



ARMED MERCHANT CRUISERS IN THE FUTURE OF THE ROYAL CANADIAN NAVY: A LESSON FROM HISTORY

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AIM

1. This service paper will argue that the Royal Canadian Navy (RCN) should create plans to commission a new generation of armed merchant cruisers (AMCs). The first step of this argument will be to examine the timelines related to a future world conflict and the current publicly discussed timelines for completing the RCN's next class of surface combatants. Next, we will examine the history of AMCs and other converted civilian vessels in RCN service during WWI and WWII.

INTRODUCTION

2. To set the stage for the remainder of this service paper, we'll discuss an encounter from the past of AMCs. This engagement was between *HMS Jervis Bay*, an RN AMC, and the *KMS Admiral Scheer*, a German pocket battleship.

3. The battle between *HMS Jervis Bay* and *KMS Admiral Scheer* occurred on November 5, 1940. *HMS Jervis Bay*, an AMC, was tasked with protecting Convoy HX-84, which consisted of 37 merchant ships. The convoy traversed the North Atlantic enroute from Halifax, Nova Scotia, to Britain. The German pocket battleship *KMS Admiral Scheer*, commanded by Captain Theodor Krancke, was on a commerce raiding mission. The *Scheer* was far superior in armament and armor compared to the *Jervis Bay* and the merchant convoy it was escorting. Upon encountering the convoy, *Scheer* opened fire. Captain Edward Fegen of *Jervis Bay* gallantly turned his ship towards *Scheer* to draw its fire and give the convoy time to scatter. After 20 minutes, the AMC was reduced to a flaming wreck. The *Jervis Bay* was outgunned and stood no chance in a straight fight, but the action bought time for the convoy.¹ There was a second hero in that convoy, *SS Beaverford*, a Canadian Pacific Railroad cargo ship armed for self-defence with a small RCN detachment onboard. The *Beaverford* fought back for over 5 hours. There were no survivors.² Through their actions, *HMS Jervis Bay* and *SS Beaverford* made it possible for 32 of the 37 ships to escape. Without their sacrifice, the *Scheer* may have sunk the entire convoy. This tragic story of heroism will be discussed again in this paper as it provides positive and negative arguments for creating new AMCs for the RCN.

CURRENT CONDITIONS

4. Decisions regarding the preparation for creating AMCs were taken before WWI and WWII. This was encouraged by geopolitical conditions that made it clear that a conflict with Germany was likely. In our current era, conflict with China and/or Russia is becoming possible, and the United States believes that conflict is expected before the end of the decade. "Earlier this

¹ "Convoy Will Scatter: The Full Story of Jervis Bay and Convoy HX84."

² "Convoy Will Scatter: The Full Story of Jervis Bay and Convoy HX84," 163–83.

year, CIA Director Bill Burns said the United States believes that Chinese President Xi Jinping has ordered his military to be ready to invade Taiwan by 2027. This was so, Burns said, despite the likelihood that Xi was “surprised and unsettled” by the “very poor performance” of the Russian military in Ukraine.”³ Russia’s relations with the West are at a new low, and tensions continue to grow. “We’re going to have to get used to the idea that it’s realistic that [Russian President Vladimir] Putin will [attack a Nato country within 5-8 years],” said Marie-Agnes Strack-Zimmermann, chair of the Bundestag defence committee.”⁴ This combination of global flashpoints has frightening parallels with the international landscape of the 1930s. “The shifting balance of power between the United States, China, Russia, and other major players in the contemporary geopolitical landscape is leading to increasing tensions and rivalries, echoing the dynamics between major powers in the early 20th century.”⁵ What does this mean for the RCN and other allied navies? It means it is time to prepare for the next conflict.

5. How should the RCN prepare? Logic would indicate that the RCN should build new ships and upgrade existing ships to meet our adversaries' potential threats to Canada and our ally's interests. In Canada, the U.K., and the U.S., the main obstacle, beyond money, to increasing the size of the navy is the number of shipyards available and the length of time it takes to build a Destroyer. The previous paragraph established a risk that a global conflict with China or Russia could begin in 2027. Leaving allies three years to increase their fleet sizes. While the United States Navy is expecting the delivery of several combatants this year, they also expect to divest ships soon. The USN will divest 62 ships and replace them with 55 ships over the next five years.⁶ This will see the USN decrease slightly in size. The RN is in the process of building Type 26 and Type 31 frigates and is scheduled to begin the design of the Type 45 Destroyer replacement.⁷ The RN has announced that the first Type 26 will be in service by 2026, and the first Type 31 will deliver in 2027.⁸ These deliveries will allow the RN to maintain its current fleet strength. The RCN's first Type 26 is expected to deliver well after the projected conflict might begin. Public Services and Procurement Canada indicates the first Canadian Type 26 will be delivered in the early 2030s.⁹ Examining the documents and websites already cited, it becomes evident that it takes roughly five years to complete a contemporary destroyer or frigate once construction has begun. We will assume that in the case of the U.S., U.K., and Canada, all shipyards that can build combatants are currently engaged. Therefore, no surge capacity remains to build warships in a crisis.¹⁰ For the RCN, the three shipyards that are part of the National Shipbuilding Strategy are currently engaged and will not be able to begin construction of new combatant warships in time for the projected conflict. Even if construction begins immediately, they cannot deliver for another five years. If the RCN requires new warships in advance or in response to a global conflict, it must look to alternate sources.

³ “The Pentagon Is Freaking Out About a Potential War With China - POLITICO.”

⁴ Foy et al., “Why Nato Members Are Sounding the Alarm on Russia’s Aggressive Posture.”

⁵ Perspectives, “Pre-WWII Parallels With Today’s Geopolitical Realities.”

⁶ “Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress.”

⁷ “Royal Navy Frigate Programme Update | Navy Lookout.”

⁸ “Royal Navy Frigate Programme Update | Navy Lookout.”

⁹ Government of Canada, “Canadian Surface Combatant - Large Vessel Shipbuilding Projects – Shipbuilding Projects to Equip the Royal Canadian Navy and the Canadian Coast Guard – National Shipbuilding Strategy – Sea – Defence and Marine Procurement – Buying and Selling – PSPC.”

¹⁰ “CNO: ‘IMPERATIVE’ TO SHORTEN SHIP DESIGN, CONSTRUCTION TIMELINES.”

PAST USE OF AMCS

6. The past may hold an answer for the RCN's ship construction challenges if required to prepare for or respond to a likely global conflict. The history of AMCs stretches back to the age of sail.¹¹ This service paper will examine the First and Second World Wars. In WWI the RCN did not possess ships appropriate to the conflict and needed more hulls to secure its coastlines. To address this shortage, the RCN purchased and armed many smaller craft. In WWI, the RN employed numerous AMCs to secure allied shipping from the threat of hostile surface raiders. The AMCS converted from fast, powerful liners using weapons the RN had cached in ports worldwide, including Canada. The ships were British Merchant vessels that received design improvements to increase their survivability and allow guns to be mounted.¹² At their peak, there were 68 AMCs in service with the RN. However, their fuel consumption and value in their original roles led to many being returned to their original roles. In WWI, only two decisive, equally matched AMC vs Raider engagements existed. Through the war, 13 AMCs were lost to enemy action.

7. The RCN's three AMCs, HMCS PRINCE ROBERT, PRINCE DAVID and PRINCE HENRY, that served during WWII were converted from Canadian National Railroads steamships purchased for service in the RCN. They were converted in three shipyards and commissioned into the RCN in 8 months. "The top two decks were cut away during the conversion and a light cruiser superstructure fitted, thereby removing the boat-deck cabins and lounges. Accommodation was revised, the hull and decks stiffened in places, and a small amount of watertight subdivision added."¹³ They were armed with weapons that the RN had stored in Canada in anticipation of the war. The Princes served the entire war. During their wartime service, they captured or sank 18 000 tons of German shipping and escorted numerous convoys; two were converted to Landing Ship Infantry and participated in D-Day, while another was converted to an Auxiliary Anti-Aircraft Cruiser and escorted convoys to Malta. They never engaged surface raiders themselves. However, it is thought they deterred surface raiders from engaging their convoys because they looked similar to much more powerful heavy cruisers.¹⁴ This deterrence should also be considered, as presence, posture, and profile are important. The three princes provided the RCN with valuable service throughout the war, and until the arrival of the cruisers HMCS MINOTAUR and UGANDA, they were, by the gun calibre, the most powerful warships in the RCN. Once again, the RCN also brought several armed yachts into service, a common practice throughout the war.

8. Examining the numbers of lost AMCs from both wars provides an insight into the weakness of the concept of AMCs and the best arguments against their use. This paragraph will examine the number of lost AMCs in both wars. In WWI, 11 of the lost AMCs were sunk by submarines, one by a surface raider, and one hit a mine and sank. Statistics on tonnage protected or preserved were not found. In WWII, the numbers were very similar: ten sunk by submarines, two by warship raiders, one by a merchant raider, one sunk by an aircraft, and one scuttled.

¹¹ "The Origin of the Armed Merchant Cruiser - ProQuest."

¹² "The Armed Merchant Cruiser - Has She a Future?"

¹³ Boutilier, *RCN in Retrospect, 1910-1968*, 44.

¹⁴ Boutilier, 122.

However, if the tonnage saved by HMS Jervis Bay in the battle of HX-84 is considered, the AMCs saved 32 ships to their losses of 15 AMCs throughout the war. This one battle could be regarded as redeeming the concept, and it doesn't count the deterrence role and other intangible results. Still, by the war's end, some authors considered the idea of AMCs obsolete.¹⁵ Another used as a negative example was HMS Rawalpindi's encounter with KMS Scharnhorst and Gneisenau; the AMC did not survive this encounter, with the majority of her crew either killed or captured. However, they reported the German ship's location before they were destroyed, which caused the German ships to return to their home port. This encounter is hard to quantify, as the destruction those two battlecruisers could have caused to allied shipping would be difficult to estimate. These two raiders were also a legitimate threat to any pair of RN ships, save the most modern battleships; therefore, any other combatant would have likely faced the same fate as the AMC. The critique aimed at the concepts of the AMCs the RN employed is that it was an idea that didn't consider the power of the German surface raiders, Pocket Battleships and Battlecruisers versus the previous war's merchant raiders, basically AMCs conducting commerce raiding.¹⁶ If this argument is scrutinized, it should be clear that AMCs in either war were not meant to fight warships of equal tonnage but instead to deter lighter raiders, to provide maritime domain awareness to call in more powerful escorts if required, and to prevent enemy ships from attacking their convoys.¹⁷ An analysis of AMC will show that they had numerous flaws as warships; they were high-profile targets, large, tall and easy to see; they were relatively slow, faster than most ships, but not as fast as destroyers and cruisers; they were cumbersome; they had little to no armour; they did not have adequate watertight subdivision; they had relatively light weapons; their weapons were obsolete; they lacked modern fire-control; and they did not have radar. Despite these flaws, AMCs filled a real gap that was eventually filled by new construction, reassigned destroyers and light cruisers, lend-lease destroyers, and the eventual arrival of the USN in the conflict. The flaws that made them vulnerable will be further discussed in this paper.

FUTURE MERCHANT CRUISERS

9. The previous paragraph is an inditement of the AMC concept. However, when examined, AMCs provided valuable service in the last World Wars and filled a gap until more capable ships could be built. This paragraph will propose a solution to the issues faced by previous merchant conversions. That solution would be to use a small container ship as the hull for conversion. The modularity of the hull would provide a blank canvas with open sightlines for weapons and sensors. Sealed empty containers or containers full of buoyant fire-resistant material could provide extra watertight subdivision, or containers full of dense material could provide makeshift protection. Modern modular weapons, vertical launch systems, Spy-6 or Spy-7 radars, and close-in weapons systems (CIWS) would lend themselves to installation into the containership hull.¹⁸ Modern merchant ships also have longer ranges than warships. Containership conversion would also provide space for installing anti-submarine weapon (ASW) systems and sensors, improving the new AMCs odds against submarines.¹⁹ The space inside the hull would allow for required

¹⁵ "The Slaughter of England's ARMED MERCHANT CRUISERS - ProQuest."

¹⁶ "Blazing Sacrifice."

¹⁷ "Fighting Capabilities of the Armed Merchant Cruiser - ProQuest."

¹⁸ "A Missile Container Navy Would Be Six Times More Cost Effective | NextBigFuture.Com."

¹⁹ "A Fighting Merchant Ship for the 21st Century."

auxiliary and ancillary systems and crew quarters to be fitted.²⁰ The space would also allow adaptability for new equipment such as uncrewed aerial systems (UAS), Uncrewed Surface Vessels (USV), and Uncrewed Underwater Vessels (UUV).²¹ The USN has also experimented with creating escort carriers from containerships. These carriers would use VTOL aircraft to protect convoys and hunt hostile submarines.²² Data links would allow older but more capable warships to utilize weapons and sensors installed in the AMC, expanding their capabilities. In summary, when installed in a containership, modern modular weapon systems provide a capable warship that could act alone or be a force multiplier for older warships. Unfortunately, they would be less maneuverable when compared to older AMCs; however, maneuverability may be less critical in future combat.

CONCLUSION

10. Outside of a gunbattle requiring tight formation maneuvering, a modern AMC built in the hull of a containership would be a capable modern combatant that could act alone or as a force multiplier in concert with an older conventional warship. Historically, the fitting out of AMCs provided a stopgap warship to fill essential duties while newer construction was completed. A contemporary AMC could do the same and be more effective than its ancestors. If the lessons from history were incorporated, these ships could be as powerful as similar conventional warships while sacrificing maneuverability and damage control.

RECOMMENDATIONS

11. To prepare for the creation of AMC, the RCN should work with DRDC, RCN naval architects, and industry to verify the feasibility of converting containerships into AMCs and prepare plans for constructing AMC. The RCN should investigate where to source containerships for conversion and investigate contractual mechanisms to ensure a supply before a conflict. The RCN should consult with the USN and industry to secure weapons systems, preferably the same ones to be installed in the Canadian Surface Combatant or at least similar systems.

²⁰ "Containerized Weapons...and Merchant Warships."

²¹ LaGrone, "Iran Building Drone Aircraft Carrier from Converted Merchant Ship, Photos Show."

²² "How Container Ships Could Provide Naval Capabilities."

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