NAVY NEWS WEEK 48-1

3 December 2017

Indian court acquits 35 from anti-piracy ship of weapons charges

Crew members of U.S.-operated anti-piracy ship were being held in India for illegal possession of arms

Thirty-five men being held in India were on Monday acquitted of illegal possession of arms while they were on a U.S.-operated anti-piracy ship in 2013. The six Britons, three Ukrainians, 14 Estonians and 12 Indians were given five-year jail sentences by a lower court in southern India's Tamil Nadu state in January last year. The Indian coast guard intercepted the privately run **MV *Seaman Guard Ohio*** off the coast of Tuticorin in Tamil Nadu in October 2013. Semi-automatic weapons and thousands of rounds of ammunition were found. The crew members were charged with not having proper paperwork to carry weapons in Indian waters, but India has faced intense diplomatic pressure over the case ever since. R. Subramaniya Adityan, a lawyer for 19 of the crew, said after Monday's hearing at the Madras High Court that the men "*will be released after the court order reaches the prison officials on Tuesday*." Another lawyer, R. Arumuga Ram, said that efforts were being made to get the men released as early as Monday night. "*Otherwise, (we) will ensure to release all of them by 6 a.m. tomorrow*," he added. Indian authorities are still able to appeal, which could prevent the foreigners from leaving India. Twenty-three of the men are detained in Chennai's Puzhal prison, while the remaining 12 are at Palayamkottai Central Prison in Tirunelveli. Yvonne McHugh, partner of one of the British men Billy Irving, told Britain's Press Association news agency that she was "*over the moon." "We are just waiting to hear how soon they'll be home*," she said. "*I won't be able to speak to him until he's out of prison, we just want them home as soon as possible. I'm absolutely ecstatic and feel proud we've managed to do this after four years.*" The southern tip of India is close to major trading routes from Asia to Europe. The **MV *Seaman Guard Ohio*** was chartered to protect ships crossing the Indian Ocean at a time of increased risk from pirate attacks. The six Britons were former soldiers working as guards on the vessels. The 35, except the Ukrainian captain and one Briton, were released on bail in 2014 on condition that they stayed in Chennai. An Indian court quashed the charges against the crew in July 2014, but the Supreme Court overturned that ruling the following year. U.S. maritime security firm AdvanFort, which owns the **MV *Seaman Guard Ohio*** vessel, denied the charges, saying all firearms on board were legally purchased and properly documented. A spokesman for British Prime Minister Theresa May said Monday that the government "*has worked hard for over four years to support the men and their families and we share their happiness at the court's decision to give a full acquittal to each of the men*." They added that Britain was "*working with the Indian authorities to discuss the next steps*." Foreign Secretary Boris Johnson said the case had long been a "*top priority*" and the verdict was "*fantastic news." "The FCO has worked tirelessly behind the scenes to reunite these men with their families*," he said. "*I hope they can return home as soon as possible*."

Source : The Japan Times

ODESSA, Ukraine (Nov. 29, 2017) Sailors aboard the Arleigh Burke-class guided-missile destroyer **USS *James E. Williams* (DDG 95)** man the rails as the ship arrives in Odessa, Ukraine, for a scheduled port visit. ***James E. Williams***, homeported in Norfolk, is on a routine deployment to the U.S. 6th Fleet area of operations in support of U.S. national security interests in Europe. (U.S. Navy photo by Mass Communication Specialist 3rd Class Colbey Livingston/Released)

Vancouver aerospace firm MDA preps bid for new Royal Canadian Navy ships

MDA is part of Canada's Combat Ship Team, which includes Lockheed Martin Canada, BAE Systems, CAE, L3 Technologies and Ultra Electronics By Tyler Orton The Vancouver-founded aerospace firm known for creating the Canadarm will be part of a consortium putting forward a bid on the next generation of Canada's naval vessels. MDA confirmed to Business In Vancouver on November 28 that if the bid were successful, the firm would provide electronics,

antennas, radar, software and system engineering for the Canadian Surface Combatant (CSC) program. The CSC program is building 15 new ships for the navy to replace the country's Halifax-class frigates and Iroquois-class destroyers. The consortium known as Canada's Combat Ship Team also includes Lockheed Martin Canada, BAE Systems, CAE, L3 Technologies and Ultra Electronics. "*One of the key aspects of the procurement is creating economic benefits to Canada*," said Dave Hargreaves, MDA's vice-president of aerospace and defence, surveillance and intelligence. "*We have worked together with Lockheed Martin and the other partners to do a lot of really creative stuff about building the ships in Canada*." Irving Shipbuilding in Halifax is serving as the prime contractor for the CSC program. Meanwhile, Hargreaves told BIV that MDA's facilities in B.C, Ontario and Quebec would all be involved in developing the products and systems used on the new ships The bid put forward by Canada's Combat Ship Team would collectively employ an estimated 9,000 Canadians. Hargreaves said he could not provide an exact number of MDA employees who'd be involved with the program but said, "*the answer is 'a lot*.'" The government pegs the CSC program's costs at $56-60 billion. **Source: business Vancouver**

Royal Navy Ship Set to Sail to Australia for Strengthening Defense Relationship

By Hiren Samani

HMS *Sutherland* has been confirmed by Gavin Williamson, British Secretary of State for Defense, to visit Australia next year as scheduled for her Asia Pacific deployment. The ship has been planned to address the onboard crew on Friday in Devonport as she sails to Asia Pacific, according to Williamson who has provided additional information on the deployment. Williamson has reaffirmed his commitment to explore opportunities for the U.K. and Australian Armed Forces to work together and strengthen the defense relationship of both countries, after the latest conversations with Christopher Pyne, Australian Minister for Defense Industry and Marise Payne, Defense Minister. Capability Study to Fit CEAFAR Radar to British Ships Begins Early Next Year The Australian Navy and the Royal Navy could find further opportunities to collaborate after the visit of the Type 23 antisubmarine warfare frigate. The ship has been scheduled to visit Adelaide, Perth, and Sydney. The deployment has been anticipated to offer an exceptional opportunity of joint exercising for the U.K. and Australia. Moreover, it could give an opportunity for Britain to showcase its state-of-the-art antisubmarine warfare technology. In 2016, both the countries exchanged goods and services worth a £13.1bn, marking them as extremely close trading partners. In the same year, the countries had started to scope out the parameters for a potential Free Trade Agreement and approved to set up a bilateral Trade Working Group. This week, Liam Fox, British International Trade Secretary, has been in Australia to further develop the trade relationship between the countries. Earlier this month, Harriett Baldwin, British Minister for Defense Procurement, had visited the country. **Source: cmfenews**

ARABIAN GULF (Nov. 28, 2017) Pilots assigned to the "Wildcards" of Helicopter Sea Combat Squadron (HSC) 23 wait to be directed off the flight deck of the amphibious assault ship **USS *America* (LHA 6)** during a fast rope exercise with the 15th Marine Expeditionary Unit (15th MEU). ***America*** is the flagship for the America Amphibious Ready Group and, with the embarked 15th Marine Expeditionary Unit, is deployed to the U.S. 5th Fleet area of operations in support of maritime security operations designed to reassure allies and partners and preserve the freedom of navigation and the free flow of commerce in the region. (U.S. Navy photo by Mass Communication Specialist Seaman Chad Swysgood/Released)

New CRS report analyzes what's involved in getting to 355-ship Navy

The current and planned size and composition of the Navy, the rate of Navy ship procurement, and the prospective affordability of the Navy's shipbuilding plans have been oversight matters for the congressional defense committees for many years and the Congressional Research Service (CRS) has now released a report that will give legislators an insight into what sort of fleet the Navy is looking for, the options and timelines for achieving that fleet — and the costs to the taxpayer. Entitled "**Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress**," the report notes, in its summary that the Navy's proposed FY2018 budget, as amended on May 24, 2017, requests the procurement of nine new ships, including one Gerald R. Ford (CVN-78) class aircraft carrier, two Virginia-class attack submarines, two DDG-51 class destroyers, two Littoral Combat Ships (LCSs), one TAO-205 class oiler, and one towing, salvage, and rescue ship. On December 15, 2016, the Navy released a new force-structure goal that calls for achieving and maintaining a fleet of

355 ships. The 355-ship force-level goal is the result of a Force Structure Assessment (FSA) conducted by the Navy in 2016 and replaces a 308-ship force-level goal released in March 2015. The actual size of the Navy in recent years has generally been between 270 and 290 ships.Compared to the previous 308-ship force-level goal, the new 355-ship force-level goal includes 47 additional ships, or about 15% more ships. More than 47 ships, however, would need to be added to the Navy's 30-year shipbuilding plan to achieve and maintain the Navy's 355-ship fleet, unless the Navy extends the service lives of existing ships beyond currently planned figures and/or reactivates recently retired ships: CRS estimates that 57 to 67 ships would need to be added to the Navy's FY2017 30-year (FY2017-FY2046) shipbuilding plan to achieve the Navy's 355-ship fleet and maintain it through the end of the 30-year period (i.e., through FY2046). The Congressional Budget Office (CBO) estimates that 73 to 77 ships would need to be added to the Navy's FY2018 30-year (FY2018-FY2047) shipbuilding plan to achieve the Navy's 355-ship fleet and maintain it not only through the end of the 30-year period (i.e., through FY2047), but another 10 years beyond the end of the 30-year period (i.e., through FY2057). Even with increased shipbuilding rates, achieving certain parts of the 355-ship force-level goal could take many years. CBO estimates that the earliest the Navy could achieve all elements of the 355-ship fleet would be 2035. Extending the service lives of existing ships and/or reactivating retired ships could accelerate e the attainment of certain parts of the 355-ship force structure. Procuring the additional ships needed to achieve and maintain the Navy's 355-ship fleet would require several billion dollars per year in additional shipbuilding funds, but those funds are only a fraction of the total costs that would be needed to achieve and maintain the Navy's 355-ship fleet instead of the Navy's previously envisaged 308-ship fleet. CBO estimates that, adding together both shipbuilding costs and ship operation and support (O&S) costs, the Navy's 355-ship fleet would cost an average of about $11 billion to $23 billion more per year in constant FY2017 dollars than the Navy's previously envisaged 308-ship fleet. This figure does not include additional costs for manned aircraft, unmanned systems, and weapons. if defense spending in coming years is not increased above the caps established in the Budget Control Act of 2011, achieving and maintaining a 355-ship fleet could require reducing funding levels for other Department of Defense (DOD) programs. Navy officials have indicated that, prior to embarking on a fleet expansion, they would first like to see additional funding provided for overhaul and repair work to improve the readiness of existing Navy ships, particularly conventionally powered surface ships, and for mitigating other shortfalls in Navy readiness. **Source: Maasmond Maritime**

Canada's Combat Ship Team: BAE Systems, CAE, Lockheed Martin Canada, L3 Technologies, MDA and Ultra Electronics Join Forces to Deliver Canadian Surface Combatant Proposal

Lockheed-Martin-CSC
Nov 28, 2017

OTTAWA, Ontario, Nov. 28, 2017 /PRNewswire/ --
Two days prior to the procurement closure date, Lockheed Martin Canada (NYSE: LMT) has confirmed delivery of the proposal for the Canadian Surface Combatant (CSC) program signifying that the acquisition has moved to the next critical phase. BAE Systems, CAE, Lockheed Martin Canada, L3 Technologies, MDA and Ultra Electronics are partnering as Canada's Combat Ship Team for the Royal Canadian Navy's future fleet of surface combatants. Canada's Combat Ship Team is offering the most advanced and modern warship design, the Type 26 Global Combat Ship (GCS), with high-tech platform innovations from prominent Canadian companies. The solution includes the internationally renowned Canadian-developed combat management system, CMS 330. Canada's Combat Ship Team's approach to the CSC project exclusively parallels the Canadian Government's Defence Policy, which is the foundation for the offering: *Strong, Secure* and *Engaged*.

STRONG. Canada's Combat Ship Team's approach to the strategic objective *STRONG* is to provide the right ship for the Royal Canadian Navy that surpasses baseline requirements with minimal change. This solution represents the lowest development risk and is underpinned by Canadian doctrine; interoperability with five-eyes nations and other NATO allies; ability to achieve safety certification and security accreditation; ease of operation, maintenance and sustainment; and ease of upgradeability to address future capabilities.

SECURE. Under the pillar of *SECURE*, Canada's Combat Ship Team's offering focuses on ensuring successful program execution by bringing together a pan-Canadian team who have proven, demonstrated and current pedigree in performing complex defence contracts in Canada; who have well-established infrastructure, employees, security clearances and facilities in place today; who have demonstrated their commitment and reliability to successfully execute the project by their substantial investments in CSC and in meeting all procurement deadlines; and therefore who are poised to perform the CSC program, **Ready on Day One**.

ENGAGED. Embodied throughout Canada's Combat Ship Team's offering is our multifaceted approach to achieving the strategic pillar *ENGAGED*. The underlying principles implemented focus on partnership with all stakeholders and, equally

important, maintaining sovereignty of the CSC solution in Canada, which can only be achieved by having the solution and capability developed "*at home*" by Canadians. Canada's Combat Ship Team is living proof that capability investments made in Canada result in sustained jobs not only through long term sustainment of its system and products, but also extend to exports which leverage Canada's investments to other nations adding more jobs to Canadian industry. This team recognizes the significant benefits that Canada will receive with the implementation of Canada's Combat Ship Team's strategic objective to bring the jobs "home" to Canada and therefore collectively become the **Home Team.**

Quotes

"*The Type 26 Global Combat Ship is a flexible, next generation warship design which offers a low risk and affordable solution for the Canadian Surface Combatant program. With the UK Type 26 program running ahead of CSC, our Canadian ship will benefit from lessons learnt on the UK program. This schedule also allows Type 26 the opportunity to be the most advanced Canadian Surface Combatant. Canadian companies such as W.R. Davis Engineering in Ottawa, Rolls-Royce in Peterborough and L3 MAPPS in Montréal have already begun work on delivering high-technology systems for the UK's Type 26, demonstrating the skills and capability available from the Canadian supply chain*." ***Anne Healey, Country Director, Canada, BAE Systems***

"*Building on our proud Canadian history of more than 70 years, we are honoured to join forces with this pan-Canadian team that has been assembled for CSC. CAE welcomes the opportunity to leverage the strengths of our combined organizations to support the Government of Canada and Irving Shipbuilding to deliver a modern, capable warship with an integrated training system that aligns with the Future Naval Training Strategy. CAE is dedicated to offering customers the most innovative training solutions to achieve the highest levels of operational readiness and performance*." ***Joe Armstrong, Vice President and General Manager - Canada, CAE***

"*The Defence Policy released earlier this year announced the Government's new vision for the Canadian Armed Forces, and as a Pan-Canadian team, our approach to CSC implements these Defence Policy pillars where we are offering the right ship for the Navy to enable them to be STRONG; we are offering proven, Canadian pedigree of companies to ensure successful program execution is SECURE; and we are offering a solution that ensures sovereignty is maintained by bringing the direct jobs on CSC home to Canada so that we are ENGAGED and able to sustain the CSC ships throughout their lifespan. Lockheed Martin Canada has been Canada's trusted Combat System Integrator for more than three decades, and our team can be counted on to deliver affordable solutions, sustained job creation, and technology development in Canada for export potential. We'll employ our proven collaborative partnership model to successfully manage the highly complex systems integration process – including integrating our CMS 330 Combat Management System with the Type 26 Global Combat Ship – and leverage the innovation and talent here at home which will ultimately result in unprecedented economic outcome for Canada*." ***Rosemary Chapdelaine, Vice President and General Manager, Lockheed Martin Canada Rotary and Mission Systems***

"*We are proud to be a member of Canada's Combat Ship Team. With a strong Canadian footprint, we are in a unique position to leverage our established Canadian companies to deliver Canadian marine technologies, systems integration support, and through life in service support to the team in a number of areas including integrated communications, electro optic and infrared sensors, torpedo handling systems, and integrated platform management systems*." ***Mike Greenley, President, L3 WESCAM***

"*As one of Canada's leading space and defence companies, MDA's participation in this team is very strategic. For MDA, in addition to providing world-class operational CSC capability to the Canadian Forces, this project will be a major enabler in achieving significant future MDA exports from Canada and the resulting growth in jobs and business in Canada – a continuous corporate strategy for MDA since 1969*." ***Dave Hargreaves, Vice President – Aerospace and Defence, Surveillance and Intelligence, MDA***

"*As a long-time participant in Canada's defence community, Ultra Electronics is delighted to be a member of Canada's Combat Ship Team. It is truly a privilege to be able to provide our world-leading Canadian designed and developed underwater warfare products to this uniquely assembled team to deliver Canada's future surface combatant*." ***Ken Walker, President, Ultra Electronics Canada***

Quick Facts

- In June 2016, following Industry engagement, the Government of Canada announced that it would proceed with a procurement package based on a Total Ship Reference Point. For industry, this meant combining the efforts of a warship designer and combat systems integrator into a consolidated proposal.
- BAE's Type 26 has been selected by the Royal Navy and steel has been cut on the first of a planned eight ships. Due to its current stage in the lifecycle, there is no obsolescence in the design and it therefore offers the lowest risk to build in Canada.
- The Type 26 Global Combat Ship can undertake a wide range of roles from high intensity conflict to humanitarian assistance, including anti-submarine warfare and air defence. It is flexible, versatile and highly survivable with an extremely low acoustic signature.
- Built for the Royal Canadian Navy's doctrine, tactics and operations, Lockheed Martin Canada's innovative Combat Management System – CMS 330 – was developed in Canada as a result of 34 years' experience and knowledge of Canadian and NATO naval operations.

- Members of Canada's Combat Ship Team are currently delivering on the final stages of Canada's HALIFAX-class Modernization Project.
- Collectively, our team employs more than 9,000 Canadians in over 40 facilities across the country with an established presence on both coasts. Our collective Canadian supply chain consists of approximately 4,000 contracts Canada-wide.

About BAE Systems

BAE Systems is a world leading shipbuilding, support and maintenance company with the skills and expertise to design, build, integrate, test, commission and support complex warships. BAE Systems has a strong track record of collaboration with customers and industrial partners worldwide to share technology and skills - helping countries grow their naval and industrial capabilities. Canadian industry is already integral to the Type 26 Global Combat Ship program.

About CAE

As a globally-recognized training systems integrator, CAE is committed to providing defence and security forces world-class training centres, training services, and a comprehensive portfolio of training solutions. CAE is headquartered in Canada and has employees in 15 locations across the country.

About Lockheed Martin Canada

Lockheed Martin Canada has a proud legacy of providing innovative naval systems and sustainment solutions for Canada and abroad. For more than three decades, Lockheed Martin Canada has demonstrated its capability and commitment to the Royal Canadian Navy as the Prime Contractor and Combat System Integrator for the HALIFAX Class Frigates.

About L3 Technologies

A leading provider of communication, electronic and sensor systems used on military, homeland security and commercial platforms, L3 Technologies is also a prime contractor in aerospace systems, security and detection systems, and pilot training. With over 50 years of business operations in Canada, L3 has a strong Canadian presence with L3 MAPPS, L3 MAS, L3 Communication Systems Canada and L3 WESCAM that each have experience working on technologies and projects for the Royal Canadian Navy.

About MDA

MDA's business provides technology solutions to commercial and government organizations worldwide. The Company's established global customer base is served by more than 6,500 employees operating from 21 locations in Canada, the United States and internationally. MDA focusses primarily in the Communications and the Surveillance and Intelligence sectors, and has supported the Royal Canadian Navy for over two decades.

About Ultra Electronics

Based in Dartmouth, Nova Scotia, Ultra Electronics is a part of the Ultra Electronics Group, an international electronics company. Ultra Electronics has been delivering sophisticated, cost-effective, and innovative solutions to the defence market for 70 years. Ultra Electronics has been extremely successful in transforming its research investment into the technologically advanced underwater battlespace sensor systems that it delivers to both Royal Canadian Navy and internationally. Today, Ultra Electronics is recognized worldwide for its expertise in hull mounted sonar, towed active and passive arrays, sonar sensors, and underwater acoustics.

Source: http://news.lockheedmartin.com

Britain's Future Frigates: Type 26 Global Combat Ships

Dec 01, 2017 04:58 UTC by Defense Industry Daily staff

December 1/17: Foreign Military Sale Canada's government has received a proposal from a team led by Lockheed Martin to build vessels for the Canadian Surface Combatant (CSC) program. Partnered with BAE Systems, CAE, L3 Technologies, MDA and Ultra Electronics, the effort is offering the Type 26 Global Combat Ship (GCS), and will utilise high-tech platform innovations from prominent Canadian companies, including a Canadian-developed combat management system, CMS 330. No other details on the proposal were given. Designed by BAE Systems, eight Type 26 frigates are already planned for the British Royal Navy.

Type 26 concept

In the late 2000s Britain slated to replace its existing fleet of Type 22 Broadsword Class and Type 23 Duke Class frigates with 2 new ship classes under a program known then as "Future Surface Combatant" (FSC). By the 2010 Strategic Defence and Security Review (SDSR), the FSC's C1 (T26) and C2 (type 27) tentative variants were merged into a single Type 26 Global Combat Ship (GCS) class. Outside attention often focuses on big-ticket ships like aircraft carriers, submarines, and advanced destroyers – but the frigate is the real backbone of most modern navies. Lord Nelson loved his **HMS *Victory*** and her fellow first-rate ships of the line, but he asked the admiralty for more cruisers because he knew their versatile value as the "*eyes of the fleet*."

Modern multi-role frigates that can engage threats on the water, under water, and in the air fill that same role today, protecting other navy ships or undertaking independent action away from their task group. The Type 26 GCS will have to fill that niche – but first, its requirements and design must be defined.

Britain's Future Surface Combatants

Type 23 frigate: **HMS *Northumberland***

Of Britain's 30 frigates built – 14 Type 22s and 16 Type 23s – 17 (4 Type 22s, 13 Type 23s) still serve in the Royal Navy, and some of the Type 23s have received modern refits to keep them going a bit longer. All remain outclassed by more modern designs. Another 10 frigates of these types have been sold abroad to Brazil, Chile, and Romania, and 3 Type 22s have been deliberately scrapped or sunk. The 2010 SDSR decided that the rest of the Type 22s will join their fellows abroad, or in the scrapyard, leaving just the Type 23 Duke Class. Fortunately, the Type 23s have been doing a lot of sailing in less strenuous environments than the treacherous North Atlantic seas they were designed for. That has helped them to last longer, but no ship lasts forever, and replacements are needed.

Type 26, 2013 click for video https://www.youtube.com/watch?v=s30JF4pYbTw

Key Type 26 design criteria include multi-role versatility, flexibility in adapting to future needs, affordability in both construction and through-life support costs, and exportability. In reality, these requirements represent a set of key trade-offs. Some can be complementary, such as cost and exportability. Other pairings usually come at each other's expense, such as the desire for high-end multi-role capability within a small ship footprint, versus the desire to keep initial purchase costs low. The current Assessment Phase was designed to make many of these trade-offs, and the program was timed so it can take the 2010 Strategic Defence Review into account. Initial reports indicate an imagined cost of about GBP 400 million per ship, but the Royal Navy is no better than the American Navy at shipbuilding cost estimates. The first ships of the Type 26 class are due to enter service in the early 2020s, and Britain envisions at least 12-13 of them. The current Type 26 plan involves 5 basic frigates, and another 8 ships with additional anti-submarine warfare equipment. By the 2030s, around half of front line Royal Navy personnel are expected to operate on Type 26 frigates.

Type 26: Design

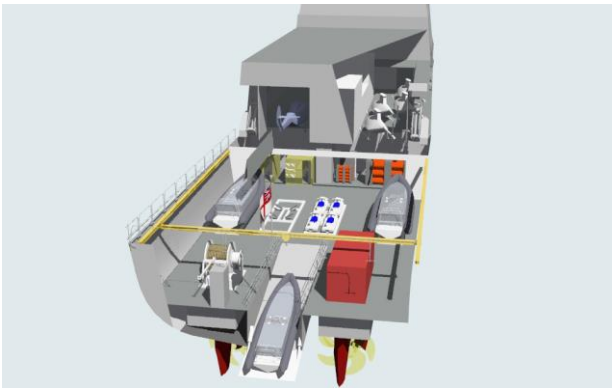
T26 concept, 2012

At present, there is no full detail design, and hence no defined equipment set for the Type 26. BAE's original working baseline reportedly involved a 141m, 6,850t ship, but reductions in target cost led them to publish figures of 148m but just 5,400t. The crew would be just 118, with room for 72 embarked troops. The ship will use a CODOG (Combined Diesel Electric or Gas Turbine) propulsion system, with a 36MW MT30 turbine from design partner Rolls-Royce, unspecified MTU diesel generator sets, and a gear box via David Brown Gear Systems Ltd. GE will be the overall integrator for the diesel-electric system. Current plans state a top ship speed of 28+ knots, with 60 days endurance and a range of 7,000 miles/ 11,000 km) at normal steaming speed of 15 knots/ 28 kmh.

MK45 Mod 4 https://www.youtube.com/watch?v=LbE8bQJk8-Q

Armament will include a 127mm gun, where according to Jane's BAE's Mk 45 Mod 4 has an edge over Oto Melara for the Maritime Indirect Fire System requirement. The new MBDA/Thales CAMM (Common Anti-

air Modular Missile) will replace the current Seawolf system for short range air defense. CAMM/FLAADS-M benefits from carrying an active radar seeker, reducing the need to rely on a ship's own radar illumination for targeting during saturation attacks. The Ministry of Defence has also reiterated that the ship would have a mission bay for "*unmanned air, surface and underwater vehicles, or additional boats*." Little is certain beyond that. The big outstanding questions involve radars, the combat system, and secondary weapons.



T26 mission bay, 2012

Radars. Based on the drawings of the May 2012 design, the long-range volume search radar atop the integrated mast would be a Type 997 Artisan system, which is also slated to equip Britain's future carriers and upgraded Type 23 frigates. The drawings also show the compact antenna faceplates of an active array radar mounted around the integrated ship's mast, however, similar to Australia's CEAFAR/ CEAMOUNT solution. At the very top end, a dedicated air defense variant of the ship could use the SMART-L derived S1850M radar that equips British Type 45 destroyers.

VLS. The May 2012 design's 48 illustrated vertical launch missile silos combine 24 larger Mk.41 or Sylver cells and 24 shorter cells. The VLS systems do come in different lengths, and the smaller cells would probably be slated for the short-range CAMM air defense missile. By October 2014 it appeared Mk.41 was the UK's choice.

Combat system. The use of CAMM means that at least some aspects of the PAAMS combat system will find their way onto the ship, but that area is still very unclear. What is clear, is that the ships will lack America's Cooperative Engagement Capability, which allows participating ships to see, track, and even fire on targets illuminated by any other CEC-equipped ship or plane. CEC makes a big difference to roles like wide-area air defense, and to ship's potential for use in anti-ballistic missile networks. Its presence would have pushed the Type 26 toward a positioning as a high end frigate, especially in conjunction with a very long-range radar like the S1850M. Instead, the Type 26 looks set to become a versatile mid-budget "*value play*" within the global export market.

Secondary Weapons. The displayed layout shows a last-ditch CIWS gatling gun, and its positioning would allow Thales' through-deck 30mm Goalkeeper. On the other hand, Britain has now used Raytheon's smaller, bolt-on 20mm Phalanx system on its Type 45 destroyers, so either choice would just expand existing buys. The Goalkeeper has more stopping power, but the Admiralty could decide that Phalanx's expandability makes it the more desirable option. The ability to convert a MK15 Phalanx mount into an 11-missile "*MK15, MOD31*" SeaRAM launcher, or some kind of future "*laser Phalanx*," is something Goalkeeper doesn't have.

Helicopters. Merlin helos will provide maritime force protection and anti-submarine warfare capabilities, while AW159 Lynx Wildcats HMAs (Helicopter Maritime Attack) will play a variety of attack and utility roles. The Wildcats will share Stingray torpedoes and Mk11 depth charges with the Merlins, and they will also sport Martlet (light) and Sea Venom (heavy) missiles.

Industrial Team. BAE Systems has made 10 selections so far, and expects another 19-20 agreements in 2014, before the production contract is signed. Official selections so far include:

Type 26 Partner	Unique Equipment
BAE Systems	**Shipbuilder & lead integrator.**
MTU	Diesel geneators
Rolls Royce	MT30 gas turbine
Babcock	Weapons Handling System
David Browne Gear Systems	Gear box
DCNS	Propulsion shaftlines
GE Energy Power Conversion	Electric Propulsion Motor and Drive System
Imtech	Heating, Ventilation and Air Conditioning System; Low Voltage Electrical equipment
Qinetiq	Paramarine advanced marine design software
Raytheon	Integrated navigation & bridge systems
Rohde & Schwarz	Integrated communications system
Tyco Fire	Fixed firefighting systems
Firm	**Weapons & Sensors**
BAE Systems	Type 997 Artisan radar; Mk.8 127/55 mm naval gun.
MBDA	CAMM-M Sea Ceptor short-range air defense missile.
© Defense Industry Daily, 2014	*Sources: DID Type 26 FOCUS article coverage.*

Targeting Exports

F124 fires SM-2

Britain intends to develop its frigates with an eye to export orders, in hopes of to spreading development costs over more vessels, getting more benefit from the manufacturing learning curve, reducing costs per ship thanks to volume orders, and sustaining the UK's naval shipbuilding industry. Rumored design options for export customers include a choice of gas turbine engines for maximum speed, or a slower but more efficient all-diesel design; as well as optional ship equipment fit-outs focused on either anti-submarine warfare (ASW) or air defense. So far, countries that have been reported as expressing some level of interest have included Australia, Brazil, Canada, India, Malaysia, New Zealand, and Turkey.

DSEi report https://www.youtube.com/watch?v=c8RBnlrg6Ao

Talks do not a deal make, however, and Britain will have a formidable set of established competitors to contend with. While the Americans have more or less abandoned this field, the Franco-Italian FREMM program offers a fully modern design, using the same MBDA PAAMS air defense missiles and DCNS SYLVER vertical launch systems as Britain's Type 45 air-defense destroyers. Meanwhile, variants of France's Lafayette Class stealth frigate design remain popular around the world. The German-Dutch F124 air defense frigates offer stealth and advanced air defense via active array radars, while using the ubiquitous American Mk.41 vertical launch system for their missiles. Lower down the scale, ThyssenKrupp Marine's globally popular MEKO Class family of ships provides a budget alternative. So does Damen Schelde's modular Sigma Class , which can be built as anything from an Offshore Patrol Vessel to a full-size frigate. Beyond the standard competitors, and countries like Russia with their own separate set of naval clients, China has recently begun exporting frigates in Asia. They will soon be joined by South Korea's very capable naval shipbuilding industry, which has demonstrated success in fielding modern domestic warships, and has a very strong commercial shipbuilding base to draw from. **Source: https://www.defenseindustrydaily.com**

China Looks Seaward to Become a Global Power

November 29, 2017 Guest Author

CSCL Star (Wikimedia Commons)

By Theodore Bazinis

Introduction

President Xi Jinping in his opening speech before the 19th National Congress of the Communist Party of China stated that, "*It's time for our nation to transform into a mighty force that could lead the world on political, economic, military and environmental issues*." In other parts of his speech he stated that, "*No country alone can address the challenges facing mankind," and that, "China is going to be a responsible global power."* These statements reveal an expansive strategic ambition for China's rise as a global leader. But it's not only about statements, the building of a mighty naval force and the emergence of China as a first-class maritime power can be identified as a fundamental indication of her attempts to implement such ambitions. A mighty naval force (a blue water navy) that can provide homeland security, ensure sovereign rights, contest national claims, and secure Chinese interests worldwide (including safeguarding the interests of her allies) constitutes a necessary condition for a world leader. The first thing that comes to mind when considering that only until now a historically continental power like China is now emerging as a leading naval power is the fallacious approach that asserted

the maritime character of the U.S. and the continental character of China would combine to result in the establishment of a new balance between them. But now since China has broken with its continental strategic tradition, the next thought that comes to mind is a saying of the greatest naval theorist Mahan who proffered, "Now that we created a powerful navy what are we going to do with it?'' In other words, what is China's vision that motivates her decision to be transformed into a global sea power? Furthermore, how will this potential be used?

What Maritime Superiority Entails

There are two possible strategies that first-class naval power enables. The **first** would be to challenge the hegemony of the U.S., either at the regional (Southeast Asia and West Pacific) or/and global levels. In such case a global rivalry would be imminent (including the extreme contingency of a hegemonic war). The **second** would be to participate in the international system as a responsible leading stakeholder that simultaneously secures one's own interests while actively contributing to collective security challenges. But pursuing either strategy involves numerous prerequisites in order to turn maritime power into strategic options of global import. Considering the globalized character of the contemporary world, the capability and ability to control neighboring littorals and the global commons constitutes a fundamental prerequisite for a state with the ambition to become leading power. Maritime supremacy includes the key missions of commanding neighboring littoral seas, controlling regional SLOCs or SLOCs of vital interest, promoting security in the global commons, establishing trade networks via maritime routes, and projecting power from the sea to apply force and gain access. All are seen as valuable capabilities in developing the potential to achieve greater strategic objectives. In this vein, Chinese actions to solidify maritime dominance are occurring along multiple lines of effort and work within a comprehensive, whole-of-government approach. These actions include expressing extensive claims (Nine-Dash Line), attempting to establish an ADIZ, building artificial islands, installing defense facilities on these islands, elevating Sansha to a province-level city with jurisdiction over disputed maritime features, developing high-end warfighting capabilities, maintaining regular coast guard law enforcement presence, and sustaining paramilitary activity. These can all be assessed as elements of China's multifaceted plan to dominate the South and East China Seas and establish maritime superiority in its immediate locale. A comprehensive effort is also taking place on a global scale. China's strategy includes efforts to control critical SLOCs by establishing distant naval bases (Hambantota-Sri Lanka, Gwadar-Pakistan, and Djibouti), implementing the One Belt One Road Initiative to include planning to reduce dependence on SLOCs, exercising in distant maritime zones such as the Baltic and Mediterranean Seas, and safeguarding the global commons such as by participating in counter-piracy patrols in the Gulf of Aden. All of the above are signs of extensive intentions, but is it safe to interpret this as a harbinger of a new hegemonic rivalry? Recall the fundamentals of U.S. maritime strategy in the 19th and early 20th centuries, which implemented principles based on the Monroe doctrine and on Mahan's theory about sea power and its role in obtaining global hegemony. Earning initial American maritime superiority included establishing regional dominance in the Caribbean Sea and reducing European influence in the region to prevent European states from becoming geopolitical players in the North American locale, such as accomplished in part by the Spanish-American War. The U.S. acquired control over the Panama Canal to promote security for chokepoints that were vital for her trade networks. The U.S. also occupied distant island colonies and established naval bases (Cuba, Hawaii, Philippines, Midway, Guam, Haiti, Samoa, etc.). The Great White Fleet sailed the world to announce blue water capability and exemplify American geopolitical preeminence.

The U.S. Navy aircraft carrier **USS *Ranger* (CV-4)** transits through the Panama Canal in 1945. (Wikimedia Commons)

Even if the similarities between the two strategies are noteworthy, other facts have to be taken into account. Many states rose to become global powers throughout history, and in many cases hegemony or great power status in international affairs was accomplished with maritime superiority. Remember the historic paradigms of Athens, the Roman Empire, East Roman Empire, Venice and Genoa, Netherlands, Great Britain, and the U.S. However, the contemporary global system is unique when compared with preceding periods. This is primarily due to globalization which has been readily facilitated by the world's oceans and been manifested in ever-rising volumes of international seaborne trade. Interdependency has grown between states and this shapes relations and rivalries. Today a conventional war between great powers is equivalent with the MAD (mutually assured destruction) of the Cold War. This time instead of nuclear weapons the deterrent/stabilizing factor is economic interdependency (MED – Mutual Economic Destruction), especially when the vast majority of trade is seaborne and where high-end naval warfare in one region alone could disrupt global supply chains.

Conclusion

China's activity in the maritime domain reveals extensive strategic ambition. Furthermore, her seaward turn after millennia of continental focus and the building of a first-class global navy within a single generation is just a necessary stepping stone in her attempt to acquire a leading world role. Although offensive approaches, extensive claims, and limited (in space and duration) tensions between China and other states can't be excluded, the elements of Chinese strategic culture would rather shape strategy characterized by patience and a well-estimated approach.

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Taiwan's navy: striking the asymmetric balance

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Image courtesy of Flickr user _MG_7778.

It is clear to Taiwan that it can't match mainland China's military might. As a result, the country is increasingly relying on an asymmetric approach to close the gap. But Taipei's plan to focus significant resources on building up the country's submarine fleet probably isn't the best way forward. Taiwan's latest quadrennial defence review, released in March 2017, departed little from previous versions in its basic strategy. The review highlighted the increasing capabilities of mainland China's forces and the need for countermeasures to 'achieve resolute defense through multi-domain deterrence' by '*adopting innovative/asymmetric means*'. The adoption of an asymmetric warfare strategy—in which a typically weaker military force seeks to exploit a stronger opponent's vulnerable points by using different weapons and tactics—has long been an undercurrent of Taiwanese defence policy. Given China's economic growth, it has been clear for a good while that Taiwan's armed forces can't maintain the advantage they had over the People's Liberation Army (PLA) during the Cold War era. The Taiwanese navy's recently launched $14.7 billion shipbuilding and force modernisation program is the maritime element of the attempt to rise to the challenge of meeting Taiwan's future defence needs. Although the plans for revitalising the surface fleet contain some provisions for asymmetry, the main effort in this area is focused on building a new submarine fleet. However, it's highly questionable whether that's the right type of asymmetry for Taiwan to embrace. With only four ageing vessels, two of which date back to the 1940s, Taiwan's subsurface fleet is in need of an upgrade. In 2001, the US agreed to build new vessels, but that effort quickly fell apart for political and technical reasons. With no other country willing to supply Taiwan with submarines due to fear of economic retaliation from China, Taipei this year announced that it would build eight of its own. Leaving aside the vast expense and inevitable delays that Taiwan will face in building a submarine industry effectively from scratch, what level of capability is the country likely to get? Many enthusiasts envision the vessels patrolling the Taiwan Strait in wartime so that they can sink PLA transport ships ferrying troops and equipment to the Taiwanese coast. If that occurred, Taiwan's loss of air superiority and sea control in the face of overwhelming PLA forces would be less decisive. But is that scenario in any way realistic? China has plenty of offensive assets of its own. Some, such as its conventionally armed ballistic missiles, would go towards ensuring that Taiwan's submarines never leave harbour. Those submarines that did get out to sea would be vastly outnumbered by the PLA's subsurface assets, and would also face an armada of surface ships and anti-submarine aircraft. So what's the alternative to submarine-based, gold-plated asymmetry? In the battle for the Taiwan Strait, the best option would be to further develop and expand more modest existing programs. Rather than submarines, Taipei should purchase dozens of upgraded models of the Kuang Hua VI-class fast attack craft fitted with the new extended-range version of the Hsiung-Feng II anti-ship missile. In times of tension, these small craft could be widely spread among Taiwan's harbours to help ensure the vessels' survival. Aspects of the new shipbuilding program should also be expanded. Less well publicised than plans for new destroyers and submarines is the intention to construct 11 Tuo Chiang-class corvettes. Increasing the number to around 20 would create a numerically resilient force capable of inflicting immense damage. Also of great potential utility and worthy of expansion is the plan to build four high-speed minelayers. Those vessels could all be backed up by large numbers of shore-based anti-ship missiles launched from platforms disguised as commercial vehicles. Arguments that giving up its submarine capability entirely would represent an unacceptable Taiwanese surrender of the underwater realm don't stand up to scrutiny. Importantly, the main threat posed by Chinese submarines isn't in the Taiwan Strait; what's more threatening is their ability to enforce a blockade in the more outward-facing maritime approaches to Taiwan. But patrolling in those areas would often put them beyond the easy protection of many of Beijing's aircraft and mainland surface-to-air missile batteries. Taipei's submarine-killing needs might therefore be best served by land-based anti-submarine helicopters using corvettes as 'lily pads' to refuel and extend their range. Although Taiwan's navy already operates such helicopters from its ships, expanding the fleet and planning to

operate them from camouflaged dispersal sites along Taiwan's east coast would improve the force's survivability and effectiveness. The country is already planning to order 10 MH-60R Seahawks from the US, and that number could be increased with money freed up from the submarine program. While Taiwan would always ultimately rely on the timely arrival of the US Navy to break a blockade, a credible effort in Taipei's territorial waters would encourage Washington to commit its forces to keeping international waters open. The navy isn't the only branch of Taiwan's military that's trying to procure an expensive and largely traditional system by calling it asymmetric. But even so, its attempt to obtain a prestige asset that's more glamorous but less useful than alternatives remains potentially damaging and should be resisted. The practical matter of Taiwan's defence needs to come first.

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