, marking to be done by using Lime Powder or Pegging & Developing pegging plan or any other means. For major works of doubling, GC, ABS, IBS, Railway Electrification, Power supply and Illuminations etc cable are to be located and shifted/re-laid on different route before commencement of earth/digging work. For ROB/RUB's work, Diversion and securing of the cables temporarily before start of the work and permanent diversion after completion of the work (as per site requirement) shall be ensured.

(e) DRM shall ensure proper coordination between various departments/ agencies undertaking any work near/ along the track. It should be ensured that all cables are located and shifted/ protected before starting the digging work.

2. (a) Before allowing the contractor to work near the tracks, the work executing agency (like SrDSTE/ SrDEN/ SrDEE or DyC8uSTE/DyCEE/DyCE, KRIDE, RE, RCIL, RVNL, GSU and State Govt authorities & other agencies etc.) shall ensure that the permission has been granted by the division to the contractor in accordance with the local instructions / JPO to work in the vicinity of the cables.

(b) Before taking up any digging activity on a particular work by any agency/organization /department, Sr. DSTE/Sr.DEE shall be approached in writing by the concerned for permission to undertake the work. Sr. DSTE/ Sr.DEE after ensuring that the concerned executing agencies/ organization/ department including the contractor have shifted /taken adequate measures for protecting the cable respond to the request for permitting the work in writing within 7 working days from the registration of request will grant the permission to work or taking additional measures for located and shifting/ protecting the cable. If such permission is delayed beyond the 7 working days it will be taken as deemed permitted.

(c) After getting the permission from S&T or Electrical department as the case may be, the relevant portion of the cable route plan / emergency sockets details in the block section shall be attached to the letter through which permission is issued to the contractor by the concerned organization/agencies / department for commencement of work. The copy of such permissions and approval or approved action plan to be circulated by Sr.DSTE/Sr.DEE to all concerned SSE/SEs including supervisors involved and connected with PWay, Works, Bridge, Security, Water Works, Operating and Safety etc. They should ensure that the contractors have fully understood the cable route plan and precautions to be taken to prevent damage to the underground cables.

[Signature]
8/12/23
PCSTE

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PCE

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PCEE

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PCSC

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12/12/23
PFA

(d) The supervisor of the executing organization (SSE/P.Way, SSE/Works, SSE/Sig/CN etc) shall pass on the information to the concerned SSE/Sig. or SSE/Tele or SSE/Electrical (TRD or G) or Supervisors of PWay, Works, Bridge, Security, Water Works, Operating, Safety and RPF control or Jurisdictional RPF Post/OP etc. of the division also about the works being taken up by the contractors in their sections at least 3 days in advance of the day of the work. In addition, Engineering control, Electrical Control, Traffic Control, Security Control, TLC/TPC, Test Room shall also be informed by SSE/P.Way or SSE/Works, or Concerned Supervisor .

(e) On receiving the above information, SE/Sig or SE/Tele or SE/Electrical (TRD or G) shall visit the site on or before the date of taking up the work and issue field permission to the contractor to commence the work after checking that adequate precautions have been taken to avoid the damage to the cables. The permission to commence work shall be granted within 3 days of submission of such requests.

(f) In case of minor nature of works where shifting of cable is not required, in order to prevent damage to the cable, the Engineering contractor shall locate and take out the S&T or optical fibre cable or Electrical cable carefully from the trench and place it properly alongside at a safe location before starting the earthwork under the supervision of SSE/Sig. or SSE/Tele or SSE/Electrical (TRD or G). The cable shall be reburied soon after completion of excavation with proper care including placement of the brick over the cable under the supervision of S&T or Electrical supervisors. However, the work will be charged to the concerned engineering works.

3. (a) In case of works being taken up by the State Government, National Highway Authority etc., Electrical/Engineering department shall process for permission and estimated fund shall be deposited by the concerned government authority for shifting/protecting the cables before granting permission to work. The details of the permission given i.e., the nature of work, kilometre etc be given to the Engineering control including the contact person's number of State Government, National Highway Authority so that the work can be done in a planned manner. The permission letter shall indicate the contact numbers of S&T control/ TPC/Elect. Control. The supervisor of Contractor / Executing Agency shall have the copy of permission obtained.

(b) Some works are being carried out by contractors / vendors of Commercial department like Erection / Installation of Advertising Screens, Banners, other equipment etc. In such cases also procedure as defined above should be followed and the contractor should be liable to pay penalty in case of damage to cable of Electrical and S&T.

4. The engineering control shall keep all the information regarding any works being done near the track. S&T, Electrical control and RPF Control shall obtain this information from engineering control. These controls shall coordinate among themselves to ensure that no work is done in the vicinity of the track without proper permission. In case any cable is found while carrying out the work, the same shall be informed to engineering control /S&T test room/TPC/Electrical control immediately and further work in the area shall be stopped till the cable is identified by the divisional S&T/electrical staff. If any work is cancelled/ rescheduled, same to be informed in

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advance by engineering control to the concerned S&T staff/ executing agency to avoid wastage of manpower,

5. The concerned SE/Pway/SE/Works/SE/Sig/SE/Tele SE/Electrical (TRD or G) or RailTel supervisors supervising the work of the contractor shall ensure that the existing emergency sockets are not damaged due to their importance in providing communication during accident/emergency.

6. For all new works, cable locating and shifting should be a mandatory part of DPR and estimate. For ongoing works, works may be sanctioned for cable locating and shifting, if necessary, through contingency/supplementary/revised estimate where provision does not exist. However, in case the executing agency /division officials decide not to shift cables (due to any reason) then protection of cable shall be ensured by them during execution of the work.

7. Penalty to be imposed for damages to cable shall be as under:

Cable damaged	Penalty per location
Only Quad cable or Signalling cable	₹ 1.0 Lakh
Only OFC	₹ 1.25 Lakh
Both OFC & Quad	₹ 1.5 Lakh
Electrical Cable	₹ 1.0 Lakh

8. Penalty should be levied on the contractor when they work without permission or resort to careless working without making arrangements for protecting cables and other utilities. Based upon the local conditions and practices,

- a. Penalty as detailed in para 7 should be levied in the following cases.
 - i. When Work is carried out without prior written permission from Sr. DSTE/ Sr.DEE as detailed in para 2(b)
 - ii. When Work is carried out without prior permission from field SSE as detailed in para 2(d) or 2 (e)
 - iii. Cables are not located/ shifted / Protected as per joint survey report with the divisional S&T/Electrical department.
 - iv. Cables which have been exposed for facilitating the works are not properly secured or are damaged by the contractor or miscreant activity during the course of the work and are not reburied after completion of the work.
 - v. Any other instance of careless working leading to damage of cable in the opinion of ADRM/Sr.DSTE/Sr.DEE.
- b. For each cable cut, a joint report at the level of supervisors should be prepared on the same day and it should become the basis for levying penalty and fixing responsibility. Joint note should be forwarded by Sr.DSTE/Sr.DEE to the executive in-charge of the work. The executive in-charge of the work should act and decide on the cable cut case within 15 days under information to Sr.DSTE/Sr.DEE as the case may be. There should be provision of appeal by contractors within one month of notice for levying penalty at ADRM level. Decision of ADRM shall be final and binding upon both parties. joint note format is given in **Annexure-I**.

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- c. Necessary debit in this regard shall be raised on the department undertaking the work, who shall in turn levy the penalty on the defaulting contractor. S&T department shall raise the debits in case of damage to OFC or Quad or Signalling cable and Electrical department shall raise the debits in case of damage to Electrical cable
 - d. As per the provision in the contract agreement /Work estimate the executing department will transfer the penalty amount to the S&T/Electrical department within two months after the final decision obtained from ADRM. A proper mechanism needs to be set up in the Divisional office for ensuring recovery of penalties from defaulting agencies and their proper accountal by finance.
 - e. In case of damage by contractors of state government / National Highways etc, without taking prior permission / careless working the penalties will be advised to the coordinating department (Engineering/ Electrical department).
 - f. In case of other Govt. and/ or Private agencies taking work near railway tracks this will be implemented and ensured by suitable communication, by the coordinating department which is assigned to facilitate the permission. (Like Electrical department for power line crossings and Engineering department for track crossing). This is as per any existing board guidelines or with the approval of DRM.
9. Railways will not lodge FIR with RPF in cases of works being executed by authorized contractors of Railways who have been duly permitted to execute the works. Department undertaking work will ensure realization of penalty during the payment of final payment. In all other cases, when the cable is cut by an agency that was not permitted to execute any work, FIR should be lodged with RPF. The Execution agency to issue Identity Cards to its Supervisors and works duly mentioning the permission ref who will work near track and places working where the cables are involved. All workers shall be given protective clothing and gear with Company Logo.
10. Other than planned works being carried out by various agencies through authorized contractors of Railways / state Government etc there may be damages to the cables due to
- (a) Cable cut by Railway staff while digging in connection with random and unplanned activity.
 - (b) Cable cuts due to actions of outsiders, be it theft or interference.

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11. Cable cut by Railway staff while digging in connection with random and unplanned activity.

These include works along the track involving digging the earth not requiring traffic block or disconnection like carrying out drainage works, levelling and other open line works and are generally taken up

- a. Without information to concerned telecom staff.
- b. Without taking due precaution to avoid the cutting of telecom cables.
- c. Without appreciating the consequence of safety to train operation,
- d. With tendency to hide the incidence of cable cut & its location, in case it happens while digging.

For such works suitable deterrent action shall be recommended for erring staff as decided by Division.

12. Cable cuts due to actions of outsiders, be it theft or interference

- a) Cable cuts caused by non-railway persons are due to either intentional interference with objective of theft or sabotage or unintentional/incidental to the activities in vicinity of Railway tracks.
- b) In case of cable cuts by outsiders like farmers/ miscreants/unknown etc, RPF complaint shall be lodged and joint observation report shall be prepared by RPF along with S&T/Electrical department. Crime No. shall be obtained from RPF. The fine imposed/disposal of the case by the jurisdictional Courts shall be intimated to S&T/Electrical department.

Division shall review the cable cut cases on daily basis and action taken/ penalty imposed/ recovered shall be reviewed and recorded.

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Annexure-I

Joint Note format as per the JPO on Cable cuts issued by SWR		
S.No	Description	Remarks
1	Division	
2	Station/Block section	
3	Date and time of cut	
4	Date and time of restoration	
5	Location of cable cut (Km)	
6	Cable type (OFC/Quad/Signalling/Electrical)	
7	Availability of Cable route plan for the block section on Railnet (Yes/No)	
8	Provision made in estimate for shifting/protecting the cable (Yes/No)	
9	Is cable shifted /protected by executing agency? (Yes/No)	
10	During execution of the work/cable cut:	
	(i) S&T/RCIL staff available at the spot?	
	(ii) Supervisor of Executing Agency available at the spot?	
	iii) Is contractor worked carelessly without making arrangements for protecting cables and other utilities (Yes/No.)	
11	Whether cable was in exposed condition for facilitating the works? (Yes/No)	
12	Is the cable properly secured or are damaged by the contractor or miscreant activity during the course of the work and are not reburied after completion of the work.	
13	Cable cut by Which Department? Name of the Executive Agency and Supervisor at Site	
14	Whether applied for digging permission by the user department? Y/N and If Yes, date of application	
15	Permission for digging provided by Sr. DSTE within 7 days of application or not? If so, date:	

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16	Prior information of the work at least 3 days in advance conveyed to S&T by Engg Control (Y/N)	
17	Permission for execution of work provided by concerned SSE/Tele/Sig (Y/N) within 3 days of application or not.	
18	Name of the contractor, phone No., nature of work details given to S&T by Engineering Control? If yes, when?	
19	Permission given for execution of the work to State Govt/NHAI/Other than Rly agencies by Engineering department with or without taking clearance from S&T department? If yes, when?	
20	List of gears affected	
21	Whether FIR Lodged (for cut without permission /By miscreants/outsideers) (Y/N) If yes, crime No. for the same.	
23	Whether Penalty recommended(Y/N)	
24	If no, Reason thereof	
25	Remarks & Signature, Name Designation of Rly/RCIL representative	Remarks & Signature, Name Designation of Executing Agency Representative

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SOUTH WESTERN RAILWAY

Office of the
CAO/CN/BNC

W. 574/CN/BNC/RDSO/RLY.BRD./SAFETY

Dated: 27.05.2025

Dy.CE/CN/I, II, III, IV, V & VI/ BNC,
Dy.CE/Works, Stores & General/CN/BNC,
Dy.CE/CN/SD/BNC, Dy.CE/CN/MYS,
Dy.CE/CN/I, II, III, IV, V & VI/UBL,


Dy.CSTE/D&D/CN/BNC, Dy.CSTE/CN/BNC,
Dy.CSTE/CN/UBL, Dy.CSTE/CN/HQ/BNC,
Dy.CSTE/CN/UBL, DSTE/CN/BNC, DSTE/CN/UBL,
Dy.CEE/CN/TRD/BNC, Dy.CEE/CN/UBL

Sub: Guidelines for Safe and Effective Use of Hydra Cranes at Railway Construction Work Sites — Prohibition of Gen-1 Hydras and Implementation of Standard Safety Protocols - reg.

In connection with the above subject, safety precautions while using of Hydra cranes at Construction Work Sites at work sites of civil, Electrical, TRD and S&T has been prepared and enclosed herewith for your information and circulate to all field officials, agencies working under your jurisdiction. The above guidelines are to be strictly followed and compliance to be sent to this office to put up to CAO/CN/BNC.

This has the approval of CAO/CN/BNC

Encl: As above.



27/05/2025

(Yogananda Babu Yagani)

Dy.CE/CN/Plg & Design/BNC

Copy to:

Secy. to CAO/CN - for kind information of CAO/CN/BNC
PCSO/SWR - for kind information
PCE/SWR - for kind information
CE/CN-I, II & III/BNC - for information
CE/CN-I, II & III/UBL - for information
CEE/CN/UBL & CSTE/CN/BNC - for information

**Guidelines for Safe and Effective Use of Hydra Cranes at Railway Construction Work Sites —
Prohibition of Gen-1 Hydras and Implementation of Standard Safety Protocols**

1. Hydra Cranes mounted on a wheeled chassis with lifting capacity ranging from 8-16 tons, have good maneuverability and capability of being mobile even while carrying a load. For the above reasons, these cranes are profusely used at construction sites for material handling and lifting purposes viz., lifting and shifting sleepers, rails, steel structures, OHE masts and portals etc.
However, any negligence in use makes them equally vulnerable too.
2. Recently in an unfortunate incident, one 15-ton hydra toppled while being used for erection of OHE portal boom in station yard. Inquiry has revealed that Gen-1 hydra before getting toppled was working on uneven ground in a 'pick and carry' operation for which it was not designed.
3. To prevent such incidents in future, it is advised that apart from extant instructions issued on the subject and provisions of contract, the following shall also be followed:
 - i. Use of Generation-1 Pick and Carry Hydra with tractor type transmission, having limited stability on uneven ground is prohibited at work sites of Construction Organization with immediate effect. These machines can be identified with operator's cabin in rear of crane.
(Photo enclosed)
 - ii. Minimum, Generation-2 type Hydra with truck type transmission shall be allowed for mobilization at construction sites. However, Pick and Carry operation with Generation-2 type Hydra shall be banned at construction sites for all activities above or near running lines.
 - iii. No pick and carry operation shall be carried out by Gen 2 Hydra for any lowering operation below ground level.
 - iv. For pick and carry operations above or within 15 meters from running lines, only 3rd generation hydra cranes or cranes with propping arrangements shall be used.
 - v. In an electrified territory the site incharge should ensure that power block is taken before permitting movement/operation of crane.
 - vi. Every lifting operation including entry point at site, crane erection and dismantling should be planned to ensure that it is carried out in a safe manner. The extant of detailed planning will depend upon the complexity of the overall operation, but no operation should be considered so simple that the pre-planning can be ignored. In no condition the plan should permit exceeding the safe working load of the crane.
 - vii. The site incharge if not directing the crane operation himself, will clearly nominate a slinger/signaller for the purpose. This nominated person should then be communicating with the Crane operator for safe operation of the crane. The nominated person should be fit with regard to eyesight, hearing, reflexes and should possess the ability to judge distance, height and clearance. The person giving directions to Crane operator should be conversant with the signal code given in Annexure 3.

- viii. Check List as enclosed at Annexure 1 shall be adopted at all work sites with immediate effect.
4. PMC/ PSS Engineers, Railway Supervisors and officials supervising works entailing crane working shall ensure that:
- i. Provisions of IS 13367 Part 1 Safe Use of Cranes are followed.
 - ii. Check List as enclosed at Annexure 1 is adopted at site.
 - iii. List of Do's and Don'ts as enclosed in Annexure 2 are followed at work sites.
 - iv. Hand Signal code for communication between crane operator and slinger/sinaller as given in annexure 3.
 - v. Precautions to be taken if the machine makes contact with live electric wires as given at annexure 4.
5. Pictorial assistance for recognizing various types of Hydra Cranes is available at Annexure 5
6. The above instructions may be brought to the knowledge of supervisor level for compliance.
7. Dy CE/C/Works shall take action to amend contract conditions to incorporate above provisions. For existing contracts the above laid down stipulations should be followed to the extent possible.

Encl/-

1. Annexure 1 - Checklist for safe operation and planning of crane activities at construction sites.
2. Annexure 2 - List of Do's and Don'ts to be followed at work site.
3. Annexure 3 - Hand gestures for crane operations.
4. Annexure 4 - Precautions in the event of crane making contact with live wire.
5. Annexure 5 - Pictorial assistance for recognizing various types of Hydra cranes.

TRD/SBC/SWR

EQUIPMENT CHECKLIST-Hydra Crane

Contractor:**Date&Time:****Project Name:****Operator Name:****Division:****Section:****Equipment ID & Model Number:****Competency Certificate No:**

SN.	Description	Yes/No	Remarks
1.	Hydra should be physically good condition & certified by TPI.		
2.	No damage in tyre (Bolts, crack, cuts & air pressure etc.).		
3.	Registration number in written.		
4.	Head & tail light and indicators in working condition		
5.	Any oil leakage in hydraulic parts		
6.	Sling drum is in good condition.		
7.	Boom condition has been checked while full extension and is free from damage.		
8.	Wire rope is free from damage.		
9.	Hoist limit switch is working properly.		
10.	Safety latch in hook is in working condition.		
11.	Safe load indicator is in working condition.		
12.	Load chart available in operator cabin (Attach with checklist).		
13.	Front & reverse horn in working condition.		
14.	Portable Fire extinguisher available in operator cabin.		
15.	Operator has valid license (heavy duty) to operate.		
16.	Lifting plan explained & fully understood by operator.		

2nd Generation Crane:3rd Generation Crane:

Inspected By(Hydra operator)	Reviewed By (Job-In-charge)
Name:	Name:
Signature with date:	Signature with date:

DO's for Use of hydra crane

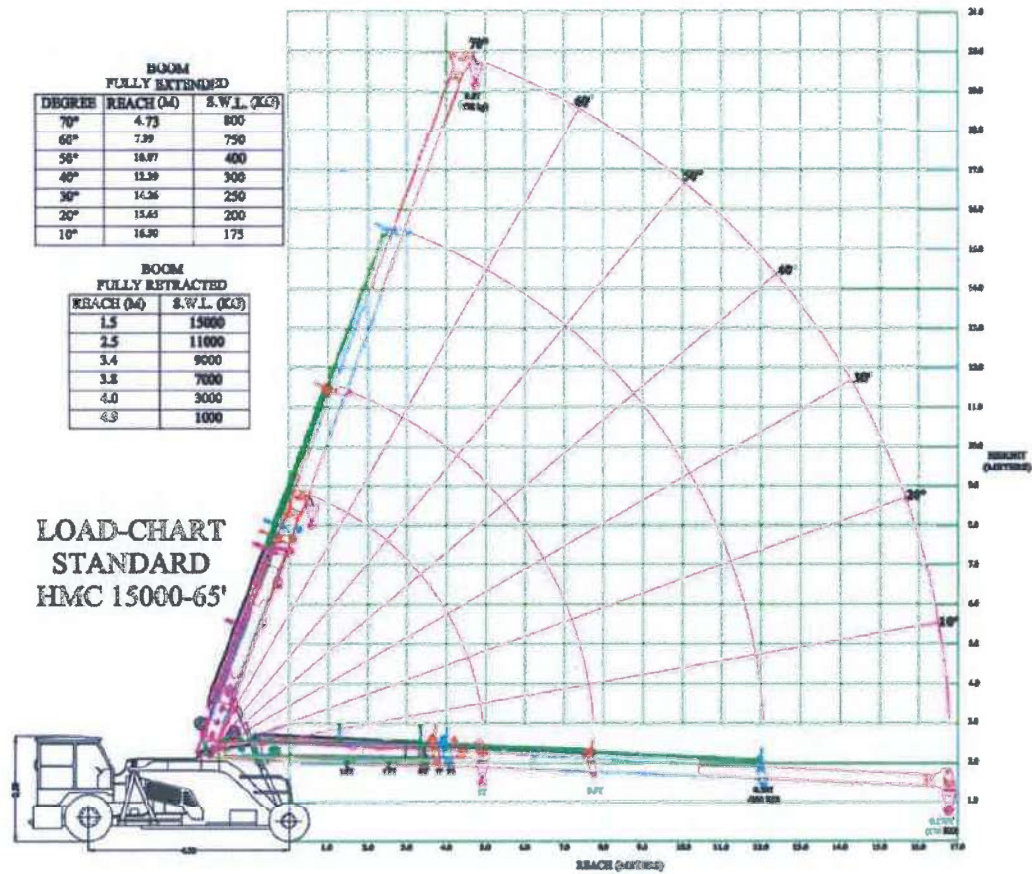
1. One helper should move ahead of Hydra crane, ahead of boom length on road at right side to guide the operator.
2. Helpers should wear fluorescent jacket and be provided with whistle at ground to caution the surroundings & own presence to the operator.
3. The operator should have a valid HMTV driving license and shall be well trained.
4. Guy ropes of required length should be tied on both sides of object being lifted and held by trained workers to guide movement.
5. Clear access while movement of the equipment to be ensured.
6. Automatic reverse horn shall be provided.
7. Ensure loading area as level as possible and the terrain should be reasonably hard. The undulation of path across the direction of travel ways should be less than 10 degrees.
8. CG of the load shall always be within the two wheels.
9. While traveling, the bottom of the load should be approx. 300-500 mm above the ground & the boom should be in its lowest convenient position.
10. If load is suspended from pulley block, it should be fully raised.
11. Before lifting load, check if connecting string / tackle are properly hooked and are strong enough to take the load.
12. Apply parking brake and scotch block when the machine is parked.

DO Not's for Use of hydra crane

1. No movement of persons to be allowed around the hydra. Area around hydra crane operations should be identified and barricaded to prevent unauthorized person in the hazardous zone.
2. Don't allow movement over extremely rough tracks consisting of pot holes or sudden dumps. If at all such path is to be negotiated, minimum speed and lowest gear should be used.
3. Engagement of two Hydras to lift single object should be avoided.
4. Overloading of the machine should not be done
5. Do not start the crane unless all routine pre-operation are done
6. Speed should not exceed more than 2 km/h while carrying load at working site.
7. While moving on road speed should not exceed more than 10 km/h
8. Do not drive the crane too close to the edge of ditch or excavated pit
9. Do not coast down a gradient in neutral gear.
10. Do not leave the crane seat with the load raised and never leave the crane unattended while engine is running.
11. Mobile phone should not be used by driver and signaller during operation.

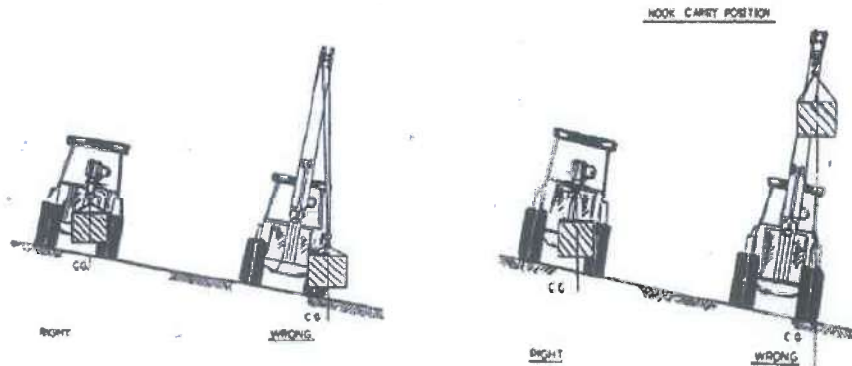
Things to keep in mind while working with Hydra Crane:

1. Valid TPI certificate should be available in the operator cabin.
2. The rated capacities are for lifting in straight unslewed position on level ground. It should not be considered as capacity to pick and carry the load. Keeping sufficient factor of safety for pick and carry is a must. As maximum load while moving the hydra comes on tyres, it is essential to ensure required tyre pressure.



3. **For marching without load:**
 - a. Travelling speed should not be more than 10 Kmph.
 - b. Boom should be fully retracted and hook block should be fully raised.
 - c. A helper (slinger/signaller) should always be available during movement.
 - d. No overtaking to be allowed.
4. **For marching with load:**
 - a. Travelling speed should not be more than 2-3 Kmph.
 - b. Always match the speed of slinger/signaller.
 - c. Always travel in low first gear. Never change gears.
 - d. Carried Load should not be more than 0.5m from the ground.
 - e. Boom should be fully retracted and in lowest convenient position.

- f. Swingling of load should not be allowed.
- g. Avoid stopping/ lifting the load with jerk.
- h. Avoid gradients above 10% and move up the slope. Moving down the slope is much more dangerous than going up.
- i. Hook should be placed right over the CG of the load to be carried.
- j. While moving the CG should always remain between front tyres.

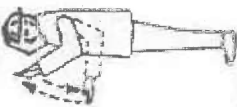
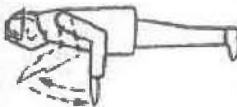
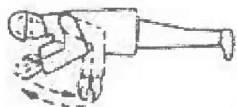
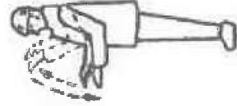
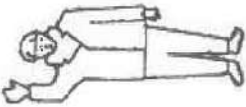
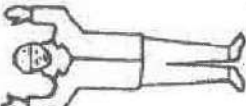
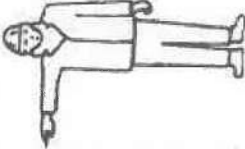

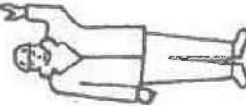



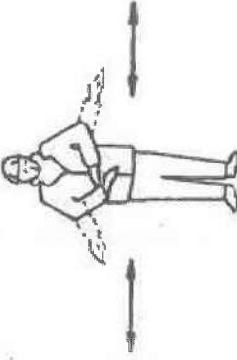
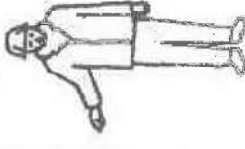
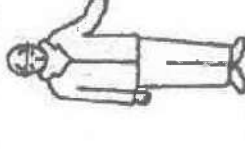
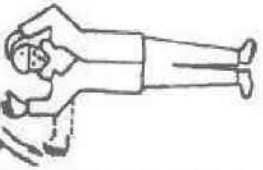
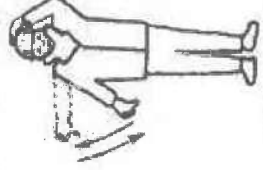


- k. Never march on sideways sloping surface.
5. Don't use hydra for long distance movement of loads.
 6. Hydra should not be used for dragging or pulling of loads.
 7. Ensure proper hooking of load to avoid load slippage /shifting of CG in operation.
 8. Check the condition and capacity of wire rope, tools and tackles.
 9. Soft ground is likely to bog down the crane. Beware of ground conditions especially during rainy season.

No guessing the load
No overloading

Hand gestures for crane operations:

Annexure 3

  <p>SIGNAL WITH ONE HAND OTHER HAND ON HEAD</p> <p>EXTEND JIB RETRACT JIB TELESCOPING JIB</p>	  <p>TRAVEL TO ME TRAVEL FROM ME (SIGNAL WITH BOTH HANDS)</p>	  <p>STOP</p> <p>EMERGENCY STOP</p>
  <p>TRAVEL IN DIRECTION INDICATED</p>	  <p>ROTATE WRIST OF LEFT HAND</p> <p>TWISTLOCKS ON/OFF</p>	  <p>CLENCH AND UNCLENCH FINGERS TO SIGNAL INCH THE LOAD</p> <p>HOIST</p> <p>CLENCH AND UNCLENCH FINGERS TO SIGNAL INCH THE LOAD</p> <p>LOWER</p>
 <p>OPERATIONS CEASE (OR CEASE TO FOLLOW MY INSTRUCTIONS)</p>	  <p>SLEW IN DIRECTION INDICATED</p>	  <p>JIB UP JIB DOWN DERRICKING JIB</p> <p>SIGNAL WITH ONE HAND OTHER HAND ON HEAD</p>

Precautions in the event of crane making contact with live wire

If machine makes contact with live wire, observe the following precautions-

- A. Remain inside cab.
- B. Warn all other personnel to keep away from crane and not to touch any part of the crane, rope or load.
- C. Try, unaided, and without anyone approaching the machine, to move the crane until it is clear of power line.
- D. If the machine cannot be moved away, remain inside the cab. Get someone to inform the electricity supply authority at once. Take no action until it has been confirmed that conditions are safe.
- E. If it is essential to leave the cab for unavoidable reason, jump clear as far away from the crane as possible. Do not touch the crane and the ground at the same time.

Inform the responsible engineer of the works or authority concerned of situation immediately and until assistance is received someone should remain near the crane to warn of the danger.

Pictorial assistance for recognizing various types of Hydra cranes-

SN	Generation	Photograph
1	<p><u>1st Generation Crane:</u></p> <ul style="list-style-type: none"> a. Easy to mobilize and operate. b. Less stable and possibility of overturning. 	
2	<p><u>2nd Generation Crane:</u></p> <ul style="list-style-type: none"> a. Used only for lifting loads. b. Offer increased lifting capacity, higher speeds, better maneuverability compared to their predecessors 	
3	<p><u>3rd Generation Crane:</u></p> <ul style="list-style-type: none"> a. Can be used for pick and carry. b. With improved anti-sway technology, lifting operations are smoother and more stable. c. This crane provides insights into equipment condition, enabling better maintenance planning. 	