



**COCHIN SHIPYARD LIMITED**  
(A GOVERNMENT OF INDIA ENTERPRISE)

COCHIN-682015

Tel. No. +91(484) 2501622/2501420

Mob: +919687606221 / +918129497524

Web: [www.cochinshipyard.in](http://www.cochinshipyard.in)

*Invites*

**Expression of Interest (EoI)**

*for*

**Maintenance contract of HVAC equipment & associated systems onboard vessel INS Anvesh for a period of five (5) years.**

CSL/SHIP REPAIR/HVAC/TDV/2023/EOI dated 05th Jan 2024

# CONTENTS

Section	Description
1	Company Profile
2	Expression of Interest (EOI) – Scope of Work
3	Pre-qualification Criteria for Bidders
4	Proforma for submission of Expression of Interest
5	Cardinal Dates
6	Special terms and conditions governing EOI
7	Queries/ Clarifications
8	Annexures A – K

## 1. Company Profile

Cochin Shipyard Ltd (CSL) incorporated in the year 1972 as a fully owned Government of India company. CSL has completed a successful IPO process in 2017 and is currently a listed company with 75% stake held by Govt of India. Over the last three decades the company has emerged as the forerunner in the Indian ship building and ship repair industry. CSL has built an enviable reputation in India for quality and timely delivery of ships. CSL has secured shipbuilding orders from internationally renowned companies from Europe & Middle East and has commissioned the country's first indigenous aircraft carrier-INS Vikrant.

CSL commenced ship repair operations in the year 1982 and has undertaken more than 2000 repair projects of all types including up gradation of ships as well periodic layup repairs and various kinds of refits including life extension of ships of Indian Navy. Along with an array of private customers, CSL have long term working relationship with various government- public sectors including Lakshadweep Development Corporation, Coast Guard, Fisheries, Port trusts and Andaman administration, DCI, SCI & ONGC etc.

CSL has recently geographically expanded its footprints across the western and eastern coast of India. Ship repair facilities have set up at Mumbai, Kolkata and Port Blair. Also, in an effort to make Kochi a Ship building and repair hub, a new bigger dry dock is being constructed at the main facility and setting up an international ship repair facility at Wellington Island, Kochi with a ship lift and six transfer bays.

### 1.1 Introduction

INS Anvesh, a Technology Demonstration Vessel, meant for various Defense R&D activities was built & delivered by CSL. The vessel is owned by Defense Research and Development Organization (DRDO) and manned by Indian Navy (IN). The vessel is having dimension of 120 Mtrs (L) x 20 Mtrs (B) with Diesel – Electric propulsion system. Base port of the vessel shall be at Chennai.

CSL entered into contract with DRDO / IN for annual maintenance of the vessel INS Anvesh for a period of five (5) years. The prime objective of annual maintenance contract is to reduce downtime of vessel by undertaking periodic maintenance of equipment / systems onboard as per maintenance protocols/ OEM manuals and maintenance of equipment / systems due to regular running / wear & tear of ship which doesn't involve material failure or damage.

### 1.2 Objective of EOI

CSL is looking for a well conversant service partner for undertaking routine, preventive and breakdown maintenance of HVAC systems as listed at Annexure –A(List of equipment's), B(scope of maintenance) & C(relevant drawings) onboard vessel INS Anvesh for a period of five (5) years at Chennai / Vizag / Cochin port in India. Apart from equipment/systems indicated in the list, maintenance of associated minor equipment which falls under category of HVAC systems are also to be considered under the scope of service provider.

### 1.3 Methodology

This Expression of Interest (EOI) is intended for obtaining willingness from suitable & reputed firms / vendors who are having expertise in the field of maintenance of HVAC systems onboard vessels based

on the qualification criteria stipulated in this EOI. After floating of EOI, all interested bidders will be allowed to attend a Pre-bid meeting to raise queries and seek clarifications. Details on conducting the Pre Bid meeting is elaborated below. Once the Pre Bid meeting is concluded, necessary corrigendum if required will be published and response for EOI will be obtained. In case no bidders intend to participate for Pre Bid, CSL will proceed with evaluation of bids received. Further to evaluation of bids, CSL will short list the bidders and float limited tender with the selected EOI bidders in two bid format. Final specification of tender will be based on the accepted proposals received from this EOI. However, there shall not be any major deviations mentioned in the EOI specification and conditions. Final selection of bidders will be based on the techno-commercial evaluation of LTE.

## **2. Expression of Interest (EOI) – Scope of Work**

1. An Expression of Interest (EOI) is being called for from reputed firms/ service providers for rendering planned & breakdown maintenance of HVAC systems as listed at Annexure -A and associated systems onboard vessel INS Anvesh for a period of five (5) years.
2. The maintenance shall be primarily carried out at base port in Chennai. However, in case of specific requirement maintenance shall be undertaken at Vizag / Kochi.
3. All associated minor equipment which falls under category of HVAC systems but not considered under Annexure -A are also included in the scope.
4. Assistance of OEM engineer if required for Preventive, routine maintenance shall be arranged by contractor. All spares and consumables for routine /preventive maintenance shall be arranged by contractor
5. List of equipment is listed in Annexure –A.
6. Maintenance routines are detailed in Annexure –B.
7. Relevant drawings are enclosed at Annexure-C.
8. The breakdown of HVAC systems owing to accident /bad whether condition/fire shall not be covered under this scope of work and shall be addressed separately. However, all breakdown maintenance of individual equipment / systems due to normal operation and wear & tear shall be covered under the scope of this EOI.
9. The AMC contractor shall attend any breakdown within 48 hours of notification of defect from CSL and shall rectify the defect immediately but not later than 10 days. All consumables and spares shall be arranged by the contractor. In case of OEM assistance required for breakdown maintenance, the same shall be arranged through AMC contractor based on mutually agreed cost.

### **2.1 Detailed scope of work**

1. The firm shall appoint project manager, Graduate engineer with five years of experience at base port at Chennai, who shall be single point contact with CSL/ Vessel to co-ordinate all maintenance / repair activities. The firm shall arrange all necessary passes/ clearances from port authorities.
2. Further, the firm should be capable to set-up a team of 3 personnel on regular payroll of which at least 1 are of Graduate engineers' /Diploma grades. (service engineers/ supervisors/ technicians) for

undertaking planned/ routine maintenance of machinery equipment/ systems at the base port of vessel in Chennai contractor shall also depute the team for undertaking maintenance activities in Vizag/Kochi on need basis.

3. The firm should have a fixed Point of contact and a owner representative, and the Point of contacts must be available through phone call, whatsapp or email. Each works has to be planned before execution with the navy staff for making necessary arrangements and the same to intimated to CSL at least before two days.
4. The firm should have or be capable to set up a suitable work shop facility having area 10 mtr x 5 Sq.Mtrs for undertaking maintenance / repairs of HVAC systems at base port of vessel. Personnel's of CSL, NAVY and DRDO have the right to visit the workshop whenever they want to inspect and the arrangement for the same to be done by the AMC service provider.
5. The firm shall be responsible for preparation of Monthly maintenance program of all HVAC system onboard vessel in line with equipment list and maintenance schedule specified at Annexure –A & B. The firm shall prepare a monthly report of maintenance activities carried out including spares consumed, any upgradation/ changes done from original scheme, work completion certificates, forecast/ broad schedule of upcoming maintenance activities in next six months etc. The firm shall maintain & update records (Equipment wise) of all activities carried out in mutually agreed prescribed format.
6. The firm should have sufficient back end support to ascertain & project spares required for routine maintenance spares well in advance based on planned maintenance schedule as promulgated at Annexure-A & B and spares susceptible for frequent failures.
7. The firm shall be able to provide six (6) months warranty for maintenance carried out on equipment / systems. If any defects arise within the warranty period, the firm shall repair/replace the items without additional expenditure to CSL.
8. The firm shall arrange all spares and consumables required for routine and preventive maintenance. All spares and consumables for routine, preventive and breakdown maintenance shall be arranged well in advance in line with maintenance schedule. Details of spares procured/to be procured for undertaking routine and preventive maintenance shall be shared with CSL. Material certificate to be recorded and genuinity need to be ensured. The contractor is responsible for arranging routine spares for preventive maintenance of equipment as per Annexure A. CSL, Navy and DRDO shall have the right to verify the genuinity of any spares at any point of time.
9. All necessary tools, special tools, equipment, lifting equipment, etc required for undertaking the job shall be under bidder scope. All tools should have proper calibration / test certificate which should be furnished upon demand. All necessary tools including special tools if any shall be arranged by the firm. Transportation of all these spares, equipment, tools are to be arranged by firm and related clearances from port to be obtained by the firm themselves.
10. All types of consumables such as Gaskets, chemicals, refrigerants, cleaning agents, glycol gel etc. Cotton Rags, Chemicals etc required during the maintenance shall be arranged by the AMC service provider as a part of the scope of AMC. Further, electrical consumables like rubber/plastic parts/mats, panel door locks, indication lamps, switches, tapes, domestic plugs, domestic sockets, panel lights, control & power wiring for panel cables, connectors, fuses, terminal box, contacts, washers, nuts, split pins, cables lugs, galley equipment consumables (like heating element, selector switches, indication lamp), banyan cloth, anti-rust spray (WD40), heat sleeves, cable gland, solder leads and the same is within the scope of AMC.

11. Products supplied shall be nontoxic and harmless to health. In the case of toxic materials, Material Safety Data Sheet may be furnished along with the material. Materials with asbestos content are strictly banned and the same shall not be used in any items.
12. All in way jobs for carrying out the main work like material shifting, work place cleaning, arranging pallets/waste bin, removal & refit of lagging, removal & refit of equipment's/ furniture and appliances etc will be on bidder's scope. Preservation of dismantled parts and tools etc will be in bidder's scope. Necessary insurance coverage for the equipment removed from the vessel shall be arranged by the contractor
13. In order to attend any exigencies, rates for skilled, semi-skilled and unskilled labors shall be provided separately in bid.
14. The firm shall be capable to undertake shipping-out & shipping-in of equipment if required including de-gutting/ re-gutting as part of defect rectification. In case of any equipment / items need to be taken outside vessel to rectify the defect, it shall be responsibility of firm to look after safety & security of the equipment until refitment of the same onboard vessel post repairs. Necessary insurance coverage for the equipment removed from the vessel shall be arranged by the contractor.
15. The quality of work/services shall be in accordance with best industry standards as well as maintenance protocols being followed in Naval vessels and in compliance with DNV & IRS standards wherever applicable. The firm shall follow HSE (Health, Safety and Environment) policies of CSL/Vessel apart from other statutory requirements.
16. The vessel INS Anvesh is built in accordance with dual class, ie, IRS & DNV. The firm should be capable of co-ordinate & offer equipment / systems as per the periodic survey plan to surveyors wherever applicable and liquidate observations to its optimum performance. Intimation to CSL to be given a week before the survey so as to arrange the surveyor.
17. Performance of equipment related to ANVESH shall be proven by AMC service provider after each major maintenance/overhaul as per relevant standards/test procedure/reference data. Work completion certificates to be obtained duly signed by navy staff for monthly maintenance records.
18. A progress review meeting shall be carried out on regular basis (as mutually agreed) to monitor activities & progress of maintenance.
19. The firm shall prove performance of equipment/ systems as per relevant standards / test procedure / reference data post each maintenance / overhaul
20. DNV/IRS class surveyor shall be arranged by CSL and the firm shall provide advance intimation in this regard.
21. All logistics, material movement, documentation, clearances etc; related to maintenance of equipment & systems shall be arranged by contractor without additional expenses to CSL.
22. Arrangement of crane, Escorts, Forklift, staging / Scaffolding, compressed air, temporary lighting, blowers/ventilations, PESO/statutory third party certifications, any other services required during the repair period will be the responsibility of the AMC contractor. (Fresh water, distilled water, fire cloth, fire lines, hoses, safety grills for manhole, ladders)

23. The firm should arrange necessary PPEs for the personnel working onboard, and safety protocols to be strictly adhered.
24. Any small fabrications or modification for any system as per the need of vessel to be done by the firm same to be intimated to CSL.
25. As it is comprehensive AMC, apart from machinery, all works related to electrical, electronics, instrumentation and controls etc. shall be in the scope of the AMC contractor.
26. Upon completion of AMC period, all the available spares shall remain the property of DRDO.

### **3. Pre-qualification Criteria for Bidders**

1. The firms should be an Indian Entity who is having past experience of undertaking periodic planned maintenance and break down maintenance of HVAC systems onboard vessels.
2. The firm should be active in the field of maintenance of HVAC systems onboard vessels during the last five (5) years out of which the firm should have completed projects worth at least 1 Cr per year in the last three (3) years. Experience will be calculated till the date of submission of EOI.
3. The firm should have successfully completed maintenance of HVAC systems onboard vessel with value not less than Rs. One (1) Crs per year in the last three consecutive years.
4. The firm should be conversant with maintenance protocols followed for HVAC systems onboard Indian Navy vessels and should have successfully executed maintenance / overhauling / refit of any major equipment which has a value not less than Rs 30 lakhs, in any Indian Naval ship in the last one year.
5. The firm should have minimum workforce strength of 10/12 personnel in permanent roles out of which 3 personnel should be in service engineer/ supervisors/ technicians' role for undertaking maintenance & repairs of Machinery equipment/ systems.
6. Firm shall be working on positive profits for the last three financial years and shall record a turnover of at least 3 Cr in each financial year.

### **4. Proforma for submission of Expression of Interest**

1. Certificate of incorporation / Article of association and other documents to show the company profile, complete name of the firm with legal status, date of establishment and type of organization, whether individual (Organization chart to be provided), proprietorship, partnership, private limited company, public limited company etc with exact and complete corporate/registered/home & office address, business address, telephone numbers, Fax numbers, email etc.
2. Relevant documents like PO/WO/Invoices/completion certificates (dully signed by owner/survey agency) to prove that the firm is working in related field as per Cl 7.2 above, for past five years and has completed the required value of projects (Rs 1 Cr per year) in last three years from the date of publishing of this EOI as per pre-qualification criteria detailed above.

3. Firm should submit relevant document like PO/WO/Invoices/completion certificates (duly signed by owner/survey agency) to prove that the firm has completed maintenance / overhauling / refit of any major equipment which has a value not less than Rs 30 lakhs, in any Indian Naval ship in the last one year. The areas of work should include ship equipment similar to one attached in Annexure A & B which should involve carrying out work in various areas including overhauling, trouble shooting, defect rectification & proving of HVAC system and associated systems.
4. Company profile details on complete name of the firm with legal status, date of establishment and type of organization, whether individual (Organization chart to be provided), proprietorship, partnership, private limited company, public limited company etc with exact and complete corporate/registered/home & office address, business address, telephone numbers, Fax numbers, email.
5. Firm shall submit the organogram with proof of employment of atleast 10/12 persons in the permanent rolls as mandated in the prequalification criteria mentioned above.
6. Financial statements and capability statement of the firm (valid financial rating certificate from M/s. CRIISL, SMERA, D&B or any organization of similar repute) to be submitted along with EOI as per the format given in Annexure E, along with a valid solvency certificate with a value of 2 Crores as per format given in Annexure H.
7. Integrity Pact: The firms shall sign and submit an "Integrity Pact (IP)" to be executed between the firm and Cochin Shipyard Limited along with the EOI as per Annexure-I.
8. Copies of PAN and GST registration.
9. Deviations or suggestions, if any.
10. All pages of the Request for EOI document, including amendments if any shall be duly signed and sealed by the authorized representative of the bidder as a token of the acceptance of all terms & conditions stated therein the document.
11. The EOI proposal addressed to General Manager (Ship Repair), Dock House, Cochin Shipyard limited, Perumanoor PO, Cochin 682 015, Kerala, India shall be sent in soft copy via email clearly mentioning "Request for Expression of Interest for maintenance of HVAC & associated systems onboard vessel INS Anvesh" in subject line to the below email ids:
  - i. [vipinram.b@cochinshipyard.in](mailto:vipinram.b@cochinshipyard.in)
  - ii. [unnigopan.sr@cochinshipyard.in](mailto:unnigopan.sr@cochinshipyard.in)
12. No hard copies / fax will be accepted.
13. The EOI shall reach the addressee not later than **1500 hrs (IST) on 01<sup>st</sup> Feb 2024.**
14. Pre bid meeting will be conducted on **25<sup>th</sup> Jan 2024.**

## 5. Cardinal Dates:

Publishing of EoI	<b>6<sup>th</sup> Jan 2024</b>
Deadline for submission of pre bid meeting questionnaire	<b>20<sup>th</sup> Jan 2024</b>
Pre bid meeting	<b>23<sup>rd</sup> Jan 2024</b>
Last date of submission of EoI	<b>1<sup>st</sup> Feb 2024 by 3:00 PM</b>
Opening of EoI documents	<b>2<sup>nd</sup> Feb 2024 by 11:00 AM</b>

## 6. Special terms and conditions governing EOI

Apart from the General Terms and Conditions as detailed above, following are the Special terms and conditions also govern the EOI / Tender. In case of any contradicting clauses, the terms in STC will prevail.

1. Conflict of Interest  
CSL- requires that the firm must provide professional, objective & impartial service and at all times hold the interest of the Company paramount, strictly avoid conflicts with other assigned jobs or their own corporate interests. In case the applicants have any subsisting interest, either by themselves or through their partners, that is likely to conflict the work specified in the requirements, they shall declare such interests as part of their proposal. CSL reserves the right to reject such proposals without assigning any reason.
2. Right to Accept Proposal  
This EOI is being sought with no financial commitment and CSL- reserves the right to modify, expand, restrict, scrap this proposal or reject any Expression of Interest.
3. Clarifications  
During evaluation stage of the Expression of Interests, CSL- may at its discretion, seek firms/ vendors for clarifications on their proposal. The firms are required to respond within the time frame prescribed by CSL. It may be noted that CSL will not reimburse any cost incurred by the bidders towards the preparation and submission of the EOI.
4. Language  
The proposal and all associated correspondence shall be in English. All supporting document or printed literature submitted along with the offer shall also be in English.
5. Evaluation

- a) CSL reserves the right to visit the premises of firms/bidders, if required to have firsthand information regarding the capacities. The bidders shall coordinate for the above visits whereas travelling and all other expenses for the same shall be borne by CSL. In the absence of adequate capacities, the EOI shall be rejected and hence will not be considered further.
- b) The offer will be examined by an evaluation committee on the basis of response to requirements defined by CSL. If found necessary applicants may be called for to present the details at a suitable date and time. The purpose of such presentations is to facilitate the applicants to demonstrate their capacities in order to assist the evaluation committee to arrive at the envisaged objective.

6. Payment terms

Following will be the schedule of payment against the contract

End of 12 months	15% of total order value and applicable tax
End of 24 months	15% of total order value and applicable tax
End of 30 months	10% of total order value and applicable tax
End of 36 months	10% of total order value and applicable tax
End of 42 months	10% of total order value and applicable tax
End of 48 months	10% of total order value and applicable tax
End of 51 months	7% of total order value and applicable tax
End of 54 months	7% of total order value and applicable tax
End of 57 months	7% of total order value and applicable tax
End of 60 months	9% of total order value and applicable tax

7. Integrity Pact

The bidders shall sign and submit an “Integrity Pact (IP)” to be executed between the bidder and Cochin Shipyard Ltd. Along with the bid as per Annexure E. IP shall be implemented through the independent External Monitors for the bid ie, Shri. Jagadip Narayan Singh, IAS (Retd.), C-54, Bharatendu Harischandra Marg, Anand Vihar, Delhi – 110092. Mobile: 9978405930 Email: jagadipsingh@yahoo.com

8. Intellectual property rights

Contractor shall not claim any IP rights regarding any works, documents related to INS Anvesh.

9. Risk Purchase clause

The contractor is responsible for arranging routine spares and service for preventive maintenance of equipment as per Annexure A. However incase the contractor does not arrange spares/service which are in this scope within stipulated time or maintenance schedule, then CSL has the right to purchase the material /service at own cost and deduct the same from contractors next payment due.

10. Termination Clause

CSL reserves the right to terminate the Annual maintenance contract at any point of time if the EOI contractor is not performing satisfactorily or deviating from the CSL terms & conditions.

11. Indemnity

Contractor shall indemnify CSL from any damage of equipment, persons etc occurred while working on the equipment.

12. Confidentiality clause

The AMC service provider shall not disclose and part of AMC / activities related to AMC to any third party without prior concurrence from CSL.

13. Insurance

Contractor shall arrange all “Contractors All Risk” insurance for all items removed and transported from ship to any repair facility / works for repairs or any works to cover any untoward incident including damage / loss of ships items. Contractors shall ensure that all his employees are covered under insurance / compensation policy to cover any untoward incident including loss of life.

14. Safety and Security of the vessel

Contractor shall ensure safety against any hazards and security of the vessel during maintenance and dry docking

15. Security clearance for Foreign Nationals

Contractor shall ensure that information regarding planned visit of foreign OEMs is provided at least three weeks in advance for obtaining security clearance.

16. Price variation

The price quoted shall stand firm for the entire 5 year period of contract. No price variation is acceptable during the contract tenure.

17. Offer validity

Offer shall be valid for a period of 3 months from the date of opening of techno-commercial offer obtained as a response to the LTE floated.

18. Guarantee / Warranty

The firm shall be provide six (6) months warranty for maintenance of equipment / systems & One (01) year for material/spares. If any defects arises within the warranty period, the firm shall repair / replace the items without additional expenditure to CSL.

19. Security deposit and Performance guarantee

The firm shall submit a Bank guarantee for 5% of the contract value, immediately upon receipt of contract, as per CSL format (annexure E) to cover security deposit valid till 5 years and later revalidated to cover the guarantee period.

20. Disqualification

CSL may at its discretion and at any time during the evaluation of proposal, disqualify any bidder, if they have/ are.

- i. Submitted the proposal documents after the response deadline.
- ii. Not submitted satisfactory documentary evidence and proof as required
- iii. Made misleading or false representations in the forms, statements and attachments submitted.
- iv. Submitted a proposal that is not accompanied by required documentation or is non-responsive.
- v. Failed to produce clarifications related thereto, when sought.
- vi. Declared ineligible by Government of India/ State Govt. /Public Sector Undertaking.
- vii. Not meeting any of the stipulated eligibility criteria laid out.

21. Even though the bidders meet the qualification criteria, they are subject to be disqualified if CSL come to know during the evaluation stage the following:

- i. Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements and or

- ii. Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion of financial failures etc.
  - iii. Information relating to the evaluation, clarification and recommendation for qualification shall not be disclosed to bidders or any other persons not officially concerned with such process until the qualification process is completed. Any effort by the bidder to influence CSL process may result in rejection of this EOI.
22. All pages of the Request for EOI document, including amendments if any shall be duly signed and sealed by the authorized representative of the bidder as a token of the acceptance of all the terms and conditions stated therein the document.
23. Jurisdiction  
This invitation for EOI is subject to the Law of India, any dispute or difference on account of this EOI shall be subject to the Courts in Cochin, Kerala.
24. Any amendments in "Request for EOI" will be published as corrigendum posted in CSL- website. ([www.cochinshipyard.com](http://www.cochinshipyard.com)) & Central Public Procurement Portal ([eprocure.gov.in](http://eprocure.gov.in)).

## 7. QUERIES/CLARIFICATIONS

1. All firms are advised to study the EOI document thoroughly and to clarify or address doubts / suggestions, modifications, if any on the EOI document and to address queries on any issues that may be raised at that stage. Any firm requiring a clarification of the EOI document must notify CSL in writing in the pre-bid questionnaire format placed at "Annexure I" latest by **20<sup>th</sup> Jan 2024** prior to the pre bid meeting date on **23<sup>rd</sup> Jan 2024**. No queries will be entertained after the above specified time. Bidders interested to take part in the pre-bid meeting through video conferencing shall intimate CSL latest by 19<sup>th</sup> Dec 2023 along with pre bid questionnaire as per annexure I with sufficient contact details. Timing for the meeting shall be intimated to interested bidders 2 days prior through email.
2. For queries regarding this EOI, interested parties may contact the following officers of CSL:

Technical queries	Commercial queries
Shri. Rajesh K R SM (SRO), CSL E mail: <a href="mailto:rajeshkr@cochinshipyard.in">rajeshkr@cochinshipyard.in</a> Mob No : 9687606221	Shri. Vipin Ram SM (SRM), CSL Email: <a href="mailto:vipinram.b@cochinshipyard.in">vipinram.b@cochinshipyard.in</a> Mob No: 8129497524

3. Any modification of the call for EOI documents which may become necessary shall be made by CSL exclusively through the issuance of an addendum or corrigendum in CSL website/Govt website. At any time before the submission of EOI, CSL may, for any reasons, whether at its own initiative or in response to a clarification requested by a firm, modify the documents by amendment. The amendment will be notified only on CSL / Govt websites and no separate paper advertisements will be issued. The firms are requested to keep themselves informed of the development by visiting CSL website [www.cochinshipyard.com](http://www.cochinshipyard.com) and the CPP portal [www.eprocure.gov.in](http://www.eprocure.gov.in) regularly. Such amendments shall be binding upon them.

## **8. ANNEXURES**

1. Annexure A: List of equipment
2. Annexure B: Repair schedule of Equipment as per Maintops
3. Annexure C: Relevant drawings
4. Annexure D: Application for Empanelment
5. Annexure E: Format for Financial Capability
6. Annexure F: Power of Attorney
7. Annexure G: Company Profile details
8. Annexure H: Solvency Certificate
9. Annexure I: Format of Pre-Contract Integrity Pact.
10. Annexure J: Pre-bid questionnaire.
11. Annexure K: Tentative Schedule of Events

Sd/-  
GM (Ship Repair)  
Cochin Shipyard Limited

INS ANVESH - AMC - LIST OF EQUIPMENT			
SI No	Name of Equipments	QTY	UOM
1	<b>FAN COILS IN GALLEY</b>	2	Nos
	FC-1, FAN COIL CLIENT GALLEY		
	FC-2, FAN COIL CREW GALLEY		
2	<b>FAN COILS IN ACCOMMODATION</b>	8	Nos
	FC-3, FAN COIL CALIBRATION ROOM, #95-100, A-DECK, SB		
	FC-4, FAN COIL INSTRUMENT ROOM, #109-125, C- DECK, PS		
	FC-5, FAN COIL SCIENTIFIC STORE, #95-105, TWEEN DECK, SB		
	FC-6, FAN COIL IN CONFERENCE ROOM		
	FC-7, FAN COIL PROJECT OFFICE/SHIP STORE		
	FC-8, FAN COIL IN CLIENT OFFICE		
	FC-9 A, FAN COIL PROJECT DIRECTOR ROOM		
	FC-9 B, FAN COIL SCIENTIFIC STORE		
3	<b>FAN COILS IN LABORATORIES</b>	18	Nos
	FC-10, FAN COIL LAB C1, #109-124, C-DECK, PS		
	FC-11, FAN COIL LAB C2, #95-105, C-DECK, PS		
	FC-12, FAN COIL LAB C3, #95-104, C-DECK, SB		
	FC-13, FAN COIL LAB B1, #91-96, B-DECK, CL		
	FC-14, FAN COIL LAB B2, #80-91, C-DECK		
	FC-15, FAN COIL LAB B3, #87-90, B-DECK, SB		
	FC-16, FAN COIL LAB B4, #90-95, B-DECK, SB		
	FC-18, FAN COIL LAB A1, #77-91, A-DECK, SB		
	FC-19, FAN COIL LAB A2, #60-77, A-DECK, SB		
	FC-20, FAN COIL LAB A3, #77-91, A-DECK, PS		
	FC-21, FAN COIL LAB A4, #77-91, A-DECK, PS		
	FC-22, FAN COIL LAB A5, #60-77, A-DECK, PS		
	FC-23, FAN COIL LAB A6, #60-77, A-DECK, PS		
	FC-24, FAN COIL ME LAB, #85-95, TWEEN DECK, PS		
	FC-25, FAN COIL EC LAB, #85-95, TWEEN DECK, SB		
	FC-26, FAN COIL S LAB, #95-105, 2ND DECK, PS		
	FC-27, FAN COIL RAPDC, A-DECK, SB		
	FC-28, FAN COIL FOR HOSPITAL/ SICK BAY-BACK UP		
4	<b>SELF CONTAINED UNITS IN CONTROL ROOM</b>	4	Nos
	SCU-50, SELF CONTAINED UNIT ENGINE CONTROL ROOM		
	SCU-51, SELF CONTAINED UNIT SWITCHBOARD		
	SCU-53, SELF CONTAINED UNIT SWITCHBOARD		
	SCU-54, SELF CONTAINED UNIT SWITCHBOARD		
5	<b>FAN COILS OUTSIDE ACCOMMODATION</b>	7	Nos
	FC-38, FAN COIL PROPULSION/ STEERING GEAR ROOM, #-5- -4, 2ND DECK, SB		
	FC-39, FAN COIL PROPULSION ROOM/ STEERING GEAR ROOM, #-5- -4, 2ND DECK, PS		
	FC-40, FAN COIL PROPULSION/ STEERING GEAR ROOM, #-5- -4, 2ND DECK, SB		
	FC-41, FAN COIL PROPULSION ROOM/ STEERING GEAR ROOM, #-5- -4, 2ND DECK, PS		
	FC-42, FAN COIL GENERAL STORE 2ND DECK, #143- 158, 2ND DECK, CL		
	FC-43, FAN COIL RADAR DECK HOUSE		
	FC-44, FAN COIL BOW THRUSTER CONTROL ROOM, 2ND DECK FWD		

6	<b>VENTILATION LOUVERS AND SWAN NECKS</b>		
7	<b>C-1/C-2/C3, CHILLED WATER PLANT</b>	3	Nos
	Screw compressor, semi-hermetic type (Bitzer)	6	Nos
	Electric motors	6	Nos
	Condenser (Alfa laval)	6	Nos
	Drier/strainer arrangement	3	Nos
	Water chiller (Alfa laval)	3	Nos
	Set Valves for water chiller	6	Nos
	Gauge panels	6	Nos
	Pipes and fittings	3	Nos
	Insulation	3	Nos
	Frame construction	3	Nos
	Vibration damping system	3	Nos
	3 Starter (loose delivery) & 3 control panel (one each machine),		
	Rubber compensators and flexible connections	2	Nos
	Refrigerant leakage alarm system	1	Nos
	Recovery package	1	Nos
	Chilled Water Pumps	2	Nos
8	<b>C-4 &amp; C-5, PROVISION PLANTS</b>		
	Marine condensing units type MCU-HGX7/2110-4	2	Nos
	Compressor (Bock)	2	Nos
	Condenser (Bitzer)	4	Nos
	Comntrol Panel	2	Nos
	Oil Separatror	2	Nos
	Drier/Strainer Arrangement	2	Nos
	Liquid sub cooler	2	Nos
	Suction Trap	2	Nos
	Suction Filter	4	Nos
	Forced draft cooler for Freezer #158-169, PS 1st-Deck , -20 °C	1	Nos
	Heater, Thermostats	1	Nos
	Self-regulating heater	1	Nos
	Forced draft cooler for Provision #153-163, PS A-Deck, +8 °C	1	Nos
	Forced draft cooler for Provision #164-170, PS A-Deck, +4 °C	1	Nos
	Forced draft cooler for Dry prov. #153-158, SB 1st-Deck, +8°C	1	Nos
	Forced draft cooler for Provision #153-158, SB 1st-Deck , +4 °C	1	Nos
	Forced draft cooler for Dry prov. #158-169, SB 1st-Deck, +8 °C	1	Nos
	Pre-mounted valve arrangements	6	Nos
	Starter panel	1	Nos
	Control panels	6	Nos
	Set of necessary copper-tubes and fittings	1	Nos
	Remote temperature reading system	QTY TO BE FINALISED	
	Leak detection alarm system		
	Set of flexible connections and vibration eliminators		

**NOTE: QUANTITIES MENTIONED ABOVE ARE TENTATIVE ONLY. FINAL QUANTITIES SHALL BE SHARED LATER.**

## **SCOPE OF WORK**

### **Equipment list**

#### **1. CHILLERS**

Make: AERON / TEKNOTHERM

Model: BITZER, Serial No. : 03108-1000-1, 03108-1000-2, 03108-1000-3

**Screw compressor**, semi-hermetic

Make/type : Bitzer

Refr. Capacity : 437 kW

**Electric motors** together with the compressor

Starting current : 465 / 1442 A (Y/D)

Working current : 202 A

Enclosure : IP.54

Voltage : 3 x 415V-50Hz

#### **Condenser**

Shell & tube type with shell of carbon steel, inner tubes of Cu, endplates of carbon steel and water heads of cast iron with corrosion plugs. The condensers are equipped with R-134a safety relief valves and service valves.

Data each:

Water amount : 70 m<sup>3</sup>/h

Pressure drop : 45 kPa

**Drier/strainer arrangement** for refrigerant circuits with stop valves, charging valve and sight glass w/moisture indicator

**Water chiller** in horizontal Shell & Tube design for direct expansion of refrigerant with 1 refrigerant circuit. With shell of carbon steel St.37.0, inner tubes of SFCU, endplates and covers of steel H11.

Cooling capacity : 875 kW

**Set Valves for water chiller**, consisting of 1 expansion valve, solenoid valve and stop valves (see above general P&ID).

**Gauge panels**, with:

HP-. LP- gauges for the compressors

**Pipes and fittings** for the R-134a system.

**Insulation** of water chiller and low temperature part of the piping system.  
Based on Armaflex insulation tubes (or similar).

**Frame construction** with built-on above components forms a complete unit with internal piping and electric wiring to control cabinet.

**Vibration damping system** including foundation, condenser and evaporator connections.

**3 Starter (loose delivery) & 3 control panel (one each machine),**

3 DOL - starters for compressor motors

3 PLC control

3 Expansion valve controllers

Including hour counters, switches, relays, signal lamps and pilot fuses.

Make : Teknotherm/Telemecanique

Main voltage for compressor motor : 3 x 415V-50Hz

Pilot voltage : 1 x 220V-50Hz Transformer incl.

**Rubber compensators and flexible connections**

**Refrigerant leakage alarm system**

Incl. potential free signals for remote indication.

Total no. of sensors, 2 pc. - divided:

1 - for machine rooms.

1 - for ventilation lines from safety valves.

**Recovery package**

**Condenser pumps incl starter**

## **2. PROVISION PLANT**

Make: AERON/TEKNOTHERM

Model: BOCK MCU-PHGX7/2110-4, Serial No: 03108-2000-1 / 03108-2000-2

**Main components at each unit:**

### **Compressor**

Piston type

Make : Bock

Type : HGX7/2110-4, 4 cyl.

Capacity : 16,9 kW

**Condenser make Teknotherm/Bitzer.** Shell & tube type for freshwater cooling with inner tubes of corrosion resistant cu-material, endplates and shell of boiler plate P 265 GH and detachable end covers. Equipped with safety relief valve, drain valve, purge valve, liquid level glass. Condenser acts as refrigerant receiver.

Type : K373H, 2-pass

**Control panel**, on which are mounted:

- 1 Low-pressure transmitter
- 1 High-pressure cut out
- 1 Oil safety switch without timer
- 3 Gauges for HP, LP and OP

**Oil separator** for automatic oil return.

**Drier/strainer arrangement** with stop valves, refrigerant charging valve and sight glass.

**ALL ABOVE FORMING A ROBUST CONDENSING UNIT.**

**Suction trap** (liquid separator) for mounting in common suction line to the condensing units.

**Suction filter** with filter basket and filter bag for commissioning.

Filter bag for commissioning to be removed after 50 hours operation.

**Forced draft cooler for Provision room**, -20 °C.

Manufacturer, type : Roller HVST 709 EP

The forced draft cooler for freezing room are equipped with electrical heaters for defrosting as well as thermostats for protection against overheating during the defrosting period.

**Forced draft cooler for Dry provision room**, +4 °C.

Manufacturer, type : Roller HVS 402 EP

**Forced draft cooler for Dry provision room**, +4 °C.

Manufacturer, type : Roller HVS 403 EP

**Forced draft cooler for Dry provision room**, +4 °C.

Manufacturer, type : Roller HVS 406 EP

**Forced draft cooler for Dry provision room**, +8 °C.

Manufacturer, type : Roller HVS 402 EP

**Forced draft cooler for Dry provision room**, +8 °C.

Manufacturer, type : Roller HVS 406 EP

**Self-regulating heater** for

mounting on drain pipe from drip tray freezing room.

Length : appr. 4 m

Effect : 17 W at 230V

**Pre-mounted valve arrangements** for each cooler with stop valves for liquid- and suction lines, strainers, thermostatic expansion valves and solenoid valves. Panels for cooling rooms to be equipped with constant pressure valve in suction line. Complete with internal pipes and fittings. The arrangement is intend to be mounted at the side panel, on each cooler.

**Starter panel** with necessary contactors, motor protection, switches, terminal blocks, but without main fuses. Potential free contacts for common alarm, and running signal. Enclosure IP44. Hour counter for each compressor is included.

Main current : 3 x 415V- 50 Hz

**Control panels**. One for each provision room with LCD display for control of temperature, fans, solenoid valve. High temperature alarm and timer for automatic defrosting.

Main current : **1 x 230V-50 Hz 16A (supply by yard)**

**Set of necessary copper-tubes and fittings** for the R-134a system. Maximum vertical distance between the condensing unit and the evaporator is 10 m. The horizontal distance is limited to 20 m. (max total of 30m).

**Remote temperature reading system**

**Leak detection system**

**Set of flexible connections and vibration eliminators**

### **3. CHILLED WATER PUMP**

Make: BEVI

Model: NSL150-415/A02, Serial No: 1807/3039400020, 1803/30382018

### **4. FCU CARRIER TYPE**

Make: AERON/CARRIER

Model: 42EN69F

Quantity: 10 Nos

1. FC-44, FAN COIL BOW THRUSTER CONTROL ROOM
2. FC-16, FAN COIL LAB B4, #90-95, SB, B-DECK
3. FC-3, FAN COIL CALIBRATION ROOM, #95-100, A-DECK, SB
4. FC-4, FAN COIL INSTRUMENT ROOM, #109-125, C- DECK, PS
5. FC-5, FAN COIL SCIENTIFIC STORE, #95-105, TWEEN DECK, SB

6. FC-6, FAN COIL IN CONFERENCE ROOM
7. FC-7, FAN COIL PROJECT OFFICE/SHIP STORE
8. FC-8, FAN COIL IN CLIENT OFFICE
9. FC-9 A, FAN COIL PROJECT DIRECTOR ROOM
10. FC-9 B, FAN COIL SCIENTIFIC STORE
- 5. FC-10, FAN COIL LAB C1, #109-124, PS, C-DECK, PS**  
Make: AERON Model: AFCU-20-CW-B-Plenum  
Quantity: 1 Nos
- 6. FC-11, FAN COIL LAB C2, #95-105, PS, C-DECK**  
Make: AERON Model: AFCU-15-CW-B-Plenum  
Quantity: 1 Nos, Serial No: A02404394
- 7. FC-12, FAN COIL LAB C3, #95-104, SB, C-DECK**  
Make: AERON Model: AFCU-15-CW-B-Plenum  
Quantity: 1 Nos Serial No: A02404396
- 8. FC-12, FAN COIL LAB C3, #95-104, SB, C-DECK**  
Make: AERON Model: AFCU-15-CW-B-Plenum  
Quantity: 1 Nos Serial No: A02404396
- 9. FC-14, FAN COIL LAB B2, #80-91, C-DECK**  
Make: AERON Model: AFCU-15-CW-B-Plenum  
Quantity: 1 Nos
- 10. FC-15, FAN COIL LAB B3, #87-90, SB, B-DECK**  
Make: AERON Model: AFCU-10-CW-B-Plenum  
Quantity: 1 Nos
- 11. FC-18, FAN COIL LAB A1, #77-91, SB, A-DECK**  
Make: AERON Model: AFCU-10-CW-B-Plenum  
Quantity: 1 Nos Serial No: 214040389
- 12. FC-18, FAN COIL LAB A1, #77-91, SB, A-DECK**  
Make: AERON Model: AFCU-10-CW-B-Plenum  
Quantity: 1 Nos Serial No: 214040389
- 13. FC-20, FAN COIL LAB A3, #77-91, PS, A-DECK**  
Make: AERON Model: AFCU-15-CW-B-Duct  
Quantity: 1 Nos Serial No: 219070092

**14.FC-21, FAN COIL LAB A4, #77-91, SB, A-DECK**

Make: AERON Model: AFCU-15-CW-B-Plenum

Quantity: 1 Nos Serial No: 219070092

**15.FC-22, FAN COIL LAB A5, #60-77, PS, A-DECK**

Make: AERON Model: AFCU-20-CW-B-Plenum

Quantity: 1 Nos Serial No: 219070097

**16.FC-23, FAN COIL LAB A6, #60-77, PS, A-DECK**

Make: AERON Model: AFCU-20-CW-B-Duct

Quantity: 1 Nos Serial No: 219070094

**17.FC-24, FAN COIL ME LAB, #85-95, PS, TWEEN-DECK**

Make: AERON Model: AFCU-15-CW-B-Plenum

Quantity: 1 Nos Serial No: 219070094

**18.FC-25, FAN COIL EC LAB, #85-95, SB, TWEEN-DECK**

Make: AERON Model: AFCU-10-CW-B-Plenum

Quantity: 1 Nos Serial No: 214040391

**19.FC-26, FAN COIL S-LAB, #95-105, PS, 2ND-DECK**

Make: AERON Model: AFCU-15-CW-B-Plenum

Quantity: 1 Nos

**20.FC-27, FAN COIL RAPDC, A-DECK, SB**

Make: AERON Model: AFCU-40-CW-B-Downstream

Quantity: 1 Nos

**21.FC-28, FAN COIL FOR HOSPITAL/SICKBAY-BACK UP**

Make: AERON Model: AFCU-40-CW-B-Downstream

Quantity: 1 Nos

**22.FC-52, FAN COIL UNIT RADAR DECK**

Make: AERON Model: AFCU-40-CW-B-Downstream

Quantity: 1 Nos Serial No: AFCU-25-CW-B-P

**23.FC-38, FC 39 FAN COIL PROPULSION/ STEERING GEAR ROOM**

Make: AERON Model: AFCU-40-CW-B-Downstream

Quantity: 2 Nos Serial No: AFCU-25-CW-A

**24.FC-40 FC-41, FAN COIL PROPULSION/ STEERING GEAR ROOM**

Make: AERON Model: AFCU-40-CW-A

Quantity: 1 Nos

**25.FC-42, FAN COIL GENERAL STORE 2ND DECK, #143- 158, 2ND DECK, CL**

Make: AERON Model: AFCU-20-CW-B-P

Quantity: 1 Nos

**26.FC-43, FAN COIL RADAR DECK HOUSE. NO. 2**

Make: AERON Model: AFCU-25-CW-B-P

Quantity: 1 Nos

**27.SCU-50, SELF CONTAINED UNIT ENGINE CONTROL ROOM**

Make: AERON Model: ASCU-E-11-FW-Plenum

Quantity: 1 Nos Serial No: 05-F-016

**28.SCU-51, SELF CONTAINED UNIT SWITCHBOARD**

Make: AERON Model: ASCU-E-28-35-FW-Duct

Quantity: 1 Nos Serial No: 05-F-017

**29.SCU 53 SELF CONTAINED UNIT SWITCHBOARD**

Make: AERON Model: ASCU-E-54-92-SW-Duct

Quantity: 1 Nos Serial No: 07-L-055

**30.SCU 54 SELF CONTAINED UNIT SWITCHBOARD**

Make: AERON Model: ASCU-E-54-92-SW-Duct

Quantity: 1 Nos Serial No: 07-L-056

**AC PLANT**

**1. OCCATIONAL**

- a. Oil to be completely replaced in case of motor failure or complete overhaul
- b. Inspect condenser tubes.

**2. EVERY SECOND YEAR OR 20000 HOURS OPERATION**

- a. Inspect all refrigerant and liquid pipes, vessels, coil terminals in condensers and evaporators. Shells of condenser, heat exchangers and other pressure parts of the equipment to be examined externally as far as practical.

**3. EVERY FIFTH YEAR OR 35-40000 HOURS OPERATION**

- a. Overhaul/ Replace compressor.
- b. Replace Oil and Filter.
- c. Replace Drier core

## **REF PLANT**

### **1. OCCATIONAL**

- a. Clean evaporators.
- b. Replacement of compressor input shaft seal.
- c. Oil to be completely replaced in case of motor failure or complete overhaul
- d. Replace compressor suction strainer and oil filter.

### **2. ANNUAL ROUTINE**

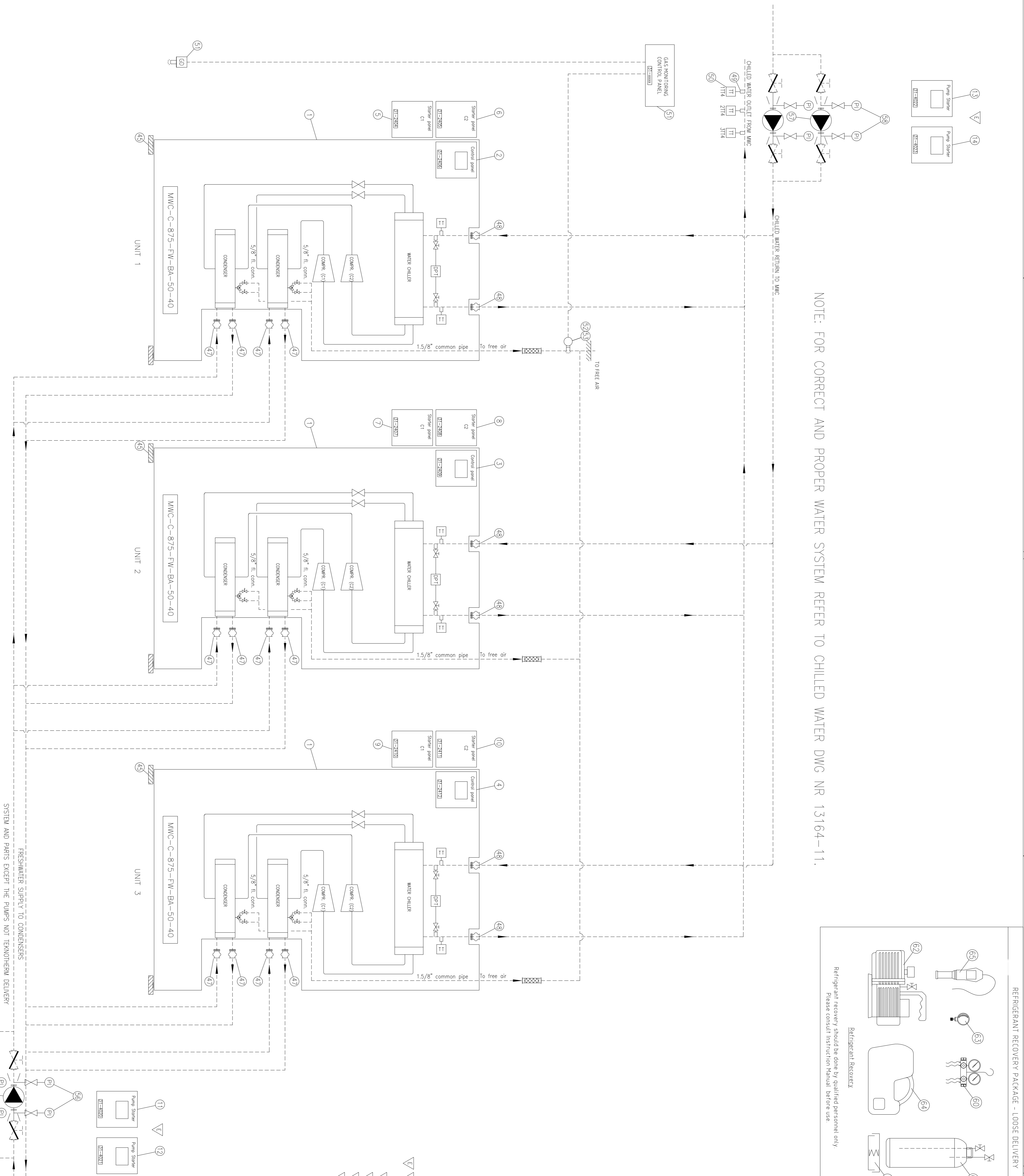
- a. Calibration of all sensors of gas detection system.
- b. Carryout external examination of all refrigerants and liquid pipes, vessels, coil terminals in condensers and evaporators. Shells of condensers, heat exchangers and other pressure parts of the equipment to be examined externally as far as practicable.

### **3. THREE YEARLY ROUTINE/30000 HRLY ROUTINE**

- a. Open up the compressor and examine rotors and bearings.
- b. Replace suction filter
- c. Replace oil.
- d. Depressurize compressor set. This should be done after having measured the pressure loss across the fine oil filters in the oil separator. This is done by measuring the pressure after the fine oil filters using a suitable gauge, compare it with the HP gauge on the unit. Pressure drop should not exceed 1 Bar. Replace if necessary. 2-5 filter cores are normally installed in each oil separator.
- e. Replace liquid line filter drier.

### **4. FIVE YEARLY ROUTINE/40000 HRLY ROUTINE**

- a. Overhaul compressor.
- b. Examine oil pump and renew parts if necessary



<b>COMPRESSOR DATA [Each]</b>	:	875 kW
Capacity :	:	Dew 2° C
Evaporation temperature :	:	Dew 50° C
Condensing temperature :	:	R134a
Refrigerant :	:	
<b>CONDENSER DATA [Each]</b>	:	70 m <sup>3</sup> /h – freshwater at max. 38° C
Cooling water demand :	:	45 kPa
Pressure loss :	:	
<b>CHILLER DATA [Each]</b>	:	Fresh water w/ 5% ethylene glycol
Chilled media :	:	+11 / -5 °C
Media inlet/outlet Temperature :	:	12L m <sup>3</sup> /h
Media flow rate :	:	17 kPa
Pressure loss :	:	
<b>PRESSURES</b>	:	
High pressure side:	:	
Design pressure :	:	1% Bar
Test pressure :	:	18.2 Bar
Lock pressure slide :	:	
Design pressure :	:	11 Bar
Test pressure :	:	14.3 Bar
-----	:	
<b>XARO RESPONSIBILITY</b>	:	
- CONDENSER COOLING WATER SUPPLY SYSTEM	:	COMPRESSORS, CHILLERS
- SAFETY VALVE VENTILATION SYSTEM	:	CONDENSERS, ALFA LAVAL
- CHILLED WATER SYSTEM	:	WATER CHILLERS, ALFA LAVAL
	:	DRY WEIGHT APPROX. 4800 KG

66	2	Recovery bottle	61.1, 009369
65	1	Leak detector, portable electronic	ITF XP-1A, CFC/HFC/HCFC, 001780
64	1	Recovery unit "Promax Minimax"	38 bar max, 001779
63	1	Vacuummeter, electronic	CPS VG100A, LED 9 steps, 001778
62	1	Vacuum pump, CPS VP2D, 2-step	45 l/min, 110-200V 50/60Hz, 001777
61	1	Electronic weight w/bag	ITF 9030E, 0-100 kg, 001776
60	1	Service manifold, 4-valve	CPS 2824-BC/4, 001774

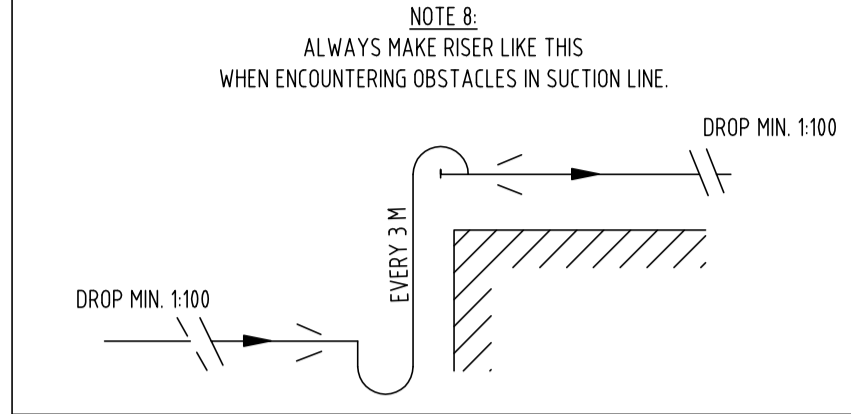
58	4	Gauges for pump	DSME type
57	2	Evaporator pump	DSME
56	4	Gauges for pump	DSME type
55	2	Condenser pump	DSME
54	1	Gas leak monitoring unit	3I-xxxx
53	2	Pipe adapter	M4x21.5P to 1.5/8" solder, 4-3894
52	1	Gas detector – vent. line	GDHF–R3 SC0100, 148H5127
51	1	Gas detector – room	GDHF–R3 SC0100, 148H5120
50	3	Temperature transmitter	4–20 mA, –50/+50°C, 1/2" MP-T
49	2	Welding Socket	1/2" FPT
48	6	Rubber compensator	DN200, PN10
47	12	Rubber compensator	DN80, PN10
46			
45	12	Vibration damper	JNHQ 150x50, M6 IRRD 60

14	1	STARTER PANEL, C/W PUMP 2	31-4023	
13	1	STARTER PANEL, C/W PUMP 1	31-4022	
12	1	STARTER PANEL, COND. PUMP 2	31-4021	
11	1	STARTER PANEL, COND. PUMP 1	31-4020	
10	1	STARTER PANEL, UNIT 3 / C2	31-2411	
9	1	STARTER PANEL, UNIT 3 / C1	31-2410	
8	1	STARTER PANEL, UNIT 2 / C2	31-2408	
7	1	STARTER PANEL, UNIT 2 / C1	31-2407	
6	1	STARTER PANEL, UNIT 1 / C2	31-2405	
5	1	STARTER PANEL, UNIT 1 / C1	31-2404	

4	1	CONTROL PANEL, UNIT 3	31-2412	
3	1	CONTROL PANEL, UNIT 2	31-2409	
2	1	CONTROL PANEL, UNIT 1	31-2406	
1	3	MMC-C-875-FW-BA-50-40	1-8188	
Item Qty	Name	Type		
Rev. C	08.01.14, IK Item 50	Rev.		
Rev. B	12.12.13, Item list 02 - 10	Rev.		
Rev. A	25.11.13, IK, Chiller com, DND200	Rev. D		
			Revised, 07/08/2017/SIS	
			Item 45, 01/08/2017/SIS	

THE TUBES ALWAYS HAVE TO BE CLEAN AND WITHOUT DIRT AND FORGE SCALES.  
THIS HAS TO BE CONTROLLED BEFORE ERECTION.  
THERE MUST ALWAYS BE A RUBBER LINER BETWEEN FASTENERS AND TUBES.  
SUCTION LINE HAS TO BE INSULATED WITH DIFFUSION TIGHT OUTSIDE MATERIAL.  
DRAIN PIPES, WATER PIPES AND WATER VALVES  
ARE NOT IN TEKNOTHERM SCOPE OF SUPPLY.

CURRENT CIRCUIT DIAGRAMS:  
CONTROL/STARTER PANEL: 31-2446  
CONTROL BOXES: 31-2447, 31-2448  
SENSOR BOXES: 3-7032  
GAS DETECTION CENTRAL: 31-2449



CU TUBE MATERIAL QUALITY:  
ASTM-B 280  
Ø3/8" x 0,76 mm  
Ø1/2" x 0,89 mm  
Ø5/8" x 1,02 mm  
Ø3/4" x 1,07 mm  
Ø7/8" x 1,14 mm  
Ø1 1/8" x 1,27 mm  
Ø1 3/8" x 1,40 mm  
Ø1 5/8" x 1,53 mm

COMPRESSOR CAPACITY (EACH):  
COOLING CAPACITY: 16,5 kW  
EVAPORATING TEMP: -28 °C  
CONDENSING TEMP: +46 °C  
FLA = 98 A  
LRA = 291 A (YYY) / 429,0 A (Δ)  
CONDENSER:  
COOLANT: FRESHWATER MAX. 38 °C  
RATED WATER FLOW: 7,0 m³/h  
MAX. ALLOWED WATER FLOW: 10,71 m³/h  
PRESSURE DROP: 0,18 BAR (AT RATED FLOW)

HIGH PRESSURE SIDE:  
DESIGN PRESSURE: 15,5 BAR  
TEST PRESSURE: 23,25 BAR  
LOW PRESSURE SIDE:  
DESIGN PRESSURE: 11,0 BAR  
TEST PRESSURE: 16,5 BAR

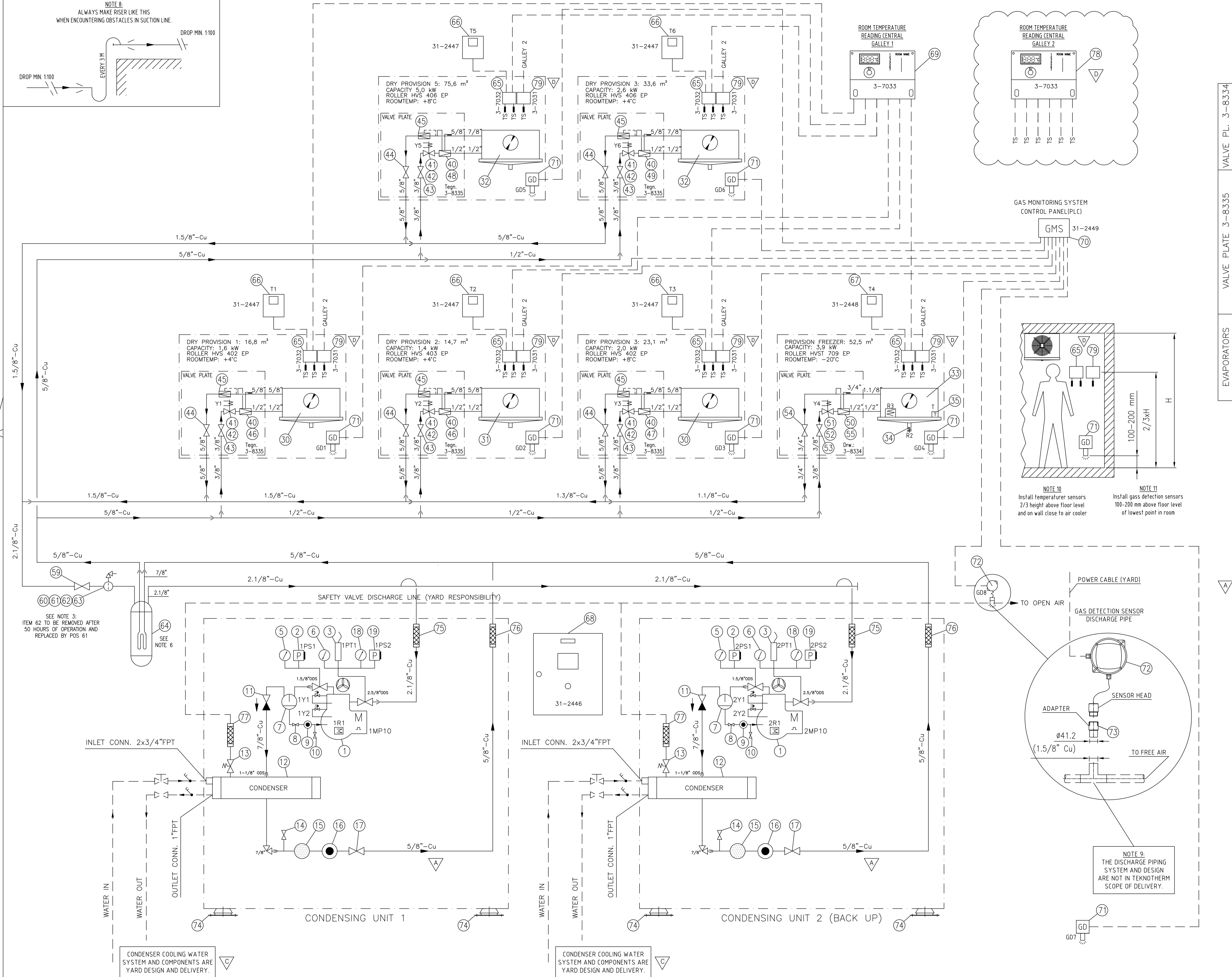
NOTE 2:  
MAX. DISTANCE BETWEEN CONDENSING UNITS AND EVAPORATORS:  
VERTICAL: 9 M  
HORIZONTAL: 21 M  
IF THE ABOVE DISTANCES ARE EXCEEDED,  
TEKNOTHERM MUST BE INFORMED!

NOTE 3:  
ITEM 62 TO BE REMOVED AFTER 50 HOURS  
OF OPERATION AND REPLACED BY POS 61

NOTE 4:  
TOTAL AMOUNT OF REFRIGERANT FILL: APPROX. 15 KG R134a  
(1 UNIT AND SYSTEM FILLED)  
(BACK UP UNIT CAN BE USED AS "PUMP DOWN" RECEIVER)  
CONDENSER PUMP DOWN CAPACITY: 16,0 KG R134a PER CONDENSER  
NOTE 5:  
COMPRESSOR OIL FILL: 4,5 LITRES PER COMPRESSOR  
OIL TYPE: FUCHS RENSO TRITON SE 55

NOTE 6:  
SUCTION TRAP TO BE MOUNTED IN THE SUCTION LINE CLOSE TO COMPRESSOR  
AND AT THE SAME LEVEL OR ABOVE.

79	6	SENSOR BOX W/1 SENSOR	TEKNOTHERM, 3-7031, NTC-SENSOR
78	1	TEMPERATURE READING CENTRAL	12-CHANNEL, 3-7033
77	2	VIBRATION ELIMINATOR	5/8" SOLDER
76	2	VIBRATION ELIMINATOR	5/8" SOLDER
75	2	VIBRATION ELIMINATOR	2 1/8" SOLDER
74	8	VIBRATION DAMPER	JNH923510W, MAX. 175 KG EACH.
73	1	PIPER ADAPTER (GAS DETECTOR)	TEKNOTHERM M42x1.5P TO 1.5/8" SOLD.
72	1	GAS DETECTOR - PIPE	GDHF SC 1000, 148H5127 (R134a)



71	7	GAS DETECTOR - ROOM	GDHF SC 1000, 148H5129 (R134a)
70	1	CONTROL PANEL (GMS)	GAS MONITORING SYSTEM, 31-2449
69	1	TEMPERATURE READING CENTRAL	12-CHANNEL, 3-7033
68	1	STARTER/CONTROL PANEL	TEKNOTHERM, 31-2446
67	1	CONTROL BOX, FREEZING ROOM	CAREL, 31-2448
66	5	CONTROL BOX, COOLING ROOM	CAREL, 31-2447
65	6	SENSOR BOX W/2 SENSORS	TEKNOTHERM 3-7032, NTC-SENSORS
64	1	SUCTION TRAP	PKR-2417, 2 1/8"S x 7/8"S
63	1	SERVICE VALVE	3/8"fi x 1/4"NPT
62	1	COMMISSIONING FILTER BAG	CARLY CCY 48 F (START UP)
61	1	SUCTION STRAINER	CARLY CCY 48 I (PERMANENT)
60	1	SUCTION FILTER HOUSE	DANFOSS DCR 04813, 1.5/8", 023U7055
59	1	STOP VALVE	DANFOSS GBC 42s, 1.5/8", 009G7028
55	1	ORIFICE	ORIFICE 05, 068-2008
54	1	STOP VALVE	DANFOSS GBC 18s, 3/4"
53	1	STOP VALVE	DANFOSS GBC 10s, 3/8"
52	1	SOLENOID COIL	DANFOSS 220-230V 50/60HZ 10W
51	1	SOLENOID VALVE	DANFOSS EVR 3, 3/8"
50	1	TERM. EXP. VALVE	DANFOSS TEN2, 068Z3385
49	1	ORIFICE	ORIFICE 03
48	1	ORIFICE	ORIFICE 04
47	1	ORIFICE	ORIFICE 02
46	2	ORIFICE	ORIFICE 01
45	5	EVAPORATOR PRESS. REGULATOR	DANFOSS KVP 15, 5/8"
44	5	STOP VALVE	DANFOSS GBC 16s, 5/8"
43	5	STOP VALVE	DANFOSS GBC 10s, 3/8"
42	5	SOLENOID COIL	DANFOSS 220-230V 50/60HZ 10W
41	5	SOLENOID VALVE	DANFOSS EVR 3, 3/8"
40	5	TERM. EXP. VALVE	DANFOSS TEN2, 068Z3385
35	1	SAFETY THERMOSTAT	ROLLER, MOUNTED ON EVAPORATOR
34	1	DRAIN PIPE HEATER	DEVI ICEGUARD 17 W, 4 M
33	1	FORCED DRAFT COOLER	ROLLER HVST 709 EP, 1 x 230V-50Hz
32	2	FORCED DRAFT COOLER	ROLLER HVS 406 EP, 1 x 230V-50Hz
31	1	FORCED DRAFT COOLER	ROLLER HVS 403 EP, 1 x 230V-50Hz
30	2	FORCED DRAFT COOLER	ROLLER HVS 402 EP, 1 x 230V-50Hz

20	2	STOP VALVE	DANFOSS GBC 10S, 3/8" SOLDER
19	2	OIL PRESSURE SWITCH	DANFOSS MP55 W/O TIMER, 060B029966
18	2	OIL PRESSURE GAUGE	-1/+15 BAR
17	2	STOP VALVE	DANFOSS GBC 16S, 5/8" SOLDER
16	2	SIGHT GLASS	DANFOSS SGN 16S, 5/8" SOLDER
15	2	FILTER	DANFOSS DML 16S, 5/8" FLARE
14	2	CHARGING VALVE, REFRIG. FILL	DANFOSS BML 10, 3/8" FLARE
13	2	SAFETY RELIEF VALVE	AQ15504, 1/2" MPT x 5/8"FL, 15,5 BAR
12	2	CONDENSER	BITZER K373H, 2-PASS
11	2	CHECK VALVE	DANFOSS NRV 19S, 7/8" SOLDER
10	2	SERVICE VALVE, OIL FILL	MUELLER A 11030 3/8"FL x 1/4"MPT
9	2	SIGHT GLASS	DANFOSS SGN 10S, 3/8" SOLDER
8	2	STOP VALVE	DANFOSS GBC 10S, 3/8" SOLDER
7	2	OIL SEPARATOR	HENRY S-5187-CE, 7/8" ODS
6	2	LOW PRESSURE GAUGE	-1/+15 BAR, R-134a
5	2	HIGH PRESSURE GAUGE	-1/+40 BAR, R-134a
3	2	LOW PRESSURE TRANSMITTER	DANFOSS AKS33, -1/+12 BAR, 1/4" flare
2	2	HIGH PRESSURE SWITCH	DANFOSS KP5, 060-117366
1	2	COMPRESSOR, SEMIHERMETIC	BOCK HGX7/2110-4, 3x415V-50Hz
Item	Qty.	Name	Type
Rev. C		Revised. 18.09.2017/SIS	Rev.
Rev. B		Vibration dampers. 28.02.2014/SIS	Rev.
Rev. A		Subcooler deleted. 25.02.2014/SIS	Rev. D Item 78/79 added. 12.03.2019/SIS

**APPLICATION FOR EMPANELMENT**  
(On the letter head of the Firm)

General Manager  
Ship Repair  
Cochin Shipyard Limited

Dear Sir,

**Sub: Expression of Interest for “Empanelment for Undertaking Turnkey Subcontract Works at Cochin Shipyard Ltd”**

With reference to your request for EOI referred above, We, .....(name of the firm) having examined all relevant documents and understood their contents, hereby submit our Eoi for empanelment for undertaking turnkey subcontract works at CSL-AN Ship Repair Unit (CANSRU)". We further state that;

1. All information provided in the proposal and in the appendices is true and correct.
2. We shall make available to CSL any additional information necessary or required to supplement or authenticate the proposal
3. We are not under a declaration of ineligibility issued by Govt. of India I State govt./ Public Sector Undertakings.
4. We do not have any conflict of interest in accordance with the Request for EOI document.
5. We agree and undertake to abide by all the terms and conditions of the Request for EOI Document.

Thanking you.

Yours faithfully,

(Signature of the Authorised Representative)

(Name and designation of the Authorised Representative)

(Name of the Applicant)

Company seal:

Date:

**FORMAT FOR FINANCIAL CAPABILITY****FINANCIAL DETAILS OF ..... (APPLICANT)**

<b>SI No</b>	<b>Financial Year</b>	<b>Average Annual Turnover</b>	<b>Profit After Tax</b>	<b>Net worth as at the end of the financial year</b>
1	2021-22			
2	2020-21			
3	2019-20			

Signature of the authorized representative of Applicant

Company seal:

Date:

**Certificate from the Chartered Accountant:**

This is to certify that..... (Name of the Applicant) has received the payments shown above in the respective years and that the net worth is as computed.

Name of Chartered Accountant:

Designation:

Name of firm:

(Signature of the Authorized Signatory)

(Seal of Chartered Accountant)

**POWER OF ATTORNEY**  
(On the letter head of the Firm)

General Manager  
Ship Repair  
Cochin Shipyard Limited.

Dear Sir,

Mr ..... (name of the person(s)), domiciled at ..... (address),  
acting as ..... (designation and name of the company), and whose  
signature is attested below, is authorized on behalf of ..... (name of the  
firm/applicant) to provide information and respond to enquiries, etc. as may be required by the employer for  
EOI for "Empanelment for undertaking Turnkey Subcontract Works at CSL" and is hereby further authorized  
to sign and file relevant documents in respect of the above.

We confirm that we shall be bound by all and whatsoever our said agents shall commit

(Signature of Mr. .... ..)

Yours faithfully,

Signature:

Name & Designation:

Company seal:

Date:

**COMPANY PROFILE**  
(On the letter head of the Firm)

1. Name of Applicant :  
Address :  
Phone :  
Fax :  
Email :  
Contact details of designated representative:  
Registered office Address :
2. Description of company detailing various activities dealt by the firm:
3. Legal status : Company/ Partnership/ Proprietorship
4. Date of establishment :
5. Number of years' experience :
6. PAN :
7. GSTIN :
8. Please indicate here or attach an organization chart showing the company structure including the positions of directors and key personnel, if relevant

Yours faithfully,

(Signature of the Authorised Representative)

(Name and designation of the Authorised Representative)

(Name of the Applicant)

Company seal:

Date:

**SOLVENCY CERTIFICATE**

General Manager

Ship Repair

Cochin Shipyard Limited

Certified that to the best of our knowledge and information (Insert name of Applicant)....., a customer of our bank, is respectable and can be treated as capable for executing the work up to a limit of Rs.....(Rs.....).

It is clarified that this certificate is issued without any guarantee or responsibility on the bank or any of the officers.

Signature:

Name & Designation:

Name of the Bank

Bank seal:

Date:

Note: This certificate may be issued on the letter head of the bank and addressed to the General Manager (SR), Cochin Shipyard Ltd

## **PRE CONTRACT INTEGRITY PACT**

### **COCHIN SHIPYARD LIMITED**

#### **General**

This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on ..... day of the month of ....., between Cochin Shipyard Ltd (CSL), A Government of India Enterprise under the Ministry of Ports, Shipping & Water Ways having its registered office at Cochin, Kerala, India (hereinafter called the “PRINCIPAL”) of the First part and M/s..... (hereinafter called the “BIDDER/Seller”) of the second part.

WHEREAS the PRINCIPAL proposes to procure ..... and the BIDDER/Seller is willing to offer/has offered the stores and

WHEREAS the BIDDER is a private company / public company / Government undertaking / partnership/registered export agency, constituted in accordance with the relevant law in the matter and the PRINCIPAL is a Government of India Enterprise.

#### **NOW, THEREFORE,**

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

Enabling the PRINCIPAL to obtain the desired said stores/equipment/item at a competition price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the PRINCIPAL will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:-

#### **Commitments of the PRINCIPAL**

- 1.1 The PRINCIPAL undertakes that no official of the PRINCIPAL, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting on implementation process related to the contract.

- 1.2 The PRINCIPAL will, during the pre-contract stage, treat all BIDDERS alike and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.
- 1.3 The officials of the PRINCIPAL will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.
- 2 In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the PRINCIPAL with full and verifiable facts and the same is prima facie found to be correct by the PRINCIPAL, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the PRINCIPAL and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the PRINCIPAL the proceedings under the contract would not be stalled.

### **3. Commitments of BIDDERS**

The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract

or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-

- 3.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the PRINCIPAL, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
- 3.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the PRINCIPAL or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract of any other contract with the government for showing or forbearing to show favour or disfavor to any person in relation to the contract of any other contract with the Government.
- 3.3 BIDDERS of foreign origin shall disclose the name and address of their Indian agents and representatives, if any and Indian BIDDERS shall disclose their foreign principals or associates, if any, in the bid.
- 3.4 BIDDERS shall disclose the payments to be made by them to their Indian agents/brokers or any other intermediary, in connection with this bid/contract in the bid and the payments have to be in Indian Rupees only.

- 3.5** The BIDDER further confirms and declares to the PRINCIPAL that the BIDDER is the original manufacturer/ integrator/authorized agent of the stores/equipment/items and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the PRINCIPAL or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.
- 3.6** The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the PRINCIPAL or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
- 3.7** The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 3.8** The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 3.9** The BIDDER shall not use improperly, for purposes of competition or personal gain, pass on to others, any information provided by the PRINCIPAL as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- 3.10** The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 3.11** The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.
- 3.12** If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the PRINCIPAL, or alternatively, if any relative of an officer of the PRINCIPAL has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filing of tender.

The term 'relative' for this purpose would be as defined in section 6 of the Companies Act 1956.

- 3.13** The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee or the PRINCIPAL.

#### **4. Previous Transgression**

- 4.1** The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify; BIDDER's exclusion from the tender process.
- 4.2** The BIDDER agrees that if it makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

#### **5. Earnest Money (Security Deposit)**

- 5.1** While submitting commercial bid, the BIDDER shall deposit an amount **NIL** (to be specified in RFP) as Earnest Money as applicable/Security Deposit, with the PRINCIPAL through any of the following instruments:
- (i) Bank Draft of Pay Order in favor of CSL.
  - (ii) A confirmed guarantee by an Indian Nationalized Bank, promising payment of the guaranteed sum to the PRINCIPAL on demand within three working days without any demur whatsoever and without seeking any reasons whatsoever. The demand for payment by the PRINCIPAL shall be treated as conclusive proof of payment.
  - (iii) Any other mode or through any other instrument (to be specified in the RFP).
- 5.2** The Earnest Money if applicable/Security Deposit shall be valid upto the complete conclusion of the contractual obligations to the complete satisfaction of both the BIDDER and the PRINCIPAL, including warranty period.
- 5.3** In case of the successful BIDDER a clause would also be incorporated in the Article pertaining to Performance Bond in the Purchase Contract that the provisions of sanctions for Violation shall be applicable for forfeiture of Performance Bond in case of a decision by the PRINCIPAL to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.
- 5.4** No interest shall be payable by the PRINCIPAL to the BIDDER on Earnest Money/Security Deposit for the period of its currency.

#### **6 Sanctions for Violations**

- 6.1** Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the PRINCIPAL to take all or any one of the following actions, wherever required:-

- (i) To immediately call off the pre contract negotiations without assigning any reason or giving any; compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.
- (ii) The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/ Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the PRINCIPAL and the PRINCIPAL shall not be required to assign any reason therefore.
- (iii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.
- (iv) To recover all sums already paid by the PRINCIPAL, and in the case of an Indian BIDDER with interest thereon at 2% above the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% above the LIBOR (London Inter Bank Offer Rate). If any outstanding payment is due to the BIDDER from the PRINCIPAL in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.
- (v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the PRINCIPAL, along with interest.
- (vi) To cancel all or any other contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the PRINCIPAL resulting from such cancellation/recession and the PRINCIPAL shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.
- (vii) To debar the BIDDER from participating in the future bidding processes of CSL for a minimum period as deemed appropriate, which any be further extended at the discretion of the PRINCIPAL.
- (viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.
- (ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the PRINCIPAL with the BIDDER, the same shall not be opened.
- (x) Forfeiture of Performance Bond in case of a decision by the PRINCIPAL to forfeit the same without assigning any reason for imposing sanction for violation of this pact.

- 6.2** The PRINCIPAL will be entitled to take all or any of the actions mentioned at para 6.1(i) to (x) of this pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.
- 6.3** The decision of the PRINCIPAL to the effect that a breach of the provisions of this pact has been committed by the BIDDER shall be binding on the BIDDER. However, the BIDDER can approach the Independent Monitor(s) appointed for the purposes this Pact.

## **7 Fall Clause**

- 7.1** The BIDDER undertakes that it has not supplied/is not supplying similar product/systems/items or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/systems or sub systems/items was supplied by the BIDDER to any other Ministry/Department of the Government of India or PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the PRINCIPAL, if the contract has already been concluded.

## **8 Independent Monitor**

- 8.1** The PRINCIPAL has appointed Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission.

- (i) Shri. Jagadip Narayan Singh, IAS (Retd.),  
C-54, Bharatendu Harischandra Marg,  
Anand Vihar, Delhi – 110092.  
Mobile: 9978405930  
Email: jagadipsingh@yahoo.com
- (ii) Shri. Om Prakash Singh, IPS (Retd.),  
Flat No. D-801, Prateek Stylome,  
Sector-45, Noida,  
Uttar Pradesh – 201301  
Mob: 9818564455  
Email: Ops2020@rediffmail.com

- 8.2** The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.
- 8.3** The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

- 8.4** Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.
- 8.5** As soon as the Monitors notices, or has reason to believe, a violation of this pact, he will so inform the Authority designated by the PRINCIPAL.
- 8.6** The PRINCIPAL accepts that the Monitors have the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitors, upon his request and demonstration of a valid interest, unlimited access to his project documentation. The same is applicable to Subcontractors. The Monitors shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.
- 8.7** The PRINCIPAL will provide to the Monitors sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitors the option to participate in such meetings.
- 8.8** The Monitors will submit a written report to the designated Authority of PRINCIPAL /Secretary in the Department/ within 8 to 10 weeks from the date of reference or intimation to him by the PRINCIPAL /BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.

## **9 Facilitation of Investigation**

In case of any allegation of violation of any provisions of this pact or payment of commission, the PRINCIPAL or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER. The BIDDER shall provide necessary information and documents in English and shall extend all possible help of the purpose of such examination/inspection.

## **10 Law and Place of Jurisdiction**

- 10.1** This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the PRINCIPAL.
- 10.2** A person signing Integrity Pact shall not approach the Courts while representing the matters to Independent External Monitors and shall await their decision in the matter.

## **11 Other Legal Actions**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extent law in force relating to any civil or criminal proceedings.

## **12 Validity**

**12.1** The validity of this Integrity Pact shall be from date of its signing and extend upto 5 years or the complete execution of the contract to the satisfaction of both the PRINCIPAL and the BIDDER/Seller, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

**12.2** Should one or several provisions of this Pact turn out to be invalid; the remainder of this pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

**13** The parties hereby sign this Integrity Pact at .....on .....

For & on behalf of PRINCIPAL  
Cochin Shipyard Limited  
(Office Seal)

For & on behalf of BIDDER  
(Office Seal)

Witness

1.....

2.....

Witness

1.....

2.....

\* Provisions of these clauses would need to be amended/deleted in line with the policy of the BUYER in regard to involvement of Indian agents of foreign suppliers.

## PRE-BID QUESTIONNAIRE

Sl. No.	Reference Clause	Page No.	Description	Tender Suggestion / Query	CSL Reply
1					
2					
3					
4					
5					
6					
7					

Signature:

Name &amp; Designation:

Company seal:

Date:

**TENTATIVE SCHEDULE OF EVENTS FOR GENERAL INFORMATION**

<b>SL.NO</b>	<b>DESCRIPTION OF EVENTS</b>	<b>EVENTS</b>
1.	Date of Publishing	T0
2.	Submission of Pre-Bid Questionnaire	T0 + 15 days
3.	Pre-Bid Meeting	T0 + 18 days
4.	EOI Submission	T0 + 26 days
5.	EOI Opening	T0 + 27 days
6.	Finalization of Bidders	T0 + 40 days
7.	Limited Tender Enquiry to Selected Bidders	T0 + 60 days
8.	Technical Bid Opening	T0 + 75 days
9.	Technical bid Approval	T0 + 80 days
10.	Price-Bid Approval	T0 + 90 days
11.	Issuing Work Order to the Successful Bidder	T0 + 100 days