

Fleet Maintenance Facility

Victoria, BC, Canada

PRODUCT USED:
Hard-Cem®

OWNER:

Department of National Defence

ENGINEER:

Stantec

CONTRACTOR:

Stuart Olson Constructors Inc.

DISTRIBUTOR:

Brock White Construction Materials

BACKGROUND

Established as a military installation by the Royal Navy in 1855 and serving the Royal Canadian Navy since 1910, the Canadian Forces Base (CFB) Esquimalt is the second largest military base in Canada. Located in Victoria, British Columbia, the base is also home to Canada's Maritime Forces Pacific.

To ensure these forces get the ship and ship-related equipment maintenance they need, the Fleet Maintenance Facility Cape Breton (FMFCB) provides the support for it. However, it along with other facilities at CFB Esquimalt's dockyard, consisting of more than 60 buildings, had been rendered antiquated by modern industrial workplace standards.

In response, a modernization program was proposed: the FMFCB Shop Consolidation Project. This project would consolidate Cape Breton's new workspace and create approximately 28,000 m² (300,000 ft²) of new operational space. This upgrade would also streamline the industrial process, transforming the facility into a truly modern space. At the same time, it would make the facility the second largest enclosed building on the North American West Coast, second to the Boeing aircraft facility in the United States of America's State of Washington.

Moreover, the upgraded facility's concrete structure would be designed to withstand earthquakes and tsunamis. And more importantly, it needed to be both abrasion- and erosion-resistant. After all, the slabs in the new building would need to survive the exposure to seawater, heavy traffic from the loading and offloading of heavy naval vessel components for repair, and contact with the processes involved with materials handling, manufacturing, welding, fabrication, and assembly.

SOLUTION

The engineer of this undertaking, Stantec, recommended Hard-Cem for the project's fourth phase.



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They did so because they knew that Hard-Cem offers full-depth concrete hardening to protect concrete from long-term abrasion and erosion and can be used with air-entrained concrete. And its chemically neutral nature means that Hard-Cem can be used with any concrete mix design. Moreover, Hard-Cem's integral quality allows it to be versatile, enabling applications for vertical, horizontal, inclined, interior, and exterior slabs.

All of which made the concrete hardener's application a success for the CFB Esquimalt's fourth phase.

With the success of that phase, Stantec again specified Hard-Cem for the fifth phase of the base modernization program, proving that Hard-Cem is the solution for engineers who want high performance in demanding applications.

