

Expression of Interest:

Water Chiller

Heat Exchangers

Hunter Class Frigate Program

Including:

- Scope of Work
- Required Supplier Capabilities
- Pre-Qualification Questionnaire
- Closing Date For Expression Of Interest



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1 PREFACE

Johnson Controls Australia as a main supplier to the Type 26 Global Combat Ship is seeking Expressions of Interest from Australian industry in order to deliver **Water Chillers** to BAE Systems Australia Limited and ASC Shipbuilding Pty Ltd for the Hunter Class Frigate Program.

Johnson Controls is the OEM of water chillers for a range of HVAC and process cooling requirements and is a global leader in the manufacture of specialised chillers for Navy applications.

The HCFP chillers will be based on the existing Type 26 chiller design with Australian engineering input to enable local fabrication and the use of COTS components available in Australia.

Each **Water Chiller** requires the following Shell and Tube Heat Exchangers:

- Horizontal Evaporator (DN700 x 4900mm)
- Horizontal Condenser (DN610 x 4900mm)

The purpose of the Pre-Qualification Questionnaire is to establish the feasibility of prospective industrial partners to provide the **Water Chiller Heat Exchangers** to **Johnson Controls Australia** for the term of the proposed contract. The information you provide within your EOI will be used by the OEM to down select organisations to receive a formal Request for Proposal.

2 SCOPE OF WORK

The **Water Chiller Heat Exchangers** are a build to print design however some collaboration with **Johnson Controls** may be required to maximise local industry content without adversely impacting cost.

Vessels are generally carbon steel and feature the following:

- Design/manufacture to AS1210
- Shell design pressure of 18 bar
- Flanged nozzles for major connections
- Hinged water boxes
- Internal distribution plates and tube supports
- Vessel structural supports and lifting lugs
- Support pads for external equipment mounting

Enhanced copper tubes are used for the evaporator. The condenser features Cu/Ni tubes and Cu/Ni clad tube sheets and water boxes.

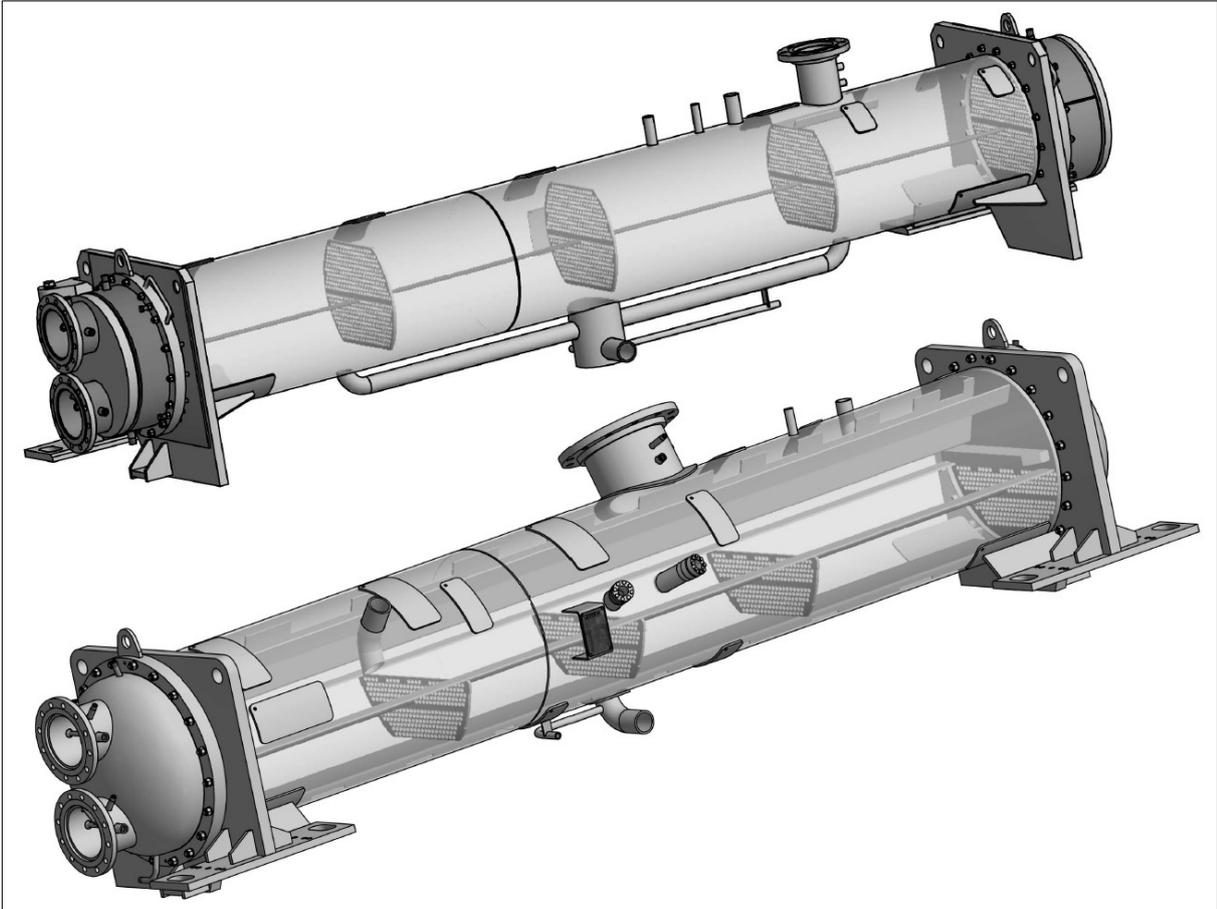
The vendor is to supply all materials for the heat exchangers as noted on the design drawings however tubes and clad tube sheets/water boxes can be free issued by Johnson Controls if required.

Integral lifting points are provided on the vessel tube sheets. Lifting lugs are also provided on each head for maintenance.

The successful contractor is required to complete all requirements to fully fabricate the heat exchangers including the following:

- Rolling and welding of shell plate
- Fabrication and installation of baffle plates and tube sheets
- Fitting and seal rolling of tubes
- Fabrication of heads
- Fabrication/welding of vessel nozzles, sump pipework and supports
- Drilling of mounting locations to required dimensional tolerance
- Perform non-destructive testing of welds
- Perform dimensional checks
- Preparation and painting to project requirements
- Preparation for shipping and Submission of MDR documentation

All welding shall comply to Australian pressure vessel standards



Water Chiller Heat Exchanger: Condenser (Top) , Evaporator (Bottom)

3 REQUIRED SUPPLIER CAPABILITIES

The successful supplier will demonstrate the following capabilities:

- ISO 9001:2015 Approved
- Manufacture, assembly, testing capabilities of build to print design
- Experience in the fabrication of pressure vessels and shell and tube heat exchangers
- Coded welding engineers
- Experience of painting to Marine requirement, internally or via sub-suppliers
- Documented material control and traceability procedures for in-house and sub-supplier manufacture

Previous experience with the supply of similar equipment for Navy or other Defence applications would be well regarded.

4 PRE-QUALIFICATION QUESTIONNAIRE

1. Provide full details of previous major defence, maritime or commercial projects in which your company has delivered fabricated equipment.
2. Do you have previous experience supplying shell and tube heat exchangers?
3. What State/s do you have these capabilities in?
4. Have you worked on defence contracts before?
5. Provide details of the company's management organisation structure.
6. Are you an Australian-owned company?
7. Are you an Indigenous company?
8. Please provide the number of Indigenous/Aboriginal/Torres Islander employees your organisation has? (Stipulate Full Time and Part Time)
9. State acquired company certification and accreditations.
10. Stipulate any further competitive discriminators that have not been identified in the answers to previous questions.
11. Have you updated your ICN company profile with your trading name, contact details, website, ABN, number of employees, annual turnover, export details (if applicable) and ANZSIC codes? This information will be used in assessing this EOI.
12. Do you have quality system accreditation under ISO 9001:2015?

5 CLOSING DATE FOR EXPRESSION OF INTEREST

5.00pm (Australian Eastern Standard Time) on 31st July 2020