T-AKE CLASS

HVAC
ITEM NO. 0812 **CATEGORY "A"**

1.0 ABSTRACT:

1.1 This item describes the requirement to remove and replace expansion joints on the Cargo Refrigeration and AC plants.

2.0 REFERENCES:

2.1 Tech Manual T9516-A8-MMC-010, Cargo Refrigeration Plant Technical Manual

2.2 Tech Manual T9516-BB-MMC-010, AC Refrigeration Plant Technical Manual

2.3 MSC Drawing 532-8387110, Low Temperature Freshwater Cooling System Diagram

2.4 MSC Drawing 516-8387086, Cargo Refrigeration Secondary Coolant Circulating System Diagram

2.5 MSC Drawing 514-8387126, AC Chilled Water System Diagram

3.0 ITEM LOCATION/DESCRIPTION:

3.1 Location/Quantity:

3.1.1 Location: Auxiliary Machinery Room (5-58-01)

3.1.2 Quantity: Three (3) Cargo Refrigeration Plants and four (4) Air Conditioning Plants

a. Six (6) 150mm (6”) expansion joints

b. Six (6) 200mm (8”) expansion joints

c. Eight (8) 250mm (10”) expansion joints

d. Eight (8) 300mm (12”) expansion joints

3.2 Item Description/Manufacturer’s Data: Your Refrigeration Plant Cargo and York Refrigeration Plan Air Conditioning

3.2.1 Bill of Materials (Contractor Furnished) CFM:

Quantity	Description	Part Number
50 sq ft	Lagging Material	N/A
5 Gal	Lagging Paste	N/A
Quantity	Description	Part Number
6 ea	150mm expansion joints	JCI-EJ240C-

	w/Control unit	NPITR DN 150
6 ea	200mm expansion joints w/Control unit	JCI-EJ240C-NPITR DN 200
8 ea	250mm expansion joints w/Control unit	JCI-EJ240C-NPITR DN250
8 ea	300mm expansion joints w/Control unit	JCI-EJ240C-NPITR DN300

3.2.2 Quantities are considered estimates. The Contractor shall provide the exact quantities and additional material such as miscellaneous pipe fittings, elbows, caps valves, pipe hangers, etc in order to install a fully functional system which meets the requirements of this specification.

4.0 GOVERNMENT FURNISHED EQUIPMENT/MATERIAL/SERVICES:

4.1 Government Furnished Equipment (GFE): None

4.2 Government Furnished Material (GFM): None

5.0 NOTES:

5.1 The contractor and all subcontractors, regardless of tier, must consult the General Technical Requirements (GTR) to determine applicability to this work item. In performance of this work item, the contractor and all subcontractors regardless of tier must comply with the requirements of all applicable GTRs.

5.2 The contractor and all subcontractors regardless of tier are advised to review the other work items under this contract to determine their effect on the work required under this work item.

5.3 THIS SHIP CONTAINS HIGH VOLTAGE (HV) ELECTRICAL SYSTEMS. OBEY ALL POSTED AND VERBAL INSTRUCTIONS REGARDING SAFETY AND EXCLUSION FROM HIGH VOLTAGE AREAS. AT NO TIME APPROACH, WORK ON, OR ENTER A HIGH VOLTAGE AREA WITHOUT PROPER AUTHORIZATION.

5.4 THE T-AKE CLASS ELECTRICAL COLOR CODING DOES NOT FOLLOW CONSISTENT COLOR SCHEME. THE SHIP IS KNOWN TO HAVE CURRENT CARRYING CONDUCTORS COLORED GREEN, BLUE, BLACK, AND WHITE. ASSUME ALL ELECTRICAL CABLES ARE ENERGIZED UNTIL TESTED AND PROVEN OTHERWISE. TEST ALL ELECTICAL CABLES TO ENSURE THEY ARE DE-ENERGIZED PRIOR TO WORKING ON THE ITEM.

6.0 QUALITY ASSURANCE REQUIREMENTS: None.

7.0 STATEMENT OF WORK REQUIRED:

7.1 Tag-Out all required systems and equipment. Drain and dispose of any liquid in accordance with all federal, state, and local regulations.

7.2 Remove lagging at from around the expansion joints where installed.

7.3 Isolate and drain system down to a point that expansion joints can be removed.

7.4 Remove existing expansion joints on the Cargo Refrigeration Units using references 2.3 and 2.4 and Air Conditioning units using references 2.3 and 2.5 for location and pipe sizes.

7.5 Retain existing fasteners for reuse. Ensure fasteners are bagged and tagged so as to be replaced in the same piping flanges.

7.6 Install new expansion joints following instructions provided in references 2.1 section SB00123A for Cargo Refrigeration Units and reference 2.2 section GB90032B for Air Conditioning Units. Use fasteners retained in paragraph 7.3

7.7 Align System valves and ensure that fluid levels are at operational levels and system is ready for operation.

7.8 Preparation of Drawings/Documents: None.

7.9 Inspection/Testing:

7.9.1 Perform operational test at system pressure. Inspect for leakage. No leakage is allowed. MSCREP to witness testing.

7.10 Painting/Lagging:

7.10.1 Reinstall lagging. Prime, paint and insulate all new and disturbed areas to match the surrounding areas.

8.0 GENERAL REQUIREMENTS: None additional