

# ONE COMPANY. MANY SOLUTIONS.

Building marine interiors and systems around the world.













## **Company Snapshot**

Trident Maritime Systems is the leading outsourced provider of turnkey marine joiner, distributed, electro-mechanical and automation and control systems for Government and commercial maritime customers targeting new ship construction as well as repair, refurbishment, and retrofit activities.

## **Trident Maritime Systems**

#### **Outfitting Systems**

- Leading provider of turnkey joiner solutions
  - Focused on "habitability" areas of ship including areas where inhabitants eat, sleep, and work
- Expanding turnkey marine repair capabilities for Government and commercial maritime customer base
- Joiner and repair services co-located at customers' shipyards



Galleys

#### **Distributed Systems**

- Leading provider of turnkey HVAC and Shipboard Distributed Systems
- Designs, engineers, procures, installs and commission/test marine systems for HVAC, and fire suppression applications
- Extensive design experience to reduce fabrication, installation and total ownership costs



Marine HVAC Systems

#### Power, Controls and Propulsion Electro-Mechanical Systems

- Leading end-to-end electrical and automation shipboard system provider
- Proprietary engineering and design capability to manufacture highly integrated process control and automation systems and individual components
- Leading integrator and provider of Naval replenishment, cargo handling and other electro-mechanical systems



Intelligent Switchboards

Subcontractor to major shipyards providing fixed-price, low-cost solutions and an exceptional track record of on-time execution



## National Shipbuilding Procurement Strategy

Trident Maritime Systems is committed to the successful execution of the NSPS programs. Trident supports NSPS in Vancouver Shipyards in areas of Turnkey outfitting and HVAC systems solutions with capability to support in other areas requiring shipboard integration experience.

## Trident Maritime Systems, NSPS Solutions

## Science Vessels (OFSV and OOSV)

- On OFSV, Trident is providing a total turnkey solution for the Outfitting Systems including:
  - All design and integration engineering services to ensure the galley, messing, berthing and other public spaces are completely integrated in the OFSV design
  - Turnkey installation and test of the accommodation systems
- On OOSV, scope very similar to OFSV will be performed by Trident

## Joint Support Ship (JSS)

- On JSS, Trident will be providing total turnkey solutions for both Outfitting and HVAC/Refrigeration Systems
  - Outfitting:
    - All design and integration engineering services to ensure the galley, messing, berthing and other public spaces are completely integrated in the OFSV design
    - o Turnkey installation and test of the accommodation systems
  - HVAC and Refrigeration
    - All functional and Detail design including installation and production information for a total integrated HVAC solution
    - Turnkey installation, commissioning and testing of the Refrigeration and HVAC Systems



# **OUTFITTING SYSTEMS**

## **Outfitting Solutions for OFSV, OOSV and JSS**

- Faced and Unfaced Mineral Wool and Fiberglass Hull Insulation
- Perforated and Solid pre-formed Protective Sheet Metal Sheathing
- Spray on Acoustic, Vibration and Thermal Coatings
- Prefabricated Toilet & Shower Modules
- 'Softcore' Divisional and Lining Bulkhead Panels
- B-0 rated continuous linear metal plank Ceiling System
- Interior and Weathertight Joiner Doors
- Full range of marine grade Steel Accommodation & Office Furniture
- Galley and Foodservice Appliances and custom fabricated Equipment
- Pre-fabricated walk-in Cooler and Freezer Boxes
- Medical and Dental Equipment
- Raised Computer Floor (False Floor)
- Loss Prevention Stowages, Lifejackets, Immersion Suits etc.
- Workshop, Storeroom and Locker Equipment and Stowages
- Purpose Built Weapons Handling systems
- Weapons and Ammunition Lockers and Stowages
- Custom Science Laboratory or "Wet Lab" OFSV only



# **DISTRIBUTED SYSTEMS**

## **HVAC Solutions for JSS**

## Long Lead Item (LLI) selection for JSS

- Trident is soliciting support and supplier information for components and equipment in support of the JSS program in the following areas:
  - Chilled Water Systems and Equipment
  - Refrigeration Systems and Equipment
  - Fan Coil and Air Handling Units
  - Ventilation Fans
  - HVAC Components such as
    - Water Tight Valves, Fire Dampers, Mist Eliminators
    - > NBC Equipment
- Vendor Furnished Information (VFI) needed to support design in Design & Production Engineering

## Non-Long Lead (Commodity) Equipment

• During the construction phase there will be opportunity to supply HVAC Material, such as heaters, duct fabrication, insulation, diffusers, and other typical HVAC Marine

Please contact Trident Maritime Systems for more information and to be added to the qualified supplier list. We look forward to hearing from you!

## TRIDENT MARITIME SYSTEMS



## One Company. Many Solutions. Around the World

## We are....

- An Established Canadian Manufacturing Organization under contract on NSPS Projects supported by our International (9 Countries) Sister Divisions
- We Specialize in Turn Key Solutions for Shipbuilders (Govt & Commercial)
  - Joiner (Interior Systems, Habitability Furniture, Watertight Closures)
  - Electromechanical (Cranes, UNREP, Elevators, Cargo doors)
  - Distributed Systems (HVAC, Water Mist)
  - Electrical (SSV, Switchboards, VSDs, Controls, Propulsion)



# Points of Contact

## One Company. Many Solutions. Around the World

## **Outfitting**

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# **CANADIAN OPERATIONS**



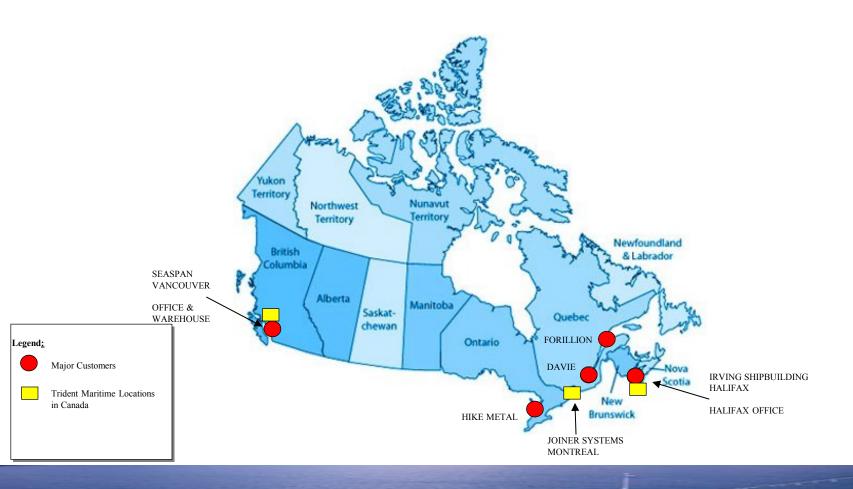
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# Supplemental Canadian Operations Information

# **CANADIAN OPERATIONS**



## One Company. Many Solutions. Around the World





## **Company Overview**

1971 – Joiner Systems Founded

- Marine & Industrial Products
  - Custom fabrication
- Products designed and built to meet and exceed customer requirements

2014 – Subsidiary of Trident Maritime Systems

## Marine Division



**Industrial Division** 



Expansion Joints Dampers

## **Company Overview (cont.)**



Employees at Trident Maritime Systems: >700

Employees at Joiner Systems: 65-70

- Management & Administration:8
- Engineering & Drafting: 7
- Plant Employees: 35
- Field technicians and installation crew: 15-20

Canadian Welding Bureau Certified

Quality System: ISO 9001:2008









## **Manufactured Products**

Watertight Navy & Commercial Closures: Doors and Hatches

Fire-Rated Marine Doors, IMO Certified

Ceiling System, and Floating Floor, IMO Certified

Modular Washrooms

Marine furniture: Metal and wood for navy & commercial

Industrial: Expansion joints, dampers, custom fabrication













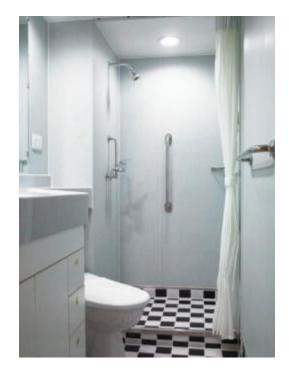


## **Products**



## Light-Weight Composite Toilet Modules





## **Products**

**Marine Furniture – Wood and Metal** 







## **Products**



## **Enclosures**





**Ammunition Lockers** 



Watertight, EMI-Shielded Electronic Cabinets

## **Company Achievements**



- The Canadian Frigate Patrol Program (12 Ships)
  - Contracted by Saint John Shipbuilding to supply and install:



- Bulkhead panels
- \* Hatches
- Watertight doors
- Interior doors
- \* Window boxes
- Lavatories
- Furniture

- TRUMP Program for Canadian Destroyers (1991-1994)
  - Contracted by Mil Davie to supply closures & accommodations materials.

## **Major Canadian Customers**



**IRVING** - FELEX Program the mid-life maintenance and upgrade work on seven East Coast navy frigates. (2008-2016)

## **SEASPAN** - NSPS

- Complete accommodations package for 3 OFSVs (2015-2019)
- Supply Doors, Hatches & Manholes for 3 OFSVs (2015-2019)

#### I NSPS Non-Combat Vessel Profile I



The numbers	3 vessels
Highlights	Modern gear for surveys up to approximately 2,500 m depth. Quieted operations
Displacement	Approximately 3,200 tons
_xW	63.3 m (208 ft.) x 16 m (52.5 ft.)
Speed (maximum)	Approximately 12.5 knots
Endurance	Sustained operations for 31 days
Crew	36 (approximately 23 core/approximately 13 science)

OFSV is a replacement class to four CCG vessels home-ported on both coasts. The vessels will support critical scientific research and ecosystem based management off the Canadian coast. OFSVs will conduct fisheries and oceanographic survey missions, sampling at up to 2,500 m depth. Design priorities will be for quiet operations and modern deck trawl gear.

## **Major Canadian Customers**



<u>Victoria Shipyard</u> - FELEX Program the mid-life maintenance and upgrade work on the five West Coast navy frigates. (2008-2016)

**NEAL Partnership** - Supply accommodation materials for the Hebron LQ (2013 – 2016)

<u>Chantier Davie</u> - Supply and install accommodations for 2 STQ Ferries (2016 – 2017)

<u>Chantier Naval Forillion</u> - NSPS -Supply interiors materials and watertight closures for 6 Search & Rescue vessels (2016-2018)

<u>Hike Metal - NSPS</u> - Supply interiors materials and watertight closures for 6 Search & Rescue vessels (2016-2018)



## **EXPANSIVE FOOTPRINT**



# Trident Maritime Systems goes where our customers need us, when they need us.



# START WITH THE END IN MIND!



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