



NEWS

Canadian Naval Technical History Association

CNTHA News
Est. 1997

CNTHA Chairman
Pat Barnhouse

CNTHA Executive Director
Tony Thatcher

**Directorate of History and
Heritage Liaison**
Michael Whitby

**Maritime Engineering
Journal Liaison**
Brian McCullough

**Newsletter Production Editing
Services by**

Brightstar Communications
(Kanata, ON)
in association with
d2k Graphic Design & Web
(Gatineau, QC)

CNTHA News is the unofficial newsletter of the Canadian Naval Technical History Association. Please address all correspondence to the publisher, attention Michael Whitby, Chief of the Naval Team, Directorate of History and Heritage, NDHQ 101 Colonel By Dr Ottawa, ON K1A 0K2 Tel. (613) 998-7045 Fax (613) 990-8579

Views expressed are those of the writers and do not necessarily reflect official DND opinion or policy. The editor reserves the right to edit or reject any editorial material.

www.cntha.ca

Hold that thought!

When members of the CNTHA get together to comment on a topic of historical interest, the discussion often includes personal memories of events that are connected to the original point. The meeting notes normally capture what was shared in person, and amplifying notes are sometimes prepared after the fact, but some of the information shared in email threads can easily become buried or lost under the sheer volume of electronic mail.

At the regular meeting held on Sept. 21, the team explored ways to capture, edit and

preserve key segments of these important online conversation strings so that the details will be available for future reference. Several members of the committee are testing a possible method for doing this in as easy a way as possible.

The following item from retired Navy Electrical Officer Pat Barnhouse is a perfect example of an amplifying note he submitted to the CNTHA committee further to a regular meeting discussion.



The Short Life of the Electrical Branch

By Pat Barnhouse

During the Second World War the predecessors of the RCN Electrical (L) Branch were the radar officers trained in Canada and loaned to the Royal Navy for service in capital ships; the officers who fulfilled duties associated with ship's power and electronics; and the ratings from the torpedo, ASDIC (now sonar), and communications trades, including those trained in radio direction-finding (now known as radar). Around the time the war ended, the L Branch was formed from the nucleus of those officers and men who chose to remain in the Navy.

The responsibilities of the branch covered power generation and distribution, logs, plots, gyros, motors, generators, internal communication, radar, external communications, and the electrical/electronic components of guns and sonars. Officers were expected to be knowledgeable in all these areas, but ratings were somewhat more specialized. The generally accepted academic qualification for officers was a degree in electrical engineering, although those with an engineering physics or other acceptable science degree could qualify. Ratings were required to have a Grade 10 education, which in the post-war era was a high requirement as most other trades in the Navy were open to those with a Grade 8 education.

In-service training for officers was at first ad hoc, but by 1950 the first Long Electrical Officers Long L) Course was underway. Officers commissioned from the ranks were given a year-long technical course tailored to areas of technology to which they had not been exposed as ratings.

Ratings all joined as Ordinary Seaman Electricians Mate Standard (OSLMS), and after basic training proceeded to sea for OJT. Here they qualified as ABLM1 (the "1" standing for Trade Group 1). This was followed by their first technical course where they divided into training as an ET (electrical technician), or RT (radio/radar technician – later called LT). At the end of this course their rank and trade group were usually LSET3 or LSRT3. Their next course (Trade Group 4) was as a petty officer 2nd class, and here the ETs were further divided into ET (power generation and distribution, logs, plots, etc.), ED (sonar), or EG (fire control). Completion of this course usually saw them promoted petty officer 1st class Trade Group 4. Beyond this qualification there was also a chief's course required to become a CPO 1st class.

continued on next page

Canada 





There was a subset of this system involved with support of naval air. Following their Long L Course, some Electrical Officers were recruited into the naval air service and were qualified through a mixture of equipment courses and familiarization periods with the RN or United States Navy. The electrical ratings followed a separate stream from their shipboard counterparts with courses training them as EAs or RAs.

The demise of the Electrical Branch came around 1960 with implementation of the Tisdall Report, but that's another story.



The following is an edited excerpt* from a 2005 interview conducted by Colin Brown on behalf of the CNTHA's Oral History Program with Bruce Wilson, resident naval overseer for electrical power equipment for the DDE-205 *St. Laurent* class:

Colin Brown: Welcome, Bruce. The first ships to be designed and built in Canada for the RCN were the *St. Laurent* class in the early 1950s, and as you had some naval service associated with Canadian industry at that time, some record of your experience with the 205 program may be useful for future historians.

Bruce Wilson: In 1945 I applied to the new Electrical Branch of the Navy while I was on a two-year course at Royal Roads, the Royal Canadian Naval College. After graduating university in 1949, I attended the long Electrical Officers Course in Halifax, and a few years later was picked to go to the Westinghouse plant in Hamilton, Ontario to augment the staff of the Resident Naval Overseer (RNO). While I was there from about November of '53 to February of '55 I got involved with the DDE-205 program, working on the electrical power equipment – the motors and motor starters, controllers, and all the basic power stuff.

Colin Brown: What did the RNO job actually consist of? Were you inspecting?

Bruce Wilson: To a certain extent. More testing than inspecting, as we had our Inspection Services there for that. The function of the RNO was to facilitate the delivery of electrical equipment from Westinghouse so that it could be fitted in the ships. The equipment was all designed to military specifications. Our function was to ensure that the equipment that was designed by Westinghouse to meet the specifications was promptly forwarded to headquarters for preliminary approval. The first-off on each of the productions was given what they call a periodic test, which was fairly extensive, and it was our responsibility on the RNO staff to ensure that all the tests were properly carried out. The equipment would eventually be delivered to the shipyards as Government furnished equipment.

Colin Brown: Did Westinghouse have any difficulty meeting the Navy's requirements?

Bruce Wilson: Westinghouse had a particular way of doing things, and there was one incident when a chap in our Inspection Services who wasn't quite as familiar with the work as he should have been turned down about fifty rotors. It was general practice at Westinghouse to balance the rotors by drilling a small hole in the laminations to take out some of the metal, but this chap was turning them down because they had holes in them. The engineer came down to the office, but the inspector was standing firm on his decision. The RNO proposed a solution to put the equipment under a severe test, and if it passed he would accept it. I think everybody knew that the method was not going to affect anything, and of course, everything passed. It was a way to let Inspection Services save face.



HMCS *St. Laurent*

Colin Brown: How would you describe your relationship with Westinghouse? Friendly?

Bruce Wilson: We usually worked together very well to get the job done. There was one time when some circuit-breakers were brought in from the Westinghouse main plant in the United States. Most of them were bearing little red tags, meaning they'd been rejected by inspectors, and there was a note attached that read, 'These have been red tagged down here for the U.S. Navy. Maybe we can pass them off on the Canadians.' I thought it was pretty friendly of our Westinghouse man to show me what they had to contend with.

Colin Brown: The start of the *St. Laurent* class saw the big change from DC to AC, certainly in the generators. Was this a problem for you fellows when you were getting this equipment from Westinghouse, and seeing it go into the ships, and training different people?

Bruce Wilson: Not at all. It was a blessing. There was a big drop in the workload because the amount of maintenance required for a DC motor is astronomical compared to an AC motor. Not only that, but our technicians already had experience with DC AC generators in the ship, and they were familiar with AC because they saw it at home. It wasn't a major change for them, so it wasn't a problem at all.

Colin Brown: Thank you very much, Bruce.



*The full interview transcript may be found at:
http://www.cntha.ca/static/documents/oral_histories/b.wilson-2.pdf

