

## CCG – 'Hero' Class Patrol Vessels Sea Chest and Grate Modification Specification

For  
Dept. of Fisheries and Oceans/Canadian Coast Guard  
Ottawa, ON



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## Revision Matrix

<i>Rev</i>	<i>Brief description of revisions made</i>	<i>Issued to client</i>

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## 1 GENERAL

In support of the Lengkeek Vessel Engineering Incorporated (LVE) Sea Chest Grate Vibration Analysis report, this specification outlines the modifications to the sea chest and grates to affect a permanent solution to the vibration issues.

## 2 PRINCIPAL PARTICULARS, “HERO” CLASS PATROL VESSELS

Length	43.00 m
Beam Moulded	7.00 m
Displacement	257 MT
Design Draft	2.85 m

## 3 SPECIFICATION DETAILS

### 3.1 SCOPE OF WORK

This specification covers work to be completed onboard the CCG Hero Class Patrol Vessels to modify the sea chest and grates located on centerline between frames 16 and 17.

### 3.2 GENERAL INSTRUCTIONS

This specification shall be read in conjunction with the latest revisions of the following drawing to indicate the extent of the work and the location of components:

J16003-S01 – Sea Chest Modification Details

Where ever the words “approved by”, “equivalent” or similar phrases are used in this specification, they shall be understood to mean the material, process, or item referred to.

Approval from the DFO/CCG is required if the Contractor wishes to deviate from any of the specified methods or recommended materials.

## 4 STRUCTURE

### 4.1 EQUIPMENT/MATERIAL REQUIRED

All new steel plates and shapes shall be minimum Lloyds Grade ‘A’ or equivalent unless noted.

The Contractor shall supply all material required, including any material required to complete the work which is not explicitly identified in this specification. See also applicable structural guidance drawings for material requirements.

All new steel work shall be sandblasted and shop primed with a primer compatible with the vessel’s existing paint system. On completion of all welding, all damaged paintwork shall be wire brushed to remove loose material.

All work shall be consistent with Transport Canada Marine Safety standards and all applicable standards as listed in the References section of this Technical Statement of Requirement. Work shall be consistent with good shipbuilding practice where standards are not applicable. The work shall be conducted to the satisfaction of the designated approval authority.

## **4.2 STRUCTURAL STRIP-OUT**

The existing grate plates of the lower sea chest located on center line between frames 16 and 17 and extending transversely approximately 600mm (P&S) are to be removed and discarded. Also, all the grate plate connection tabs located inside the sea chest are to be removed down to the hull plate.

## **4.3 NEW STEEL WORK**

### **4.3.1 SEA CHEST PREPARATION**

The inside area around the openings for the sea chest located on center line between frames 16 and 17 and extending transversely approximately 600mm (P&S) shall be sandblasted and shop primed with a primer compatible with the vessel's existing paint system. See Dwg. J16003-S01-Rev 0 for guidance.

### **4.3.2 SEA CHEST MODIFICATIONS**

Shell insert plates to be fabricated and installed at Frame 16.5 in way of the existing floor as detailed on Dwg. J16003-S01-Rev 0. Care to be taken by double checking the actual width of the openings and adjusting the dimension given on the drawing to suit to ensure a proper fit.

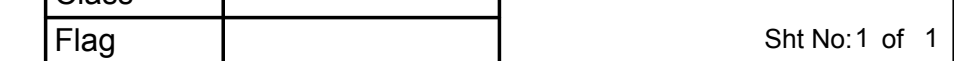
After the insert plates are installed, grate rings are to be fabricated and welded into place as detailed on the drawing. The grate rings are to be shaped slightly to suit the line of the hull.

New grate plates to be fabricated as per the drawing and shaped to suit the new grate rings. Mounting holes to be templated from the rings and drilled to suit.

Stainless steel cap screws are to be welded to the inside of the grate ring to act as studs for mounting the grate plates. After grate plate installation the nuts are to be tack welded in place to prevent them from backing off.

**APPENDIX A:**

**DWG NO. J16003-S01\_RA SEA CHEST MODIFICATION DETAILS**



DETAIL 1-2A

QTY=4 PER VESSEL