TC Marine Engineer Training
-with Andrew Robertson

This talk will be based on the December 2009 Memorial University Faculty of Education academic publication:

A Study of Canada's Merchant Marin Post-Secondary Training requirements for Merchant Marine Crew,

by Chief Engineer Andrew Robertson.

The complete publication (230 pages), or any desired portion there-of, is available free of charge from Mr. Robertson as E-document. This includes many hard-to-get and useful statistics concerning numbers of Canadian Marine Engineers, current to January 1, 2008.

This study was inspired by controversy concerning crew training issues for Canadian ships. As mariners, we should be aware that Canada is more dependent on the maritime industries than most Canadians seem to be aware of. As we for the second decade of the 21st century, despite huge gains in technology and improved Labor Laws, many Canadian Marine Engineers find themselves working harder and putting in longer hours than ever before. On average, our ships and their crews get older by the year.

"Where is my relief?"
"Where are the new ships?"

There is a growing need to attract new large numbers of young people and provide them with the required years of high quality training. That's an expensive and uncertain prospect. It takes no less than seven years of intense college theory and ship-board practical training for a new trainee to make it to the lofty title of Chief Engineer.

Who's job is it to, "Make It All Happen?"

No-one has conducted a formal academic-format maritime industry personnel study since the Memorial University Offshore Petroleum Board Study of 2000, and Making Waves, a study of shipping in the Great Lakes (1990) by Jamie McDuff, a professional statistical researcher for the Niagara Marine Secretariat.

Following the lead of these and other previous professional studies, I was able to provide some more up-to-date numbers (2007) concerning who's out there for marine crew what they are doing.

The first Problem is that most school kids don't even know who and what a Marine Engineer IS. They are taught the minimum about our maritime industries, and even then, related careers are for "some-one else." This was certainly the case when I was in High School in the 70's.

Who's fault is that?

This is what got me to put on my walking shoes and travel across Canada (2005-2007). I visited numerous Employers, Marine Engineer Colleges, high schools and Marine Safety offices. I asked all the same questions everyone is asking:

Just who and what IS a Marine Engineer?
Do we even NEED any?
We do? Then….
What does it take to become one?
How many do we need?
How soon do we need them?
And finally….
WHO is going to make sure this All Happen?

I found there can be a "Disconnect" between the Key Players: Colleges who are tasked to recruit and train students, Employers, who will hopefully invest by sharing in recruiting and training, (and perhaps even hire some of their graduates), and the Canadian Public, who are for one (or many) reasons, up to now largely unaware of Opportunities that exist for THEM in the many sectors of the Canadian marine industries.

The Findings of my research provided Answers that came directly from those same persons who I interviewed in person: Employers, college Trainers, Marine Safety Examiners and ship-board Marine Engineers, themselves. I will list ways we can all be part making a PERSONAL INVESTMENT by promoting and training for our own profession as Marine Engineers.

Whose job is it? OURS.

FOR INFORMATION ONLY:

The Andrew Robertson study is inspred by several previous Professional studies:

Jamie Duff was a professional statistician in Toronto who was hired by the Niagara ***Marine Secretariat*** to provide a comprehensive report concerning a perceived imminent vessel crew shortage on the Great Lakes, back 18 or 20 years ago. Turns out, Mc Duff was right about his 1990 crewing predictions projected to 2000. I phoned him up in 2007 and we exchanged notes. We also discussed the present employment situation for the Great Lakes bulk carriers such as Algoma, CSL and Upper Lakes.

The ***Newfoundland Offshore Petroleum Board*** Study was a larger effort and there was no one single person to talk to. Just a lot of committees over in St. John's, and they've

long-since dissolved. All the Petroleum Board did was to outline their projected demands for personnel; NOT how to get them.

EMPLOYERS:

I talked to and surveyed by official University-approved mail-out questionnaires, about ten companies -from Seaspan Towing in Vancouver, to BC Ferries, Coast Guard, Marine Atlantic here in Eastern Canada, Maersk, Atlantic Towing and others. This took me about 2 frustrating years to finish off, until all the completed surveys were returned to me for correlation. Why so slow? Employers' HRM and technical department personnel are overloaded with work. They really are.

MARINE COLLEGES:

I interviewed and question-aired Department Heads at the 8 Transport Canada-approved (non-military) marine colleges in Canada. All colleges were personally visited by me and the instructors interviewed. This took me from 2005 to 2007. Those statistics I collected show their combined total output is only about 60 or 70 grads per year, and even that (quite frankly) is being optimistic. A lot of students drop out and go to Calgary after first work term. (I'm personally not happy about that.) My Stats Canada and official TC stats for 1997 to 2007 show these do not meet the rate of retirements.

MARINE SAFETY:

I contacted Marine Safety offices across Canada. Some of the Senior Examiner/ Inspectors were folks I already knew from past vessel inspections and/or college days. They seemed only too willing to talk and really laid the situation on the line.

It's all in the main body of my completed thesis

WHAT EVERYONE SUGGESTED:

a) Increased public awareness of opportunities in various sectors of Canadian maritime industries (there are many). This requires advertising by various employer groups, unions and Government.

b) Insertion of marine sector information in public school system syllabus, as is done in Western Europe.

c) Increased (tax, financial, leave system, and other) incentives provided to attract and retain marine sector employment, specifically as vessel crew. Being Scot by birth and half-Norwegian, marine careers were always considered "respectable professions of choice"; a great stepping career stone -well-recognized by shore-side sectors. Here in Canada, it's just that folks really aren't AWARE of our marine industries. We Canadians

tend to look AWAY from our shores -especially Central and Western Canada. This is a surprising but well-documented FACT.

d) Some employers suggested that TC make it easier for those leaving the Canadian Navy to get credit for military sea time and training. This is indeed already the case and in place as TC policy, but there aren't all that many leaving the Navy and going merchant marine. Were an ex-Navy person desirous of obtaining TC certification, they must get their Navy sea time and technical courses properly documented into the required format and apply to TC Marine Safety. Should approval be granted, then the TC Examiner decides what "ticket" they can write. By this, I mean, they would be required to write five to seven three hour written exams and the oral exam. This would be a real ordeal, and I only personally know of one person who went to that trouble. That was for a Leading Seaman Engineer who obtained the TC 2nd Class Engineer Certificate. I was informed that Canadian Navy and TC merchant marine engineer theory examinations are very different in content and format. Each of the six exams required took a month to prepare for.

e) Recognize all foreign national ICSTCW certificates as ships officers. That is to say, TC does NOT (2008) honor those STCW agreements of the International Maritime Organization (IMO) concerning bilateral recognition of certificates of Competency as a ships officer. Canadians can sail on foreign-registered ships, but foreign nationals who do not hold current and valid TC certification cannot sail on Canadian-flagged vessels. Many Canadian employers, including those on the Great Lakes, want TC to permit those foreign nationals holding ICSTCW certification to sail as officer onboard Canadian-registered vessels in level of professional capacity. (More than half the 10 employers surveyed said they were pushing for this.)

Fixing this situation will not happen overnight, of course, but it IS do-able.

PRESENT SITUATION FOR MARINE ENGINEER (AND NAVIGATION) TRAINING:

I noticed while working for the Terra Nova and various oil sector installations that there aren't all that many actual "sailors" onboard (that is TC Marine Safety-certificated personnel). They are people with plenty of shore-side skills that take the 3-day BST course, so they are minimum-qualified to travel to, and work on the marine -based job site. As a Chief Engineer, all I care is that these persons can get the hell off safely in case of emergency and can performed their skilled, specialized jobs safely and effectively.

TC-REQUIRED CERTIFICATION TAKES TOO LONG:

As we know, obtaining successive Transport Canada Certifications is a rather time-consuming affair. I graduated for the Coast Guard College (Engineers) in '86 and there really aren't too many of us left sailing. Maybe 2 or 3 of 26 Engineering grads and 2 or 3 of 28 Navigators. These numbers seem to correspond for all classes '85 to '90. Then there was no intake for several years after that. The Coast Guard College has a mandate to train

only for the Department of Fisheries and Coast Guard needs, but the reality is that most Coast Guard College grads move on to private sector after a couple of years.

The other year (2006)I helped recruit for the Coast Guard College. There were 50 new cadet openings available, but only 35 of the mere 350 applicants from all-Canada met minimum entry requirements: Grade 11 and 12 physics and one year of High School French. (Now this was for a much-touted 4-year all-expense paid scholarship worth $400,000 with guaranteed Government job for all successful graduates!)

As a Coast Guard College recruiter I visited schools in Nova Scotia and the BC lower mainland to present an information session concerning marine career opportunities. This was part of my study, and I recorded level of student awareness of the marine industry overall. To put it this way, it was fun, and I hope I left students with a few good things about opportunities in the marine industry (including, but not limited to vessel crew).

There are seven other non-military marine schools in Canada, including Marine Institute in St. John's (where I sometimes teach), Owen Sound (very much Lakers and cruise ship-oriented), Pacific Marine Training Institute in Vancouver (where I've also provided courses and found the same), Rimouski (very good, from what I've seen on my visits, and of course oriented towards to Quebecoise students).

There's the Port Hawkesbury Nova Scotia Community College campus (which is NOT part of the Coast Guard College -that's in Sydney). The Port Hawkesbury campus USED to be the old Nautical School in Halifax. Not many new students, anymore, so the two TC certificated engineer department instructors concentrate on providing Certificate-upgrading courses and the Engine room simulator. The MED facility and Engine and Navigation bridge simulators are the primary courses they provide. These are proven money-makers for the NSCC campus. However, as such, they do not replace the TC-required 500 hours minimum theoretical classroom training for writing the 4th class certificate. By that route, the students somehow have to get 3 years of sea time (that's 1095 eight-hour days or 730 twelve-hour days) as Oiler. (Whenever I get a General Purpose, that is, GP crew person who is the least interested in the Engine room, I give them credit for some sea time.)

Some believe that only six month's sea time is required, but that's for the full three and four year cadet-type programs. NSCC is NOW providing such a program. ***I may be the one working as a new INSTRUCTOR, with Department Head Rickey O'doom to "MAKE IT HAPPEN."***

Only 90 days sea time is required for the ERA certificate, which is formal TC-recognition as "Oiler" or "ERA" (same thing), and one I highly support.

Holland College Marine Campus in Summerside, PEI: It's a lovely campus and a favorite place of mine. It's run by Captain Steve McFarlane, who is being very creative about attracting new students. There is TC approval to hold marine engineer training, but few

such students are applying at this time. That's the Canada-wide challenge facing all the marine schools.

So for us TC vessel crew trainers, it's back to the need to advertise opportunities in the Canadian and world-wide marine industry in order to sell Canadian merchant marine TC college courses.

Thanks.
Andrew Robertson
Chief Engineer, B Naut. Sci., CCGC.,
Provincial Instructor Diploma (BC)
Master of Education