
The Bosun's Call

NOVA SCOTIA - NAVAL ASSOCIATION OF CANADA NEWSLETTER



"PASSING THE WORD"



Editor: Doug Thomas 462-4049, doug.thomas@eastlink.ca Summer 2016



2016 SOCIAL CALENDAR

The Spring Lunch on 9 June at the Saraguay House was another successful event, and greatly enjoyed by those who attended. However the numbers were down considerably over last year's event.

You are reminded of our Garden Party, scheduled at 1130 for 1200, August 11at RA Park. Let Don Uhrich or Bob Lancashire know if you are coming. The cost is a very reasonable \$20 each – cash or cheque at the door.

**Trafalgar Lunch - October 20, 1130 for 1200, Saraguay House, RNSYS
Christmas Lunch, December 16, 1130 for 1200, RA Park
(Prices to be confirmed, but certainly not more than last year.)**

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Blue Book Amendments

DELETE THE FOLLOWING

Deceased: Al MacLeod – died 12 July 2016

For non-payment of dues:

- BRUSHETT, Gerald**
- EMERSON, Mary**
- JONES, Hugh W**
- STANFORD, Gerald B (transferred to Victoria)**
- VALLIS, Beth**
- WEDGE, Richard A**

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OBITUARY FOR A YORKSHIRE FARMERS WIFE

Following the death of his wife a thrifty Yorkshire farmer visited the offices of the Yorkshire Post. After 50 years of happily married life he felt that an obituary would be in order. When the receptionist on the desk informed the farmer of the cost he exclaimed in true Yorkshire fashion.

“How Much?!” Then he reluctantly produced his wallet saying, “I want summat simple, my Gladys was a good-hearted and hard-working Yorkshire lass but she wunt ‘ave wanted owt swanky’.

"Perhaps a small poem," suggested the woman at the desk.

“Nay,” said the farmer “she wunt ‘ave wanted anything la-di-da, just put; ‘Gladys Braithwaite’s died””

"You need to say when" he was told by the receptionist.

So she went to check it out. She went to the Western Wall and there he was, walking slowly up to the holy site.

She watched him pray and after about 45 minutes, when he turned to leave, using a cane and moving very slowly, she approached him for an interview.

"Pardon me, sir, I'm Rebecca Smith from CNN. What's your name?"

"Morris Feinberg," he replied.

"Sir, how long have you been coming to the Western Wall and praying?"

"For about 60 years."

"60 years! That's amazing! What do you pray for?"

"I pray for peace between the Christians, Jews and the Muslims."

"I pray for all the wars and all the hatred to stop."

"I pray for all our children to grow up safely as responsible adults and to love their fellow man."

"I pray that politicians tell us the truth and put the interests of the people ahead of their own interests."

And finally "I pray that everyone will be happy".

"How do you feel after doing this for 60 years?"

"Like I'm talking to a f***ing wall"

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It is with deep regret that we announce the passing of Allison MacLeod (Al) a long standing member of Royal Artillery Park.

We extend our deepest sympathies to Al's family and many friends. He will be greatly missed.

MacLeod, Allison Hugh - Cdr, CD, RCN (Ret'd), age 89, passed away July 12, 2016 at the Halifax Camp Hill Veterans Memorial Hospital –V5W. Born in Glace Bay, NS he was the only child of the late Malcolm A. MacLeod and Cora M. (Fergusson) MacLeod. He served in the Canadian Army from 1944-45 as a gunner and following

his discharge from active service he attended Mount Allison University in N.B. while serving as a UNTD officer cadet with the RCNR. Following his graduation he received his commission in the RCN and served as a logistics officer for 28 years, both afloat and ashore. Among his favorite postings was during an exchange with the US Navy in Bremerton and Seattle Washington, U.S.A. After resigning in 1976 from the forces he completed his B.Comm. at St. Mary's University and was employed in real estate, taught business at the vocational school and then joined the Federal Government as an economist and then as a material control officer at CFAD Bedford where he ended his career of over 42 years as acting Superintendent at the magazine hill depot. During his life he held many positions and was very active within his church, naval officer associations, credit union and the Geritol Club at the Royal Artillery Park (his favorite watering hole). He is survived by his daughter, Heather, Kentville, four sons, John, Calgary, David (Diane), Halifax, Paul, Winnipeg, Doug (Maureen) Maple Ridge, BC and wife (separated) Arabel Campbell. He is predeceased by his first wife, Therese M. Thibault (R.N), his son Robert and daughter Suzanne. His family wish to take this time to thank the staff of Camp Hill, especially the nurses of V5-West whose care and attention will not be forgotten. Donations may be made to the Canadian Naval Memorial Trust (HMCS Sackville). Online condolences may be viewed or sent to: www.mattatallfuneralhome.com.

Energy Use and Conservation in the Marine Sector

Environmentalists are making a lot of noise these days about “getting off oil” in the next two to three decades. This might seem like a great idea until looked at carefully from a practical perspective. Sure, we could build more energy-efficient buildings and electrify the railroads, but what would happen to the rest of the transportation industry in Canada under such a concept? For instance, a complete or even partial lack of fossil fuels in the marine sector would cause absolute havoc. The inescapable fact is that the marine sector depends on the internal combustion engine. The extent of this dependence is sufficiently great to be a major factor in the national economy. Affordable alternatives to internal combustion engines at sea just do not exist at the moment. I suppose we could return to an era of sailing ships, but what would that do to a manufacturing industry structured on a “just-in-time” logistics concept? Chaos! How would we maintain the export market for fish without refrigeration? And how would the essential network of ferries be sustained? Could we afford to rebuild the national fleets of ferries to run on nuclear energy or even fuel cells? All valid questions that should be part of any future proposal for “getting-off oil.”

Policy-makers and their critics from central Canada have a nasty habit of ignoring the marine sector and its role in the national economy. This isn't new, it goes back for well over 100 years despite the fact that the sea played and continues to play an essential role in the development of the country. Geographic and economic data should speak for themselves. One would think that by now that the Canadian population would accept not only the magnitude of the ocean areas over which sovereignty is claimed but also that those waters are directly and indirectly the source of great wealth. Ignore the oceans at your peril!

Surprisingly, good statistics on Canadian ocean use are now hard to find. The government no longer collects and analyses the amount of marine data as in the past, and the few analyses that are published are shallow in the extreme. But, by delving into some private sector reports and analyses, a pretty good picture of the Canadian marine sector can be found.

The Canadian Marine Sector

We tend to speak of a Marine Sector in a unitary sense, whereas in reality it is multi-faceted. Summaries of activities in five of the more obvious areas provide an overview of national economic and employment implications. The common denominator throughout is the internal combustion engine, with some reliance on gas-turbines.

(1) Trade by sea, coastwise and international, is a key component of our economy. Somewhere in the vicinity of 315,000 tonnes of cargo, worth some \$500 billion, are loaded and unloaded in Canadian ports every year. In turn, this generates nearly \$200 million in operating income and creates about a quarter of a million jobs. Shipping adds \$25 billion annually to the national GDP. An important and often overlooked fact is that many of the foreign merchant ships using Canadian ports refuel and re-provision there. “Getting off oil” would almost certainly impact the freedom of use of those ports, with considerable economic consequences.

(2) Resource exploitation, mainly the fishery and offshore oil and gas, employs some 83,000 people including those in the shore-based support operations. Off-shore oil and gas operations provide some \$60 million annually to R&D and pump over \$2.0 billion in revenue to provincial governments. I could not find a figure for the number of vessels involved in the oil and gas industry, but over 18,000 vessels form the backbone of the inshore and deep ocean fisheries. The economic value to Canada of the fishery is \$7.8 billion.

(3) The recreational use of the oceans and inland waters by Canadian is extensive. Here again, the data are scarce; some 4.3 million small vessels are registered for recreational use, but there is no easy way of telling how many of those vessels do not have an engine, but most probably do. With the support infrastructure, recreational use of Canadian waters is estimated to add about \$5.0 billion to the economy every year.

(4) The shore-based infrastructure to support these marine activities, as one would expect, is very large and diverse; covering ship-building and repair, logistics, management and maintenance of ports and waterways, cargo handling, and the necessary administration to make it all function. Statistics covering the full economic value of this aspect of the Canadian marine sector are impossible to find, but several hundred thousand people are employed in all aspects of this activity. I could not find a figure for the number of tugs, barges, and small boats support this infrastructure, but anyone who has ever watched port or shipyard operations appreciate that they bustle with activity.

(5) Without a comprehensive system of regulations and the means of enforcement, any marine sector would be complete chaos. Although many of the related activities are shore-based, a significant number of ships and people carry out this work on the water. The Canadian Coast

Guard, the primary law enforcement arm of government, for instance, maintains 119 vessels, 22 helicopters and employs over 4,500 people.

In summary, the marine sector in Canada employs thousands of people from coast to coast as well as in the North and on the inland waterways. The value to the economy is billions a year. In all, some 50,000 or so ships and smaller vessels use virtually all parts of Canada's vast oceans and inland waters for many reasons and, with few exceptions, they all use some form of an internal combustion engine for propulsion or to generate electricity. It is perfectly fair to claim that without the internal combustion engine and fossil fuel, the Canadian maritime sector would collapse and in the process do immeasurable damage to the economy.

Alternative Fuels and Means of Propulsion

At present, transportation accounts for roughly 39 percent of all Canadian energy consumption; this includes aviation, road and rail as well as the marine sector. Nearly all that amount is fossil fuel. Assuming that somewhere between one-third and one half of that energy is used by the internal combustion engines of the marine sector, ridding the economy of fossil fuels or even attempting to reduce consumption presents a huge challenge. Let's look at some options.

(1) Shifting to bio-mass based fuels or cleaner variants of fossil fuels, is theoretically possible but those fuels still produce carbon emissions albeit at a lower level. Although biodiesel holds promise as an efficient fuel for transportation having about 93 percent of the power derived from traditional diesel fuels, serious concerns exist over its sustainability as a major fuel because of the amount of bio-mass needed to create the fuel. Recent American studies, for instance, place bio-mass requirements in thousands of acres. This is accompanied by calls for far larger crop yields per acre. Moreover, there is a not insignificant need for energy in its production, a fact which sometimes gets overlooked.

(2) Fuel Cells are essentially chemical batteries and have been used for several purposes from driving buses to providing emergency electrical power. Iceland and The Netherlands are now using fuel cells to power small boats and Iceland has plans to shift its entire fishing fleet to this power source. Several submarines are using fuel cells to augment their diesel-electric propulsion for greater underwater endurance. The cells are quite expensive and fairly bulky, but with some limitations can be retro-fitted into existing hulls. Individual cells can be "stacked" to provide a larger power potential; an upper limit of that process has not yet been established. Fuel cells are not easily refuelled, and the production and storage of hydrogen, essential for the operation of the present generation of fuel cells, can be problematic.

(3) For larger ships – naval and merchant – nuclear power offers the most logical solution to "getting off oil" especially as Canada already has a small nuclear industry. As with fuel cells, the key factor is to determine the amount of power needed. For instance, a modern, large container ship or the largest of the Marine Atlantic ferries have shaft horse power ratings (SHP) of 75,000 to 80,000. The electrical power needed to propel and provide domestic power for those vessels is about 70 megawatts (MW). The Russian nuclear-powered icebreaker, *Yamal*, has an SHP rating of 75,000 developed by two 56MW reactors. (For cross-reference, a wind turbine develops 2-3 MW depending on wind strength, and one MW will supply power for about 200 homes). A

fourth generation Westinghouse reactor generates 550 MW; a modern aircraft carrier has two such reactors. Small commercial reactors developing 25 to 100 MW are being developed in many countries; these would produce enough power to drive medium-sized cargo ships and ferries. Once past the “nuclear allergy” issue, the problem with nuclear power is cost and the need to develop a very large support infrastructure.

Conclusion

“Getting off oil” in Canada’s maritime sector will be a major undertaking that needs to be carefully planned in order not to disrupt the national economy. It would, in fact, be a national project that could take several decades to implement fully. There is no single solution to solving the perceived oil problem: a lot of new ships embodying new technologies will have to be built to replace existing hulls. Here, it makes sense to use nuclear power for warships, submarines in particular, icebreakers, the large Coast Guard vessels, northern supply vessels, and probably most of the Marine Atlantic fleet. Fuel cell technology is certainly promising and could well offer a solution for the smaller commercial vessels, harbour tugs, and smaller ferries. Biofuels, once the sustainability issue is solved, could well become the primary fuel for small fishing vessels and the bulk of the recreational fleet, but there is a lot of preparatory work to be done before this can become a reality.

The call to “get off oil” should be seen as an opportunity to move Canada to world-class status in the management of the marine sector. It will not be cheap, and will have to be accompanied by a significant public education initiative to overcome opposition to the new technologies. One has to wonder though if any government, present or future, will have the courage to embark on such a huge modernization initiative.

Peter Haydon
Bedford, NS,
July, 2016

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German Navy’s first F125 frigate reaches new home

FGS Baden-Württemberg, the first of four German Navy F 125 frigates, was transferred from the Hamburg shipyard to her new port in the Wilhelmshaven navy base on July 18. Eight ships had streamers flying topmast high to welcome the latest “family member” entering the base with manned rails and ship horn sounds.

Two 120-strong crews, Alpha and Bravo, will operate the frigate in the following months carrying out weapon- and sensor testing. The ship will undergo first-of-class trials and work-ups prior to commissioning in mid-2017.



FGS Baden-Wurttemberg

F 125 frigates are a new class of ships set to replace the smaller eight Bremen (F-122) Class - frigates currently in service of the German Navy. This is the reason for the two crews, each roughly half that of the ship's companies of the older frigates. Together with a ship designed for long service between major overhauls, the intention is to achieve similar length of operational deployments with four new ships to that now possible with the 8 Bremen class frigates. Crew changes will routinely take place every four months, and if the ships are deployed outside home waters, the change will take place in a foreign port.

Though classified as frigates, the four ships of the class are comparable to destroyers in size.

According to the German Navy, the new frigates require only half the crew necessary to operate the Bremen-Class frigates. They will be able to stay at sea for up to 24 months and thereby reduce the transit times for the crews. The crews will swap in regular intervals directly in the areas of operations which means that the ships will have to make fewer port visits. The navy has also developed an alternative crewing model for the F 122 frigates. Namely, the four ships will be operated by eight crews and the deployment duration for any of the crews should not exceed four months. The crews will count approximately 120 persons.

New sensor-weapon concepts are prepared for the enhanced flexibility and scalable control-options of the frigates. The Navy said that almost all weapons on board would be remotely controlled. Passive protection will also be enhanced by automatized surveillance systems.

These ships are the first ones to run the so-called CODLAG propulsion system. The system essentially consists of electric motors which will draw power from diesel generators. The new ships will carry four deployable boats and have two container spots on the middle deck. Accommodation space is provided for 50 Special Forces Personnel.

The F125-class frigate propulsion module consists of one LM2500 gas turbine, two electric motors and four diesel generator-sets in a combined diesel-electric and gas turbine (CODLAG) propulsion arrangement.

All four of the new F125-class frigates being built for the German Navy will use the same LM2500 CODLAG-configured propulsion system. Weaponry will consist of HARPOON and RAM missiles, one 127 mm gun, two 27 mm and five 12.7 mm guns. The 150-meter ships have a complement capacity of 190 persons and a maximum speed of 26 knots.

In addition to the traditional tasks of national and alliance defense, the 125 class frigates are designed for conflict prevention, crisis management, and international intervention and stabilization missions. They have some unique characteristics: there is no conventional anti-submarine sonar, only a diver and swimmer detection system to counter terrorist threats. The ship is not equipped with an area-air-defence system (this is provided by the F-124 Sachsen-Class frigates); just a point-defence self-protection capability with the 2 Mk. 49 RAM (Rolling Airframe Missile) system launchers fitted one forward and the other aft on the hangar roof. They are also equipped with water cannons for non-lethal defence. They are meant for independent operations, and one of the capabilities with which they are fitted are bow-thrusters to permit easier maneuvering in ports where tugs may not be available.

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NSNAC MEMBERSHIP RENEWAL FORM

Members are reminded that it is time to renew your NSNAC membership for 2016 if you have not already done so. Please complete the form below, include a cheque or money order for \$65.00 payable to Nova Scotia Naval Association of Canada, and mail it to:

Treasurer NS-NAC
P.O. Box 801
Halifax N.S.
B3J 2V2

Name:-----

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