



भारत सरकार Government of India  
परमाणु ऊर्जा विभाग Department of Atomic Energy  
भारी पानी संयंत्र Heavy Water Plant  
तूतीकोरिन Tuticorin-628007



## TENDER DOCUMENT

TENDER NOTICE NO : HWPT/MECH/2026/1102

NAME OF WORK : Erection of approach platform on product storage  
. vessels and erection of transfer and utility pipelines from  
. SPP to product storage vessels at HWP-T.

Sl. No.	Contents	Page No.
1.	<i>Tender Notice</i>	2 - 6
2.	<i>Memorandum of item rate tender</i>	7 - 8
3.	<i>Part- I Technical Specifications</i>	9 - 17
4.	<i>Part – II General Conditions</i>	18 - 23
5.	<i>Part – III Price Bid</i>	Separate in excel sheet
6.	<i>Part - IV General Conditions of Contract of HWPT</i>	PDF
7.	<i>Part - V AERB safety guide</i>	PDF

HEAVY WATER PLANT (TUTICORIN)  
NOTICE INVITING e-TENDER  
TENDER NOTICE NO: HWPT/MECH/2026/1102

On line-item rate tender in two parts i.e., Part “A” – Technical Bid and Part ‘B’ – Financial Bid is hereby invited through e-tendering mode on behalf of “The President of India, by General Manager, HWP, Tuticorin”-628007 for the following works from the eligible contractors

Name of the work	“Erection of approach platform on product storage vessels and erection of transfer and utility pipelines from SPP to product storage vessels at HWPT”
Estimated Cost	Rs. 48,10,900/-(including GST @ 18%)
Earnest Money Deposit	Rs. 96,218/-
The original EMD document shall be deposited at the office of General Manager, Heavy Water Plant Tuticorin-628 007 on or before 1500 hrs. of <b>30.05.2026</b> in a sealed envelope clearly indicating Name of the work and NIT Number. Original EMD / bid security document shall preferably be submitted in person. However, documents sent by post or courier will also be considered provided the same is received within due date & time. For any postal delay department shall not be responsible and offer will not be considered.	
Tender processing Fee	Nil
Period of Completion	Three Months from date of issue of work order
Dates for Download of Tender Document (excel / word formats)	<b>From 04.05.2026 (0900 Hrs.) to 25.05.2026 (1800 Hrs.)</b> on <a href="http://www.eprocure.gov.in">www.eprocure.gov.in</a> website.
Pre-bid clarification	Clarification request to be received latest <b>by 25.05.2026 up to 15.00 Hrs.</b>
Last date and time of closing of on-line submission of tenders.	<b>25.05.2026 (1800 hrs.)</b>
Last date for submission of original EMD / bid security document.	<b>On or before 1400 Hrs. of 30.05.2026</b>
Date &Time of opening of Part A	<b>01.06.2026 (1530 hrs.)</b>
Validity of offer	<b>75 Days</b> from the last date of receipt of technical bid (Part-A).
Date &Time of opening of Part B	Will be up loaded later ( After Approval of Part-A)
Performance guarantee (PG) and security deposit(SD)	<b>PG 5.0 % &amp; SD 2.5%</b> of the tendered amount

For further information, please contact Maintenance Manager (0461-2244503), Fax: (0461) 2355389 between 1000 hrs. to 1600 hrs. on all working days or by e-mail [mm@tut.hwb.gov.in](mailto:mm@tut.hwb.gov.in)

## **Eligibility Criteria, conditions and Instructions:-**

1. Contractors who fulfill the following requirements shall only eligible to apply
  - a. The bidder's firm must be a prime contractor in successfully executed the similar job and value as mentioned below. In case any bidder is not a prime contractor but sub-contractor, the bidder's experience as sub-contract is considered only if the sub-contract is in compliance with the requirements of this tender notice. In such case the contractor shall submit completion certificate from the prime contractor having successfully completed the work along with a copy of permission from the principal owner to sub-contact the work. In the absence of the above, experience of the sub-contractor will not be considered.
  - b. All the bidders should have successfully completed the works and number of works as indicated below during the last seven years ending on **31.03.2026** duly supported by documents, WOs & work completion certificates (to be uploaded by the contractor)

Three similar work orders value of each is not less than **₹ 19,24,360/-**

or

Two similar work orders value of each is not less than **₹ 28,86,540/-**

or

One similar work order of value not less than **₹ 38,48,720/-**

- c. Bidder should furnish average annual turnover for last three consecutive financial years and shall not be less than **₹ 24,05,450/-**.
- d. The bidder has to deposit a total amount of Rs. 96,218/-as EMD in the form of Fixed Deposit Receipt / Demand Draft / Bankers Cheque/Pay Order of a Scheduled Bank, issued in favor of **Pay &Accounts Officer, HWP, Tuticorin payable at Tuticorin**.
- e. Bidders shall upload scanned copy of following.
  - a. Registration certificate, if any
  - b. Work order copies of similar works
  - c. Work order completion certificates
  - d. Certificate of Registration for GST
  - e. PAN (Permanent Account Number)
  - f. Document in support of EMD submission (EMD)
  - g. Income tax return for the preceding three financial years
  - h. Annual turnover statement duly certified by CA
  - i. Profit loss statement
  - j. Bank Solvency certificate

- d. Profit / Loss: The bidder should not have incurred any loss (profit after tax should be positive) in more than two years during available last five consecutive balance sheet,

duly certified and audited by Chartered Accountant. The balance sheet in case of private / public limited company means its standalone finance statement and consolidated finance statement both.

- f. Solvency / Net worth certificate: Solvency of the amount equal to 40% of the Estimated cost put to tender not older than one year (or) Net worth certificate of minimum 10% of the estimated cost to tender issued by certified Chartered Accountant to be submitted.
- g. Bidder shall have GST registration certificate.
- h. PAN allotted by the Income Tax Department to the bidder

Similar works means having experience of any of the following works from any reputed industry **“Fabrication & erection of structural supports and members of equipment and pipe lines, welding of CS and SS pipelines, structures, painting etc., in any fertilizer, refineries or chemical industry.”**

2. Successful bidder has to deposit an amount equal to 2.5% of the tendered value as security deposit in the form of Government deposits , FDR or bank guarantee(in the described proforma) etc... before commencement of the work or within 15 days of issue of the work order in favor of Pay & Accounts officer , HWP(Tuticorin) valid for the entire period of work order including defects liability period of six months as per the terms & conditions of the contract failing which it shall be recovered @ 2.5% of gross amount of RA / final bills for this work till the amount of SD is collected. This will be retained for the guarantee period of 6 months towards defect liability. This amount will be refunded after the completion of guarantee period. In case of any defects noticed during the guarantee period, the contractor will be asked to rectify the defects within fifteen days, failing which the same will be rectified departmentally or otherwise at the risk & cost of the contractor.
3. EMD submitted by the successful bidder will be returned on submission of TR61 form after placing work order.
4. Bidders are advised to inspect and examine the site and its surroundings before submitting their tenders. They shall assess the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influenced or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed.
5. The intending bidder must read and understand technical specification and General conditions of contract of the tender document. Party should only submit bid if it/they consider eligible and it is/they are in the possession of all the documents required. Department reserves the right of Non-consideration of Tender documents of the agencies that are not fulfilling the NIT stipulations and / or having adverse report on the performance in the past.

6. Information & instructions for bidders posted on website shall form part & parcel of the tender documents.
7. The tender documents which consist of technical specifications, general conditions and other terms & conditions to be compiled by the bidder can be seen and downloaded from the website at free of cost.
8. Tender drawings are uploaded for downloading if any stipulated in the tender documents.
9. Contractors registered with website can only download and submit/upload tenders.
10. On opening date bidder can login and see the bid opening process.
11. Contractor must ensure to quote rate of each item. The column meant for quoting rate in figures appears in YELLOW color and the moment rate is entered, it turns SKY BLUE. In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO).
12. If any information furnished by the applicant is found to be incorrect at a later stage, they shall be liable to be debarred from tendering / taking up works in HWP, Tuticorin.
13. The tender for the work shall be valid open for a period of **75 days** from the date of opening of technical bid. If any bidder withdraws his tender before the above said period, or issue of Letter of Intent, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the Department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money absolutely. Further the bidder shall not be allowed to participate in the re-tendering process of the work.
14. The tenderer, whose tender is accepted, will be required to furnish performance guarantee of **5%** of the tendered amount within 7 days from the receipt of LOA. This guarantee shall be in the form of Government Securities / Fixed Deposit Receipt (FDR) / or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. It shall remain valid for a period of minimum 60 days beyond the date of completion of the job. If the job is not completed within the stipulated period a fresh PG shall be submitted.
15. This period can be further extended at the written request of the contractor by the Engineer-in-charge for a maximum period ranging from 1 to 7 days with late fee @ 0.1% per day, of performance guarantee amount. After receipt and acceptance of PBG work order will be issued to the contractor. After completion and acceptance of work PBG will be released to the contractor.
16. Special conditions brought out in the tender document would supersede the General Conditions of Contract in case of contradiction.

17. The working schedule shall be on all general working days and during general working hours. However, contractor shall work on extended hours / Sundays or public holidays at the discretion of the EIC of the work.
18. The competent authority, on behalf of The President of India, does not bind himself to accept the lowest or any other tender, and reserves to himself the authority to reject any or all the tenders received, without assigning any reason. All tenders, in which any of the prescribed condition is not fulfilled or any condition, including that of conditional rebates is put forth by the tenderer, shall be summarily rejected.
19. The Competent Authority, on behalf of The President of India, 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 rates quoted.
20. The Notice Inviting Tender shall form a part of the contract document. The successful tenderer / contractor, on acceptance of his tender by the Accepting Authority shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of, The Notice Inviting Tender, all the documents including all conditions, specifications and drawings, if any, forms issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
21. **EPF at the rate of 12% and ESI at the rate of 3.25% shall be reimbursed only on the production of documentary evidence**
22. **Income tax, Other taxes, etc., as applicable from time to time will be deducted from RA bills. TDS – GST @ 2% will be deducted on basic value of each RA bill as per section 51 of GST Act 2017.**

SD/-  
(R. Subramaniam)  
General Manager  
Heavy Water Plant, Tuticorin  
For & On behalf of The President of India

**Government of India  
Department of Atomic Energy  
Heavy Water Plant, Tuticorin**

**Item rate tender for works**

I / We hereby tender for the execution for The President of India for the work specified in the underwritten memorandum within the time specified in such memorandum at the rates specified therein and in accordance in all respects with the specifications, designs, drawings and instructions with such materials are provided for, by and in all other respects in accordance with such conditions so far as applicable.

**Memorandum**

General description of work : **Erection of approach platform on product storage vessels and erection of transfer and utility pipelines from SPP to product storage vessels at HWPT**

Estimated cost : Rs. 48,10,900/- (including GST @ 18%)

Last date and time of closing of on-line Submission of tender. : 25.05.2026 (1800 hrs.)

Date & Time of online opening of Part A : 01.06.2026 (1530 hrs.)

Earnest Money Deposit : Rs. 96,218/-

Security Deposit : 2.5 % of the tendered value

Completion Period : Three months from the issue of work order

Guarantee period : Six months from the date of final completion of work

Validity of offer : 75 days from the last day of receipt of technical bid

Tender fee : Nil

Tender document download period : **04.05.2026 (0900 Hrs) to 25.05.2026 (1800Hrs.)**

Should this tender be accepted in whole or part, I/We hereby agree (i) to abide by and fulfill all the conditions annexed here to an all the term and provisions contained in notice inviting tenders so far as applicable and /or in default thereof to forfeit and pay to The President of India or his successors in office the sum of money mentioned in the said condition. A sum of Rs. 96,218/- (Rupees Ninety-Six Thousand Two Hundred Eighteen only) is hereby forwarded as Earnest money / bid security.

If I/We fail to commence the work specified in the above memorandum I/We agree that the said The President of India or his successor in Office shall without prejudice to any other right or remedy, be they said Earnest money shall be retained by him towards security deposit mentioned above. (ii) to execute all the works referred to in the tender documents upon the terms and deviations as may be ordered up to a maximum of (10% ± of individual item) percent at those rates quoted in the tender document and those in excess of that limit at the rates to be determined in accordance with the provisions contained in clause 12(A) of the tender form.

Dated the                      day of                      2026

Witness        :

Signature     :

Address        :

The above tender is hereby accepted by me on behalf of The President of India.

Dated                              the Day of                              2026

## PART-I

### TECHNICAL SPECIFICATION

This specification covers technical & general requirements for the job “Erection of approach platform on product storage vessels and erection of transfer and utility pipelines from SPP to product storage vessels at HWP-T”

**Scope of Work:** The job includes

- Assessment of site condition, preparation of isometric, obtaining approval, fabrication, inspection, erection, testing, painting, & commissioning of CS & SS pipelines, fabrication & erection of supports, clamping the pipeline, etc. as per approved Isometric drawing. After completion of all work, as built isometric drawing indicating the location of weld joints, supports and type of support shall be prepared and submitted for records. Arrangement of the scaffolding materials and erection/de-erection of the scaffolding. Other than the free issue materials mentioned under the HWPT Scope of supply, Contractor shall have to supply all other consumables, tools & tackles required for completion of the work
  - Assessment of site condition, Fabrication and erection of operating platform above the 3 nos. of storage tanks to approach the valves and manhole at the top of the tanks by cutting and GTAW welding of beam, channels. Angle, plates checker plate, plain gratings, hot dip galvanization of gratings.
  - Fabrication and Supply of hot dip galvanized Plain gratings with 40mm × 5mm MS bearing bars at 40mm spacing, and 12mm × 5mm MS flat cross bars at 100mm spacing, hot-dip galvanized per IS 4759 with minimum 610 g/m<sup>2</sup> zinc coating, ensuring uniform, defect-free finish and compliance with IS 2062 steel standards.
  - Erection and de-erection of scaffolding as per site requirements and directed by the EIC. Arrangement of scaffolding materials including scaffolding pipes, clamps, jali, rope, tools & tackles, etc.
1. Mobilization of skilled man powers, tools and tackles for carrying out the job. The job shall be completed within **Three months** from the date of issue of the work order.
  2. The job shall be started after obtaining safety work permit which shall be renewed in each shift.
  3. Arrangement of scaffolding materials like, scaffolding pipes, clamps, planks, rope, etc. Erection & de-erection of scaffolding at required location is in contractor’s scope
  4. Job shall be carried out in presence of departmental supervisor.
  5. Contractor shall commence the job after obtaining safety pass and height pass for their workmen and supervisor.
  6. Contractor shall engage qualified welder, fabricator/fitter for carrying out cutting and welding work.

7. Structural welding shall be done by qualified welder by using E 6013 Electrode. Before welding components, to be welded, shall be degreased, descaled and aligned properly.
8. Measurement shall be done in weight of structural member fabricated.
9. After completion of welding, temporary scaffolding erected for replacing damaged grating shall be de-erected.
10. Contractor shall not leave the work place in unsafe condition to prevent fall of persons

**Specification for fabrication, welding and erection of CS & SS pipelines**

11. Fabrication & Erection of the pipelines has to do as per approved isometric drawing for CS & SS pipelines. The Isometric drawing shall be developed by the contractors as per site requirement and same shall be approved by the department.
12. Welding of CS pipeline: Making edge preparation & fit-up as per code, alignment, root welding by GTAW and subsequent stabilising Welding by SMAW using approved welding procedure (WPS) by experienced welder, root & final DP test, etc. Welder qualification is required.
13. All consumables like, welding electrodes (E-7018), filler wires (ER-70S2), cutting/grinding wheels, argon, acetylene, oxygen, DP kit, tools & tackles, machines, etc. are in contractor's scope.
14. Welding of SS pipeline: Making edge preparation & fit-up as per code, alignment, root & final welding by GTAW using approved welding procedure using approved welding procedure (WPS) by experienced welder, the line should be purged with Ar/He during welding, root & final DP test, etc. Welder qualification is required
15. All consumables like, filler wires (ER-316L), argon gas, cutting/grinding wheels, DP kit, tools & tackles, machines, etc. are in contractor's scope.
16. Erection of fabricated pipe lines by providing proper supports with channel/angle, pipe shall be clamp by U-clamp, cleaning of pipes & supports, application of one coat of red-oxide primer followed by two coat of CR paint (as per colour code followed at HWPT). The primer, paints, thinner, brush, buffing wheels/machine, red-fibre sheet, U-clamp of required size, etc. are in contractor's scope.
17. For CS pipe supports GI U-clamp & for SS pipe support SS U-clamp shall be used to fix the pipes. The U-clamps are in contractor's scope. SS pipe need not to paint however CS pipe shall be painted with one coat of red-oxide primer followed by two coats of CR paint.
18. The following codes and standards shall be followed
  - a. Process Piping: ASME B31.3 - 2006
  - b. Welding: ASME Sec. IX - 2007
  - c. Manual Metal Arc Welding of Mild Steel: IS-823 Code for procedure for (for structural steel)
  - d. Welding & Brazing Qualifications: ASME – Sec IX

- e. Non-Destructive Examination: ASME Sec V
  - f. Electrodes/filler wire: IS 814 and IS 816 latest editions
19. The contractor shall submit manufacturer's test certificates for each batch of Filler wire and electrodes supplied by them. Electrodes shall be stored in unopened original containers. They shall be stored adequately to prevent moisture loss or moisture absorption and shall be handled in such a manner so as to avoid the damage of coating.
  20. Electrodes when used shall be free of rust, oil, grease, earth or any other matter which could be harmful for the quality of welding. The electrodes used shall be suitably to the welding process and the base metal and the weld properties shall not be lower than those of base metal.
  21. Electrodes shall be heated before use at approximately 250°C - 300°C and shall be kept in drying oven at approximately 40°C - 50°C. For special electrodes the instruction of Manufacturer shall be applicable.
  22. Welding electrodes shall be of M/s Advani Oerlikon/Philips/D&H Secheorn / L&T make Mangalam / ESAB or equivalent make ISI approved
  23. Contractor's welder shall be qualified for 6 G position in accordance with the ASME Section-IX for the approved welding procedure specification available at HWP-T. Engineer In-charge of the work shall witness the test and certify the qualification of each welder separately. Only those welders who have been approved the Inspector shall be employed for welding.
  24. Contractor shall carry out the qualification test of their welders at his own cost at the job site. All tools, tackles and auxiliaries required for carrying out Welder's test shall be supplied by contractor at his own cost. Maximum six sets of test pieces shall be issued for welder testing by the department at free of charge and further test pieces will be charged double the cost of purchase inclusive all taxes and levies.
  25. Contractor shall submit the welder qualification test reports in the format as per QW-484, ASME Section IX (latest edition) and obtained department approval before commencement of work. It shall be the responsibility of the contractor to carry out the qualification tests of welders
  26. The ends to be welded shall be properly cleaned. All paint, oil, grease, rust and oxide in general shall be removed, as well as all earth, sand or any other material which could be harmful to the welding. Ends shall be totally dry when welded.
  27. No dirt or debris will be permitted in the pipeline. Prior to alignment, the inside of each joint shall be adequately swabbed, either by use of leather or canvas belt disc of proper diameter or other improved method
  28. Edge preparation, alignment, spacing, fit-up for pipe to pipe and branch connections welding shall be as per applicable piping code.

29. Pieces to be welded shall be aligned and spaced in a suitable manner, so as to hold the ends during welding at a distance to ensure full penetration. Root opening shall not be more than as specified in WPS. Internal misalignment shall not exceed 1.5 mm.
30. For pipe with thickness 4 mm or larger, the pieces to be butt welded shall be coupled by means of pipe couplers or by yokes or bridge "C" clamps
31. Root pass shall be made with specified filler wire of approved brand by Gas Tungsten Arc Welding (GTAW) to achieve full penetration with complete fusion of the root edge. Weld projection inside the pipe shall be as per WPS
32. Stabilizing passes shall be made by Shielded Metal Arc Welding (SMAW) by approved brand of welding electrode. Preferred size of the electrodes is 2.5 mm diameter (12 SWG) but, in any case not greater than 3.15 mm (10 SWG)
33. Upward technique shall be adopted for welding pipe held fixed with its axis horizontal. Peening shall not be used.
34. Any deviation desired from the recommended welding technique and electrodes indicated in the welding specification should be adopted only after obtaining explicit approval of the Engineer In-charge of the work.
35. Branch Connections shall be made with forged tee and weldolet. All branch connections accomplished either by pipe-to-pipe connections or by using forged tees the rates quoted for piping shall be inclusive of this work. Reinforcement pads shall be provided wherever required as per code and standards governed by piping material specifications.
36. In flange Connections, all flange facings shall be true and perpendicular to the axis of pipe to which they are attached. Flanged bolt holes shall straddle the normal center lines
37. All high points and low points in piping shall be provided with vents and drains to be used during start up, shut down or test operations. All vents & drains shall be provided with isolation valve
38. Welding shall be uninterrupted. While the welding is in progress care should be taken to avoid any kind of movement of the components, shocks, vibrations and stresses to prevent occurrence of weld cracks
39. At each interruption of welding and on completion of each run, craters, weld irregularities and slag shall be removed by grinding.
40. When the welding is complete, but joints shall have a cover pass. It shall be slightly conveyed and fuse into the surface to the base metal in such a manner as to have a gradual notch free finish a good fusion at the joint edges. It shall not be chipped after completion.
41. Two weld beads shall not be started at the same point in different layers. Butt joints shall be completed with a cover layer that would affect good fusion at the joint edges and a gradual notch free surface.

42. Inspection of all welds shall be carried out as per the latest edition of the applicable codes and specifications. All finished welds shall be visually inspected for parallel and axial alignment of the work, excessive reinforcement, concavity of welds, shrinkage cracks, inadequate penetration, unrepaired burn-through, under cuts, dimensions of the weld, surface porosity and other surface defects. Undercutting adjacent to the completed weld shall not exceed the limits specified in the applicable standard / code.
43. All Root and final weld joints shall be tested by Liquid Penetrant Examination as per ASME Section V article 6. If any defect observed during testing, the same shall be rectified by the contractor at free of cost and the joint shall be tested again.
44. Before erection all pre-fabricated spool pieces, pipes, fittings etc. shall be cleaned inside and outside by suitable means. The cleaning process shall include removal of all foreign matter such as scale, sand, weld spatter chips etc. by wire brushes, cleaning tools etc. and blowing with compressed air/or flushing out with water. Special cleaning requirements for some services, if any shall be as specified in the piping material specification or isometric.
45. No deviations from the piping route indicated in drawings shall be permitted without the consent of Engineer In- charge. Pipe to pipe, pipe to structure / equipment's distances / clearances as shown in the drawings shall be strictly followed.
46. In case of fouling of a line with other piping, structure, equipment etc. the matter shall be brought to the notice of Engineer In-charge and corrective action shall be taken as per his instructions.
47. While fitting up mating flanges, care shall be exercised to properly align the pipes and to check the flanges for trueness, so that faces of the flanges can be pulled together, without inducing any stresses in the pipes and the equipment nozzles. Extra care shall be taken for flange connections to pumps, compressors, Heat Exchangers, etc. if any. The flange connections to this equipment shall be checked for misalignment, excessive gap etc. after the final alignment of the equipment is over, the joint shall be completed.
48. The assembly of a flange joint shall be done in such a way that the gasket between these flange faces is uniformly compressed. To achieve these bolts shall be tightened in a proper sequence. All bolts shall extend completely through their nuts but not more than 1/4".
49. Line Mounted Equipment / Items Installation of line mounted items like Valves, filters/ strainers, tapping for vent and drain, etc. including their supporting arrangements shall form part of piping erection work.
50. All piping system network laid shall be hydro tested at test pressure specified by the EIC. Contractor shall make all necessary arrangement like blinding, water filling and pressurizing to the test pressure. Any joint, pipe or fittings found leaking during hydro test will be welded at free of cost and hydro tested again.

51. Pipe supports are designed and located to effectively sustain the weight and thermal effects of the piping system and to prevent its vibrations. Location and design of pipe supports shall be shown in drawings for lines.
52. Pipe supports to be fabricated and erected as per design given by HWPT and instructed by EIC.
53. The guarantee period of the pump is Six months from the date of final completion of the work.
54. The work area shall be cleaned and all the tools/tackles/machines shall be return to the mechanical workshop/respected area.
55. All material before being utilized in work shall be inspected and tested by the Engineer in-Charge or his representative. Only approved materials shall be used in the works.
56. Arrangement of scaffolding materials like, scaffolding pipes, clamps, planks, rope, etc. Erection & de-erection of scaffolding at required location is in contractor's scope
57. Job shall be carried out in presence of departmental supervisor.
58. Contractor shall commence the job after obtaining safety pass and height pass for their workmen and supervisor.
59. Contractor shall engage qualified welder, fabricator/fitter for carrying out cutting and welding work.
60. Structural welding shall be done by qualified welder by using E 6013 Electrode. Before welding components, to be welded, shall be degreased, descaled and aligned properly.
61. Measurement shall be done in weight of structural member fabricated.
62. After completion of welding, temporary scaffolding erected for replacing damaged grating shall be de-erected.

**Specification for fabrication, welding and erection of structures for operating platform**

63. Contractor shall not leave the work place in unsafe condition to prevent fall of persons. Contractor's welder shall be qualified for 5F (for fillet welding) / 6G (for groove welding) position in accordance with the ASME Section-IX for the approved welding procedure specification available at HWP-T. Engineer In-charge of the work shall witness the test and certify the qualification of each welder separately. Only those welders who have been approved the Inspector shall be employed for welding.
64. Contractor shall carry out the qualification test of their welders at his own cost at the job site. All tools, tackles and auxiliaries required for carrying out Welder's test shall be supplied by contractor at his own cost. Maximum three sets of test pieces shall be issued for welder

testing by the department at free of charge and further test pieces will be charged double the cost of purchase inclusive all taxes and levies.

65. Contractor shall submit the welder qualification test reports in the format as per QW-484, ASME Section IX (latest edition) and obtained department approval before commencement of work. It shall be the responsibility of the contractor to carry out the qualification tests of welders.
66. Shop Fabrication / Prefabrication: The purpose of shop fabrication or pre-fabrication is to minimize work during erection to the extent possible. Fabricated materials shall be stacked with proper identification marks, so as facilitate their withdrawal at any time during erection. Care shall also be taken to avoid any physical damage to the materials.
67. All filler rods, metal/size wise must be stored in dry condition with original tags and original cartons. Only a few electrodes shall be taken out from the drying oven at a time for immediate use. Different containers shall be used for different type of electrode.
68. Before welding all materials shall be thoroughly cleaned of rust, oil, grease and any other chemical/ foreign material which may affect the welding. Edge preparation shall be as per applicable code. Oils, Greases, and paints shall not be stored where the electrodes and filler metals have been stored.
69. Welding shall be uninterrupted. While the welding is in progress care should be taken to avoid any kind of movement of the components, shocks, vibrations and stresses to prevent occurrence of weld cracks.
70. At each interruption of welding and on completion of each run, craters, weld irregularities and slag (if any) shall be removed by grinding or chiseling.
71. Welds shall have a regular appearance and shall be free from defects. Two weld beads shall not be started at the same point in different layers
72. Inspection of all welds shall be carried out as per the latest edition of the applicable codes and specifications. All finished welds shall be visually inspected for parallel and axial alignment of the work, excessive reinforcement, concavity of welds, shrinkage cracks, inadequate penetration, unrepaired burn-through, under cuts, dimensions of the weld, surface porosity and other surface defects. Undercutting adjacent to the completed weld shall not exceed the limits specified in the applicable standard / code
73. All weld joints shall be tested by Liquid Penetrant Examination as per ASME Section V article 6. If any defect observed during testing, the same shall be rectified by the contractor at free of cost and the joint shall be tested again.

## **Specification for Hot Dip Galvanized Plain Gratings:**

### **74. Grating Construction:**

- **Bearing Bars:**
  - Material: Mild Steel (MS) conforming to IS 2062
  - Size: 40 mm (width) × 5 mm (thickness)
  - Spacing: 40 mm center-to-center
  - Orientation: Longitudinal load-bearing members
- **Cross Bars:**
  - Material: Mild Steel (MS) flat bars conforming to IS 2062
  - Size: 12 mm (width) × 5 mm (thickness)
  - Spacing: 100 mm center-to-center
  - Orientation: Transverse members welded or mechanically locked to bearing bars

75. **Fabrication :** Bearing bars and cross bars shall be fabricated as per standard practices ensuring firm and secure welding or mechanical locking at every intersection. The assembly shall be square and free from warping or distortion

76. **Hot-Dip Galvanizing :** Galvanizing shall be carried out as per IS 4759 and IS 2629 standards. Surface Preparation to be done by thorough cleaning by degreasing, pickling, and fluxing before dipping. The minimum average zinc coating weight on the steel shall be **610 g/m<sup>2</sup>** as per IS 4759 for fabricated steel articles. Coating Thickness to comply with IS 2633 for measurement of zinc coating thickness. The galvanized finish should be continuous, uniform, and free from defects such as blisters, roughness, or bare patches

77. **Mechanical Properties :** Base steel shall conform to IS 2062 with minimum tensile strength and elongation as specified therein. Welding shall maintain the mechanical integrity of the grating

78. **Inspection and Testing :** Visual inspection to ensure uniform galvanizing coverage. Coating thickness measured by magnetic thickness gauge or other standard methods. Adhesion tests as per IS 2629. Dimensional checks for bearing bar and cross bar sizes and spacing.

79. **Packaging and Delivery:** Gratings shall be suitably packed to avoid damage during transport. Each batch shall be accompanied by test certificates covering chemical composition, coating weight, and mechanical properties

### **Contractor's scope of supply**

80. Skilled and experience manpower like, qualified welder & fabricator, experienced rigger & supervisor, helper, etc.
81. All the machines & consumables required for the jobs, like, welding electrodes & filler wire, Ar gas, Gas cutting set, Oxygen & Acetylene gas, LPT kit (cleaner, penetrant & developer), Red-oxide primer, chlorinated rubber paints, grinders, grinding/cutting wheels, SS wire brush,

U-clamps, machines, tools & tackles, etc. required for the execution of the job, fabrication & erection of pipeline, etc.

82. Arrangement of scaffolding materials like, scaffolding pipes, clamps, planks, rope, etc. welding machine with all accessories, sufficient length power/welding cables, extension boards with ELCB & MCB, gas cutting set, etc. required for execution & completion of the work covered under this tender document shall be arrange by the contractor.
83. Contractor shall make their own arrangement for accommodation, transportation, food and all required PPE kit, like, safety helmet, shoes, welding globes & face shield, etc. as required for their manpower.
84. Other than the free issue materials mentioned under the HWPT Scope of supply, Contractor shall have to supply all other consumables, tools & tackles required for completion of the work.

**HWPT's scope of supply**

85. The following materials will be supplied by the Heavy Water Plant, Tuticorin as Free Issue Materials (FIM).

Sl. No.	Item Description	Unit	Qty.
1	SS Pipe: 1" NB Sch.10S A316 and compatible pipe fittings	Mtr.	400
2	ASTM A106 Carbon Steel Gr B Seamless Pipe and compatible pipe fittings	Mtr.	200
3	MS structural material of various cross - section ISMB, ISMC, ISA up to 300 mm section conforming to IS2062	kg	10000

86. Power, water and air will be supplied by HWPT at one location as free of charges to the extent available. However, Contractor has to make arrangement for all additional points, cables and switches etc. and tapings shall be in accordance with Electrical/Safety regulations.

## PART – II

### GENERAL TENDERING CONDITIONS

1. The work shall be started immediately on receipt of confirmed work order. Mobilization period will be 10 days from the date of issue of work order.
2. The Completion period shall be **Three months**, which shall be counted from the date of issue of work order.
3. Since time is essence of the contract, successful bidder must ensure timely completion of job. Completion of jobs shall mean total completion of all jobs listed in schedule of quantity of tender document including testing, cleaning of area and final acceptance of the work by HWPT engineer.
4. **GUARANTEE PERIOD:** The guarantee period shall be **Six months** from the date of final completion of work at Site.
5. All bidders shall quote their rate as per the details given in the schedule of quantity of commercial bid. Successful bidder shall follow all the terms & contract conditions given in the tender document.
6. Any and all the exceptions that the bidder wishes to make to the clauses in this tender document shall be clearly out lined as deviations in his tender, otherwise it shall be construed that the bid is in total conformity with this tender document. Only such deviations as are approved by the government shall form part of this agreement.
7. Power, water and air will be supplied by HWPT to the successful bidder at the site of work at *one location* free of charges to the extent available. However, bidders shall indicate clearly the requirement of these facilities in quantum as well as quality. The successful bidder has to make arrangement for all additional points, cables and switches etc. and tapings shall be in accordance with Electrical/Safety regulations.
8. No lodging and/or boarding facilities will be provided either free or on chargeable basis by HWPT and the successful bidder shall have to arrange the same for all his personnel/work force. Contractor shall make their own arrangement of accommodation and transportation for their personnel to Plant site. Canteen facilities for their personnel are the contractor's responsibility. However, the contractor can use department canteen as per the rules laid by the canteen committee.
9. **SUB CONTRACTORS:** The contractor shall not sub contract whole or part of the work without the written consent of the Government. When permitted by the Government, the contractor shall be responsible for all the work of sub-contractor/s.
10. **SITE VISIT:** The contractor shall visit the site & examine the working conditions. The acceptance of the order of making of a contract shall be construed as evidence that such an examination was made, and later claims for labour equipment or materials required or for difficulties encountered which could have been foreseen, will not be allowed.
11. **COORDINATION OF WORK:** The contractor shall schedule his work so as to avoid interference with the works of the Government. Contractor has to depute one site supervisor to coordinate

the job and have communication with the department, obtaining daily safety work permit prior to start the work and ensure the safety of the workers.

12. **SECURITY:** Contractor shall submit photo identity in the form of Aadhar card/ Voter ID/ Driving license/ Passport/ Ration card/ Bank pass book for their working personnel as per the Security section instructions for obtaining entry passes for their working personnel.
13. You have to arrange Police Verification Certificate (PVC) for all the manpower deployed as per government norms and obtain gate pass required to enter Heavy Water Plant Tuticorin premises. You shall provide the PVC application receipt within 15 days of entry of your personnel as proof of online application and within 30 days of entry, original PVC shall be submitted, failing which your personnel will not be permitted entry into the site beyond 30 days.
14. Please note that "SAFETY& SECURITY" would be one of the important factors in the execution of the contract. Contractor & his staff shall follow all safety and security regulations prevailing at Heavy Water Plant Tuticorin site
15. **SAFETY PRECAUTIONS:** The contractor shall be responsible for the taking of all safety precautions during construction and on completion of the work and for leaving the site safe at all times and at the end of each working day. Also, at all times when the work is temporarily suspended, the contractor shall protect all construction materials, equipment and facilities from causing damage or interfering with the properties and work of others.
16. The safety of the workmen engaged in the execution of the work is the sole responsibility of the contractor and the department shall not take any responsibility for any such accident / death caused to the contractor's workmen during the execution of the contract. The contractor is advised to take necessary insurance coverage to their working personnel at their own cost.
17. The contractor shall comply with all applicable provisions of the safety regulations, clean-up program and other precautionary measures, which the Engineer has in force at site. The contractor shall ensure that his personnel wear safety shoes, helmets, gloves and safety belts etc. as per the requirement of the work or as advised by the Engineer In charge. While executing the work. The safety instructions issued to the contractor from time to time by safety Officer / Engineer In-Charge of HWP (T) are to be scrupulously followed. All the contractor's manpower shall be subjected to safety training at the time of their first entry in to the Plant premises for the work.
18. Contractor has to follow safety code and model rules for protection for Health which are enclosed with this tender.
19. **HOUSE KEEPING:** The contractor shall at all times keep the site free of rubbish, debris and surplus materials so as to render the place of work clean and safe for all personnel working in the area. After completion of the work he shall remove all rubbish and waste material resulting from his work and leave the site in a clean and finished condition. All scaffolding and temporary structures shall be removed as soon as the jobs for which they are intended are complete. Welding and other electrical cables shall be routed to allow safe traffic by all concerned. The erected equipment shall be kept clean by regular cleaning or protective methods. The contractor shall employ adequate housekeeping staff for this purpose. The government has the right to stop work if the contractor fails to improve upon the house keeping after having been

notified. If so required, such work will be performed by the Government at contractor's expenses.

20. Technical specifications applicable for the work as well as scope of work covered under this tender shall be as given in Part I. The bidder shall visit site if he deems it necessary before submission of the quotation, to ascertain themselves about quantum/magnitude of jobs, material requirement etc. and hold discussions with site engineers for clarifications. No drawings will be handed over to the bidder.
21. The quoted rate shall be valid for **75 days** from the last date of receipt of technical bid (Part-A).
22. Department shall reserve the right to enhance or decrease the quantity of work by 25% and the above quoted rates by the contractor shall remain same for the variation in the quantities indicated as per schedule depending upon the site condition.
23. The Contractor while executing the above contract shall take precautions not to cause any damage or loss to the departmental property and any such loss / damage noticed shall be recovered from the contractor's bill. The contractor manpower shall have to work in co-ordination with the departmental and other agencies who may be working in the Plant premises.
24. All the relevant labor acts, provident fund provisions, for the workmen employed by the contractor and other statutory measures are to be strictly observed by the contractor.
25. Acceptance of the tender or its rejection is totally at the discretion of the Competent authority, HWP (Tuticorin) and no reason is required to be given by the competent authority for taking such decision.
26. Successful bidder, who will be awarded the work, shall have to sign a formal agreement form as a token of acceptance of the work.
27. Successful bidder shall have to communicate the name of the authorized representative at site to whom official communication can be sent at site. Successful bidder will also have to depute authorized representative holding valid power of Attorney for formal execution of agreement.
28. If a tenderer withdraws his tender within the validity period or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the government shall without prejudice to other rights or remedy, be at liberty to forfeit the earnest money deposit absolutely.
29. All the bidders are supposed to quote with full details of manpower i.e. Engineer/Supervisor, high skilled persons, helpers etc. they intend to deploy. They shall bring all the tools, tackles and other material indicated in the contractor's scope of supply and others they consider necessary for taking up the job.
30. Contractor's personnel should concentrate on the job specifically allotted under this contract. Tampering of any other equipment and materials of HWPT or other contractors shall be avoided.

31. Contractor's engineer/supervisor shall entirely co-ordinate this work with HWPT authorities throughout the currency of the contract. The work shall be executed under Contractor's engineer/supervisor's constant supervision.
32. The contractor shall bring in all their material, required for this work, after obtaining HWPT security personal signature as a proof of "brought in". Similarly, the material shall be taken out on "material gate pass" by getting it authorized by HWPT authorities.
33. The contractor shall submit 2 copies of daily progress report to Engineer-in-Charge for monitoring the progress of the work. The inspection and testing reports shall be jointly signed by the contractor's and HWPT engineer.
34. First aid facility at the HWPT site for the contractor's staff will be available. However, the contractors at their own cost shall arrange further medical treatment.
35. Decision of HWPT authorities will be final and binding with regard to inspections, security, safety etc and job is to be carried out by the successful bidder strictly as per the instructions / guidelines / specifications given by HWPT authorities.
36. HWPT reserves the right to terminate / suspend the contract at its discretion and the contractor has to comply with the same as per the instructions of the engineer.
37. The contractor shall maintain a Muster as well as Payment Registers and payment to the labourers made only in the presence of the Engineer and it is the responsibility of the contractor to get his endorsement on the payment on the register.
38. After completion of the work by the successful contractor, they shall clear the site to the satisfaction of HWPT authorities.
39. The contractor shall get the Assistant Labour Commissioner's approval for manpower deployment of the job.
40. **General Conditions of the Contract and AERB safety guidelines**, which are enclosed with the tender document, shall also be followed.
41. Contractor shall submit Contract workers Muster roll and register of wages in form No. XVI and XVII to Labour Enforcement Officer, Tuticorin.
42. Copies of form No. XVI, XVII and receipt/ challan for the payment of ESI contributions shall be submitted along with their bill. Without these documents bill will not be processed.
43. Idle charges to labour or overtime charges shall not be payable by HWPT.
44. **PERFORMANCE GUARANTEE:** Successful bidder will be issued Letter of Acceptance and contractor shall submit **performance guarantee of 5%** of the tendered amount **within the 7 days** from the date of issue of LOA. This period can be further extended at the written request of the contractor by the Engineer-in-charge for a maximum period ranging from 1 to 07 days with interest @ 0.1% per day, of performance guarantee amount. After receipt and acceptance of PBG work order will be issued to the contractor. After completion and acceptance of work PBG will be released to the contractor

45. **Earnest Money Deposit** submitted along with the bid shall be returned after receiving performance guarantee by submitting duly filled TR-61 form.
46. **INCOME TAX** at prevailing rates on the gross amount of bills shall be deducted from the Contractor's bills as per Section 194 of the Income Tax Act or any amendments thereto.
47. All tendered rates shall be inclusive of any tax, levy or cess applicable on last stipulated date of receipt of tender including extension if any. No adjustment i.e. increase or decrease shall be made for any variation in the rate of GST, building and other construction workers welfare cess or any tax, levy or cess applicable on inputs. However, effect of variation in rates of GST or building and other construction workers welfare cess or imposition or repeal of any other tax, levy or cess applicable on output of the works contract shall be adjusted on either side, increase or decrease. Provided for building and other construction workers welfare cess or any tax (other than GST), levy or cess varied or imposed after the last date of receipt of tender including extension if any, any increase shall be reimbursed to the contractor necessarily and properly pays such increased amount of taxes/ levies/ cess. Provided further that such adjustment including GST shall not be made in the extended period of contract for which the contractor alone is responsible.
48. **INSURANCE:** Insurance against theft, fire and arsenal shall be arranged by the contractor for all the materials, tools & tackles, etc. belonging to the contractor (required for execution of the work) and also for the materials supplied under the present contract. The contractor shall also arrange insurance of their personnel also.
49. **PROOF OF ABILITY:** Bidders should list out the detail of jobs of similar nature so far handled and completed by him. Preference will be given to bidders who have previously carried out the work on similar nature.
50. **SECURITY DEPOSIT:** 2.5% of the tendered value shall be deducted @ 2.5% of each bill as security Deposit Which will be retained for the guarantee period 6 months towards defect liability. This amount will be refunded after the completion of guarantee period. In case of any defects noticed during the guarantee period, the contractor will be asked to rectify the defects within fifteen days, failing which the same will be rectified departmentally or otherwise at the risk & cost of the contractor.
51. **TERMS OF PAYMENT:**
- I. Progressive payment shall be made depending upon quantum of the job completed physically in three parts (two running account bills and one final bill with each bill after completion of 33 percent of the work order quantity) on submission of clear Running Account bills after confirming joint measurements by the engineer in-charge and the contractor.
  - II. The statutory deduction like, Income Tax, TDS on GST, etc. will be deducted from the payments made to the contractor.

## SCHEDULE OF QUANTITY

Tender No.: HWPT/MECH/2026/1102

Name of the work: Erection of approach platform on product storage vessels and erection of transfer and utility pipelines from SPP to product storage vessels at HWP-T.

Sl. NO	Description	Unit	Qty
1	Fabrication of CS pipe line as per approved isometric drawing, making edge preparation as per code, fit-up, alignment, root welding by GTAW and subsequent stabilising Welding by SMAW using approved welding procedure by authorised welder, root & final DP test, etc. as instructed by EIC. All consumables like, welding electrodes, filler wires, cutting/grinding wheels, tools & tackles, etc. are in contractor's scope.	Inch-Dia.	200
2	Fabrication of SS pipe line as per approved isometric drawing, making edge preparation as per code, fit-up, alignment, root as well as subsequent welding by GTAW using approved welding procedure by authorised welder, root & final DP test, etc. as instructed by EIC. All consumables like, welding electrodes, filler wires, cutting/grinding wheels, tools & tackles, etc. are in contractor's scope.	Inch-Dia.	350
3	Erection of fabricated CS/ SS pipe at site providing supports, including erection of valves, fittings, clamping, painting of pipe line with one coat of red oxide and two coat of finish paint wherever required as instructed by EIC. Colour code shall be followed as per HWPT standard. All consumables, like paint, primer, buffing wheels, machines, tools, tackles, slings/ rope, D-shackles, chain-pulley blocks, etc. shall be under contractor's scope.	Inch mtr.	600
4	Erection and de-erection of scaffolding as per site requirements and directed by the EIC. Arrangement of scaffolding materials including scaffolding pipes, clamps, jali, rope, tools & tackles, etc. are in contractor's scope. This quantity to be executed for erection of fabricated pipelines only.	cubic mtr.	600
5	Fabrication & erection of structural members to provide approach platform for solvent storage vessels in SPP as per the attached drawing and instructed by EIC. Job includes fabrication and welding of MS structural steel of various cross sections using SMAW, painting with one coat of red oxide and two coat of finish paint, fixing of gratings, erection and de-erection of scaffolding as per site requirements and directed by the EIC. All consumables like welding electrodes, paint, primer, buffing wheels, machines, tools, tackles, slings/ rope, D-shackles, chain-pulley blocks, etc. shall be under contractor's scope. Erection and de-erection of scaffolding required for this job as well as arrangement of scaffolding materials including scaffolding pipes, clamps, jali, rope, tools & tackles, etc. are in contractor's scope	kg.	10000
6	Fabrication and Supply of hot dip galvanized Plain gratings with 40mm × 5mm MS bearing bars at 40mm spacing, and 12mm × 5mm MS flat cross bars at 100mm spacing, hot-dip galvanized per IS 4759 with minimum 610 g/m <sup>2</sup> zinc coating, ensuring uniform, defect-free finish and compliance with IS 2062 steel standards.	sqmtr.	200