FRESH OFF THE BOAT

A BCIT Marine Engineer cadet's journey

About me

- George COMAN
- Born in Romania in 1979
- Immigrated to Canada in 2004
- Joined BCIT Marine Cadet training program in 2007
- Worked for Norwegian Cruise Line, Upper Lakes Shipping, Regent Cruises and Oceania Cruises(last one as an engineering officer)
- Graduating in August 2011

The Journey

- September 2007 – August 2008 First year of training – mostly at school
  - Eight months with the Chair of Vancouver CIMarE Branch
  - Learned the basics of Diesel, excellent hands-on training
  - Also did all the basic safety Transport Canada courses – ready to go to sea

The Journey (continued)

- September 2008 – February 2009
  First sea phase
  - A month on a cruise ship with Norwegian Cruise Lines
  - Three months on the Great Lakes on a self unloader
    - 33,000 tonnes
    - Two MAN L34/30, reduction and CPP

The Journey (Continued)

- March 2009 – July 2009 Second year in school
  - The learning curve became way steeper
  - Ran into more conservative instructors
  - At the end of it, went for another cadet term

The Journey (Continued)

- August 2009 – February 2010 – Second Sea Phase
  - Did 3 ½ Months on a cruise ship
  - Diesel-Electric, azimuth pods propulsion
  - World cruise

The Journey (Continued)

- March – August 2010 – Third year of school
  - Agonizing preparedness for the Transport Canada exam
  - 4th Class Motor Certificate at the end of it
  - Time to make some money

The Journey (Continued)

- September 2010 – February 2011 – Third Sea Phase
  - 3rd Engineer with Oceania Cruises
  - Got the chance to work on a new built M/S Marina
    - 66,000 tonnes cruise ship
    - Diesel Electric 2 Wartsila 12W54 and 2 8L54
    - Spent most of my time in the shipyards in Genova, Italy
    - Performed the sea trials and the maiden voyage

What's out there

- Technological progress is making its way in the shipping industry
- While the Medium Speed Diesels are going back to individual fuel pumps, cutting edge technology can be seen at work
- New generation Fire suppression systems (Hi-FOG) replacing everything else
- New generation oily water separators (MARINFLOC), separating ALL THE OIL
- And the scariest one of all, SPM and vibration condition monitoring

HI-FOG

- All spaces are protected by high pressure water mist system
- No CO2 nor other inert gas system for the Engine spaces
- High pressure pump units connected to fresh water with emergency connection to sea water
- Nitrogen cylinders and accumulator water tank one shot emergency discharge

MarinFloc oily water separators

- fully automatic constant flow Emulsion Breaking Bilge Water Cleaning System
- the effluent processed water from the CD contains less than 5 PPM of oil
- Cost of USD 2/m3 cleaned water
- keeps the water content in the drain/refuse between 2 and 5% of the Processed Bilge Water Volume

The engineer's annihilator "UMS2"

- Vibration and Shock Pulse Measurement eliminates the need of periodic maintenance on most machinery
- Class approved, it saves companies millions in spare parts and MAN HOURS
- It gives early warning for equipment on it's way out
- Extremely easy to use/graphic interface
- Introducing a new concept:

  "Condition based maintenance"

Condition monitoring(continued)

Bearing condition

Bearing lubrication

Out of balance

Misalignment

Loose parts

Soft foot

Gear damage

What to make out of it?

- Although the end of a trade might be in sight, got to make the best out of it
- Jobs are there and pay is not bad
- For now, the best choice is going International
- Canadian Marine Engineer Certificate has a top market value!

Canadian Trained vs. others

- The structure of the COOP program proved to be a great success
- BCIT's Hands-on learning approach made me highly competitive
- Competition from other countries with academically stronger programs
- However, they come with an acute lack of practical skills

Training at BCIT

- Confortable co-op program
- Small size class (16 students started – 12 graduating)
- Ideal preparedness for Transport Canada Fourth Class Engineer license
- A mix of nationalities, ages and backgrounds amongst the instructors – a perfect mirror of the Canadian society and of international shipping
- Most of the time student feedback is appreciated
- Most of the instructors looking forward to learn from returning students

Training at BCIT (continued)

- New, best of its kind, propulsion and auxiliary plant simulator(2011)
- Spacious workshop well equipped
- Industry placement
- Prime real estate

Training at BCIT (room for improvement)

- Lack of cooperation with local shipping companies
- Lack of incentives from provincial & federal Government
- Conservative attitude amongst some of the instructors
- Dated curriculum (Transport Canada)
- Very little choice for training/entry level positions on Canadian vessels

Questions?

THANK YOU