TECHNICAL SPECIFICATION OF AIR CONDITIONING PLANT FOR BNT HALDA AND PASSURE

1. **Name of the Equipment**. Air Conditioning Plant (20 Ton).

2. **Purpose**. The central air conditioning plants of BNT HALDA and BNT PASSURE are presently equipped with 03 x 6 Ton air conditioning units with sealed (hermetic) compressors and concentric tube (tube-in-tube) type condensers. The present units are to be replaced with new marine type AC plants having 2 x semi-hermetic compressors, 2 x shell and tube condensers and 1 x shell and tube evaporator. In the proposed offer compressor and condenser will be operated alternatively. The new plants shall supply chilled water to the existing 15 (fifteen) nos Air Handling Units (AHU) onboard each Tug and shall be capable of cooling air at office, accommodation, equipment rooms and other working spaces through the existing ship's air ducting system with automatic control of temperature within the specified limits.

3. **Quantity**. 02 (Two) in number Air Conditioning Plants (01 AC plant for each vessel). Each plant shall consist of 02 (two) sets of compressor and condenser (one working and one standby) connected to 01 (one) common evaporator. The quantity of each component is mentioned at paragraphs 18 to 26.

4. **Manufacturer, Principal Supplier & Local Agent**. Names and full addresses are to be mentioned in the following table.

Ser	Description	Remarks
a.	Brand/Manufacturer	To be mentioned
b.	Principal Supplier	To be mentioned
c.	Local Agent	To be mentioned

5. **Year of Manufacture**. 2026 or later. The items should be brand new and original.

6. **Country of Origin (Including all components)**. USA, UK, EU Countries, Japan, Turkey, Canada and Australia.

7. **Country of Manufacture (Including all components)**. Same as the Country of Origin.

8. **Certificate/Document of Authentication**. The supplier shall submit the following certificate(s)/ document(s) along with the offer/ quotation to establish the authenticity and source of the Plant:

   a. One certificate/document by the manufacturer in favour of the Local agent (in case of manufacturer is the principal Supplier).

   b. Two certificates/documents, one by the manufacturer to authorized distributor/dealer and other by the authorized dealer/ distributor to supplier (in case of authorized distributor/ dealer as immediate source). If dealership is found available in the manufacturer's website, separate certificate will not be required manufacture; only the dealer's authorized agent will submit one certificate.

9. **Environmental Conditions**. The plants shall be designed and selected for the following conditions:

   a. **Typical Outside Air**.

Ser	Description	Remarks
(1)	Dry Bulb Temperature	35°C - 45°C
(2)	Relative Humidity (RH)	Up to 95%

   b. **Requirement of Conditioned Space (Running One Compressor-Condenser Set)**.

Ser	Description	Remarks
(1)	Dry Bulb Temperature	23°C or less
(2)	Relative Humidity (RH)	50% (approximately)

c. **Sea Water Temperature**. 5°C - 35°C.

d. **Quality of Sea Water**. Salty, sandy and muddy; salinity up to 35,000 ppm (35 gram per litre).

e. **Maximum Allowable Inclinations**. The plant shall operate satisfactorily at maximum rolling of ± 30° and maximum pitching of ± 10°.

10. **Maximum Dimension (LxBxH)**. The whole plant of each Tug (compressors, condensers, evaporator, pumps and motors with accessories and piping) shall be suited to fit within L-2250 x B-1650 x H-1950 mm space of the existing AC plant compartment.

11. **Duty Cycle/ Nature of Duty**. 24-hour operation per day.

12. **Standard**. The Air Conditioning Plants shall be designed, constructed and tested in accordance with applicable international marine standards, i.e. ISO 4678:2024, ISO 8861:1998 and IMO SOLAS, IMO Resolution A468 (xii) or equivalent. The compressors shall be marine type, type approved by an IACS member classification society (or individual component certification is to be provided). The specific standards with which the quoted Air Conditioning Plant complies shall be stated in detail.

13. **Construction and Supply**. Each compressor and its associated equipment is to be constructed/ installed on a base frame (skid mount) suitable for easy installation/ removal. The sea water pumps and chilled water pumps are to be on separate frames. Each plant must be supplied completely ready in all aspects with all necessary equipment, items, material and fittings (including appropriate grades of refrigerant and compressor oil), so that it can be put into immediate operation after installation onboard without requiring any additional fittings, equipment, items etc. The AC plants and their accessories shall be compatible with the existing set-up, chilled water circulation system and the 15 (fifteen) Nos AHU fitted onboard each Tug (as per paragraphs 17d and 27).

14. **Available Power Supply Onboard**.

a. **Shore Power Input**. 380V, 50 Hz, 3 Phase.

b. **Nominal Power at Sea**. 415V, 60 Hz, 3 Phase.

c. All machinery/ equipment of the AC plant (compressors, sea water pumps, chilled water pumps, associated motors, starters, contactors and control system) shall be able to run smoothly at both the above conditions, without any modification or changeover of equipment. Motors shall not be overloaded when running at 60 Hz.

d. The input power supply tolerance of compressors, pumps and associated motors of the plants should be ± 10% of the rated electric supply.

e. The OEM rated voltage/ frequency of each motor and the cooling capacity of the compressor at both power supply conditions are to be mentioned with the offer.

15. **Scope of Supply**. The scope of supply is to include the followings:

a. 02 x Air Conditioning Plants (01 for each Tug), with all items necessary for immediate operation without the requirement of any other items (attachments, accessories, consumables, etc) (as per paragraphs 17 to 26).

b. The AC plants and their accessories should be sufficient to replace the existing AC units and should be compatible with the existing set-up, chilled water system and AHUs installed onboard (as per paragraph 17d).

c. Electrical and Control System of AC Plant (as per paragraph 24).

d. Compatibility, repair and renewal of components of existing AHUs (as per paragraph 27).

e. Spare parts (as per paragraph 30).

f. Standard Tools and Special Tools (as per paragraphs 31 and 32).

g. Optional items (as per paragraph 33).

h. Documents and certificates (as per paragraphs 34 to 36).

j. Installation, Test, Trial, Commissioning, Acceptance and Training (as per paragraphs 37 and 38).

k. Factory Acceptance Test (FAT) and Pre-Shipment Inspection (PSI) (as per paragraph 39).

l. Warranty and Guarantee (as per paragraphs 40 and 41).

m. Any other issue relevant (if any).

16. **Spaces Available for Installation and Site Survey**. The new plants are to be installed in the existing AC unit compartments in place of the old units. The site survey shall be carried out as follows:

a. **Site Survey**. Bidders shall carry out a site survey onboard both BNT HALDA and BNT PASSURE before submitting the offer, in coordination with DNE Directorate and the respective ship. The survey shall cover the available space and access route for equipment, foundations, existing chilled water and sea water piping, the 15 (fifteen) Nos AHU, air ducting, and the electrical supply and control arrangement.

b. **System Design and Drawings**. Based on the site survey, the bidder shall submit with the offer the full system design and drawings of the offered plant, including heat load and capacity calculation, schematic diagrams of refrigerant, sea water and chilled water circuits and general arrangement/ layout of equipment in the AC plant compartment.

17. **General Particulars of Proposed AC Plants**. The supplier shall propose AC plants as follows:

a. **Type**. Marine type, chilled water (indirect) type AC plant with semi-hermetic compressors, sea water cooled shell and tube condensers and common shell and tube Evaporator (direct expansion of refrigerant inside the Evaporator).

b. **Cooling Capacity of the Plants**. Each compressor-condenser set must have a cooling capacity of not less than 20 TR (approximately 70.3 kW or 60,480 kcal/h) at the design conditions of paragraph 9, so that one set alone can maintain the conditions of paragraph 9b. If higher capacity is required (as per OEM calculation) to meet the requirement of paragraph 9b, the bidder may offer higher capacity components. The OEM calculation is to be submitted with the offer.

c. **Refrigerant**. The plants must run with a refrigerant that is in compliance with the requirements of the international regulations regarding ozone friendliness and is readily available in local (Bangladesh) market. (To be mentioned).

d. **Compatibility with Existing Set-up**. The AC plants shall be fully compatible with the existing set-up onboard, including the existing chilled water piping and circulation system, the 15 (fifteen) Nos AHU, air ducting, diffusers and louvers, the onboard power supply (paragraph 14) and the available space/ foundation. Any adaptation, modification or additional fittings required to make the new plants compatible with the existing set-up and AHUs are to be included in the scope of supply at no extra cost.

e. **Compressor Oil.** Grade and name of the compressor oil and its commercial equivalent are to be mentioned. The oil must be available in the local (Bangladesh) market.

f. **Mode of Running and Capacity Control.** Each AC plant shall run continuously with one compressor-condenser set in operation and the other set will be kept standby for alternative use. Both sets will not be operated simultaneously. Cooling capacity of the running compressor shall be controlled automatically on chilled water temperature by cylinder unloading mechanism (0-50-100% or finer steps as per OEM design). Details of the capacity control and duty/ standby changeover system are to be mentioned.

18. **Compressors with Drive Motor.** There will be 02 (two) compressors for each plant (04 in total), each capable of handling the total cooling load of the ship independently (one working and one standby). Specifications of each compressor are as follows:

a. **Maker.** To be mentioned.

b. **Model.** To be mentioned.

c. **Country of Origin and Manufacture.** As per paragraph 6.

d. **Drive.** Electric motor driven.

e. **Type.** Semi-hermetic reciprocating, marine type, type approved.

f. **No of Cylinders.** To be mentioned.

g. **Bore x Stroke.** To be mentioned.

h. **Capacity.** As per paragraph 17b.

j. **Method of Capacity Control.** By cylinder unloading of the running compressor as per paragraph 17f (to be mentioned).

k. **Safety Devices.** Compressor motor should have at least thermal and overload trip mechanism with provision for manual reset.

l. **Motor Type.** To be mentioned.

m. **Motor Power.** To be mentioned.

n. **Power Supply.** Motor should be able to run with the power supply mentioned at paragraph 14.

p. **Motor RPM.** To be mentioned.

q. **Protection.** IP 54 or better.

r. **Insulation Class.** F or better.

s. **Lubrication System.** To be mentioned.

t. **Features.** Each compressor shall be fitted with:

(1) Gauge panel with HP, LP and oil pressure gauges.
(2) HP pressure cut-out switch (manual/ electrical reset).

(3) LP pressure cut-out switch.
(4) Oil pressure cut-out switch (manual/ electrical reset).
(5) Suction and discharge (delivery) service valves (01 set per compressor).
(6) Oil separator with oil return line.
(7) Oil filter and oil level sight glass.
(8) Crankcase heater.

u. The compressors are to be supplied complete with motors, starters (star-delta/ part winding as per OEM), safety devices and control panels.

v. **Overall Dimension**. To be mentioned.

w. **Overall Weight (with Motor and Starter)**. To be mentioned.

19. **Condenser (Sea Water Cooled)**. Each AC plant shall have 02 (two) condensers (04 in total), one for each compressor, matching the compressor capacity. Specifications of the condenser are as follows:

a. **Maker**. As per paragraph 4.

b. **Model**. To be mentioned.

c. **Type**. Horizontal shell and tube type, sea water cooled, with removable end covers for tube cleaning.

d. **Tube Material**. To be mentioned (must be refrigerant grade Cu-Ni or equivalent/better, compatible with the refrigerant and compressor oil). Higher tube thickness is preferable considering highly suspended mud, sand and dirt in sea water.

e. **Capacity**. To match the capacity of the compressor (to be mentioned).

f. **Country of Origin and Manufacture**. (As per paragraph 6) To be mentioned.

g. **Pressure Relief Valve**. To be fitted, type to be mentioned.

h. **Corrosion Protection**. Sacrificial zinc anode plugs to be fitted (to be mentioned).

j. **Liquid Level Gauge**. To be fitted (01 per condenser, 02 per plant and 04 in total).

k. **Required Water Flow Rate (m^3/hr)**. To be mentioned.

l. **Water Inlet/ Outlet Temperature**. To be mentioned (design inlet temperature as per paragraph 9c).

m. **Dimension**. As per technical drawing to be submitted with the offer.

n. **Weight**. To be mentioned.

20. **Evaporator**. Each AC plant shall have 01 (one) common evaporator (02 in total for 02 AC plants). Specifications of the evaporator are as follows:

a. **Maker**. As per paragraph 4.

b. **Model**. To be mentioned.

c. **Type**. Shell and tube type common Evaporator with 02 (two) independent refrigerant circuits, one for each compressor-condenser set. Each circuit shall be able to carry the full capacity of one compressor.

d. **Tube Material**. Copper/ Copper-Nickel 90/10 or equivalent/ better (to be mentioned).

e. **Capacity**. Matching the capacity of one compressor-condenser set as per paragraph 17b (to be mentioned in kW).

f. **Country of Origin and Manufacture**. As per paragraph 6.

g. **Pressure Relief Valve**. To be fitted as per design.

h. **Chilled Water Inlet/ Outlet Temperature**. To be mentioned.

j. **Nominal Chilled Water Flow Rate (m^3/hr)**. To be mentioned.

k. **Insulation**. Closed cell insulation of adequate thickness to prevent sweating.

l. **Protection**. Low chilled water temperature (anti-freeze) cut-out and chilled water flow switch to be provided.

m. **Dimension**. As per technical drawing to be submitted with the offer.

n. **Weight**. To be mentioned.

21. **Piping for Refrigerant**.

a. The complete gas circuit of both compressor-condenser sets shall be connected to the common Evaporator with copper piping as required, along with bends, elbows and other valves as required (01 set per plant, 02 sets in total). Piping for refrigerant liquid lines, suction lines, hot gas lines and all fittings should be of international standard refrigeration (ACR) grade copper for robust use at naval ships and must be easily replaceable/ removable for repair/ servicing. Piping material to be mentioned.

b. **Piping Design**. The piping design should fulfil the followings:

(1) Ensure proper fit to condenser and evaporator.
(2) Provide practical line size without excessive pressure drop.
(3) Protect the compressor by preventing excessive lubricating oil from being trapped in the system.
(4) Protect the compressor by preventing liquid refrigerant from entering the compressor during operation and shutdown.
(5) The piping should be able to withstand vibration during operation of the ship at rough sea condition up to Sea State 7.
(6) Appropriate insulation must be supplied for the refrigerant suction line.

c. **Charging Connection/ Adaptor**. Each plant must be provided with facility for charging refrigerant into the system as per OEM design (To be mentioned).

22. **Sea Water Cooling Pump**. 02 (two) sea water pumps for each plant (04 in total), one for each condenser, one working and one standby, are to be supplied and installed with necessary modification of the pipelines. Specifications are as follows:

a. **Type**. Marine type, self-priming, centrifugal, electric motor driven, suitable for the sea water conditions of paragraphs 9c and 9d.

b. **Model and Maker**. To be mentioned (maker as per paragraph 4).

c. **Motor Capacity**. Sufficient to meet the cooling water flow requirement of the condenser (to be mentioned).

d. **Capacity (m^3/hr) and Head**. To be mentioned (shall be compatible to cool one condenser during operation).

e. **Suction/ Discharge Pressure**. To be mentioned.

f. **Suction/ Discharge Pipe Diameter**.

(1) Suction O/D- 49mm
(2) Discharge O/D- 49 mm

g. **Power Supply**. As per paragraph 14.

h. **Insulation Class/ Protection**. F or better/ IP 55 or better.

j. **Sea Water Strainer**. Duplex/ easily cleanable strainer to be provided at pump suction.

k. **Country of Origin**. As per paragraph 6.

l. **Casing and Impeller**. To be made of bronze/ Ni-Al bronze or equivalent/ better.

23. **Chilled Water Pump**. 02 (two) fresh water (chilled water) pumps for each plant (04 in total), one working and one standby, are to be supplied and installed with necessary modification of the pipelines. Specifications are as follows:

a. **Type**. Marine type, centrifugal, electric motor driven.

b. **Model and Maker**. To be mentioned (maker as per paragraph 4).

c. **Pump Capacity (m^3/hr), Discharge Head and Motor Power (kW)**. To be mentioned (shall be compatible to circulate chilled water from the Evaporator to all 15 (fifteen) Nos AHU to maintain the conditions of paragraph 9b).

d. **Suction/ Discharge Pressure**. To be mentioned.

e. **Suction/ Discharge Pipe Diameter**. To be mentioned.

f. **Power Supply**. As per paragraph 14.

g. **Insulation Class/ Protection**. F or better/ IP 55 or better.

h. **Country of Origin**. As per paragraph 6.

24. **Electrical and Control System**. 01 (one) set of electrical and control system for each plant (02 sets in total) is to be supplied and installed. The system shall consist of the following:

a. Basic on/off and control system for duty/ standby operation of the two compressor-condenser sets and pumps, with auto/ manual mode and duty selector switch. An interlock shall prevent simultaneous running of both compressors. In auto mode, the running compressor shall start/ stop and load/ unload on chilled water temperature.

b. Panel board with circuit breaker, magnetic contactor, relay, timer and control circuit. All control components and terminals shall be factory wired and tested.

c. Starter panel for each compressor and pump motor with circuit breaker, magnetic contactor and overload protection.

d. Basic safety system for high pressure cut-out, low pressure cut-out and low lube oil pressure cut-out integrated in the control system. Compressor start shall be interlocked with the running of sea water pump and chilled water pump (flow switch).

e. Indication lamps (run/ trip), ammeter, voltmeter and running hour meter for each compressor.

f. Power cable and control cable of marine grade shall come with the system (35 RM and 16 RM or as per load calculation, to be mentioned).

g. The supplier will carry out all electrical work related to the replacement of the AC plant onboard and its connection with the existing ship supply and AHU circuits, including main electrical wiring, control wiring, main and local isolations in accordance with BN standard.

h. Any other components necessary for controlling and monitoring the AC plant.

25. **Other Components/ Accessories**. Necessary thermostatic valves, solenoid valves, shut off and bypass valves, liquid and moisture indicator, dehydrator filter, safety valves and other required components are to be supplied for immediate operation of the AC plants. Details of above components types, brand, technical specification are to be mentioned with the offer.

26. **Refrigerant and Oil**.

a. Refrigerant gas as per paragraph 17c shall be supplied for initial charging of the system (exact quantity to be mentioned).

b. Flushing oil is to be used for flushing the system at initial start-up. After settlement, the flushing oil is to be drained and OEM recommended compressor oil is to be charged into the compressor. Both flushing oil and compressor oil are to be supplied by the supplier (01 lot per plant, 02 lots in total).

27. **Existing Air Handling Units (AHU)**. Each Tug is fitted with 15 (fifteen) Nos AHU. The offered AC plants shall be compatible with all AHUs and shall be able to maintain the conditions of paragraph 9b. Servicing, repair and renewal of components of the AHUs (fan/ blower, motor, coil, valves, filters, insulation etc.) as required to make them compatible with the offered AC plants and to achieve the required performance as per paragraph 9b shall be carried out by the supplier. Bidders are to survey the AHUs during site survey (paragraph 16a) and include the same in the offer.

28. **AC Plant Design**. OEM or OEM authorised designer shall approve the selection of compressor, condenser, evaporator and the overall design.

29. **Standard Accessories**. Standard accessories must include all items and accessories essential to operating each Air Conditioning Plant, whether mentioned in the specification or not. The price of standard accessories is to be included in the FOB value. However, an itemised price list of standard accessories is to be provided with the offer for reference value only.

30. **Spare Parts**. A recommended list of spare parts required for the Air Conditioning Plant for 05 years running is to be provided with the quotation indicating itemised price. BN shall have option to choose from the list of spares partially or completely. However, these prices will not be included for financial evaluation of offer.

31. **Standard Tools**. 02 (two) sets of standard tools and necessary test equipment (refrigerant manifold gauge set, thermometer etc.) for maintenance and trouble-free operation of each Air Conditioning Plant are to be provided. The list of tools and test equipment is to be submitted with the offer. The price of standard tools is to be included in the FOB value. However, an itemised price list of standard tools is to be provided with the offer for reference value only.

32. **Special Tools**. A recommended list of special tools required for carrying out maintenance of each Air Conditioning Plant is to be submitted with the quotation indicating itemised price. That price will be added to the total price while evaluating the comparative price of the suppliers.

33. **Optional Items**. The quotation should include a list of optional items (if any) required to operate the Air Conditioning Plants. When evaluating the comparative prices of the suppliers, only the prices of items selected by BN will be added to the total price.

34. **Documents**. 03 (three) copies of the following documents in English are to be provided for each plant (free of cost):

a. Operation manual.

b. Technical manual.

c. Maintenance instruction/ manual.

d. Parts catalogue (for all supplied equipment/ items).

e. Complete system drawings/ diagrams.

f. Installation instructions and layout drawings/ diagrams.

g. As-fitted drawings of refrigerant, sea water, chilled water piping and electrical system after installation.

h. Guarantee certificate (by the principal).

j. Electrical cable and control circuit diagrams.

k. Certificate of manufacturing standards (by the manufacturer).

l. PSI certificates.

m. Final system design and drawings as approved by BN (as per paragraphs 16b and 37a(2)).

n. Other documents/ drawings, if deemed necessary.

35. **Certificates**. The manufacturer must give a certificate, which will form a part of the contract, stating that all the mechanical, electrical and electronic components of the Air Conditioning Plant and its control system are currently in production. The following certificates should be provided with the Air Conditioning Plant as per international standards:

a. Type approval/ certification from internationally recognised standards/ classification society.

b. Certificates of compliance (in English) with the standards mentioned at paragraph 12, at the time of delivery.

36. **Quality Assurance Certificate**. Quality Assurance Certificate in respect of the associated equipment regarding its manufacturing and performance is to be provided at the time of delivery of the items.

37. **Removal, Installation, Test, Trial, Commissioning and Acceptance**.

a. **Workmanship and Installation**. The responsibilities for removal and installation of the plant onboard each Tug are as follows:

(1) **Buyer's Responsibilities**. The Buyer shall remove the existing units and clear the installation spaces. The Buyer shall also construct the foundations for the new compressors, condensers, evaporators and pump as per the system design & drawings submitted by the supplier.

(2) **Supplier's Responsibilities**. The full system design and drawings submitted with the quotation (as per paragraph 16b) shall be finalised and approved by BN before commencement of the job. The Supplier shall provide and fabricate copper piping for the refrigerant circuit in accordance with the plant design, seawater piping for the condensers, and chilled water piping for connection to or modification of the existing chilled water system, as required. The Supplier shall also provide and install the necessary electrical power and control cables and panels. The complete plant system shall be flushed with nitrogen gas to remove debris, pressure-tested with dry nitrogen and vacuum-tested in accordance with OEM recommendations to ensure leak-free operation. Refrigerant and compressor oil shall be charged in accordance with paragraph 26. All safety trips shall be tested to verify proper functioning, and the complete system shall undergo operational testing and trials to the satisfaction of the vessel.

b. All hot work and other jobs onboard shall be carried out following the safety regulations of the ship/ dockyard.

c. On completion of installation of the supplied AC plants onboard each Tug, harbour and sea trials will be carried out by BN in presence of the supplier/ manufacturer's representative. During trials, each compressor-condenser set shall individually demonstrate that the conditions of paragraph 9b are achieved.

d. Manufacturer is to provide the services of at least one OEM certified engineer for the supervision of installation including test/ trial and commissioning. The manufacturer's engineer will be responsible to demonstrate and ensure that the tests/ trials and commissioning of the AC plants are satisfactory and fulfil the contract requirements. The duration of stay of the manufacturer's engineer/ engineers for test and trial is to be specified.

e. Cost of airfare, accommodation, food and other expenses of the manufacturer's engineer/ engineers is to be borne by the manufacturer/ supplier.

f. The installation, test, trial and commissioning of both plants are to be completed within 03 (three) months from the date of delivery of the items at NSD Chattogram.

g. After satisfactory test, trials and commissioning, a report will be signed jointly by the representative of supplier and the representative of buyer and to be forwarded to CINS office. Acceptance Certificate will be issued by the BN authority on completion of successful test/ trial.

38. **Training**. The supplier's/ manufacturer's installation engineer will provide operation and maintenance training in Bangladesh to the users of each Tug for 05 (five) days (minimum 05 hours per day) after the Air Conditioning Plant is tested, trialled and commissioned. The bidder will quote the cost of training separately in their financial offer. The supplier will bear the cost of the trainers' air ticket, internal transportation, accommodation, food, medical support, etc.

39. **Factory Acceptance Test (FAT) and Pre-Shipment Inspection (PSI)**.

a. FAT and PSI will be carried out by 02 (Two) BN officers for 03 (Three) days, excluding the journey period, at the buyer's expense. The supplier should inform the buyer about the date and schedule of FAT and PSI at least 08 (eight) weeks before the commencement of the said PSI. During PSI, the compressors should be operated to show maximum capacity. All arrangements in this regard shall be done by the supplier at their cost. After inspection, a joint inspection report will be prepared and signed by both the seller and buyer's representatives.

b. On completion of the inspection, FAT and PSI team will submit a report to DNE. DNE will forward the final decision along with the FAT and PSI report to DGDP, based on which DGDP will render clearance for the shipment of stores. The supplier will not ship any item of the contract without clearance from DGDP.

c. All types of movement/ transportation (air, sea, road, rail) of the FAT and PSI team within the manufacturer/ supplier's country, reception and arrangement for entry into the country/ concerned area for the PSI are to be borne by the supplier.

40. **Warranty**. The principal/ manufacturer will give a warranty for trouble-free operation for at least 01 (One) year from the date of acceptance by the buyer. During the warranty period, if the Air Conditioning Plant remains non-operational due to any action pending by the supplier, the warranty will be extended for the same period. The warranty covers all parts, refrigerant/ oil refilling, installation workmanship and labour (including the cost of the service engineer) throughout the warranty period.

41. **Guarantee**. The manufacturer will guarantee the supply of the spare parts for at least 05 (five) years at a reasonable price. The annual increase in the price of spares should not be more than 5% of the price list provided with the quotation.

42. **Shipment**. The following information is to be provided (if applicable):

a. The supplier will arrange shipment of all items by sea/ air to the sea/ airport of Bangladesh.

b. All items are to be delivered in sea/ air-worthy packaging to ensure safe transportation by sea/ air.

c. All packages are to have packing notes showing their contents in detail and all packages shall be marked with the name and address of the consignee and gross weight.

d. The supplier will arrange transportation of all supplied items from sea/ airport to the NSD Chattogram.

e. **Port of Shipment**. Any port of manufacturing country.

43. **Delivery**.

a. The items are to be delivered within 06 (Six) months from the date of signing the contract to the following consignee:

The Commanding Officer,
Naval Stores Depot Chattogram,
New Mooring, Chattogram, Bangladesh.

b. **Place of Delivery**. NSD Chattogram. On completion of CINS inspection, Supplier will arrange transportation of the items to the installation site (BNT HALDA and BNT PASSURE) at his own cost and risk.

44. **Validity of Offer**. The offer should remain valid till 30 June 2027.

45. **Currency**. Foreign Currency.

46. **Terms of Payment**. L/C for the full purchase amount will be opened in favour of the principal supplier under the following payment terms:

a. 80% of the total LC value will be paid on delivery of the items described under the scope of supply and on production of necessary shipping documents.

b. The remaining 20% of the LC value will be paid upon producing an 'Acceptance Certificate' after satisfactory installation, test and trial jointly carried out by the buyer's and supplier's representatives.

47. **Condition for Acceptance of Quotation**. The quotation has to have supporting documents (booklets, leaflets, catalogues, brochures, etc.) with details about the Air Conditioning Plant. If detailed information regarding specifications, maker's books and catalogue for the quoted model of the Air Conditioning Plant, spare parts, accessories, scope of supply, etc. are not provided, the quotation will not be accepted.

48. **Compliance Statement**. A compliance statement fulfilling all the requirements of the tender is to be submitted with the offer for evaluation of the quotations. Merely stating 'Yes' or 'No' will not suffice, rather detailed descriptions/ information as required are to be provided. An incomplete compliance statement may contribute to the cancellation of the offer. If any clause of this specification is not commensurate with the offered Air Conditioning Plant, the deviation must be spelt out clearly.