



HMCS OKANAGAN



THE SUBMARINE

HMCS Okanagan, the last of three Oberon class submarines built for the Maritime Command of the Canadian Armed Forces embodies all the improvements suggested by experience with previous ships of the class, and by continuing research into the techniques of anti-submarine warfare. She is capable of cruising for long periods at depth, and of bursts of high underwater speed. She has a wide range of equipment to increase her detection capability, and she packs an impressive punch.

CONSTRUCTION

The Okanagan's hull has been designed to with-stand pressure at great depths, and to travel at high speeds without generating noise that would betray her to a vigilant enemy. The hull was constructed by unit prefabrication, which permitted the building of the ship in sections and afforded maximum control of all phases of the work.

Much thought and ingenuity have been devoted to using every scrap of space to maximum advantage. The 295 feet of the Okanagan's length will be packed with complex equipment that must all be accessible and situated for the best performance of its functions.

WEAPONS

The Okanagan has six bow tubes capable of firing either diesel or electrically propelled torpedoes. Two tubes at the stern fire electric torpedoes only. Spare torpedoes are stowed in both torpedo rooms.

PROPELLION

The main propulsion plant comprises two diesel-generator combinations and two large storage batteries. The generators and batteries, separately or in combination, drive the motors that propel the submarine.

Each engine-generator combination consists of a 16-cylinder V-construction diesel engine of the Admiralty Standard Range, driving an English Electric 1280 KW generator. The engines, rated at 1840 BHP maximum (supercharged surface), were designed and built at Chatham.

ELECTRONICS

The Okanagan has radio equipment for transmitting and receiving over a wide range of frequencies. She has five different sonars, all capable of passive listening and one able to make transmissions. There are three underwater telephones, two of which are for escape purposes. The navigational and warning radar antennae are on a retractable mast, and may be used on the surface or at periscope depth. One periscope has an antenna that enables radar ranges to be taken while only the periscope is exposed.

HABITABILITY

A great and sustained effort has been made to provide the best living and working conditions possible, both in designing the whole submarine to make the maximum space available for her crew, and in providing equipment and services to ensure their health and comfort. Particular effort has gone into the improvement of air conditioning, sanitation and waste-disposal.

Accommodation consists of the commanding officer's cabin, an improved wardroom, for seven officers, with an optionally separated sleeping area, chiefs' and petty officers' bunk spaces and crews sleeping areas forward and aft.

The re-setting, forward, of the all-electric stainless steel galley has made possible the introduction of cafeteria style of messing. The compact equipment can provide meals that compare favourably with those in surface ships.

Arrangements for recreation include a library, a movie projector and a tape recorder.

PROVISIONS

There is refrigerated and dry storage space for a 90-day supply of provisions, and the submarine can be self-sufficient in food, water and fuel for several weeks on patrol at a stretch.

The main storage batteries, manufactured by Chloride Batteries Limited, consist of two 224-cell groups. These in turn are divided into two sections of 112 cells, which can be operated separately, in series, in series-parallel, or in parallel, to give a wide spread of power ranges for the motors.

The double-armature main motors, manufactured by English Electric produce 3000 horsepower per shaft.

AUXILIARY MACHINERY

A Caird and Rayner distilling plant in the generator room produces 20 to 25 gallons of fresh water per hour for domestic use and for the main storage batteries.

The 4-stage Reavell air compressors, also in the generator room, produce the high-pressure air to operate the air systems. This air is stored in five main accumulator groups, one outside the pressure hull and the others inside the submarine. It is used for blowing the main ballast tanks, and also supplies the interior service air system. A low pressure blower in the auxiliary machinery space provides the large volume of air required to complete the blowing of the main ballast tanks after surfacing.

The high capacity air conditioning plant in the auxiliary machinery space operates in conjunction with spot coolers in all the compartments. In the same space is a freon refrigeration unit for the cold and cool rooms.

Two pumps supply the hydraulic system through two accumulators. This system operates main vents, exhaust valves, snort masts, periscopes, steering gear and hydroplanes.

ELECTRICAL EQUIPMENT

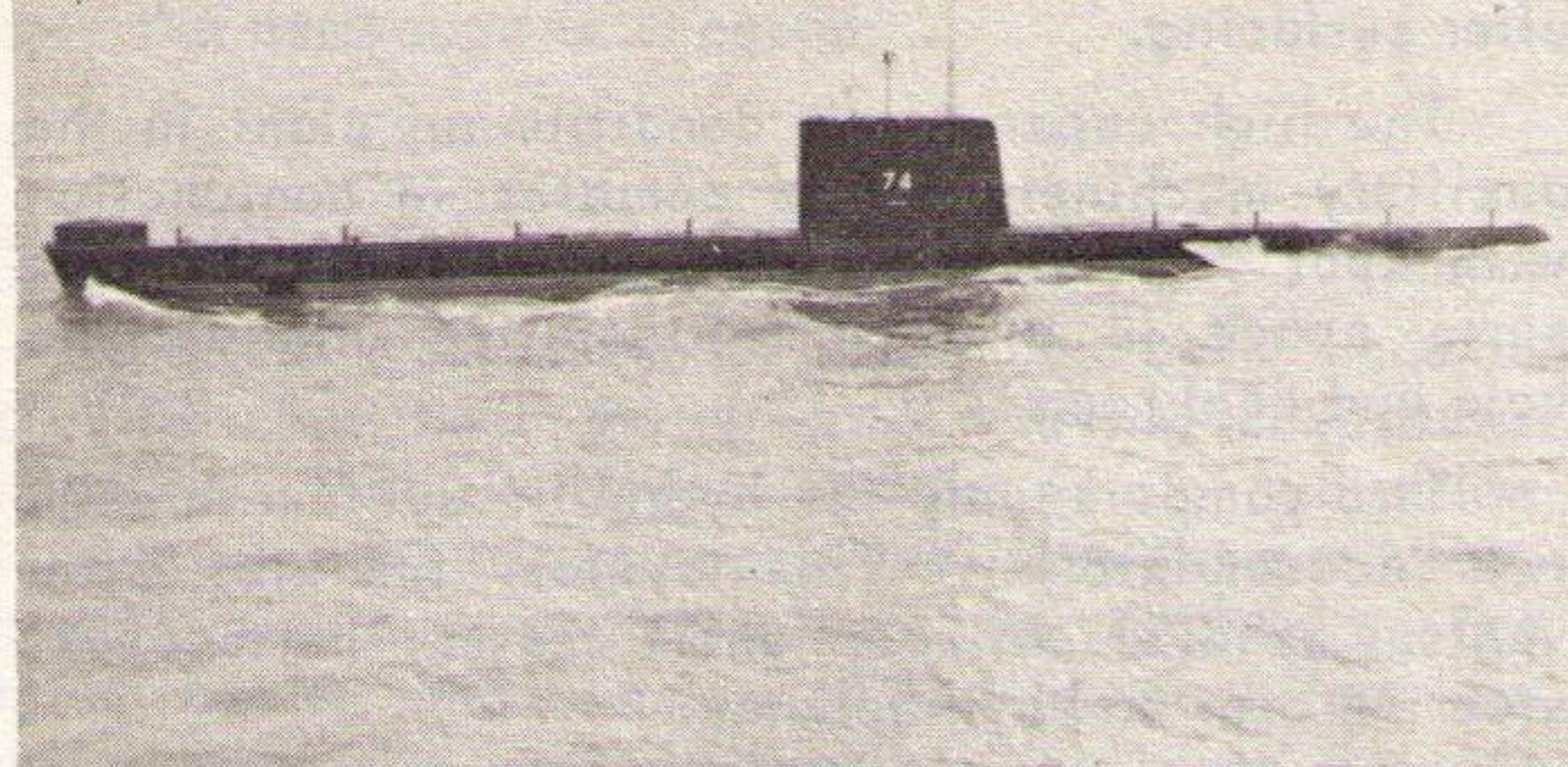
The electrical and electronic systems are complex. There are two of each of the following types of motor-generators: 100 KW; 15 KVA, 115V, 60-cycle, 3-phase; 15 KVA, 200-volt, 400-cycle, 3-phase. Several smaller motor generators supply special services, such as the gyro compass and the fire control systems.

SAFETY

The ship's company of HMCS Okanagan has been trained in one-man escape techniques. Emergency escape arrangements including one-man escape chambers and indicator buoys are fitted at both ends of the submarine. A messenger buoy for use in the diving bell method of escape is fitted forward.

HISTORY

HMCS OKANAGAN commissioned at Chatham Dockyard in England on 22nd June, 1968. After completion of builders' trials and workups, she arrived in Halifax, Nova Scotia, her new home port, in October, 1968. From then until October 1971, OKANAGAN conducted operations in the Atlantic. In October 1971 OKANAGAN commenced her first refit in HMC Dockyard, Halifax, on the modern synchrolift (synchroshod drydock). She completed this refit in May 1973, and, on completion of sea trials and workups, resumes her Atlantic station operations.



THE OKANAGAN STORY

The Okanagans are a branch of the Interior Salish nation of British Columbia in Canada and the State of Washington in the U.S.A. They were not a long-house people, but built individual family dwellings - pits roofed with wood and turf for winter and light frame lodges covered with rush mats for summer.

They lived by hunting and fishing and their principal foods were salmon, venison, bear meat and other game. Their only crop was tobacco.

The most remarkable handicraft of the Okanagan people was basketry, for their ware was watertight. In fact, they used baskets as cooking pots, dropping in heated stones until the contents boiled.

Both dug-out and bark canoes were used by the Okanagans, but they did most of their travelling on foot because of the violent rapids on the rivers of the mountain region where they lived. The bark canoes were of an unusual design, being longest at the keel and shortest at the gunwale giving the craft a ram-like stem and stern.

The Indian's first contact with the white man was in 1811 with the traders of John Jacob Astor's fur brigades exploring the interior from their base at the mouth of the Columbia. The Okanagan valley gave access to the whole of the interior of New Caledonia - now called British Columbia.

In 1826 the Hudson's Bay Company started using the same route and continued to do so until the international boundary was established and the United States began collecting customs duties for furs. This forced the company to transfer its west coast base to Fort Camosum (now Victoria, B.C.) in 1847. Some gold was discovered in the valley in 1860, but it was not until the late 1880's that Europeans moved into the region to settle after the Canadian Pacific Railway line had been built, bringing them close to the north end of the valley.

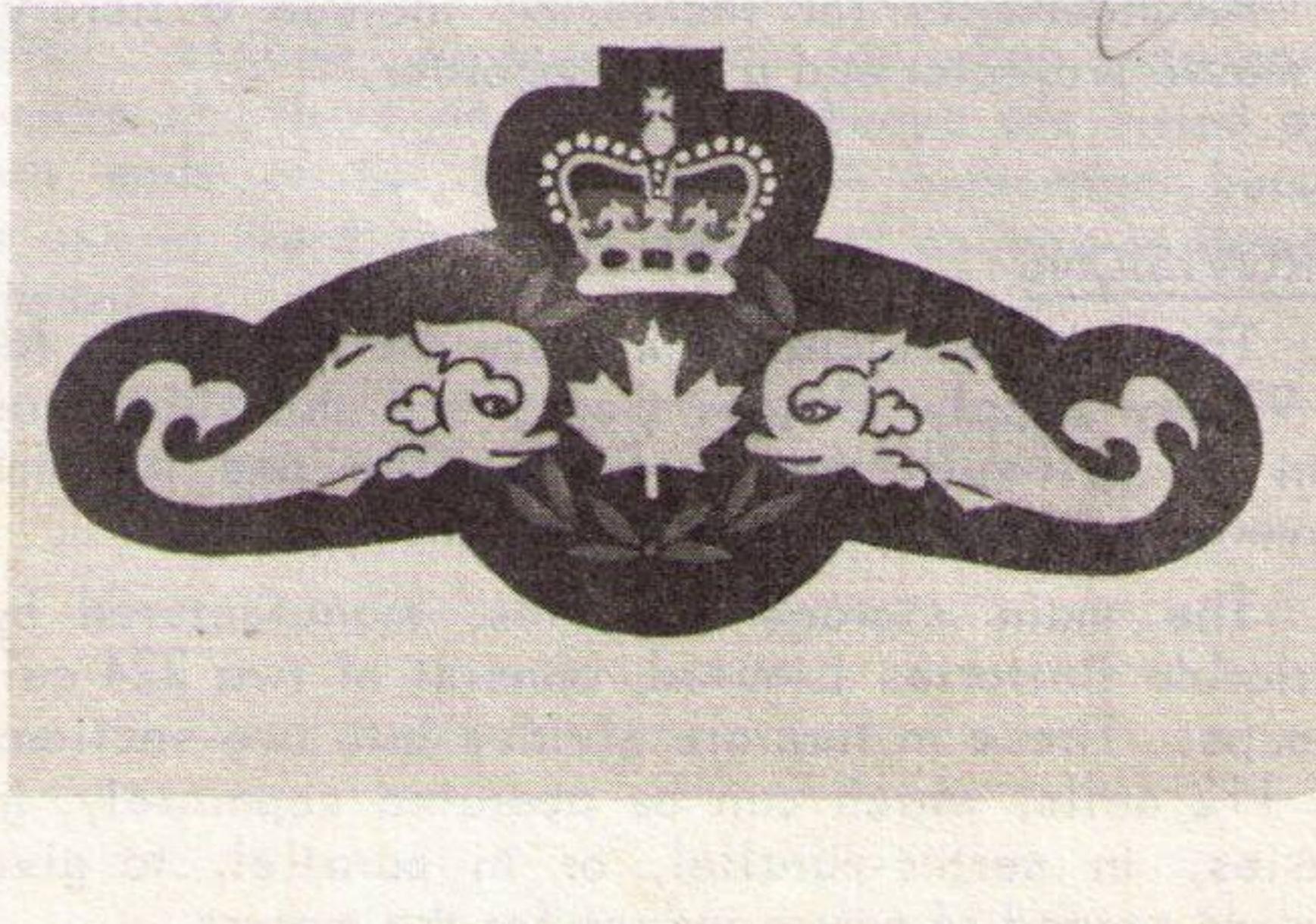
FIRST CANADIAN SUBMARINE SQUADRON

HMCS Okanagan joined the First Canadian Submarine Squadron based at Halifax, N.S., on 21st September, 1968.

This squadron was formed on April 22, 1966, and now includes HMCS Ojibwa and HMCS Onondaga.

The First Canadian Submarine Squadron succeeded the Royal Navy's Sixth Submarine Squadron which was formed in Halifax in March, 1955. The submarines provide anti-submarine training to surface ships and aircraft of Maritime Command.

Over the years they have proved to be the busiest units of the Atlantic fleet.





LIEUTENANT COMMANDER R.C. HUNT

LIEUTENANT COMMANDER HUNT was born in London, England and raised in Belfast, Northern Ireland. He started his sea going career as a cadet in the British Merchant Service. After obtaining his Masters Certificate in 1959 he served with the Royal Naval Reserves until entering the RCN in 1961.

He served in HMC Ships CRESCENT and INCH ARRAN before commencing submarine training in New London, Connecticut in 1964. Posted to HMCS GRILSE (SS 71) the same year, he remained in that submarine December 1968 when GRILSE paid off and HMCS RAINBOW (SS 75), was commissioned. He served as Executive Officer in GRILSE and RAINBOW from April 1968 to August 1969 when he was selected for the Submarine Commanding Officers Qualifying Course with the Royal Navy.

In April 1970, he assumed command of RAINBOW until August 1972 when he was posted to the Canadian Forces Staff College in Toronto. After the staff course, LIEUTENANT COMMANDER HUNT was posted to the First Canadian Submarine Squadron as Squadron Operations Officer.

He assumed command of OKANAGAN in August 1974.