

कोचीन शिपयार्ड लिमिटेड/COCHIN SHIPYARD LIMITED
कोच्ची/COCHIN - 682 015

पोत निर्माण प्रभाग/SHIP BUILDING DIVISION

आउटसोर्सिंग विभाग
OUTSOURCING DEPARTMENT



निविदा दस्तावेज़/TENDER DOCUMENT

TENDER NO. SB-OSD/ASW/894/2024 Dtd. 29-07-2024

**MACHINING OF FOUNDATIONS ONBOARD ASW SWC
VESSELS BY 523 & BY524**

JULY - 2024

निविदा सूचना / TENDER NOTICE
कोचीन शिपयार्ड लिमिटेड / COCHIN SHIPYARD LIMITED

पोत निर्माण प्रभाग / SHIP BUILDING DIVISION
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SB-OSD/ASW/894/2024

29TH JULY 2024

निविदा सूचना / TENDER NOTICE

संक्षिप्त विवरण / BRIEF DETAILS:

निविदा जांच संख्या और तारीख Tender enquiry No. and date	SB-OSD/ASW/894/2024 Dtd: 29-07-2024
कार्य का नाम Name of work	Machining of Foundations Onboard ASW SWC Vessels BY 523 & BY 524
निविदाएं प्राप्त करने की अंतिम तिथि और समय Last date & time of receipt of Tenders (भाग/Part I – तकनीकी-वाणिज्यिक बोली और भाग - II मूल्य बोली/ Techno-Commercial Bid & Part II-Price Bid)	09 TH AUGUST – 2024 at 15.00 Hrs IST
पूर्व बोली बैठक की तारीख Date of Pre bid meeting	07 TH AUGUST – 2024 at 14.00 Hrs IST
भाग I (तकनीकी-वाणिज्यिक) बोली खोलने की तिथि और समय Date & time of opening of Part I (Techno – Commercial) Bid	09 TH AUGUST – 2024 at 15.30 Hrs IST
संपर्क व्यक्ति Contact Person	<u>For Commercial queries:</u> Mr. Vidhu Sebastian, SM (outsourcing) Mob No:9995806136, vidhu.s@cochinshipyard.in <u>For Technical queries:</u> Mr. Sandeep N S, Manager (IAC&DP) Mob. No: 8138917195, sandeep.ns@cochinshipyard.in

नोट: इस निविदा के खिलाफ उद्धृत करने से पहले, संभावित बोलीदाता से अनुरोध है कि वे निविदा जांच दस्तावेज़ (और अनुलग्नक, यदि कोई हो) को पूरी तरह से और सावधानी से पढ़ लें। निविदा के नियमों और शर्तों में विचलन अत्यधिक हतोत्साहित किया जाता है। इसलिए, निर्धारित किसी भी नियम और शर्तों, योग्यता मानदंड, ईएमडी जमा करने से छूट के लिए पात्रता, दस्तावेज़ीकरण/प्रक्रियात्मक आवश्यकताओं आदि के संबंध में स्पष्टीकरण, यदि कोई हो, के संबंध में उत्पन्न होने वाले किसी भी संदेह को संभावित बोलीदाता द्वारा बोली जमा करने से पहले निरपवाद रूप से उपरोक्त सूचित व्यक्तियों के माध्यम से अनिवार्य रूप से स्पष्ट किया जाएगा।

Note: Before quoting against this Tender, the prospective bidder is requested to go through the Tender Enquiry document (& Annexes, if any) thoroughly & carefully. Deviations to the Terms & Conditions of the Tender are highly discouraged. Therefore, any doubts arising in respect of any of the Terms & Conditions stipulated, Qualification Criteria, Eligibility for exemption from submission of EMD, clarification if any w.r.t. Documentation / Procedural requirements, etc. shall get clarified by the prospective bidder through above noted contact persons invariably before the submission of the Bid.

1. कोचीन शिपयार्ड लिमिटेड, एक प्रमुख पोत निर्माण और पोत मरम्मत उद्योग और वैश्विक पोत निर्माण के मोर्चे पर विख्यात, इच्छुक, प्रतिष्ठित, संसाधन संपन्न और वित्तीय रूप से सक्षम कंपनियों/ठेकेदारों को एकल चरण दो भाग बोलियों को प्रस्तुत करने हेतु आमंत्रित करता है।

Cochin shipyard Limited, a leading Ship Building & ship repair industry and also well known player on the global ship building front, invites interested, reputed, resourceful and financially solvent firms/contractors to submit single stage two part bids.

2. निर्धारित प्रपत्र में पासवर्ड संरक्षित प्रतिस्पर्धी मूल्य बोलियां निविदा जांच के अनुबंध में उल्लिखित नियम और शर्तों के अनुसार होनी चाहिए।

The password protected competitive Price bids in the prescribed form should be as per the terms and conditions as mentioned in the annexure to tender enquiry

3. निविदा के कार्यक्षेत्र के विस्तार पर चर्चा करने के लिए निविदा पूर्व बैठक दिनांक 07.08.2024 को सीएसएल के जहाज निर्माण सम्मेलन हॉल (प्रेरणा) कक्ष में अपराह्न 14.00 बजे से आयोजित की जाएगी। पूर्व निविदा बैठक में भाग लेने के इच्छुक ठेकेदारों को अपने पूर्व निविदा प्रश्नों (यदि कोई हो) को दिनांक 06.08.2024 तक सकारात्मक रूप से सूचित और अग्रेषित करना चाहिए।

The pre-bid meeting will be held on 07.08.2024 at Ship Building Conference Hall (Prerana) of CSL from 14.00 PM. to discuss the detail scope of work of the tender. The Contractors interested to participate in Pre-bid meeting should inform and forward their Pre-bid queries (if any) by 06.08.2024 positively.

4. पूर्व निविदा बैठक में भाग लेने के लिए सूचना और पूछताछ, यदि कोई हो, तो निम्नलिखित मेल आईडी sandeep.ns@cochinshipyard.in पर, vidhu.s@cochinshipyard.in पर प्रति के साथ समय पर अग्रेषित की जानी चाहिए।

Information to participate in pre-bid meeting and queries, if any should be forwarded in time to following mail ID: sandeep.ns@cochinshipyard.in with a copy to vidhu.s@cochinshipyard.in

5. निविदाएं दो बोली प्रणाली में प्रस्तुत की जानी हैं; भाग I: तकनीकी वाणिज्यिक बोली और भाग II: सॉफ्ट कॉपी के रूप में मूल्य बोली (पासवर्ड से सुरक्षित) और निर्धारित तिथि और समय पर या उससे पहले अधोहस्ताक्षरी के पास पहुंच जानी चाहिए:

The tenders are to be submitted in two bid system; **Part I : Techno Commercial Bid** and **Part II : Price Bid (Pass word protected)** as Soft copy and should reach the undersigned on or before the date and time as stipulated:

6. बोलियां जमा करने का तरीका / MODE OF SUBMISSION OF BIDS

- a. निविदा केवल ई-मेल के माध्यम से सॉफ्ट कॉपी में प्रस्तुत की जानी चाहिए।

Tender should be submitted in soft copy via E-mail only.

- b. ई-मेल के विषय में स्पष्ट रूप से निविदा पृष्ठताछ संख्या और जमा करने की देय तिथि का उल्लेख होना चाहिए। मूल्य बोलियों को पासवर्ड से सुरक्षित किया जाना चाहिए और जब तक मांगा नहीं जाता तब तक पासवर्ड अग्रेषित नहीं किया जाना चाहिए।

The subject of the E mail should clearly state the tender enquiry number and due date of submission. Price Bids are to be password protected and password is not to be forwarded unless asked for.

- c. निविदा दस्तावेज़ पीडीएफ प्रारूप में प्रस्तुत किया जाना चाहिए और पीडीएफ प्रारूप से सीधे खोला जा सकता है। उपरोक्त का अनुपालन न करने वाले प्रस्तावों को बिना किसी सूचना के सरसरी तौर पर खारिज कर दिया जाएगा। Tender Documents should be submitted in PDF Format and Directly openable from the PDF format. Offers not complying with the above shall be summarily rejected without further intimation.

- d. निविदाएं, तकनीकी - वाणिज्यिक बोली (भाग-I) और मूल्य बोली (भाग-II) अलग से ई-मेल के माध्यम से **“SB-OSD/ASW/894/2024”** विषय के साथ प्रस्तुत की जाएगी।

Tenders, Techno- commercial bid (Part-I) and Price bid(Part -II) shall be submitted separately via email , with subject as “ SB-OSD/ASW/894/2024” to:

- (i) vidhu.s@cochinshipyard.in

Copy to:

- (ii) madhu.pk@cochinshipyard.in

- (iii) philip.thomas@cochinshipyard.in

7. बोलियां दिनांक **09 अगस्त- 2024** को अपराह्न **15.00** बजे या उससे पहले कोचीन शिपयार्ड लिमिटेड में प्राप्त की जाएंगी और भाग I तकनीकी - वाणिज्यिक बोली उसी दिन अपराह्न **15.30** बजे खोली जाएगी।

The Bids shall be received at Cochin Shipyard Ltd on or before 15.00 Hrs on 09th August - 2024 and Part I Techno-Commercial Bid will be opened at 15.30 Hrs on the same day.

8. देर से आनेवाली निविदाएं/शर्तों वाली निविदाएं सरसरी तौर पर खारिज कर दी जाएंगी।

Late tenders / tenders with conditions will be summarily rejected.

9. सीएसएल ई-मेल द्वारा भेजी गई निविदाओं के विलंब, खो जाने या प्राप्त न होने की कोई ज़िम्मेदारी नहीं लेगा।

CSL takes no responsibility for delay, loss or non-receipt of tenders sent by e-mail.

10. मूल्य बोली खोलने के लिए केवल तकनीकी रूप से योग्य बोलियों पर विचार किया जाएगा। तकनीकी पहलुओं और वाणिज्यिक शर्तों दोनों के लिए बोलियों का मूल्यांकन करने के बाद, तकनीकी-व्यावसायिक रूप से योग्य बोलीदाताओं को भाग-II मूल्य बोली खोलने की तारीख और समय के बारे में सूचित किया जाएगा।

Only technically qualified bids will be considered for price bid opening. After evaluating the bids for both technical aspects and commercial terms, the techno-commercially qualified bidders will be intimated regarding the date and time of opening of Part II - Price Bid.

11. केवल तकनीकी - वाणिज्यिक बोली खोलने को अनुबंध देने के लिए प्रस्ताव की स्वीकृति के रूप में नहीं माना जा सकता है।

Merely opening of Techno-Commercial Bid cannot be construed as acceptance of offer for awarding of contract.

12. **भाग I (तकनीकी-वाणिज्यिक)बोली के साथ निम्नलिखित प्रस्तुत किया जाएगा:**

The following shall be submitted along with Part I (Techno-commercial) Bid:-

- i. अनुलग्नक I, II, III, IV, V और परिशिष्ट –A & B में रखे गए पृष्ठताछ के नियम और शर्तें, सामान्य शर्तें, तकनीकी विनिर्देश और आरेखण सहित सभी पृष्ठों पर विधिवत हस्ताक्षरित मूल निविदा दस्तावेज़।

Original tender document duly signed on all pages - including Terms & conditions of enquiry, general conditions technical specification and evaluation forms placed at Annexure I, II, III, IV, V और Appendix-A & B

- ii. अनुलग्नक IV में तकनीकी वाणिज्यिक जांच सूची पूरी तरह से भरी हुई है और विधिवत हस्ताक्षरित है। विधिवत भरी हुई तकनीकी वाणिज्यिक जांच सूची प्रस्तुत न करने पर बोलियों को अस्वीकार कर दिया जाएगा।

The techno commercial Check List at Annexure IV filled up completely and duly signed. The non submission of duly filled techno commercial checklist will lead to the rejection of the bids.

iii. गैर-मूल्य बोली प्रारूप की प्रतिलिपि (कीमत/अंकों के बिना मूल्य बोली)।

Copy of un-priced bid format (price bid WITHOUT prices/numerals)

iv. निविदा पृष्ठताछ नियम और शर्तों से विचलन/बहिष्करण की सूची (यदि कोई हो)।

List of deviations/exclusions from the tender enquiry terms and conditions (if any).

13. एमएसएमई - विशेषाधिकार / MSME- PRIVILEGES

सीएसएल वेबसाइट (www.cochinshipyard.in) के अनुसार एमएसएमई, स्टार्ट-अप आदि से संबंधित भारत सरकार की सार्वजनिक खरीद नीति पहल इस निविदा के लिए लागू होगी।


Public procurement policy initiatives of Govt. of India, pertaining to MSME's, Start-up etc. as per CSL website (www.cochinshipyard.in) shall be applicable for this tender.

कोचीन शिपयार्ड लिमिटेड (सीएसएल) ने ट्रेड्स पोर्टल अर्थात् आरएक्सआईएल, एम1 एक्सचेंज और इनवॉयस मार्ट में पंजीकरण कराया है। वे विक्रेता जिन्होंने ट्रेड्स पोर्टल में पंजीकरण कराया है, वे ट्रेड्स पोर्टल के ज़रिए भुगतान को संसाधित करने के लिए संबंधित निष्पादन अधिकारी को सूचना के तहत संबंधित पोर्टल में चालान अपलोड कर सकते हैं। आपूर्तिकर्ताओं से अनुरोध है कि ट्रेड्स पोर्टल में चालान अपलोड करने से पहले, जहां भी लागू हो, गुणवत्ता निरीक्षण स्थिति के संबंध में संबंधित निष्पादन अधिकारी से जांच करें।

Cochin Shipyard Limited (CSL) has registered in the TReDS Portal viz., RXIL, M1xchange and Invoice Mart. Those vendors who have registered in the TReDS portal may upload the invoice in the respective portal under an intimation to concerned executing officer for processing the payment through TReDS portal. Suppliers are requested to check with the concerned executing officer regarding the Quality inspection status, where ever applicable, before uploading the invoices in TReDS portal.

महाप्रबंधक, पोत निर्माण प्रभाग, कोचीन शिपयार्ड लिमिटेड, निविदा या उसके हिस्से को स्वीकार करने हेतु अधिकृत व्यक्ति है, जो न्यूनतम निविदा को स्वीकार करने हेतु स्वयं को बाध्य नहीं करता है और बिना कोई कारण बताए प्राप्त किसी या सभी निविदाओं को अस्वीकार करने का अधिकार सुरक्षित रखता है।

General Manager, Ship Building Division, Cochin Shipyard Limited, is the authorized person to accept the tender or part thereof, who does not bind himself to accept the lowest tender and reserves the authority to reject any or all of the tenders received without assigning any reason.


**कृते उप महाप्रबंधक / For Deputy General Manager
आउटसोर्सिंग विभाग / Outsourcing Department**

विधु सेबास्टियन
VIDHU SEBASTIAN
वरिष्ठ प्रबंधक / Senior Manager
कोचीन शिपयार्ड लिमिटेड
Cochin Shipyard Ltd.
कोच्ची / Kochi - 682 015

ANNEXURE- I

जांच की नियम और शर्तें / TERMS & CONDITIONS OF ENQUIRY

**MACHINING OF FOUNDATIONS ONBOARD ASW SWC
VESSELS BY 523 & BY524**

1. कार्य का विवरण / DESCRIPTION OF WORK

- 1.1. The work “**Machining of Foundations On board ASW SWC Vessels BY 523 and 524**” includes machining of 05 Sets of weapon foundations on board each ASW SWC Vessels as per the following documents:
 - 1.1.1. Cochin Shipyard Ltd - Terms and conditions (Annexure I)
 - 1.1.2. Cochin Shipyard Ltd - General conditions (Annexure II)
 - 1.1.3. Scope of work / Technical Specification (Annexure III)
- 1.2. The scope of work includes machining of 05 Sets of foundations onboard each ASW SWC Vessels up to the entire satisfaction of OEM, CSL / IN, with the available infrastructure facilities and Equipments / materials / provided by Cochin Shipyard Ltd. (CSL) in accordance with the enclosed Specifications and drawings, delivery schedule, CSL - Terms and conditions in all respects.
- 1.3. The work is to be carried out In-Situ area (Onboard the ships BY 523 & BY 524) allotted to the contractor inside CSL premises.
- 1.4. Bidders are requested to study the scope of work before submitting their offer. Technical Clarification, if any, required may be obtained from **Mr. Sandeep N S, Manager (IAC & DP)**, E-mail: sandeep.ns@cochinshipyard.in, before quoting.

2. विक्रेताओं के लिए पूर्व योग्यता मानदंड / PRE QUALIFICATION CRITERIA FOR BIDDERS

The contractor should qualify the following PQ Criteria.

- 2.1. Bidder should have experience in executing On site machining of Equipment/Weapon foundations in other projects / floating vessels and should be conversant with Ship Building / Ship Construction procedures or paramilitary ships or submarines or offshore structure in CSL or other yards/Marine projects. Necessary documents in proof of carrying out works as specified above shall be submitted with the offer.
- 2.2. The relevant experience should be during the past Five (05) years ending on 30th June 2024 . The bidder should have successfully completed any of the following: -
 - a. Three similar completed works costing not less than the amount equal to 6.5 Lakhs.
or
 - b. Two similar completed works costing not less than the amount equal to 8 Lakhs.
or
 - c. One similar completed work costing not less than the amount equal to 13 Lakhs.

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ASW SWC Vessels BY 523 & BY 524**

- 2.3. Bidder shall not be under a declaration of ineligibility issued by Govt. of India/ State govt./ Public Sector Undertakings etc. The bidder shall not have been debarred / black listed by CSL or by any of the Public Sector Undertaking or Government department etc. **Self declaration to be submitted along with Technical bid.**
- 2.4. The firm has to submit the documents which validate the above mentioned Clause 2.1, 2.2 and 2.3 requirements .Documents to prove credentials of the firm to undertake the subject work. eg: Details of available equipments & facilities, Skilled Manpower, Work experience of similar job (copy of work order and work completion certificate/ copy of invoice), etc. shall also be attached with the offer. Work order for material supply will not be considered.
- 2.5. Bidder shall submit the proof of EPF, ESI and Registration of MSME and NSIC in case any relaxation is claimed under MSME scheme.
- 2.6. Contractors shall not engage employees of other contractors presently working in CSL & recorded at Security Dept. The contractor can engage such employee if other contractor gives No Objection Certificate for such engagement & cancel the name of such desirous employee from his roll & accordingly convey to Security. The contractor engaging such employee without permission is liable for penalty including termination of contract & forfeiture of Security Deposit. Penalty can also be imposed if it is observed that supervisors /Workers deployed by contractor are not on their role as per statement submitted by him at Security.

3. प्रस्ताव की वैधता / VALIDITY OF OFFER

The offer shall be valid for acceptance for a period of 90 days from the date of opening of the Part-I Techno-Commercial Bid.

4. अनुबंध प्रदान करने का तरीका / METHOD OF AWARDING CONTRACT

- 4.1. Machining work of foundations, onboard ASW SWC Vessels (BY 523 & BY 524) is covered under this contract. However, the contract is extendable to more vessels in the series with same rate, terms & condition on mutual agreement.
- 4.2. Since it has been decided to carry out the machining jobs for BY 523 & BY 524 in parallel, there arises a requirement to progress the work simultaneously with different contractors. Considering the limited time period available for the requirement, CSL intends to award one ship to L1 bidder , and balance 1 ship to the other one bidder (willing to match the rates negotiated with L1) from amongst other bidders sequentially starting with L2, L3, L4 and so on, in that order of preference.
- 4.3. In the event of no other firms are willing to match L1 rate, CSL reserves the right to place order in part/ full on L1 firm, depending upon project schedule, priorities,

capacity to mobilize manpower, previous performance etc. and after assessing the financial capabilities, etc.

- 4.4. In the event of resultant single bid, CSL reserves the right to place order in part/ full, depending upon project schedule, priorities, etc. and after assessing the bidder's execution & financial capabilities, etc. CSL's decision in this regard will be final and legally binding on the bidders
- 4.5. CSL reserves the right to cancel the tender if required.
- 4.6. Price negotiation will be as per CSL prevailing procedure/rules.
- 4.7. Once work order is placed, successful Contractor shall complete mobilization of his workforce, tools & equipment within one week from advance intimation from IAC&DP Department to start the work. During this mobilization period, contractor should complete QAP approval and required to arrange entry passes for his employees and no excuse for delay in commencing work on this account will be entertained. Final clearance of unit as per QAP shall be treated as completion date.
- 4.8. The performance will be assessed by CSL on a bi weekly/ monthly basis as desired necessary by the Execution officer as per format indicated at Appendix A. CSL reserves the right to take over / allocate the scope to another suitable contractor if the work performance rating is below "Average".

5. कार्य की प्रगति तथा समापन की समय – सारणी / WORK PROGRESS AND SCHEDULE OF COMPLETION

- 5.1. The entire job has to be completed within 20 days from the date of commencement of work.
- 5.2. Post issue of WO/LOI , mobilization instruction shall be issued separately by CSL and contractor should be capable of mobilizing the team within 7 days from date of mobilization request issued by CSL. Contractor is required to mobilize required number of machining equipments, work round the clock / Sundays/ holidays as per the requirement of concerned department in order to complete the work in time.
- 5.3. Availability of both vessels for machining simultaneously will depend on the docking schedule of the vessels which may be intimated by IAC & DP department and the contractor shall plan the mobilization accordingly
- 5.4. CSL has the right to change the schedules of the project to the interests of the company and the contractor/s should be capable of adjusting the resources according to the instructions from the CSL contact person. It is also to be understood by the Contractor that Cochin Shipyard Limited does not bind itself to give the Contractor any regular or specific quantity or area of work and it shall be done at the sole discretion of CSL

depending on the prevailing site conditions and other limiting factors and no claim on this account from the contractor shall be entertained.

5.5. Detailed working schedule (Weekly/bi-weekly) etc. to be prepared and submitted to CSL personnel. However, a detailed overall schedule, in a reasonable manner should be submitted prior to commencement of work. The detailed schedule should encompass the following:

- i. Approximate quantity of work planned in each week,
- ii. Number of Manpower planned for each week,
- iii. Completion schedule for machining of each foundation

6. कार्य प्रक्रिया / WORK PROCEDURE

- 6.1. The work procedure briefly described below, detailed scope for each category of work is mentioned in the Annexure III to the tender enquiry.
- 6.2. Necessary job instructions, drawings etc. for the work will be issued by CSL.
- 6.3. Contractor required carrying out the work as per the specifications / drawings supplied, and to the satisfaction of OEM, Class authorities , CSL & IN.
- 6.4. Contractor should maintain the quality as per CSL Quality Standards, yard quality procedures. A separate QC Inspector should be deputed by the Contractor for internal quality checks before presenting to CSL QC. Inspection will be carried out during machining by CSL/ IN/OEM/IN Designated Agency.
- 6.5. The survey requests should be submitted to CSL by the QC Inspector of the Contractor.
- 6.6. Contractor should depute a single point coordinator for the project who will act as a nodal point for the firm who will liaise with CSL at all times. He will be responsible for forwarding the;
 - i. Detailed work schedule along with resource allocation,
 - ii. Weekly progress status of machining,
 - iii. Submission of planned works for the upcoming 2 weeks,
 - iv. Any issues hindering the work progress.
- 6.7. Contractor shall submit the weekly /bi weekly progress reports to CSL.
- 6.8. Since the Ship belongs to Indian Navy the work has to be meeting the quality standards of Naval vessels (IAC or similar) and the responsibility of meeting the requisite standards will be of the Contractor.
- 6.9. The work is of urgent nature and hence the contractor should commence the work immediately after getting the work order/ intimation from the executing officer of CSL.
- 6.10. The entire machining work of foundations is coming under the Contractor's scope.

7. अनुबंध की वैधता / VALIDITY OF CONTRACT

- 7.1. Once the contract is awarded, the price offered and mutually agreed shall remain firm (Contract concluded price as per Annexure V) till completion of work and no escalation in rate shall be allowed by CSL on whatsoever reason thereafter.
- 7.2. Contract Validity: Contract shall be valid for 6 months from the date of award of contract. Exact date of commencement will depend upon award of contract. Any work released till the completion of contract shall be carried out by the contractor. The contract may be extended for a further period of 6 months on mutual agreement with the same Terms & Condition if found necessary.
- 7.3. Entire job has to be completed within 20 days from the date of commencement of work. Final clearance of the machined foundation as per QAP shall be treated as completion date.

8. निरीक्षण / INSPECTION

- 8.1. The complete work has to be carried out under the survey of OEM / IN / Classification Society/CSL.
- 8.2. Survey presentation to CSL I&QC, IN and OEM as per QAP shall be under the contractor's scope of work. However, CSL will liaison with other agencies for the survey.
- 8.3. Machining tolerances for each foundation as mentioned in Annexure III, should be strictly ensured and to be proved to OEM / IN / CSL/IN Authorized Agency.

9. बोलियां जमा करने के लिए दिशानिर्देश / GUIDELINES FOR SUBMISSION OF BIDS

9.1. Technical Bid (Part –I)

The technical bid as specified in the scope of work (Annexure III) shall be submitted by e-mail mentioning the subject as the bid No, tender No. and date.

9.1.1. The following shall be submitted along with technical Bid, failing which the bid may be summarily rejected :-

- i. Tender document general Terms & conditions and technical specifications placed at Annexure I, II & III duly signed on all pages.
- ii. The Techno commercial Check List at Annexure IV filled up completely and duly signed
- iii. Copy of un-priced bid format of each category of works at Annexure V.

9.1.2. The non submission of duly filled Techno commercial checklist will lead to the rejection of the bids.

9.2. Price Bid (Part-II)

- 9.2.1. The bid shall be comprehensive of the nature of Machining of Foundations onboard ASW SWC Vessels (BY 523 & BY 524) and shall be inclusive for all the

applicable charges envisaged under the scope of the contractor as specified in the technical specification Annexure III.

- 9.2.2. Bidders shall quote total amount in figures and in words. Corrections and additions if any must be attested/ duly signed by the bidder. In the case of error in multiplication/addition in amount calculated, the rate quoted will be considered as correct and the amount will be calculated accordingly. Conditional rebates & discounts, incomplete/ ambiguous offer will be rejected.
- 9.2.3. The price bid shall be all inclusive of scope of contractor on unit rate basis and any rates on variable basis will not be accepted within the price bid and thereafter throughout the period of the contract. Any variable rates if deemed inevitable and applicable only in special cases/situations (not in the normal course of execution of contract) will only be considered for mutual agreement.
- 9.2.4. Price Bid Format: The price bids shall be prepared as per the format given in Annexure V to the enquiry. The bidder must quote all line items as per price bid format any failure in this regard will lead to the rejection of bid.
- 9.2.5. Rates of individual line items for the overall L1 is considered as L1 rate irrespective of lower rates in case of the line items of other bidders.
- 9.2.6. Currency: The price bids shall be prepared in Indian National Rupees for all bidders.
- 9.2.7. The bids which are not conforming above requirements shall be summarily rejected without any further notice.

10. असामान्य रूप से कम उद्धृत दरें /ABNORMALLY LOW QUOTED RATES

- 10.1. In case the price of L-1 Bidder is found to be unreasonably low and/ or bidder expresses desire to withdraw from the tender after opening of price bid, then tender will be cancelled and suitable penal action as per CSL procedure shall be taken against the firm.

11. कर / TAXES

- 11.1. GST shall be applicable extra on the prescribed work. Bidders should indicate the applicable GST percentage and HSN code of the category in the offer. Bidders are also requested to furnish the following details in the invoice/Bill.

- iv. Applicable rate of GST/SAC Code
- v. Firms GST Reg. NO
- vi. Service accounting code (SAC) as prescribed by statutory authorities.
- vii. GST Reg. No. of Cochin Shipyard Ltd (32AAACC6905B1ZD).

11.2. Any new tax/duty that may be made effective by the government for this work and paid by the contractor shall be reimbursed on production of documentary evidence.

12. भुगतान की शर्तें / PAYMENT TERMS

12.1. 100% Payment will be made for each vessel against satisfactory completion of scope of works per vessel without any comments from OEM/CSL/IN and on submission of Performance Guarantee as per Clause 14 in Annexure I on certification by the officer-in-charge.

12.2. All claims for payment for the work/additional work shall be submitted by the subcontractor within one month of completion of work.

12.3. The contractor shall prepare and submit Work Completion Certificate (WCC). Payment will be made based on completed works certified by the Officer-in-Charge.

12.4. An invoice upload facility by vendor is established through the Vendor Invoice Management (VIM) Portal is currently available for supply as well as service vendors including subcontractors so as to facilitate transparency and timely payment. The portal can be accessed at: <https://apps.cochinshipyard.in:446/vim/Home/.jsp> . The same can also be accessed via Cochin Shipyard Website (<https://cochinshipyard.in>) as below;

12.5. Path: Cochin Shipyard Website--> Related Links--> Vendor Payment Info

12.6. All invoices above 10 Lakhs (including GST) are required to be digitally signed by the vendors and uploaded in VIM portal. The direct submission of invoices value above 10 Lakhs will not be accepted. Once the invoices are digitally signed and uploaded, there is no need to submit the hard copy for processing the payment.

12.7. Service Acknowledge Number (SAN) to be obtained from the Executing Officer at the time of certification of Work Completion Certificate (WCC) for the above process.

12.8. The invoice can be tracked using the generated Invoice Tracking Number till the payment.

12.9. Payment will be made by RTGS/NEFT to the account of contractor. The name of the bank, branch, A/C No., IFSC code & other particulars shall be furnished by the contractor in the proforma of CSL.

12.10. Payment will be made on actual quantity of work done as per the rate mentioned in Annexure V.

12.11. Statutory levies such as I.T, Contribution towards PF, ESI etc., shall be deducted from the bill as applicable.

13. प्रतिभूति जमा / SECURITY DEPOSIT

13.1. The successful tenderer shall remit 5% of the value of the contract as security deposit within 15 days of receipt of the work order. This amount has to be remitted by way

of demand draft or bank guarantee (in approved proforma of CSL) from any of the nationalized banks, valid till the satisfactory completion of the entire work. The Security Deposit will be released after satisfactory completion of the contract/guarantee period (if separate BG as per clause 14 is not furnished) and on certification of nil liability to CSL by Officer-in Charge. The Security Deposit retained will not bear any interest.

14. निष्पादन गारंटी / PERFORMANCE GUARANTEE

- 14.1. The complete work carried out by the contractor shall be guaranteed against performance of work and/or poor workmanship for a period of one year from the date of completion of work. Any damage or failure due to defects in execution of the work for a period of 12 months from the date of completion of work, should such damage or failure occur within the guarantee period, the contractor shall rectify/rework the defect as applicable without any extra expenditure to CSL and such repaired work shall be guaranteed for a further period of one year from the date of repair.
- 14.2. Should any unsatisfactory performance and / or damage or failure occur due to poor workmanship and poor quality material used by the contractor, the contractor shall be solely responsible for payment/reimbursement of expenditure incurred by Ship owner for rectifying the defect.
- 14.3. Towards this, a performance guarantee equivalent to 5% of the value of the contract to be furnished by the contractor along with submission of first bill in case of pro rata payment or completion of entire work in other cases, as per payment terms, by way of a bank guarantee (in approved proforma of CSL) from a nationalized bank valid till the expiry of the guarantee period plus a grace period of 3 months.
- 14.4. Performance Guarantee is applicable for all bidders irrespective of MSME/NSIC registration for necessary coverage under the performance guarantee clause.

15. परिसमापन क्षतिपूर्ति / LIQUIDATED DAMAGES

- 15.1. The progress of work will be monitored against the mutually agreed detailed schedule referred in this tender. Liquidated damages for delays in execution of the work envisaged as per this order, for any reason other than force majeure conditions, will be recovered at the rate of half percent (0.5 %) of the basic value of the delayed work per week or part thereof, subject to a maximum of ten (10) percent of the basic value of the delayed work.

16. आदेश रद्द करना और जोखिम अनुबंध / CANCELLATION OF ORDER AND RISK CONTRACTING

- 16.1. In the event the contractor fails to complete the work promptly and satisfactorily as per the terms of the order, and if the work is delayed beyond the agreed schedule,

CSL, without prejudice, reserves the right to cancel the order and get the work done at contractor's cost and the expenditure so incurred including any damage or loss will be recovered from the firm and the Security Deposit furnished by the firm is liable to be forfeited either in whole or in part.

16.2. In addition to above tender holiday will be imposed against the firm as per discretion of CSL.

17. अप्रत्याशित घटना / FORCE MAJEURE

17.1. Should failure in performance of any part of this contract arise from war, insurrection, restraint imposed by Government act or legislation of other statutory authority, from explosion, riot, legal lock-out, flood, fire, act of Govt. or any inevitable or unforeseen event beyond human control which will be construed as a reasonable ground for extension of time, CSL may allow such additional time as is mutually agreed to be justified by the circumstances of the case.

17.2. The occurrence / cessation of force majeure situation have to be informed with documentary evidence within 15 days from the date of occurrence / cessation.

18. मध्यस्थता / ARBITRATION

18.1. Any disputes arising during the currency of the contract shall, in the first instance be settled by mutual discussions and negotiations. The results of such resolution of dispute shall be incorporated as an amendment to the contract, failing which the parties can resort to arbitration.

18.2. If any dispute, disagreement or question arising out of or relating to or in consequence of the contract, or to its fulfillment, or the validity of enforcement thereof, cannot be settled mutually or the settlement of which is not herein specifically provided for, then the dispute shall within thirty days from the date either party informs the other in writing that such disputes, disagreement exists, be referred to arbitration. The arbitrators shall be appointed and the arbitration proceedings shall be conducted in accordance with and subject to the Arbitration and Conciliation Act, 1996 (No. 26 of 1996) as amended from time to time and the decision of the Arbitrators shall be final and binding on the parties hereto. The arbitration will be done by a Board comprising one officer nominated by each party, and a mutually agreed Umpire. Each party shall bear its own cost of preparing and presenting its case. The cost of arbitration shall be shared equally by the parties unless the award provides otherwise. The enforcement of the award shall be governed by the rules and procedures in force in the State in which it is to be executed. Performance under this Contract shall however, continue during arbitration proceedings and no payment due or payable by the parties hereto

shall be withheld unless any such payment is or forms a part of the subject matter of arbitration proceedings.

18.3. In case of disputes, the same will be subjected to the jurisdiction of courts at Ernakulum, Kerala, India only.

19. क्षेत्राधिकार / JURISDICTION

19.1. All questions, disputes or differences arising under/out of or in connection with this contract shall be subject to the jurisdiction of the Courts in Cochin.

19.2. श्रम कानून और नियम / LABOUR LAWS AND REGULATIONS

19.3. The Contractor shall undertake and execute the work with contract Labour only after taking license from the appropriate authority under the Contract Labour (Regulation & Abolition) Act 1970.

19.4. The Contractor shall observe and comply with the provisions of all Labour and Industrial laws and enactments and shall comply with and implement the provisions of the Factories Act, 1948, Employees Provident Funds & Miscellaneous Provisions Act, 1952, Employees State Insurance Act, Payment of Gratuity Act, minimum Wages Act, Payment of Bonus Act. Contract Labour (Regulation and Abolition) Act and all other enactments as are applicable to him and his workmen employed by him. The Contractor shall inform CSL his license number from the Central Labour Commissioner.

19.5. All contract workmen, except those exempted under the respective Acts, shall necessarily be insured under the ESI scheme and be made members of the EPF Scheme from the day of their engagement as contract workmen in the company. All such insured contract workmen should carry with them their ES Identity Card for verification by the authorities. No contract workmen without a valid ESI Identity Card for verification by the authorities will be permitted to work in the company.

19.6. The Contractor shall submit the Labour Reports>Returns as required by the Company from time to time in respect of their workmen in standard format to the concerned contracting officer so as to enable the same to reach Personnel Department by the 5th of every month. Delayed submission of the same shall attract penal interest /damages at the rate as levied by the respective authorities under the relevant Acts.

19.7. The Contractor shall maintain the records viz. Muster Roll, Acquaintance Roll with full details, Account books etc., in original. These are required for inspection by the concerned authorities under each scheme.

19.8. If the Contractor fails to pay any contributions, charges or other amounts payable under any of the aforementioned provisions of law, CSL shall deduct or adjust amounts equivalent to such contribution, charges or amounts from amount payable

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to him by CSL, including any deposit or amounts payable against bills and make payments on his account to the appropriate authority. He shall not be entitled to question or challenge such deductions, adjustments or payment made by CSL.

19.9. Any other amount payable under any law or in respect of any person employed by the Contractor, if not paid by him, shall be deducted or adjusted by CSL out of any amount payable to the Contractor including any Security Receipt and paid ever or withheld for payment by CSL.

19.10. The Contractor shall be fully responsible for the conduct and discipline of the workmen employed by him in the Company premises. If such workmen commit any misconduct or criminal act inside the Company, the Contractor shall take appropriate action against such workmen. The contractor shall abide by the instructions/guidelines issued by the Company for maintenance of discipline and good conduct among the workmen employed by him.

- i. All people who are engaged for various works in CSL either directly or through contractors, should produce the following documents prior to issuing their entry passes:
- ii. Passport/attested copy of passport with photo and address particulars. OR
- iii. Police clearance certificate with photo and address particulars. (Police clearance certificate to the effect that the concerned person is staying in the area of jurisdiction of the certificate issuing Police Station and that the person is not involved in any criminal offences as per the records available therein.).
- iv. Every person entering CSL for work has to undergo Safety Induction training before getting an entry pass. ID proof and a Police Verification Certificate are mandatory for obtaining the entry pass

19.11. Application and Declaration for enrolling under Employees Provident Fund and ESI Scheme 3 individual passport size photographs and two copies of family photographs of the members.

19.12. Contractors are requested to familiarize themselves with the labor rules & regulations prevailing in CSL Including the labour wage pattern of contract labour as per the settlement between the trade unions & contractors.

20. आई एम एस दिशानिर्देशों / IMS GUIDELINES

20.1. CSL has implemented an Integrated Management System (IMS) consisting of Environmental Management system (EMS), Occupational Health and Safety Management System (OHSMS) and the Quality Management System (QMS) within the yard. As part of IMS, subcontractors shall comply with the following measures related to the Quality, Health, and Safety & Environment (QHSE) policy of CSL.

- i. Meeting or exceeding customer requirements.

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- ii. Assuring quality of the products and service.
- iii. Preventing occupational ill health & injuries.
- iv. Ensuring safe work sites.
- v. Conserving natural resources.
- vi. Preventing/ minimizing air, water & land pollution.
- vii. Handling and disposal Hazardous wastes safely.
- viii. Complying with statutory & regulatory and other requirements.
- ix. Developing skills and motivating employees.

20.2. Occupational Health, safety & Environmental requirements of CSL shall also include the following.

- i. The contractor (or a sub-contractor performing work on behalf of the contractor) is deemed to comply with the Occupational Health, Safety and Environmental Policy of the company and also to all operational controls/standard operating procedures and shall undertake the work in total compliance with the requirements of the established Integrated Management System (IMS) of the company.
- ii. The Contractor shall undertake the work in total compliance with all applicable legal/statutory requirements related to Occupational Health, Safety and Environment effective in the state of Kerala.
- iii. It is the sole responsibility of the contractor to assure that any sub-contractor, who shall perform works in company lands/facilities/worksites on behalf of the contractor, is also following all requirements related to the Integrated Management System of the company and the Health, Safety & Environmental Rules effective in the state.
- iv. The contractor shall provide/implement and operate/practice all Occupational Health, Safety and Environmental management measures/facilities, for their period of contract, in their activities/at their work sites, which shall be required according to the IMS of the company or that required by the Health/Safety/Environmental Rules established and effective in the state, at their own cost.
- v. If any contractor failed to comply with or violated any clauses/requirements of Occupational Health, Safety and Environmental Rules effective in the state, in their activities or at work sites and the same shall be exposed to the government or any competent authorities upon inspections, the contractor shall be solely responsible for all liabilities caused by his/her action and shall be responsible for paying the penalty and taking stipulated corrective actions insisted by the authorities within the specified time, at their own cost. Any liability to the company in this regard needs to be compensated by the contractor.

- vi. Upon completion of the work, contractor shall clear the area and shall not leave any Occupational Health/Safety/Environmental liabilities to the company, from their activities at the worksites.
- vii. Any clarification related to IMS requirements of the yard, may be obtained by the contractor from the DGM (IAC) or the authorized representative of the contract, prior to the commencement of work.

21. बिजली के नियम और कानून / ELECTRICITY RULES AND REGULATION

- 21.1. The contractor shall adhere to the various rules in respect of electrical installation as per the Indian Electricity Rules and Regulations and Electrical Inspectorate Standards in order to make sure that men and materials are safe from hazards.

22. गोपनीयता खंड / SECRECY CLAUSE

- 22.1. The CONTRACTOR shall be responsible to ensure that all persons employed by them in the execution of any work in connection with this contract are aware of the provisions of the official secrets act 1923 and to comply with the same. The CONTRACTOR shall also ensure secrecy of design, construction, equipment and completion of the vessel. Any information provided to you under this contract is to be treated as strictly confidential and is not to be disclosed to any person or persons not concerned therewith.
- 22.2. All documents under this Contract transferred when the parties shall be treated as UNCLASSIFIED unless explicitly marked.
- 22.3. The CONTRACTOR shall ensure that their organization, suppliers/ installation agency/test and trials teams etc. shall not communicate for use in advertising, publicity, sales release or in any other medium, system details, photographs and reproduction of equipment and their fitment on board Navy vessels except without or security clearance from the Indian Navy.
- 22.4. Since this is a project of national importance, proper, procedure has to be followed by the vendor in documentation; in this regard a Non-Disclosure Agreement has to be signed between CSL and the vendor.

23. अधिलेखन और सुधार / OVERWRITING & CORRECTIONS

- 23.1. Tenders shall be free from overwriting or erasures. Corrections and additions, if any, shall be duly attested and a separate list of such corrections shall be attached with the offer.)
- 23.2. All terms and conditions, other than those mentioned above, contained in the Enquiry specification and drawings (Annexure I), Cochin Shipyard Ltd - General

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Terms and conditions (Annexure II) and other annexure pertaining to this tender shall also be attested by the bidder as a token of acceptance.

- 23.3. CSL reserves the right to reject any or all bids without assigning any reasons whatsoever and or based on the past unsatisfactory performance by the bidders at CSL/other PSE's/Government Departments. After issuing the work order, CSL reserves the right to terminate the contractor if the performance of the contractor is not found satisfactory. The decision of CSL regarding the same shall be final and conclusive.



**कृते उप महाप्रबंधक / For Deputy General Manager
आउटसोर्सिंग विभाग / Outsourcing Department**

विधु सेबास्टियन
VIDHU SEBASTIAN
वरिष्ठ प्रबंधक /Senior Manager
कोचीन शिपयार्ड लिमिटेड
Cochin Shipyard Ltd.
कोच्ची / Kochi - 682 015

ANNEXURE-II

कोचीन शिपयार्ड लिमिटेड / COCHIN SHIPYARD LIMITED

कोच्ची / KOCHI-682015

सामान्य शर्तें / GENERAL CONDITIONS

- a. The complete work to be carried out with the highest degree of workmanship under the inspection of CSL Classification Society, OEM, IN, or any other agency nominated by the Shipyard/ IN.
- b. Quality of workmanship shall conform to the specification/ standards laid down by CSL. Necessary job instructions for the work will be given by CSL. The contractor has to carry out the job as per the instruction and to the full satisfaction of Officer in-Charge
- c. CSL reserves the right to award the work to more than one contractor or to take over partially or fully the work depending upon the scheduled requirements.
- d. CSL reserves the right to divert the job partially to another vendor in case vendor is failing to meet the schedule.
- e. CSL reserves the right to cancel the requirement of machining of individual equipment based on recommendation/decision by CSL/OEM/IN
- f. Cochin Shipyard Limited reserves the right to terminate the Contract at short notice in case the Contractor's performance is found not satisfactory with regard to progress of work, quality, time factor, labour dispute with their workers, poor safety records etc., and other contractual obligations. No claim whatsoever will be entertained by Cochin Shipyard Limited on this account.
- g. Compliance of all statutory safety requirements and other safety rules stipulated by CSL and other applicable statutory bodies shall be the responsibility of the Contractor while working at CSL premises. The Contractor should ensure that their workmen and staff are adequately covered under Insurance.
- h. Contractor shall be responsible for safety and welfare of all its employees employed for construction, and shall be responsible for payment of all salaries to their employees and other statutory dues and for all provisions of statutes governing them.
- i. The Contractor shall also be governed by the General Conditions of Contract of CSL, General Safety Rules and other relevant labour laws.
- j. General Manager (SB) or his authorized representative will be the Officer-in-Charge of this Contract.
- k. The contractor shall execute the work in every area under instruction/intimation to CSL personnel at site.
- l. Subcontracting to other contractors shall be only after written intimation and approval of competent CSL authorities. Contractor shall not delegate or subcontract any of its obligations under the agreement without CSL's written consent. Contractor will remain liable for all subcontracted obligations and all acts or omissions of its subcontractors.
- m. The Contractor shall have to engage men on round the clock basis and also on Sundays and holidays, if required. Work has to be completed to the satisfaction of CSL

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representative deputed for the job. The job should be completed at the time specified by the representative deputed for the job for each stage of work.

- n. WORKING ON CSL HOLIDAYS: Intimation for working on Saturday / Sunday / holidays if required, should be submitted 2 working days prior to the date of holiday indicating names of personnel to Personnel Department and Security through concerned Department.
- o. Contractor shall carry out the complete work in accordance with Shipyard's approved drawings/ Technical requirements. Any minor modifications from drawing or any other work or supply of material, which is not specified hereunder, but is considered incidental and essential for the successful completion of the job, shall be carried out by the Contractor without any additional charge. Contractor should also carry out all rectification works pointed out during inspection.
- p. Any minor modifications, resulting from the change in statutory regulations prevailing at the time of final inspection of work by OEM, to be carried out by the Contractor free of cost. In case of rework/modification/additional work, written consent is to be obtained from the Officer-in-charge before commencement of the work.
- q. The procedures of work, standard operating procedures of work including documents like welding procedure specifications developed by CSL are intellectual property of CSL. Contractor shall not use or copy the procedure in any format without the written consent of competent authorities of CSL.
- r. The contractor shall be responsible for any damage caused to CSL properties/tools/accessories/material supplied by CSL. Compensation with penalty for damage or loss of the item will be recovered from the Contractor, in the event of loss or damage
- s. Contractor shall execute, during or after completion of the work, any minor job connected with the work, should it be considered necessary by Shipyard and/or OEM
- t. Contractor shall return the CSL resources to CSL immediately after provision of all deliverables and services or any termination of the agreement.
- u. The Contractor shall indemnify CSL and CSL's personnel against any claims arising out of accidents or injuries to workmen or other persons or damage to other property which may arise during the execution of the contract or from breach of any Law or Regulation prior to delivery and acceptance of the items at CSL.
- v. Withdrawal of the quotation after it is accepted or failure to make contract execution within the stipulated completion period will entail cancellation of the order and forfeiture of EMD/ Security Deposit, if any/ and or risk purchase.
- w. Conditional discounts, if any, will not be reckoned for tender evaluation/comparison purposes. However the same will be considered at the time of placement of purchase order if the firm turns out to be lowest bidder.
- x. Any material which needs to be taken out of CSL after completion of the work must be declared in the Material Declaration Form (MDF) available with CISF, South Gate. CSL cannot permit to take out any material not reflected in MDF.

**Tender Enquiry Notice – Machining of Foundations Onboard
ASW SWC Vessels BY 523 & BY 524**

- y. Every person entering CSL for work has to undergo Safety Induction training before getting an entry pass. ID proof and a Police Verification Certificate are mandatory for obtaining the entry pass.
- z. Any particulars/literature/information/certificates required by the Shipyard in connection with the work is to be forwarded free of cost.
- aa. All correspondence with the Shipyard to be in English language. All documents and plans to be in English and in metric units.
- bb. All electrical switchboards/ plug boards/ distribution boards, etc., brought in for the work should have proper ELCB and individual switches for each connection. Electrical equipment/ tools and cutting hose shall be of good quality, proper rating/ size and without any chances of leakage. These items will be inspected by the CSL team, and any discrepancy/ defect noticed shall be rectified by the subcontractor.



कृते उप महाप्रबंधक / For Deputy General Manager
आउटसोर्सिंग विभाग / Outsourcing Department

विधु सेबास्टियन
VIDHU SEBASTIAN
वरिष्ठ प्रबंधक / Senior Manager
कोचीन शिपयार्ड लिमिटेड
Cochin Shipyard Ltd.
कोच्चि / Kochi - 682 015

ANNEXURE- III

कार्य क्षेत्र / SCOPE OF WORK

**MACHINING OF FOUNDATIONS ONBOARD ASW SWC
VESSELS BY 523 & BY524**

A. परिचय / INTRODUCTION

Cochin Shipyard Ltd (CSL) intends to outsource the machining works of foundations onboard 02 Nos ASW SWC Vessels (BY 523 & BY 524) which includes machining of 05 Sets of foundations onboard each ASW SWC Vessels to competent contractors who qualifying techno-Commercial conditions and emerging as L1/ bidder willing to match the rates negotiated with L1

B. कार्य का तकनीकी विवरण/ TECHNICAL DETAILS OF WORK:

Table 1: Dome of Hull Mounted Sonar – 1 No per Ship

Sl No.	Parameter	Value
1	Flatness	±0.5 mm
2	Area of foundation to be machined	2.278 sq. m
3	Thickness of foundation	45 mm
4	Min. Thickness requirement of Machined Surface	32 mm
5	Surface roughness	6.3 micron
Note 1: Overall flatness tolerance to be maintained as ±1 mm for the entire length of the foundation		
Note 2: Drilling of the foundation to be carried out with the supplied Drill Jig (Total 72 Nos. Bolting Holes dia 32 and 02 Nos Guide pin holes of dia 30). Spot facing if required to be carried out by the vendor.		

Table 2: Transducer of Hull Mounted Sonar – 1 No per Ship

Sl No	Parameter	Value
1	Parallel to ship datum by	± 5' (Maximum tilt of 2mm)
2	Flatness	±0.5 mm
3	Fwd-Aft line of Foundation to be matched with centreline of ship by	± 1 mm
4	Area of foundation to be machined	0.536 sq. m

**Tender Enquiry Notice – Machining of Foundations Onboard
ASW SWC Vessels BY 523 & BY 524**

5	Thickness of foundation	45 mm
6	Min. Thickness requirement of Machined Surface	30 mm

Note: Drilling of the foundation to be carried out by taking necessary template of the equipment base. Spot facing if required to be carried out by the vendor.

Table 3: 30mm Gun – 1 No per Ship

Sl No	Parameter	Value
1	Flatness	±1 mm
2	Parallel to ships datum by	±1 m rad
3	Surface roughness	3.2 micrometre
4	Area of foundation to be machined	0.882 sq. m
5	Thickness of foundation	20 mm
6	Min. Thickness requirement of Machined Surface	10 mm

Note: Drilling of the foundation to be carried out by taking necessary template of the equipment base. Spot facing if required to be carried out by the vendor.

Table 4: EOD for 30 mm Gun – 1 No per Ship

Sl No	Parameter	Value
1	Flatness	±.08 mm
2	Parallel to ships datum by	±1.5 m rad

Table 5: UWT Transducer – 1 No per Ship

Sl No	Parameter	Value
1	Surface roughness	6.3 micrometre
2	Flatness	0.5 mm
3	Thickness of foundation	20 mm
4	Green Material	8-10 mm

Note: Drilling of the foundation to be carried out by taking necessary template of the equipment base. Spot facing if required to be carried out by the vendor.

C. काम की गुंजाइश-ठेकेदार / SCOPE OF WORK-CONTRACTOR

The work shall be carried out based on the contract specification, , CSL mentioned standards and Design drawings. The scope of contractor involves machining of foundations onboard ASW SWC Vessels(BY 523 & BY 524) up to the entire satisfaction of OEM, Classification Society ,CSL & IN, which includes the following:

- Mobilization of workforce, jigs , Fixtures, tools and equipment within one week from advance intimation from CSL to start the work.

**Tender Enquiry Notice – Machining of Foundations Onboard
ASW SWC Vessels BY 523 & BY 524**

- b) The work has to be completed within 20 days to the total satisfaction of OEM, CSL and IN
- c) All the tools and accessories, jigs and fixtures required for the work shall be under the scope of contractor.
- d) Machining tolerances as mentioned above should be strictly ensured and to be proved to Classification society /Owner / OEM / IN / CSL.
- e) Prior to start with the machining, all the dimensional checks as applicable shall be verified and confirmed with CSL personnel and deviations, if any, shall be reported in advance.
- f) Clearance from CSL Officers is to be obtained prior to the commencement of each stage of operation
- g) Hot work (Cutting, welding and dry survey for installation and removal of machine/equipment) and other allied works required for the execution of job are under contractor's scope.
- h) Dimensional confirmation for flatness, parallelism and surface finish are to be carried out by the contractor and the equipment used for the purpose shall be supported with relevant calibration certificates to prove the authenticity.
- i) All items required for the successful completion of the job other than that under CSL scope is coming under the scope of contractor.
- j) Rectification of defects as per the comments from CSL I&QC, Class Authorities ,IN & OEM is included in the scope of work.
- k) The transportation, storage, preservation and protection of the materials etc., intended for installation on the ship, will be under the responsibility of the Contractor
- l) General lighting and Ventilation shall be arranged by CSL based on availability. However Localized lighting, DBs/ ventilation etc. for the smooth conduct of work is to be arranged by the contractor.
- m) Mobilizing own equipment, necessary working tools and tackles, safety and protective gear for their personnel inside the yard for carrying out the work as per Safety/ Statutory rules/ Yard rules is the responsibility of the contractor.
- n) All tools and tackles required for the work are under the scope of the contractor.
- o) Minor staging up to 3m height shall be erected by the contractor for the work using CSL material without any separate payment as per the SOP of CSL. Any requirement over and above this shall be arranged by CSL separately.
- p) Segregation of waste at source and deposit into the respective pallets is the sole responsibility of the contractor. In case of any mixing of waste, CSL will segregate the waste at the expenses of the contractor.

D. सीएसएल का दायरा / SCOPE OF CSL

- a) The design & supply of materials mentioned in Work description.
- b) Power supply, Water, compressed air (at available pressure) and cutting gases at centralized points
- c) Services of CSL cranes and forklifts will be provided subject to availability.
- d) Necessary items like fire cloth, polythene/tarpaulin sheets, bubble sheets etc. required for protection of equipment
- e) Staging above 3m height.
- f) Arranging QC/ IN for inspection and survey.
- g) Bi weekly / Monthly performance rating evaluation based on Appendix A.

E. काम करने की पद्धति / METHODOLOGY OF WORKING

- a) A detailed project report to be submitted prior to commencement of works.
- b) During this mobilization period, contractor should complete QAP approval and required to arrange entry passes for his employees and no excuse for delay in commencing work on this account will be entertained.
- c) The contractor shall deploy/nominate a person who will be in charge of the work for the entire period of project execution. He shall keep close liaison with CSL Officers/supervisors concerned and ensure smooth and satisfactory progress of the work from time to time and shall be available for the entire duration of the project.
- d) Necessary competent supervisors for the work, to be deployed.
- e) Employees of the firm shall work under close coordination with CSL personnel, structural contractors and Piping/Painting contractors with a conciliatory approach and team spirit to achieve the project completion in time.
- f) The Contractor is expected to have full knowledge and understanding of the Labour rates, conditions, practices etc. prevalent in the CSL and premises. The contractor shall be entirely responsible for all matters related to manpower and labour engagement for the subject contract.
- g) Issues related to availability and utilization of manpower shall be dealt by the Contractor. Availability of competent labour with requisite skills for the specified jobs shall be ensured by the contractor.
- h) Clearance from CSL in terms of permits/internal regulations etc. as applicable from time to time shall be obtained. The contractor shall obtain necessary hot work sanctions, permission to work in confined areas, safety clearance for scaffolding done by the contractor, electrical related provisions etc. as per CSL safety rules.

- i) Hot works are to be carried out as per the existing CSL norms. Timely closing of work permits is the responsibility of the Contractor. This is to be done in a regular manner in consultation with the Executing Officer.
- j) The Contractor is to ensure proper cleanliness all around his work area while working on board ship. The contractor shall arrange to collect and clean up every day all the waste, scrap, debris etc. generated by their workmen while working on board the ship and other locations and deposits the same suitably at specified location at his cost to the complete satisfaction of CSL. In case of any failure on his part to comply with the requirement, CSL will arrange the required cleaning entirely at the contractor's cost.
- k) Daily cleaning and housekeeping in work areas to be ensured by the contractor. In case of any failure to do so, CSL reserves the right to make alternate arrangement for cleaning at the risk and cost of the contractor.
- l) The upper age limit of all workers and supervisors employed by the contractor and those contractors who do or supervise the job themselves shall be as per the prevailing rules of CSL.
- m) Any material/ fitting/ equipment fitted onboard the vessel is CSL property. Removal of any such item shall be done only with the written approval of officer concerned. 'Permit for Removal and Refitting' has to be meticulously followed to this effect.
- n) Contractor has to ensure proper diligence while laying hoses and cables onboard vessel. Separate route to be used for fuel hoses and electric cables. Clear space/ passage for movement of personnel are to be maintained throughout the construction period. CSL reserves the right to confiscate the hoses/ cables those are laid in a haphazard/ inconvenient way or to impose suitable penalty on the contractor.
- o) Half yearly inspection of portable electrical tools and leak testing of cutting hoses are mandatory. Electric tools/ cutting hoses without valid inspection certificate will not be permitted onboard vessel.
- p) The contractor has to handle the CSL properties and materials issued to the contractor with due care. CSL reserves the right to recover any losses due to damage/ loss occurred in this regards.
- q) All equipment/ portable electric tools, plug boards etc. used by the contractor should have tally plates/ tags for easy identification.

**F. कार्मिकों की सुरक्षा और प्राथमिक चिकित्सा / सांविधिक दायित्व / SAFETY OF PERSONNEL
AND FIRST AID / STATUTORY RESPONSIBILITY**

- a) The contractor shall be entirely responsible for the safety of all the personnel employed by him on the work. In this regard, he should adopt all the required safety measure and strictly comply with the safety regulations in force. A copy of CSL's

**Tender Enquiry Notice – Machining of Foundations Onboard
ASW SWC Vessels BY 523 & BY 524**

“Safety Rules for Contractors (Revised)” is available with SB Outsourcing Department for reference.

- b) The Contractor should arrange to suitably insure all his workmen/other personnel in this regard. CSL will not be responsible for any injury or illness to the Contractor's workmen/other personnel during execution of the works due to whatsoever reasons.
- c) In this regard, the Contractor will have to fully indemnify CSL against any claims made by his workmen/other personnel.
- d) The Contractor shall provide and maintain so as to be readily accessible during all working hours, a first aid box with prescribed contents at every place where he employs contract labour for executing the works.
- e) The entire work force under the contractor shall always follow all instructions from CSL safety personal.



**कृते उप महाप्रबंधक / For Deputy General Manager
आउटसोर्सिंग विभाग / Outsourcing Department**

विधु सेबास्टियन
VIDHU SEBASTIAN
वरिष्ठ प्रबंधक /Senior Manager
कोचीन शिपयार्ड लिमिटेड
Cochin Shipyard Ltd.
कोच्चो / Kochi - 682 015

ANNEXURE- IV

तकनीकी वाणिज्यिक जांच सूची / TECHNO COMMERCIAL CHECK LIST

(To be submitted by the bidder)

TENDER NO. SB-OSD/ASW/894/2024 Dtd. 29-07-2024

(Bidders may confirm acceptance of the Tender Conditions/deviations if any to be specified)

SL No.	Tender Enquiry Requirements	Confirmation from bidder (<u>strike off whichever is not applicable</u>)	Specific comments /Remarks
1	Scope of work as per Technical Specification /Drawings/ General Terms & conditions (Annexure III)	Agreed as per tender /Do not agree	
2	Whether technical bid & price bid are submitted in separate E-mails?	Yes / No	
3	Schedule of work as specified in technical specification/ price bid of this tender is acceptable	Yes/ No	
4	Submission of Information/Documents relevant as per clause 2 of Annexure I	Submitted/Not submitted	
5	Submission of MSME and NSIC registration document with offer	Submitted/Not submitted	
6	Offer Validity (date)	90days - Agreed as per tender/Do not agree	
7	Completion period as mentioned in the tender enquiry is acceptable	Yes/ No	
8	Taxes & Duties	Specified/included in Price	
9	Payment terms - confirm		
a	Payment terms as per Annexure I clause 12.	Agreed as per tender/Do not agree	
b	Any others (Specify details)		
10	Price shall remain firm and fixed and No Escalation in prices after awarding of contract	Agreed as per tender/Do not agree	
11	Security Deposit & Performance Guarantee Clause	Agreed as per tender/Do not agree	

**Tender Enquiry Notice – Machining of Foundations Onboard
ASW SWC Vessels BY 523 & BY 524**

12	Termination of contract/risk purchase as per relevant clause in the terms & conditions of tender enquiry is acceptable	Yes / No	
13	Force Majeure	Agreed as per tender/Do not agree	
14	Liquidated damages and cancellation of contract	Agreed as per tender/Do not agree	
15	Arbitration & Jurisdiction clauses	Agreed as per tender/Do not agree	
16	Confirm all other terms and conditions of our enquiry are acceptable.	Confirmed/Not confirmed	
17	Confirm, un-priced price bid (price bid without price) is submitted with Part – I bid	Confirmed/Not confirmed	
18	Fully aware about the safety, general rules, regulations, standards, entry pass eligibilities.	Yes / No	
19	Bidder shall not be under a declaration of ineligibility issued by Govt. of India/ State govt./ Public Sector Undertakings etc. The bidder shall not have been debarred / black listed by CSL or by any of the Public Sector Undertaking or Government department etc.	Self declaration submitted/Not submitted	
20	Is your firm registered under TReDS	Yes/No	
21	Is your firm registered as vendor in CSL if so Please VendorCode	Yes/No	Vendor Code : -----
22	Does your firm have valid registration under statutory schemes such as ESI / EPF	Yes/No	
23	Deviations from Tender conditions	No Deviations /Deviations are specified	

हस्ताक्षर / Signature:

ठेकेदार का पता / Address of the Contractor

मुहर / Seal:

ANNEXURE-V

मूल्य बोली प्रारूप / PRICE BID FORMAT

TENDER NO. SB-OSD/ASW/894/2024 Dtd. 29-07-2024

**MACHINING OF FOUNDATIONS ONBOARD ASW SWC VESSELS
BY 523 & BY 524**

SL No.	Description	Qty (Nos) (A)	Unit Rate In INR (B)	Total In INR (C=A*B)
1	Dome of Hull Mounted Sonar	1		
2	Transducer of Hull Mounted Sonar	1		
3	30mm Gun	1		
4	EOD for 30 mm Gun	1		
5	UWT Transducer	1		
6	Mobilization Charge (to and fro)	Lumpsum		
7	SUB TOTAL AMOUNT FOR 01 VESSEL EXCLUDING GST (SUM OF SL No.1 to SL No.6)			
8	GST ----- % HSN Code :			
9	LANDED COST FOR 01 VESSEL INCLUDING GST (SL No 7+8)			

Grand Total amount (in words) Rupees.....

.....

NOTE:

- Price basis: For Destination (at CSL).
- L1 will be determined based on Sub total Amount at Sl. No. 7 excluding GST.
- GST as per the prevailing rate will be paid.
- L1 declaration will be based on the price bid verification by CSL finance dept as per the calculation specified.
- The L1 bidder will be awarded the Machining work of foundations onboard 01 No. ASW SWC Vessel (BY 523 or BY 524 as decided by CSL)
- Unit rate quoted per foundation seat should include** labour charge, handling charge, Equipments, Tools & tackles, consumable charges, and any other cost included for the

**Tender Enquiry Notice – Machining of Foundations Onboard
ASW SWC Vessels BY 523 & BY 524**

satisfactory completion of all works as per drawings and scope of work mentioned at Annexure III.

Signature of Contractor/authorized signature
of firm or agency:

Name of contractor or authorized signatory
of firm/agency:

Designation:

Address:

Contact No:

APPENDIX-A

PERFORMANCE EVALUATION FORM

	Evaluation Grade Points Awarded (Grade Points X Weightage)					
Parameters	Grade	Excellent	Good	Average	Bad	Very Poor
	Weightage	5	4	3	2	1
Timely Completion as per Project schedule	10					
Work Planning & Coordination	2					
House Keeping and HSE	2					
Responsiveness to critical and complex works	2					
Overall Quality Management	2					
Integrity and Professionalism	2					
Total Grade Points (sum of points in each grade)	20					

Grand total of grade points awarded (Max 100)	
--	--

Points to be considered during evaluation


Timely Completion as per Project schedule	Completion of work within stipulated time, including class surveys & till submission of proper quotation. (No Reworks/Survey failures)	
Work Planning & Co-ordination	Planning of (material, labour & machinery) for smooth execution of work, coordination with multiple agencies/stakeholders, Pro-active approach in avoiding hindrance of work, Supervisory skills, communication etc.	
Responsiveness to critical and complex works	Willingness to execute complex works understanding the importance of the work for CSL, deployment of adequate workers in time & round the clock in critical tasks.	
Overall Quality Management	Quality of Work, No of QC/Class survey points, Re-works, RT/Survey Failures, quality of manpower, supervisors etc. to be considered	
House Keeping and HSE	Adherence to CSL HSE policies and instructions, use of PPEs, commitment & continuing practises for good housekeeping at site, daily tool box meetings at site.	
Integrity and Professionalism	Responsiveness & commitment to work, uniforms to workers, appropriate & polite behaviour at site, ethics in preparation of quotations, corrections in quotation, proper documentation.	
	Signature (CSL Officer in-Charge)	
	Name & Design	



PRODUCTION DWG. INFO. :-

DESCRIPTION :-

- 1 Shell Structure modified between Fr.18 and Fr.24 for integration of HMS
- 2 HMS Tranducer Foundation Provided
- 3 UWT Foundation Provided
- 4 Girder Provided between Fr.20 and Fr.21 for Lifting Arrangement of HMS Transducer Array

	SHIP/ PROJ.No.	BY524-530	Rev.No.	A-R07	No.of Copies							
					Issued to							
SCALE : NTS				<div>UNIT - 03LL</div> <div>(Part Rev.)</div>							DRG.No.	
APPROVED	Binoy Chandran		BY523W003LL AR07									
CHECKED	Arvind M		SUPERSEDES									
DRAWN	Dinesh P	29-06-2024	SUPERSEDED BY									

**APPLICABLE GUIDELINES IF HMS EQUIPMENT IS NOT AVAILABLE AT SITE DURING THE DOCKING PERIOD**

1. THE 14MM THICK BOTTOM PLATING SHALL BE FABRICATED WITHOUT STRUCTURAL WORKS RELATED TO FITMENT OF TRANSDUCER ARRAY/UWT ON THE BOTTOM PLATING AND THE SAME SHALL BE CARRIED OUT POST RECEIPT AND SHIPPING IN OF HMS EQUIPMENT ONLY.
2. IF TRANSDUCER FOUNDATION AND UWT FOUNDATION ARE NOT FITTED, SUFFICIENT STRENGTHENING IS TO BE PROVIDED ON THE 14MM THICK BOTTOM PLATE IN THE LOCATION BEFORE LAUNCHING. SPECIAL CARE TO BE TAKEN DURING WELDING & REMOVAL OF THE TEMPORARY STIFFENERS ON THE HIGHER THICK SOLE PLATE, SINCE ADDITIONAL HIGHER THICK PLATING IS NOT AVAILABLE.
3. ONLY MARKINGS HAVE BEEN PROVIDED FOR THE OPENINGS ON THE 14MM THICK BOTTOM PLATING FOR THE UWT FOUNDATION AND HMS TRANSDUCER ARRAY. THESE OPENINGS NEED TO BE CUT ONLY AFTER THE AVAILABILITY OF HMS EQUIPMENT AT CSL DURING DOCKING/RE-DOCKING, AS APPLICABLE.
4. ALL MACHINING ACTIVITIES ARE TO BE DONE ONLY ON AVAILABILITY OF HMS AND UWT EQUIPMENT AT CSL AND SHIPPING IN OF THESE EQUIPMENT.
5. DRILLING HOLES AND BOLTING OF EQUIPMENT ARE TO BE DONE ONLY ON AVAILABILITY OF HMS AND UWT EQUIPMENT AT CSL AND SHIPPING IN OF THESE EQUIPMENT.
6. THE HULL REVISION 03LL AR06, BECOMES THE APPLICABLE HULL REVISION FOR THE HULLS BY524-530, (FOR INTEGRATION OF THE HMS FOR THE RESPECTIVE ASW HULL) IF HMS EQUIPMENT IS AVAILABLE AT SITE DURING THE DOCKING/RE-DOCKING PERIOD (FOR THAT RESPECTIVE HULL) AND IN THAT CONDITION, THE ABOVE GUIDELINES STANDS NON VALID.



A. NOTES ON HMS TRANSDUCER FOUNDATION:

1. Transducer foundation to be welded on to the sole plate, i.e. the bottom plate of the ship flange
2. Top surface of the foundation (at 62mm ABL) to be parallel to the ship datum with a tolerance of $\pm 5'$ (i.e. maximum tilt of 2mm is acceptable during foundation welding from end to end) and matching of Fwd-Aft line on the foundation to the centerline of ship to be within the tolerance of $\pm 1\text{mm}$.
3. The transducer foundation to be welded in such a way that the Fwd-Aft line of foundation is aligned along the ship's center line within an error of $\pm 5'$.

B. NOTES ON HMS DOME FLANGE:

TOLERANCES:

1. The Flatness on the dome steel flange to be maintained as $\pm 0.5\text{MM/M}$. However, overall flatness to be maintained as $\pm 1\text{MM}$ for the entire length.
2. Surface Roughness of the dome steel flange to be 6.3 micron.
3. Sole Plate areas where the foundation of transducer, UWT foundation and hydrostatic sensor are welded are to be provided with surface roughness of 6.3 microns.

MACHINING:

1. IN-SITU machining of dome steel flange from 45mm to 32mm thickness.

C. NOTES ON UWT FOUNDATION:

TOLERANCES IN SEAT TOP PLATE OF UWT:

1. Surface Roughness: 6.3 micrometer
2. Flatness: 0.5MM
3. Angularity: Surface of foundation to be maintained parallel to ship datum within a tolerance $\pm 5'$.

MACHINING OF SEAT TOP PLATE:

1. Proof machining of 8mm to be done to bring the plate thickness to 12mm from 20mm.
2. IN-SITU bedding/grinding 2mm minimum thickness. 10mm to be maintained.
3. Cover plate bottom surface flatness to be within 0.5mm. Roughness 6.3 microns. Minimum thickness to be maintained 9mm.

D. GENERAL NOTE ON HOLE MARKING, SHOWN IN THE DRAWING:

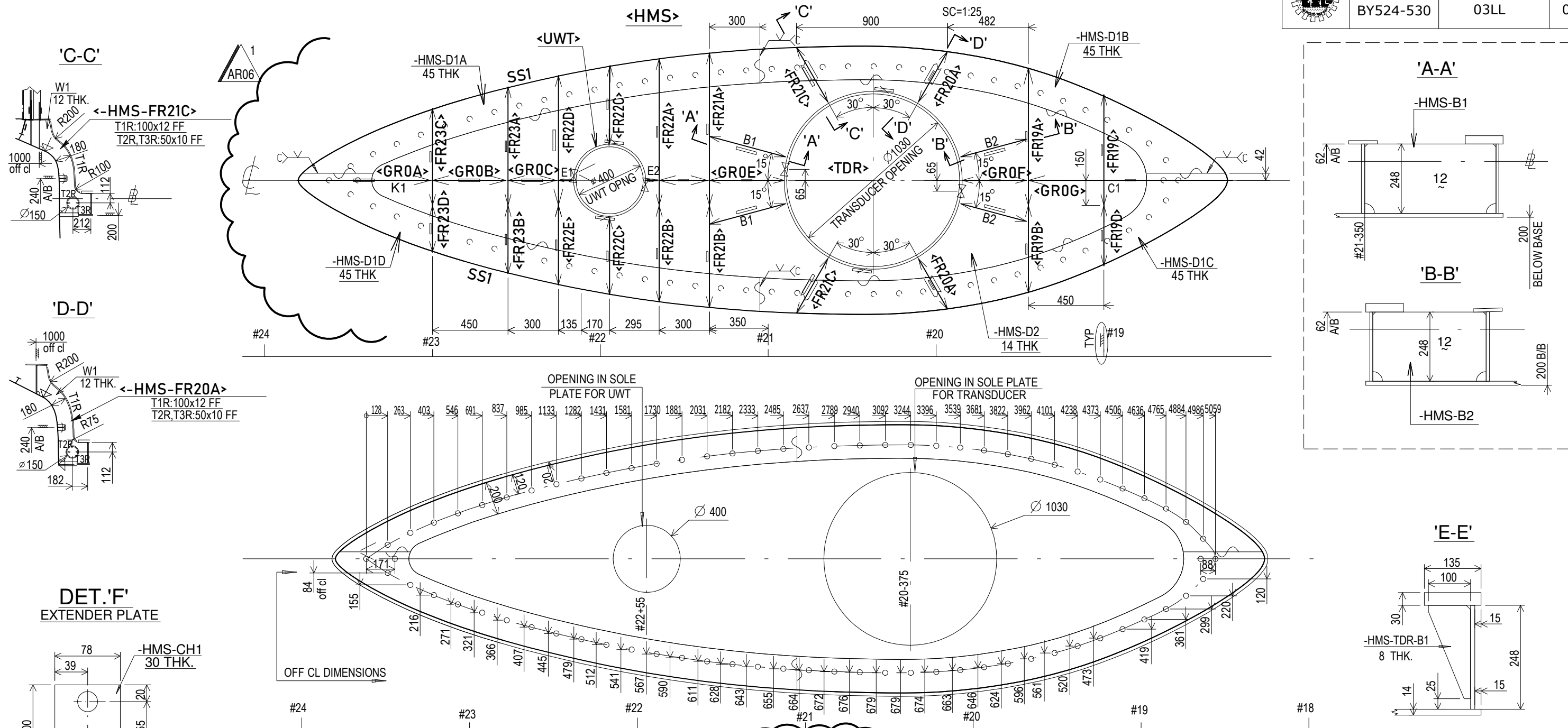
1. The locations of the Holes provided in the drawing are preliminary.
2. HOLES SHALL ONLY BE DRILLED AT SITE AFTER CROSS CHECKING WITH THE TEMPLATE OF THE HOLE LAYOUT OF THE EQUIPMENT.
3. Drilling jig, supplied along with the equipment, to be used for drilling the holes.

E. SLOT ON TRANSVERSE WEB FRAME AT FR.19

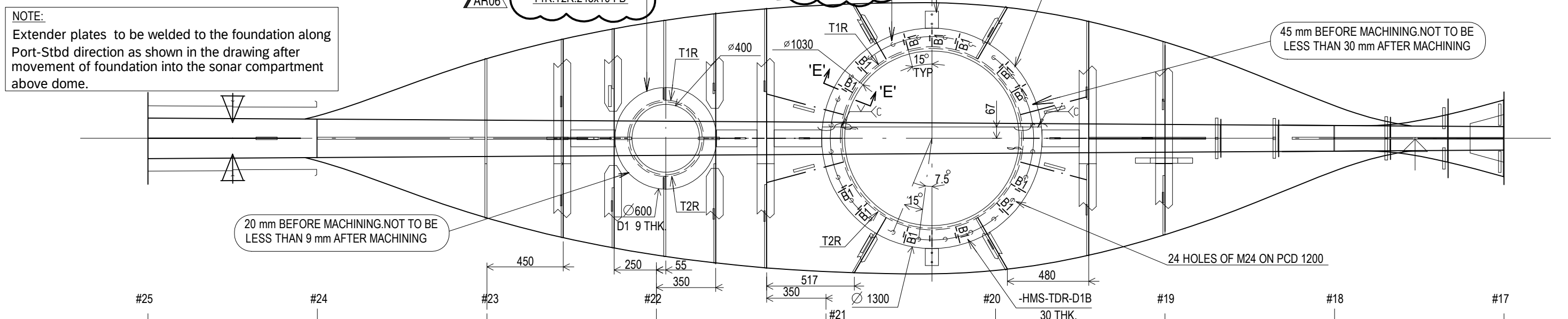
1. A slot may be provided in situ on the transverse web frame at Fr.19, near to the sole plate/flange for the purpose of tightening of the bolts aft of Fr.19.



PLAN AT 200 mm BELOW BASE LINE



PLAN AT 62 mm ABOVE BASE LINE





1000
OFF CL

30°

T1R

R200

B1

W1

240

150

200

240

A/B

<HMS-FR21A>
W1:12 THK.
T1R:100x12 FF

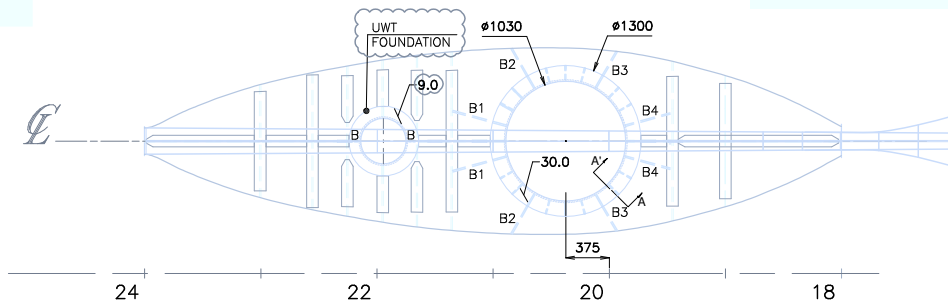
<HMS-FR21B>
W1:12 THK.
T1R:100x12 FF

[illegible]

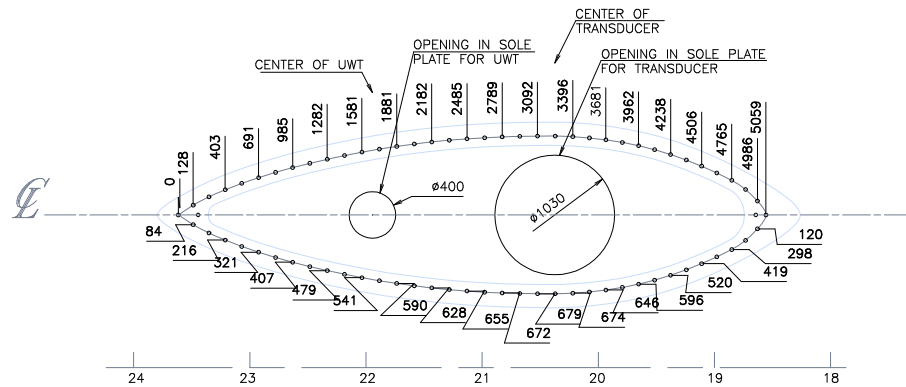
Technical drawing of the hull structure of the HMS-STR2A. The drawing shows a cross-section of the hull with various components and dimensions. Key components include the HMS-FR21A-B1 (150x4), HMS-STR2A, HMS-FR19A-B1 (150x4), and the hull shell. Internal stiffeners are labeled W1, T1R, and T. Dimensions include 150x4, 350, 550, and 74x50x4/4 T. The drawing also shows the hull structure with various components and dimensions.

[illegible]

HMS DOME FLANGE DRAWING

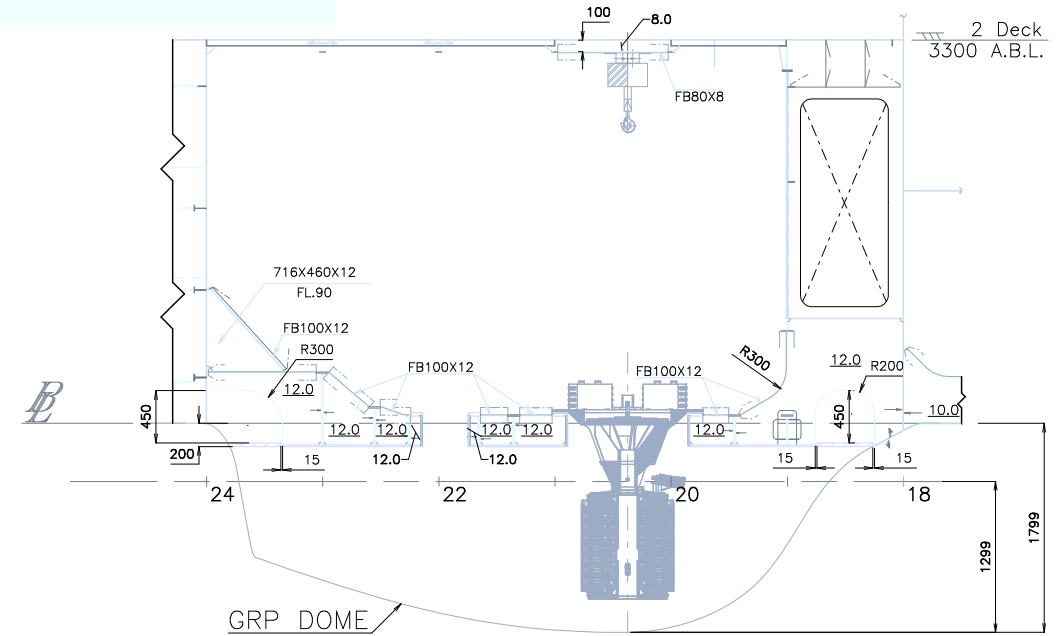


PLAN 62mm A.B.L.



PLAN 200mm BELOW BASE LINE

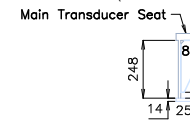
Additional Transverse girders at Fr. 19+450, Fr. 21+350, Fr. 22-55, Fr. 22-350, Fr. 22+250 & Fr. 23-450 above the sole plate between adjacent long. gdrs.



CL ELEVATION

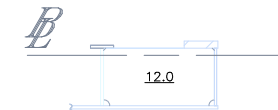
SEC A-A'

Typ Bkt. below Transducer Seat
(Scale 1:25)

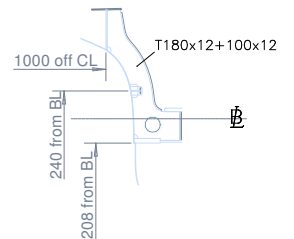


Bkt. B1

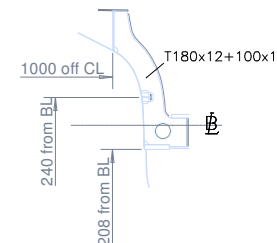
(Scale 1:25)



Bkt. B2

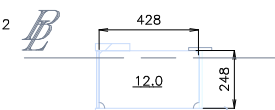


Bkt. B3

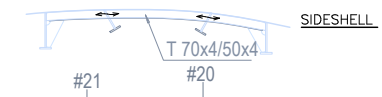


Bkt. B4

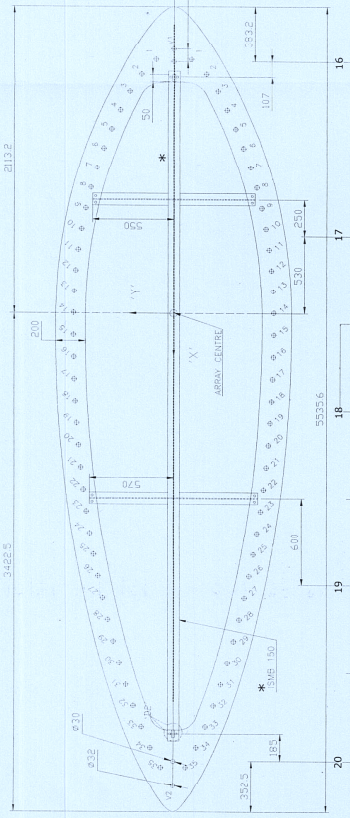
(Scale 1:25)



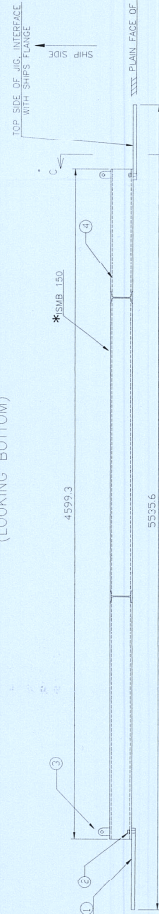
SEC. AT 240 ABOVE BL.



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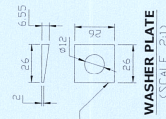


PLAN VIEW
JIG PLATE - 14 MM THK
(LOOKING BOTTOM)

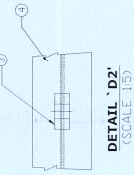


SIDE VIEW
(LOOKING PORT)

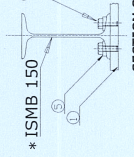
HOLE IDENT NO	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
X' COORDINATE	160.46	150.72	136.50	135.13	105.35	97.64	74.13	64.44	43.24	20.01	18.49	13.42	7.35	-13.24	-38.81	-139.87	-242.83	-353.87	-464.84	-575.81	-686.78	-797.75	-908.72	-1019.69	-1130.66	-1241.63
Y' COORDINATE	540.74	564.86	590	613.57	638.31	664.25	693.37	724.78	758.53	794.63	833.07	873.85	916.97	962.44	1000.28	1040.5	1083.12	1128.04	1175.26	1224.78	1276.6	1330.72	1387.04	1445.56	1506.28	1569.2
HOLE IDENT NO	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26
X' COORDINATE	3241.3	3113.4	2977.8	2835.7	2694.4	2553.1	2414	2256.5	2092.4	1952.2	1819.5	1694.5	1577.8	1469.5	1369.7	1278.5	1195.8	1121.6	1056	1000	953.5	916.5	889	871.5	864.5	868
Y' COORDINATE	9	84.23	155.25	216.41	271.29	321.0	366.41	407.33	444.78	474.46	511.66	548.19	584.67	621.19	657.75	694.35	731.0	767.7	804.4	841.1	877.8	914.5	951.2	987.9	1024.6	1061.3



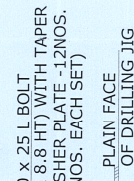
WASHER PLATE
(SCALE 2:1)



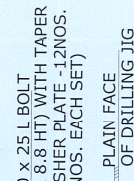
DETAIL 'D1'
(SCALE 1:5)



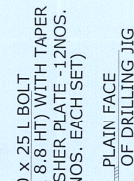
SECTION C
(SCALE 1:4)



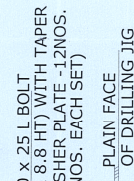
PLAIN FACE
OF DRILLING JIG



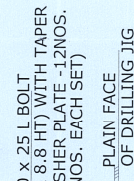
SIDE VIEW
(LOOKING PORT)



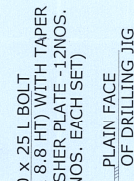
PLAN VIEW
(LOOKING BOTTOM)



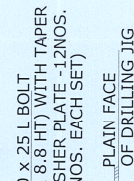
SIDE VIEW
(LOOKING STARBOARD)



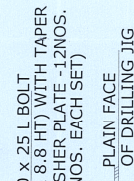
PLAN VIEW
(LOOKING TOP)



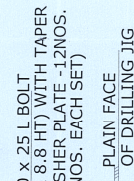
SIDE VIEW
(LOOKING STARBOARD)



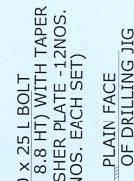
PLAN VIEW
(LOOKING TOP)



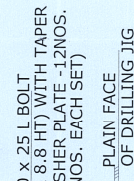
SIDE VIEW
(LOOKING STARBOARD)



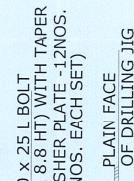
PLAN VIEW
(LOOKING TOP)



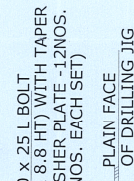
SIDE VIEW
(LOOKING STARBOARD)



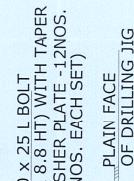
PLAN VIEW
(LOOKING TOP)



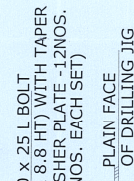
SIDE VIEW
(LOOKING STARBOARD)



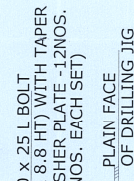
PLAN VIEW
(LOOKING TOP)



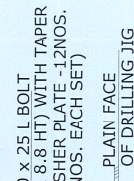
SIDE VIEW
(LOOKING STARBOARD)



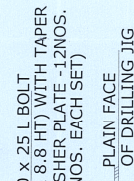
PLAN VIEW
(LOOKING TOP)



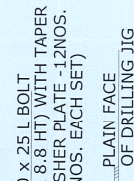
SIDE VIEW
(LOOKING STARBOARD)



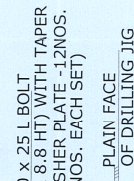
PLAN VIEW
(LOOKING TOP)



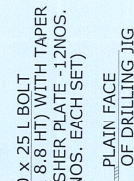
SIDE VIEW
(LOOKING STARBOARD)



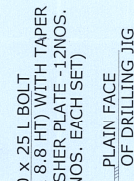
PLAN VIEW
(LOOKING TOP)



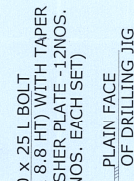
SIDE VIEW
(LOOKING STARBOARD)



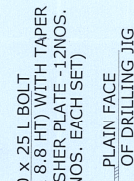
PLAN VIEW
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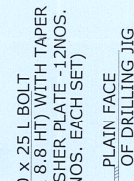
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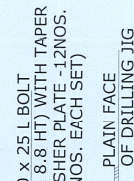
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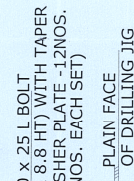
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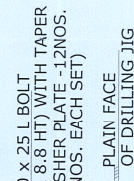
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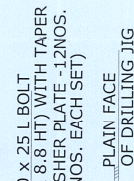
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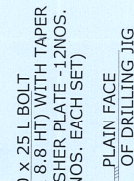
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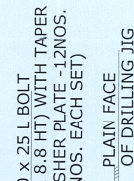
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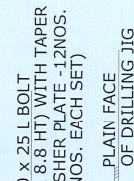
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(LOOKING TOP)



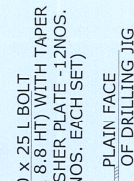
SIDE VIEW
(LOOKING STARBOARD)



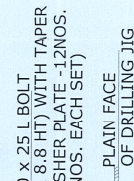
PLAN VIEW
(LOOKING TOP)



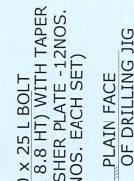
SIDE VIEW
(LOOKING STARBOARD)



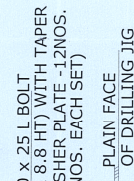
PLAN VIEW
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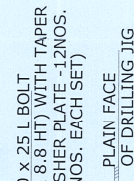
SIDE VIEW
(LOOKING STARBOARD)



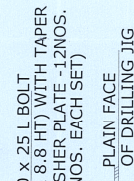
PLAN VIEW
(LOOKING TOP)



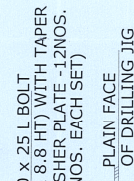
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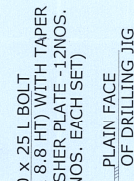
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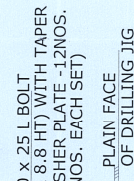
SIDE VIEW
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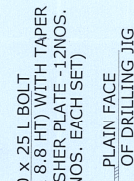
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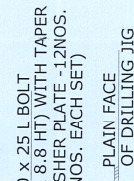
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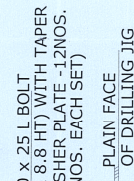
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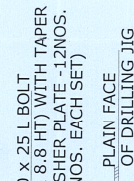
SIDE VIEW
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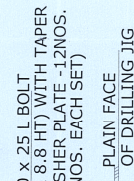
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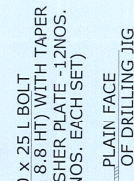
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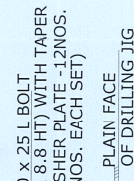
PLAN VIEW
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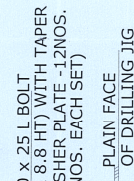
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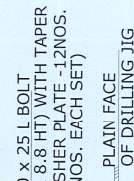
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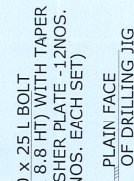
SIDE VIEW
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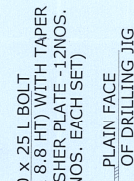
PLAN VIEW
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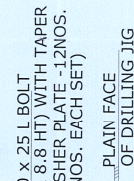
SIDE VIEW
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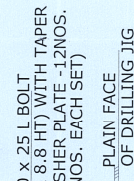
PLAN VIEW
(LOOKING TOP)



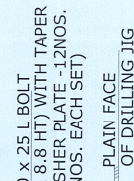
SIDE VIEW
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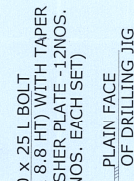
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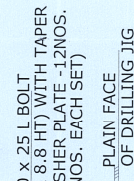
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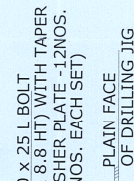
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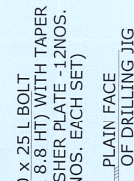
SIDE VIEW
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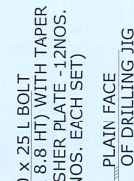
PLAN VIEW
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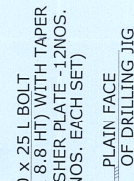
SIDE VIEW
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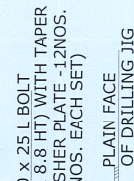
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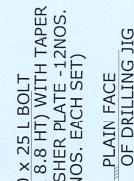
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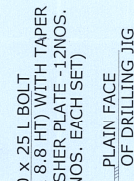
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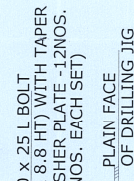
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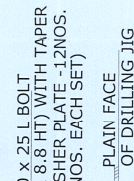
PLAN VIEW
(LOOKING TOP)



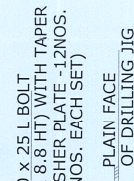
SIDE VIEW
(LOOKING STARBOARD)



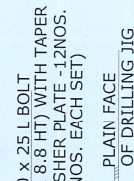
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(LOOKING TOP)



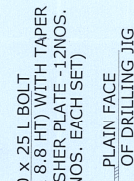
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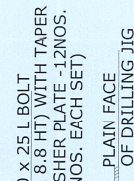
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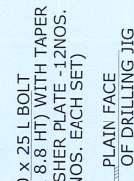
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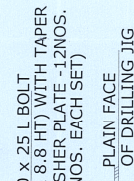
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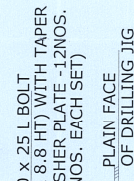
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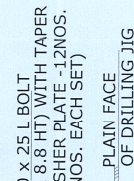
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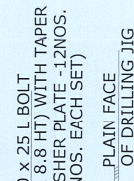
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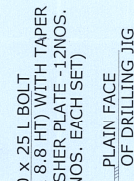
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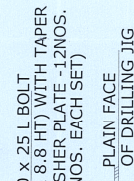
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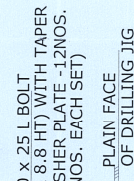
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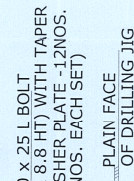
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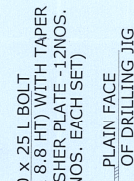
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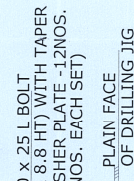
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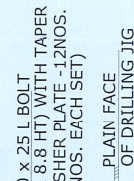
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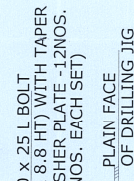
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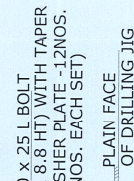
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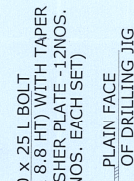
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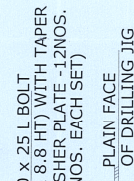
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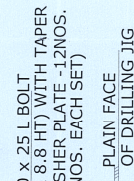
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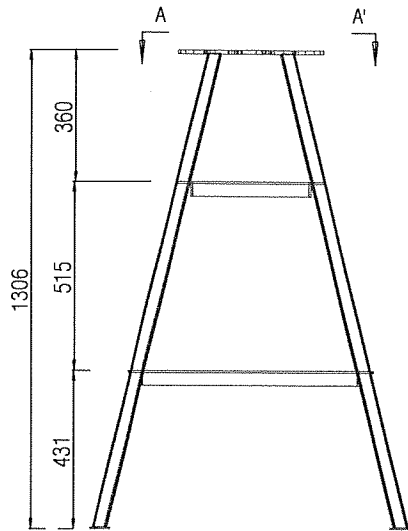


PLAN VIEW
(LOOKING TOP)

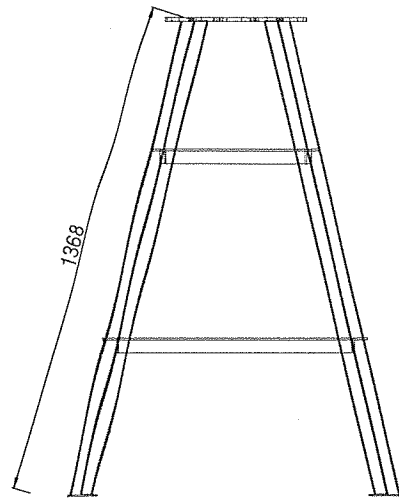


SIDE VIEW
(LOOKING STARBOARD)

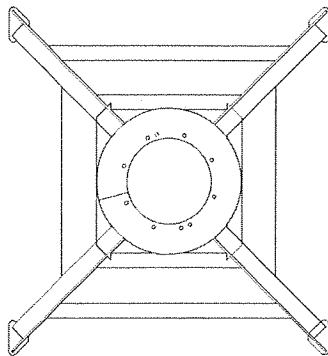




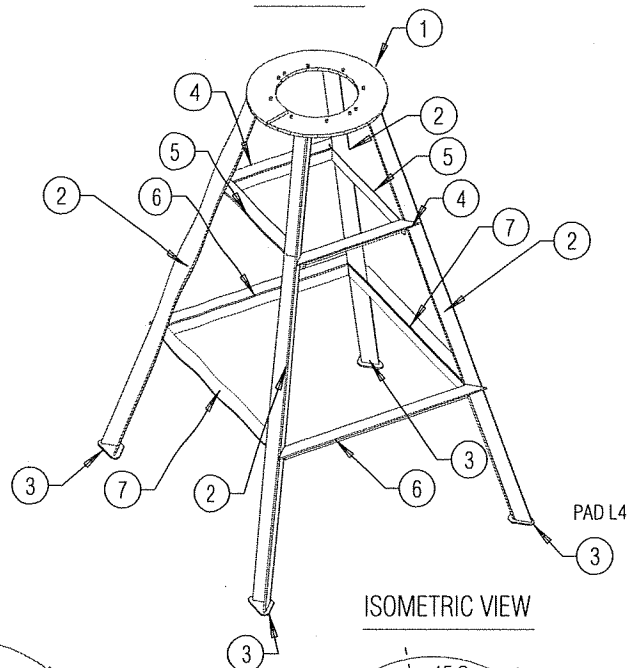
ELEVATION



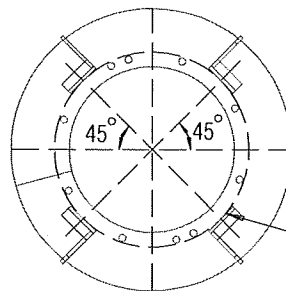
SIDE VIEW



PLAN VIEW



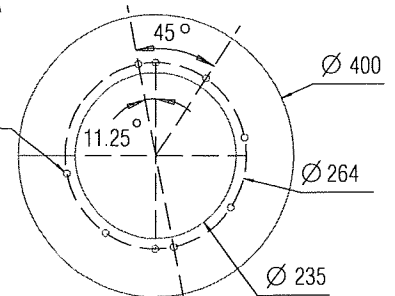
ISOMETRIC VIEW



VIEW A-A'

Ø10X10 HOLES

Ø 277



DETAILS OF POS NO:1

TABLE-1

SLNO	PIECE MARK	UNIT WT (Kg)
1	E_03DS_W.CIWS.EOD1_F	14.48

POS	DESCRIPTION	SIZE	WT(KG.)	QTY
1	ALUMINIUM PLATE 10MM THICK, 5083 PLATE	400X400 (MM)	2.16	1
2	ALUMINIUM (6082 -T5) EQUAL ANGLE 50X50X5	1366 MM	1.75	4
3	ALUMINIUM PLATE 4MM THICK, 5083 PLATE	74X74 (MM)	0.04	4
4	ALUMINIUM (6082 -T5) EQUAL ANGLE 50X50X5	321 MM	0.41	2
5	ALUMINIUM (6082 -T5) EQUAL ANGLE 50X50X5	427 MM	0.55	2
6	ALUMINIUM (6082 -T5) EQUAL ANGLE 50X50X5	597 MM	0.77	2
7	ALUMINIUM (6082 -T5) EQUAL ANGLE 50X50X5	660 MM	0.85	2

NOTES:-

- 1) SHARP EDGES TO BE ROUND OFF
- 2) ALL DIMENSIONS ARE IN MM
- 3) PIECE MARK SHOULD BE CLEARLY MARKED ON FITTING SEAT.
- 4) PAINT CODE - **β3 Cβ**
- 5) QUANTITY OF SEATS - 1 No./VESSEL.

SEAT FOR ELECTRO OPTICAL DIRECTOR(EOD) OF CIWS

SCALE-NTS

FT5ADXXX04U000 R8

BY523-BY530

5 / 5