DITD(South)
Naval Research and Development
Institute, ITD Wing
at NSSD, West Wharf Road
KARACHI
Tele: 021-48508410
Email: ditd-s@paknavy.gov.pk

TD/2400/5/MSCWP/25/ 1012

ON PPRA

05 June 2025

INVITATION TO TENDER – INDIGENOUS DEVELOPMENT/ MANUFACTURING OF MOBILE SHORE CHILLED WATER PLANT

1. Pakistan Navy is interested in indigenous development of captioned item. You are being invited to quote for the manufacturing of the same. Your firm should have qualified manpower/ expertise and requisite machinery/ equipment to undertake the project, any third party involvement/ outsourcing must be highlighted with detailed scope of work to be undertaken from the third party. DITD (S) has the rights reserved to reject the proposal, if third party involvement is considered not in the favor of PN. Detail of item is as under:

Description	Qty	Specifications
Mobile Shore Chilled Water Plant (Trailer mounted)	04	Specifications are attached at Annex A, B & C.

2. You are requested to furnish the under mentioned mandatory information (as applicable) on your quotation. Otherwise, your quotation will not be entertained:

a. The firm's Sales Tax Registration Number.
b. National Tax Number.
c. Professional Tax Certificate (held/ not held)
d. Validity of quotation, which should not be less than six months.
e. Item price with 18% GST.
f. Terms & Conditions for payments (whether advance payment, required/ not required).
g. Warranty/ Guarantee of at least 12 months for product to be developed.
h. Previous experience of developing similar projects.

3. **Delivery of Tender**. The offer is to be submitted in duplicate as under:

a. Three "envelopes" of Commercial Offer, Technical Offer and Tender Fees should be enclosed in one cover, properly sealed, bearing the address of this office clearly marked "**Quotation for Indigenous Development of Mobile Shore Chilled Water Plant (Trailer mounted)**" Tender No and date of opening.

b. **Technical Offer**. The Technical Offer should contain all relevant specifications alongwith technical literature/ brochure in an envelope and clearly marked "**Technical Offer**" without price, tender number and date of opening. Technical offer may please be made as per the guide lines contained in Annex A to this letter, while including the following:

(1) Methodology of Development.
(2) Warranty period minimum for 12 months for hardware and 05 years for software.
(3) Availability/ supportability minimum for 10 years.
(4) Validity of quotation minimum for 06 months.

(5) Mutated copy of earnest money Pay Order/ Demand Draft.
Project plan is to be provided with time lines preferably in MS Project format. Same is to be submitted along with technical proposal.

c. **Feasibility Study**. A detailed feasibility study comprehensive report including but not limited to electrical/ electronic works and technical drawings is to be submitted alongwith the technical offer/ proposal submitted against IT.

d. **Commercial Offer**. The Commercial Offer should include price quoted in figures as well as in words. The contents **'Commercial Offer'** should be clearly marked on the envelope with tender number and the date of opening.

e. **Tender Fee**. Pay Order/ Bank Draft is to be enclosed in a separate envelope clearly marked "**Tender Fee of Indigenous Development of Mobile Shore Chilled Water Plant (Trailer mounted)**" in respect of "Directorate of Indigenous Technical Development Registration and Indexation Account (Account No. 4000039556 NBP, Avari Towers Branch, Karachi)" amounting on following rates:

S No	Project Cost	Tender Fees
(1)	For total estimated project cost under Rs 0.49 M	Rs. 2,500/-
(2)	For total estimated project cost from Rs 0.5 M upto 0.99 M	Rs. 4,500/-
(3)	For total estimated project cost from Rs 1 M upto 2.49 M	Rs. 7,500/-
(4)	For total estimated project cost from Rs 2.5 M upto 4.99 M	Rs. 15,000/-
(5)	For total estimated project cost Rs 5 M or more	Rs. 23,000/-

f. Cheques, Pay-in-Slip and Cash are not acceptable. Tender fee is non-refundable. Offers submitted without tender fee will not be considered in tendering process.

g. **Earnest Money (Refundable)**. Earnest money in shape of Pay Order/ Demand Draft in favour of 'The Controller of Naval Accounts, 14 Liaquat Barracks, Karachi' must be submitted along with the commercial offer without which no tender will be accepted. The amount of earnest money is given as under:

(1) The firms registered with DITD/ PN will submit 2% of the quoted value subject to maximum ceiling of Rs. 0.500 Million.
(2) The firms non-registered with DITD/ PN will submit 5% of the quoted value subject to maximum ceiling of Rs. 1.000 Million.

Note: Mutated copy of earnest money Pay Order/ Demand Draft is to be provided in technical offer envelope.

4. Offers are to be dropped in the **Tender Box** placed in DD (ME) office at DITD (S), not later than **1100** hours on **20 June 25**.

5. Technical offer i.e. without price will be opened on **20 June 25** at **1200** hours for technical scrutiny. Commercial offer will be opened upon acceptance of technical offer. If offer will not be accepted technically, the commercial offer will be retuned un-opened.

6. The commercial offer/ quotation will be opened in the presence of bidder if desired so.

7. Upon opening of commercial offer, it will be requested to justify the price quoted alongwith breakdown of cost quoted for each major activity of the development/ manufacturing process.

8. In case of the above, Development Contract for local development will be awarded upon successful development of prototype and after approval of the case by the Competent Financial Authority.

9. Relevant extract from technical manual and user requirements document about the system are enclosed. However, you are welcome to visit this office, for additional information (if required) on **weekdays** at **1000** hrs. In order to undertake site survey for feasibility study, you are requested to submit the under mentioned documents, in respect of visiting individuals, to this office for security clearance:

a. Personal data sheet (form may be obtained from this office).
b. Two latest passport size photographs of personnel required to visit.
c. Attested photocopy of CNIC of personnel required to visit.
d. An undertaking from the firm regarding safety of its men and material while deployed on duty/ work in Naval premises.

10. Project plan to be provided with time line preferably in MS Project format.

11. Point of contact for subject project in case of any query or further correspondence is **LT CDR RAHEEL AHMED PN (Tel No: 021-48508881/3)**.

12. **Special Instructions**. Special instructions are as under:

a. Supplier is to very clearly mention against each clause his reply regarding conformance or otherwise of that clause in "Supplier's Remarks" column. The general remarks that "all technical or contractual clauses are acceptable" will not be considered sufficient for technical scrutiny. The offers not confirming to the given format will be technically knocked out. The suppliers are to provide relevant brochure of quoted item clearly mentioning the origin of equipment and OEM address with the offer.

b. Tender document and its conditions may please be read point by point and understood properly before quoting. All tender conditions should be responded clearly. In case of any deviation due to non-acceptance of tender conditions, the same should be highlighted along with your changed offer/ conditions.

c. Tender may however, be liable to rejection due to non-acceptance of any one or more conditions outlined by Purchaser in this IT DITD (S) reserves the right to cancel quotation/ tender without assigning any reason.

Yours sincerely,

USMAN ZAFAR TI(M)
Captain Pakistan Navy
Director

Annexes:

A. Specifications and General Requirements of Mobile Shore Chilled Water Plant.
B. User Requirement Document (URD) of Mobile Shore Chilled Water Plant.
C. Drawings of Couplings.

ANNEX A TO DITD (S) LETTER
TD/2400/5/MSCWP/25/10 12
DATED 03 JUNE 2025

SPECIFICATIONS AND GENERAL REQUIREMENTS – MOBILE SHORE CHILLED WATER PLANT

Introduction. Mobile Shore Chilled Water Plant is required to meet air conditioning requirements onboard. The air conditioning onboard control environment to preserve and ensure optimum efficiency of electronics equipment through achieving required temperature and relative humidity.

S No	Specifications/Requirements	Manufacturer's Remarks (Complied/ Not Complied)
1.	**Technical Description** As per attached URD at Annex B.	
2.	**Maintainability Requirement** This system should contain the following: a. Accessories/ wiring/ components shall be made as needed by R & D team of the firm with mutual concurrence of end user.	
	b. Mobile Shore Chilled Water Plant should be easy to maintain (software/ hardware).	
	c. Maintenance support and up gradation should be assured for at least 10 years.	
	d. Training/ technical assistance in maintenance/ usage of Mobile Shore Chilled Water Plant is to be provided by the developer.	
	e. Continued spare supportability is to be ensured for sustained operational availability of the system. Moreover, complete documentation of the system including technical and operation manual is to be provided in sot copy/ CDs as well.	
	f. Fault diagnosis sheets and electrical drawing are also to be provided alongwith the system.	
	g. Through life supportability (maintenances/ spares support) for satisfactory operation of the system for at least 10 years is to be ensured by the firm.	
	h. Installed components should be easily accessible for removal/ installation for system maintenance.	
3.	**Operating Parameters**. a. 5.5°C-10.5 °C at @ 26 m^3/hr in a closed loop. b. To provide efficient services during summer season when peak ambient temperature is at 45°C or above and humidity 80-90%.	
4.	**Material Specification**.	
	a. All components used for the Chilled water plant must be of Marine Version standard. Certificate to this	

	affect is also to be provided. b. Latest hardware is to be used which should be supportable for next 10 years.	
5.	**Acceptance Criteria/ Test/ Trials Procedures.** The acceptance test procedures are to be agreed between the user and supplier so as to prove all the functionalities mentioned in the specifications. Draft procedures are to be formulated by the firm based on the requirements highlighted in URD in liaison with the PN Project Team during preparation of Project Definition Documents (PDD). The trials are to include but not limited to following: a. System accuracy checks. b. System performance checks. c. Test procedure to verify the Inputs/ Outputs.	
6.	**Documents/ Standards/ Drawings**: Following documentation is to be provided by the Firm: a. **Operator/ User Manual**. An Operator/ User Manual giving detailed operating procedures (02 Sets).	
	b. **Maintenance Manual**. The firm is to provide Technical manuals which should include complete maintenance schedule, procedures etc. (02 Sets).	
	c. **Drawings**. Complete system layout/ diagram along with illustrated part catalog.	
	d. **Software Documentation Support**. Complete source code of software (if applicable) which will be developed by firm for subject system to be provided on CD with the hard copy.	
	e. **Standards**. The developer is to provide the copies of all applicable standards/ specifications (in English language) referred to or used for the system. The same may be included in feasibility study.	
7.	**Critical Spares List** Firm will provide critical spares list at the time of product delivery (as applicable).	
8.	**Test/ Trials Duration**. 02 weeks acceptance trials including Factory Trials (FATs) and Site Acceptance Trials (SATs).	
9.	**Training Requirement for Operation and Maintenance**. 10 x working days operator and maintainer training (5 days at OEM premises and 5 days at end user premises). The training session may be increased if required.	
10.	**Feasibility Study**. Firm will be required to submit the feasibility report on the project alongwith its technical offer indicating details pertaining to the proposed solution (duly highlighting standards to be followed) in the light of user requirements	

	mentioned at Annex A, B & C of IT.	
11.	**Delivery Schedule**. Firm will deliver all stores/ equipment/ systems preferable within 06-08 months of Contract Effective Date (CED) or as mutually agreed i.a.w contractual specifications/ requirements. Extension of delivery schedule shall remain the exclusive discretion of DITD (S).	
12.	**Stage Inspections**. The firm will allow representatives of DITD (S)/ End user or nominated member by PN to carry out stage inspections to monitor the progress of the work, on 'As & When Required' basis, to verify materials and quality of components being used. Schedule for stage inspections will be formulated at later stages and will form part of the contract.	
13.	**Packing Standard**. a. The equipment shall be packed as per standard trade packing worthy for transportation by rail/ road or by air so as to ensure free from loss or damages on arrival at the ultimate destination. b. A packing note, showing the following details, should be placed on package: (1) Manufacturer Part No. (2) Serial Number of Transportation Container. (3) Full nomenclature/ description. (4) Contract number. (5) Date of packing. (6) Special storage environment/ conditions, if any. c. All stores should be marked with broad arrow pointing upwards, by stamping, painting or tallying. Each individual item of stores must bear the pattern number to facilitate identification.	
14.	**Terms & Conditions for Payments**. a. Standard payment terms; 90% payment will be made on successful completion of the project and 10% upon completion of warranty period. OR Payment terms may be mutually agreed. b. In case the developing firm desires to get advance payment against BG, payment terms will be as under: (1) 20% advance payment against BG for an equivalent amount valid up to completion of project. (2) 70% payment on delivery/ acceptance.	

	(3) 10% payment upon completion of warranty period. c. The supplier has the provision to receive 10% final payment on completion of the project against submission of BG for equivalent amount which will be released upon completion of warranty period.	
15.	**Warranty/ Guarantee**. Warranty/ Guaranty of 12 months for hardware and 05 years for Software after final acceptance of the equipment/ system.	
16.	**Validity of Quotation**. The validity of quotation should not be less than 06 months.	
17.	**Miscellaneous Requirements**. The firm will furnish the under mentioned information alongwith the offer: a. The firm's Sales Tax Registration Number. b. National Tax Number. c. Professional Tax Certificate (held/ not held).	

ANNEX B TO DITD (S) LETTER
TD/2400/5/MSCWP/25/ 1612
DATED 03 JUNE 2025

USER REQUIREMENT DOCUMENT – MOBILE SHORE CHILLED WATER PLANT

S No	User Requirements/ Specifications	Manufacturer's Remarks (Complied/ Not Complied)
1.	**Details of Requirement**: a. Provision installation and commissioning of Mobile CWP (Capacity 42 RT @ 26m^3/hs) with 380-440 V 50 Hz 3 Phase input power supply.	
	b. Mobile Chilled Water Plant shall be mounted on a suitable trolley supported by wheels and hook/ fulcrum arrangements.	
2.	**Technical Details**: a. **Chilled Water Plant Output**: (1) 5.5°C-10.5 °C at @ 26 m^3/hr in a closed loop. (2) To provide efficient services during summer season when peak ambient temperature is at 45°C or above and humidity 80-90%.	
	b. **Compressor**: CWP should comprise of 02 x semi hermetic compressors with provision of sump heaters and capacity control system. The compressor should also comply following. (1) Suitable to achieve all required parameters. (2) Compressor should be USA or western origin having local market spare supportability. (3) Input power supply AC 380-440 V-10% 50Hz, 3 Phase. (4) High and low pressure analogue/ digital gauge fitted one ach compressor/ circuit. (5) Compressor to be mounted on shock resilient mounts. (6) Oil pressure gauge to be fitted on each compressor. (7) Suitable rating circuit breaker to be fitted on each compressor for protection against voltage variation/ over current and surge.	
	c. **Condenser Fan Motors.** (1) Sufficient number of condenser fans to meet design requirements efficiently during peak summer season. (2) Fan cycle switches be provided to trigger 'ON' and 'OFF' of fans corresponding to increase and decrease in condenser load Motors should be waterproof as per IP 54 standard and should be able to	

	operate in all-weather Motor be mounted on shock resilient mounts. (3) The condenser fans should be direct drive sized to achieve maximum efficiency with minimum vibration. (4) Fan guards should be fabricated from heavy gauge steel and should be epoxy coated. (5) Provision to switch off fan/ fans after considerable time. After shut down of plant to facilitate heat extraction from condenser.	
	d. **Condenser Coil (Air Cooled).** Forced draft air cooled condenser coils should be seamless copper tube mechanically bonded to aluminum fins for maximum heat transfer weather protected (epoxy pained) with high sustainability against rusting and moisture/ suitable for marine environment.	
	e. **Refrigerant Control.** Thermostatic Expansion valve is recommended for refrigerant control device, which is to be adjustable.	
	f. **Chiller – Shell and Tube Type** Shell and tube type chiller having provision for following: (1) Independent circuits with inlet & outlet temperature analog stainless steel case gauges. (2) Water pressure manual analogue dial gauges at both inlet/ outlet sides. (3) Valves piping for chilled water should be of stainless steel and provision of union for connection/ removal of piping with cross connecting valves. (4) Chiller is to be properly insulated with insulation rubber material.	
	g. **Liquid Receiver**: Provision of liquid receiver at outlet of condenser for dumping refrigerant gas relief valve must be incorporated to prevent the condenser and liquid receiver from getting pressurized.	
	h. **Dryer**: Provision of shell type dryer with removable dryer cartridge.	
	j. **Refrigerant**: Non-CFC Gas R-407C	
	k. **Chilled Water Reservoir**. Suitable quantity (250-300 liters) of Chilled Water reservoir is required to be installed on van to make up for the losses (if any) when plant is connected to platform during operation. However, initial and day to day charge of chilled water circuit is to be undertaken by end user.	
	l. **Water circulating Pumps (for chiller) with 01 x standby pump for filling of reserve water**: Circulating water pumps capable to meet the requirement of water for CWP Motor should be 3 Phase 50 Hz & 380 – 440 volts fully compatible with the system directly coupled on the same bed with centrifugal pump of stainless-steel shaft, bronze/ steel impeller. With suction/ Discharge pressure gauges (dial type	

	stainless steel case).	
	m. **Inter Locking Wiring**: Control panel should be water resistant and connected in such a way to control capacity temperature followed by stopping of compressor in order to avoid chiller frost. In addition, compressor starting should be interlocked with water flow sensing of both chilled and condenser water Plants operation to be integrated for combined operation to meet cooling requirements.	
	n. **Test/ Trials**: Test/ trials as per given parameters above and on OEM recommendations.	
	p. **Unit Casing.** Unit casing should be manufactured by galvanized steel double sheets with 03 mm minimum thickness and epoxy painted against rusting and moisture suitable for marine environment. All doors/ ports/ windows should be hinged with frame for ease of opening along with lock. Width of the plant should be 8 feet.	
	q. **Power Supplies**. Following main and control supplies be provided with breakers: (1) Main voltage: 380- 440 VAC ± 10% (50 Hz, 3 phase) (2) Control Voltage: 110 VAC 50 Hz Single phase	
	r. **Operating Conditions**: As per weather condition defined by ASHRAE (American Society of Heating Refrigeration & AC Engineers). (1) Ambient Temp: 15-45°C (2) Humidity: 60-80%	
	s. **Protection**: The Unit controls shall provide following intended for each compressor. (1) Compressor staging circuit timer. (2) Compressor internal Protector. (3) Compressor shock resistance. (4) Inter locking of compressor with pumps and motors. (5) Thermostats switches. (6) Pressure relief valves on chilled water circuit. (7) Over current relay for compressor & condenser fan motor. (8) Safety switches for high and low refrigerant pressure. (9) LP/ HP Gauges. (10) Oil pressure gauge (if applicable). (11) Oil differential safety (if applicable). (12) Relief valve on liquid received (spring type). (13) Pressure regulating valves on chilled water circuit to maintain/ adjust pressure/ flow rate in chilled water circuit. (14) Inlet and outlet water flow meters. (15) HP/ LP trip/ cutout. (16) Anti-freeze/ low water temp safety at inlet of chiller. (17) Volt meter (with selector switch for each phase).	

(18) Amp meter (with selector switch for each phase).
(19) Voltage Sensor for 360-440V with electric cut off system with protection.
(20) High and low voltage safety.
(21) Phase sequence module.
(22) Module for winding protection.
(23) Ampere/ Volt meter.
(24) Input Supply monitor module.
(25) Electronic over loads of all motors.
(26) Main supply circuit breaker with adjustable rating for over load/short circuit protection.

t. **Monitoring/ control Panel**. Following is to be provided by the contracting firm with Shore CWP.

PLC based Controls (HMI) should consist of following:

(1) 03 Ph Voltage sensor/ phase monitor (range 380-440 volt).
(2) Analog temperature and pressure gauges/ meters.
(3) Ambient temperature in (OC and OF) and humidity.
(4) Chilled water inlet and outlet temperature and pressure.
(5) Suction/ discharge and oil pressure gauges for refrigeration system.
(6) Input supply voltage/ frequency meter (analog and digital) with selector switch.
(7) Ampere meter (analogue and digital) with selector switch.
(8) Ground fault indication meter, light and alarm.

u. **Auxiliaries.**

(1) **Electric Cable (4 core).** Flexible electric cable 50 meters in length 300 Amperes having capacity to take load of both compressors, 4 core of minimum thicknesses to be provided with unit (Pakistan cables or equivalent).

(2) **Flexible rubber hoses for circulation of chilled water,** 02 x flexible rubber hoses for intake and delivery of shore water having internal dia and flange as per enclosed drawing be provide. Moreover, 150 meter hose pipe is required to connect the CWP plant with S/M should also be provided. Details specification are as under:

Diameter	2.5" Inches
Length of hose	150 meter (till 3rd and 4th S/M)
Hose Material	Hose made of European standard Rubber is to be provided with CWP
Origin	Imported European
Spiral wire	Wire should be able to with stand pressure and for safety of flexible hose.(As per OEM standard)

Degree of flexible	Spiral wire should be retractable so that if pressed. Comes back to original orientation
Color	Black
Weight	Suitable for Ease to handing
Stowage spece	Stowage space for hose is to be provided inside weather shield canopy for securing purpose

(3) **Coupling**. Coupling as per drawing at Annex C.

v. **Carrying Vehicle.**

(1) **Canopy**

(a) CWP should be enclosed in an industrial grade acoustic and weather proof canopy mounted on a towable trolley.

(b) Acoustic canopy to be designed to limit noise breakout not greater than 85dbA at 1 meter. Canopy is to be lined with acoustic lining.

(c) Tail reflectors should be incorporated for night transportation.

(d) Double coat of navy grey final paint should be used.

(e) Canopy must contain double opening side doors centrally positioned lifting bale and integral ladder with suitable frame mountings. Enclosure is to be Epoxy coated for durable/ weather protection.

(f) Canopy should be designed for industrial type noise level. Canopy should be water resistant/ ran protected specially designed for use in tropical environment.

(2) **Trailer**.

(a) The CWP should be mounted on towable trailer with front wheels having 90° turning capability on each side.

(b) Trailer should have 04 x Inflatable heavy duty rubber tyres of commercial size of 14 ply tube type, which can be easily available in local market. Preferable (USA/JAPAN made is required whereas local or china made tyres not acceptable).

(c) Tyre Load bearing capacity should be enough to sustain gross vehicle weight (GVW).

(d) Trailer should gave two axles (rear and

front) of sufficient load capacity for mobility and road worthiness of the CWP. Front axle should gave turning arc of 180° (90° each side).

(e) Trailer must be comprises of following features:

i. Auto reverse braking system
ii. Hand Brake system should be incorporated for safe parking of the machine.
iii. Lighting.
iv. Galvanized steel construction.
v. Dual Axel
vi. Pneumatic tyres.
vii. Revolving assembly with towing bar, which facilitate in moving towing bar through ad angel 180°
viii. 04 x alloy/steel tyre rims of 16 inch size should have corrosion resistant properties.
ix. Axle clearance from ground/ road should be minimum of 12 inches.
x. Appropriate Shock absorbing arrangement should be incorporated for safety of the machine in case of collision.
xi. Wheel mud guard with reflector should be incorporated.
xii. All around steel fenders should be incorporated for safety of the machine in case of collision.
xiv. Generating set mounting rails should be incorporated according to weight and dimensions of generating
xv. Mounting pads should be incorporated as per CWP specifications for vibration dampening
xvi. Adjustable hook should be provided for towing
xvii. Trailer must be capable of bearing GVW in stationary as well as in moving states.

f. 02 x spare wheel (Tyre) to be provided with Chilled water Plant (properly fitted/ secured on trailer).

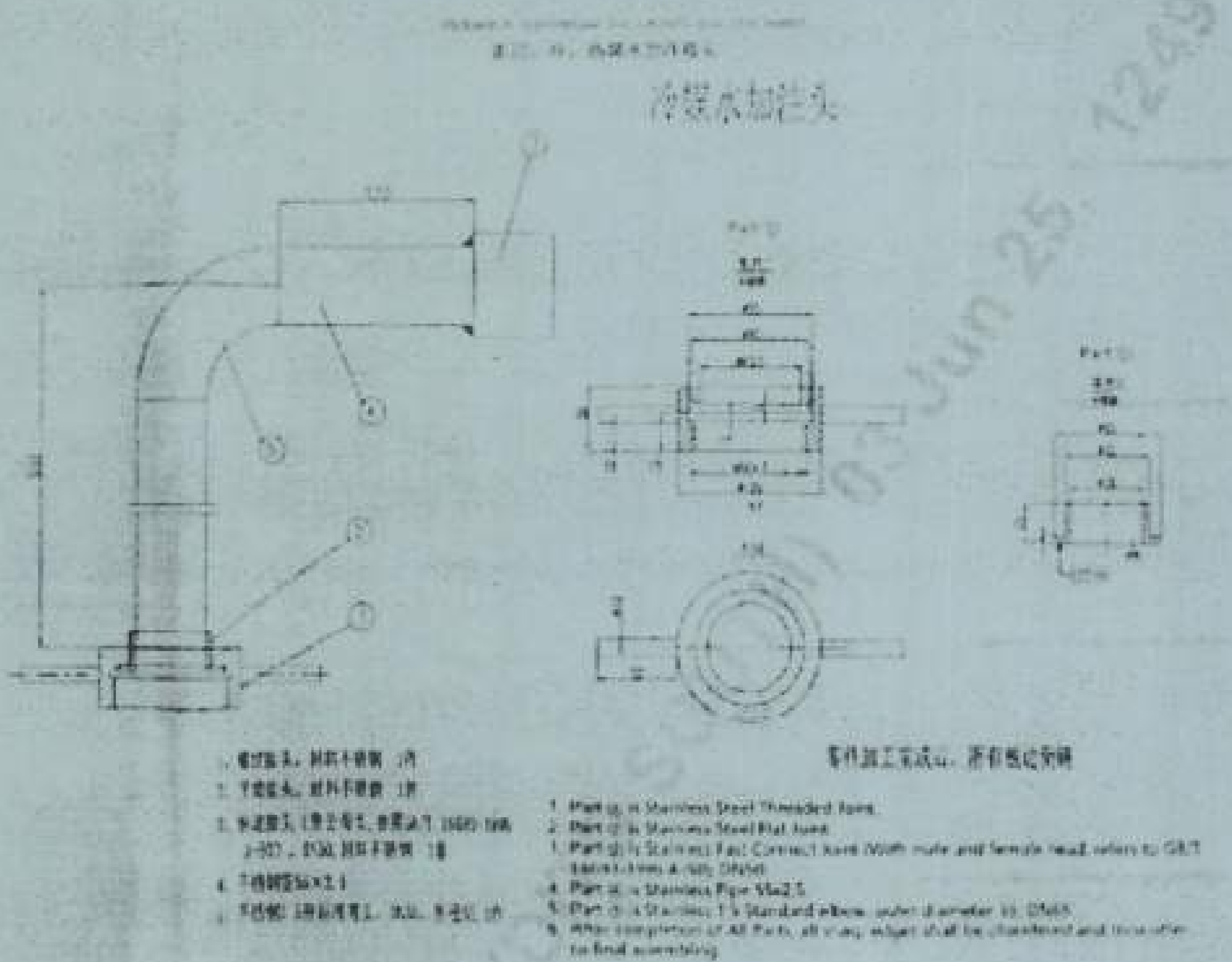
c. **Lifting Eyes.** Lifting eyes/ shackles to be provided on top to facilitate lifting of plant by passing wire slings through eyes. Lifting eyes should be given on trailers body columns. So that they can take weight of whole plant when lifted. Eyes/ Shackles once fitted be load tested along with te unit prior shipment of the final product to customer.

3.	**Parking Jacks.** 04 x Hydraulic jacks are to be installed to ensure plant lifting on jacks curing plant operation and while provisioning of services to end user/ ships.	
4.	**Painting.** The trailer and unit be painted in glass Naval Grey color epoxy powder coating of Oxyplast/ Jotun/ Berger of marine grad. Paint should be used with ability to withstand and to protect the trailer and unit from marine/ humid environment	
5.	**System Software**. The software (if any) of the system should include but not limited to the following: a. Should be user friendly and customizable as per PN requirement. b. Software modules should be fully documented. c. Should be fully supportable in case of an upgrade in hardware, if required. d. A certificate should be obtained from the manufacture/ OEM that software supplied is of latest version. Any up-gradation in the software should be provided free of charge during the warranty period. e. Backups of all software to be provided in CD including embedded software and application software. f. System software programs specific setting, perpetual license keys (including any hardware dongles) for all programmable components, modules, sub-systems and system, data loading/ reading tools or special equipment, interface and requisite procedure(s) are to be provided. g. Necessary software for running the diagnostic test up to component level should also be provided.	
6.	**Training Requirement**. 10 x working days operator and maintainer training (5 days at OEM premises and 5 days at end user premises).	
7.	**Required Standard.** Marine Standards.	
8.	**System Software (where applicable)**. As per S.No 5	
9.	**Technical Assistance**. Technical Assistance/ Spare Supportability for 10 years after final acceptance.	
10.	**Acceptance Trials Criteria/ Procedures**. a. OEM is to arrange FATs at company/ firm premises. PN may send up to 04 x personnel to witness FATs at OEM premise on company expenses including boarding/ lodging. b. FATs schedule and FATs acceptance criteria schedule is to be provided to PN 03 x months in advance. c. Firm is to simulate ambient conditions including w.e.f	

	weather conditions (rain simulation). d. Supplier is to provide OEMs certified factory acceptance criteria and details available facilities for testing of the equipment within 01 months after signing of the contract. e. PN will evaluate the supplied acceptance criteria and amend it as per its experiences as regards to operation and maintenance of FATs and approval Final Design Report (FDR) by PN. f. Shipment would be allowed only after acceptance of FATs and approval Final Design Report (FDR) by PN g. Supplier will arrange 05 days operator maintainer training at manufacturer/ premises for 05 personnel.	
11.	**ILS Requirement (Where applicable).** Yes	
12.	**Warranty.** 12 x months warranty after successful completion of test/ trials of chilled water plant at end user premises.	
13.	**Technical Documentation/ Integrated Parts Catalogue (IPC).** Two sets of following original documents are required to be provided by the firm for each system: a. Operator manuals. b. Maintenance manual with mechanical and electrical/ control circuit diagram mentioning each valve/ relay/switch followed by all maintenance routines of the equipment. c. Provision of integrated part catalogue (IPC) along with Part Numbers and price of each item to be provided. d. PMS Routine wise list of all items with their part No/NSN No. quantities, denomination and process are to be provided which will be mandatory used in the routines. Any item that is to change on "condition base" or uncertain requirement may be separately indicated. e. Photocopies of documentation will not be accepted.	

ANNEX C TO DITD (S) LETTER
TD/2400/5/MSCWP/25/1012
DATED 03 JUNE 2025

DRAWING OF COUPLINGS



HBL HABIB BANK حبیب بینک

Deposit Slip
Customer Copy

Branch:

Date: D D M M Y Y Y Y 30 05 2025

Account Title: PPRA

IBAN: P K H A B B 0 0 045 400 13 007 01

Currency: ☐ PKR ☐ USD ☐ EURO ☐ GBP ☐ JPY ☐ Others ☐ Intercity ☐ Within city ☐ Same Branch

Credit Card No.

☑ CASH

BANK / BRANCH	CHEQUE/INSTRUMENT NO.	AMOUNT
		15000/-
	TOTAL AMOUNT	15000/-

Total Amount in Words: Fifteen thousand only

Commission (if any):

Depositor's Name: Usman

Contact No. 0336-0304911

Depositor's CNIC No. 42101-1679632-9 (For non HBL/Walk-in Customers. Also attach CNIC Copy)

Depositor's Account No. (For HBL Customers / Account Holders)

Online Cash Deposit
Branch: CDNO-WEST WHARF KARACHI
Account: PUBLIC PROCURSM Date: 2025-05-30
IBAN: PK17HABB0004540013100701
Amount: ***********15,000.00 PKR
Charges: *************19.00
Teller: 3147 71 Time 11.30.38.164000

Received By:

Depositor's Signature

(As per Terms & Conditions on reverse) (Not official unless validated)

30169318