

MARITIME NEWS – 02 DECEMBER 2016



JS Takanami seen at the RNZN 75 anniversary celebrations. One of three ASW destroyers in the class, she was laid down in 2000 and commissioned in 2003 – less than three years and build. With a displacement of 6 000 tons, she has a 127mm gun and her Mk-41 VLS carries both ESSM missiles and ASROC, making her a very credible warship. Not all are aware of the size and capability of the Japanese Maritime Self-Defense Force which is one of the world's largest navies. With four helicopter destroyers (actually mini carriers with latest two displacing 27 00 tons!), twenty six destroyers; sixteen frigates/corvettes and nineteen submarines, they are a good ally to have.

Troubled \$29 Billion U.S. Warship Sows Fresh Doubt on Worth



Littoral combat ship **USS Coronado** (LCS 4). **U.S. Navy Photo**

The U.S. Navy's Littoral Combat Ship program "stands at a crossroads," as the service prepares to ask Congress to authorize spending as much as \$14 billion to buy more of the troubled vessels, congressional auditors say. Congress must decide "whether a ship that costs twice as much yet delivers less capability than planned warrants an additional investment," the U.S. Government Accountability Office said in a report issued Thursday as the Senate Armed Services Committee met to review the \$29 billion program.

The Navy plans to ask early next year for authorization to build the final 12 of 40 ships as well as equipment for missions. Those final ships are described as "frigates" that will be better-armed than the existing designs. The Navy will seek the funding for fiscal years 2017 and 2018 "despite significant unknowns about the cost, schedule, and capability of the vessel," the GAO said in its report to the committee headed by Senator John McCain, a longtime critic of the program. The last two defense secretaries have cut back plans for the ship, built in two versions by Lockheed Martin Corp. and Austal Ltd.

"The taxpayers have paid for — and are still paying for — 26 ships that have demonstrated next-to-no combat capability," McCain, an Arizona Republican, said in opening Thursday's hearing. Calling it an "all too common example of defense acquisition gone awry," McCain said Congress has continued to fund the ships even though lawmakers have raised questions about it since the first funds were sought in 2002.

Trump's Shipbuilding

But the Littoral Combat Ship, designed for operations in shallow coastal waters, may gain a champion in President-elect Donald Trump, who has vowed to increase the Navy's fleet to 350 ships from 272 today. In addition, Senator Jeff Sessions of Alabama, an early Trump supporter who's now his nominee for attorney general, has been a steadfast booster of the program. The Austal version is built in Mobile, Alabama. Lockheed builds the other model in Wisconsin.

"We can't achieve anywhere near" the 350 Navy vessels Trump has promised unless the costs of Littoral Combat Ships are brought under control, McCain said in an interview after the hearing. "You can't have costs double and redouble the way that has characterized the LCS. You can't do it, and taxpayers won't stand for it."

The GAO assessment, a distillation of 10 years of reports and current information, offers a cautionary tale on depending too heavily on the LCS to boost the fleet. The Navy's buying approach "raises concerns about overcommitting to the future acquisition of ships for which significant cost, schedule, and technical uncertainty remains," Paul Francis, the GAO's managing director for acquisition and sourcing management, wrote in the report. Twenty-six ships of what's now a 28-vessel program of original Littoral Combat Ships are delivered or on contract; the last two are being authorized this year. Over a decade, the vessels went from an estimated cost of \$220 million per ship to an average currently of \$478 million apiece.

Navy's Response

Sean Stackley, the Navy's acquisitions chief, said in testimony to the committee that the Littoral Combat Ship "is of critical importance to the Navy." He said it now has "a stable design and a mature production line" that's allowed the service "to make significant progress in completing both ship and mission-package testing requirements." Acknowledging the history of cost increases and schedule delays, Stackley said "each of the eight LCS that are in service was delivered at a successively lower cost, and with improved reliability as compared to their predecessors."

In the fiscal 2018 budget, Congress will be asked to authorize a 12-ship "block buy" of modified "frigates" intended to round out the program at 40 vessels. "Authorizing the block buy strategy for the frigate appears premature," Francis of the GAO wrote.

'Deviated' on Acquisition

The Navy has "deviated from traditional shipbuilding acquisition in hopes of rapidly delivering ships to the fleet" with the consequences "well-known today — costs to construct the ships have more than doubled from initial expectations, with promised levels of capability unfulfilled and deliveries significantly delayed," Francis said. McCain said in the interview that he expects the committee to examine whether the additional 12 frigates are needed. GAO "has made a strong case" against the block buy, "and I understand that. Except for mature systems, I have opposed block buys as well." **Source : Bloomberg**

Navy's costly and controversial Zumwalt may get second look by Trump

With breakdowns and growing costs, the U.S. Navy's most expensive destroyer ever is likely to face added scrutiny by the incoming Trump administration and could see its future role minimized. The **USS Zumwalt**, a stealth ship commissioned in October and costing upward of \$4.4 billion, has already had engineering and propulsion problems and experienced a breakdown last week when it passed through a portion of the Panama Canal.

It was delivered about two years late and despite its stealthy qualities is seen by some as vulnerable and no longer suitable for the missions it was designed to handle. "Since they originally started to build the ship, the threat environment has changed so that cruise missiles can easily reach out and hit anybody that's out there close enough to use a gun to hit the shore," said Bryan Clark, a senior fellow at the Centre for Strategic and Budgetary Assessments, an independent policy research institute based in Washington, D.C. Clark, a former aide to the chief of naval operations, explained that the Zumwalt-class destroyer was originally designed for operating close to shore such as acting as support for Marines when they land on shore.

"That mission sort of fell away [and now the ship is] too vulnerable and too valuable to have them get so close to shore." The Navy plans to get two more of the Zumwalt-class guided missile destroyers, which are equipped with labour-saving technology and manufactured by General Dynamics' Bath Iron Works in Maine. But its fate will ultimately rest with President-elect Donald Trump, who has made expansion of the Navy part of his plan to strengthen the military. A General Dynamics Bath Iron Works spokesman deferred questions on the destroyer to the Navy, which did not respond at deadline.

Costly ammunition adds to concerns

The Pentagon originally had hoped to get 32 of the Zumwalt-class warships but backed off the plan more than a decade ago after congressional criticism about costs. Adding to the concerns is the huge cost of ammunition for the Zumwalt's on-board advanced guns made by BAE Systems, which can run upward of \$1 million apiece, according to some reports. That means the each round of the guided precision ammo is equivalent to the cost of a Tomahawk or a Boeing Harpoon missile.

"The ammunition is definitely an issue," said Benjamin Freeman, deputy director of the National Security Program at Third Way, a Washington-based think tank. "Frankly it's unsustainable for the Navy. At almost \$1 million a shot, that's not actually something that they can do." The Zumwalt ship and its class of destroyers, also known as DDG 1000, was named for the late Chief of Naval Operations Adm. Elmo Zumwalt. The destroyer's 155-millimeter guns were designed to use so-called Long Range Land-Attack Projectiles, or LRLAPs, made by Lockheed Martin. Around 90 LRLAPs were bought for the Zumwalt, including some for testing.

"As the DDG 1000's mission continues to evolve, and taking into consideration funding profiles available to support the weaponization of the ship in light of the severe reduction in the planned production quantities, the U.S. Navy decided to evaluate alternate solutions to LRLAP," a Lockheed Martin spokesperson said in an email statement. "Lockheed Martin is working aggressively to provide the Navy with options in relation to the DDG-1000's long-range land attack mission."

Purchases of around 2,000 projectiles to supply all three Zumwalt-class destroyers would likely exceed \$1.8 billion. That is in addition to the Zumwalt-class development costs, which have already reached roughly \$10 billion. Meantime, the **USS Zumwalt** warship is expected to arrive in San Diego by the end of the year and a decision on new ammunition for the ship's big guns is likely to be made by the Trump administration.

Trump's defense plan outlined in September called for up to 350 surface ships and submarines, up from 276 today and above the Pentagon's current target of 308 ships over the next 10 years. That said, Trump hasn't specified plans for destroyer warships and could revisit the Navy's decision to buy three of the Zumwalt-class destroyers.

Zumwalt's role is evolving

Today, the Navy has around 80 destroyers and cruiser ships and Clark suggests there's a greater need to build smaller surface combatants like patrol ships, missile craft and frigates. He said a fleet architecture study the centre completed for the Navy concluded the fleet size doesn't necessarily need to be bigger across the board. "It's sort of a rebalancing of the Navy towards a larger and more distributed fleet of smaller platforms as opposed to what we have today, which is a smaller fleet of really large, expensive, multimission platforms," said Clark. "And the **Zumwalt** is a perfect example of that expense."

According to Clark, the Zumwalt ships appear destined to get used mostly as a technology demonstration platform for the Navy. That would allow the Navy to experiment with the destroyer's next-generation technology, which features all-electric systems that can distribute power for everything from the propulsion system to on-board laser guns that can destroy targets for a fraction of the cost of conventional weaponry.

Indeed, some suggest the older Arleigh Burke-class destroyers made by Huntington Ingalls Industries still provide a formidable platform for firepower and can be enhanced with next-generation upgrades. The Navy is currently building two Arleigh Burke-class destroyers per year and Clark believes the Trump administration could ramp that up to three to four "relatively easily."

"HII stands ready to support our customers' shipbuilding requirements, and will leverage our hot production lines and our suppliers in 48 states to build the ships that our nation requires," Huntington Ingalls said in a statement provided to CNBC. While the Zumwalt-class destroyer costs more than \$4 billion, the Arleigh Burke-class warships run about \$1.3 billion apiece. Huntington Ingalls has built and delivered 28 DDG 51 (or Arleigh Burke-class destroyers) and has contracts for seven more.

Still, some believe the Zumwalt should have a bigger role as Trump looks to build a 350-ship Navy. They contend that the older destroyers lack the power bandwidth for some of the energy-intensive futuristic weapons such as the electromagnetic rail gun and lasers. "My concern is that the Trump administration ... would continue to buy the antiquated technology just to get ships in slots to that 350 number," said Freeman, a long-term proponent of the Zumwalt class.

While the upfront costs of the Zumwalt-class destroyers are higher, Freeman contends there's a longer-term savings for the Navy going with the next-generation warships over the older Arleigh Burke-class. He insists the lifetime costs of

going with newer-class destroyer technology is "at least equal" if not ultimately lower than the older class. "If you can pay a little money now to get a better ship, then that will be cheaper to operate in the long run and we should do that," said Freeman. Moreover, he said he expects the Navy will eventually lower the cost of the 155-millimeter projectiles and can increase the use of Zumwalt's laser electric weaponry. **Source : CNBC**

British Fighters to Overfly South China Sea



British fighter planes visiting Japan will fly over the South China Sea and Britain will sail aircraft carriers in the Pacific once they are operational in 2020, given concerns about freedom of navigation there, Britain's ambassador to the United States said on Thursday. The envoy, Kim Darroch, told a Washington think tank that British Typhoon aircraft currently deployed on a visit to Japan would fly across disputed parts of the South China Sea to assert international overflight rights, but gave no time frame.

Speaking at an event also attended by Japan's ambassador to Washington, Darroch said that most future British defense capacity would have to be directed toward the Middle East, but added: "Certainly, as we bring our two new aircraft carriers on stream in 2020, and as we renew and update our defense forces, they will be seen in the Pacific. "And we absolutely share the objective of this U.S. administration, and the next one, to protect freedom of navigation and to keep sea routes and air routes open."

In spite of Britain's preoccupations in the Middle East, "we will try to play our part" in the Pacific, he said. Four British fighter planes arrived in Japan in October to take part in exercises with Japanese forces at a time of rising tensions over China's pursuit of disputed territory in East Asia, including the South and East China Seas. In Beijing, Chinese Foreign Ministry spokesman Geng Shuang said all countries had freedom of navigation and overflight in the South China Sea, in accordance with international law, and there was no dispute about that.

"We hope the relevant party can earnestly respect regional countries' efforts to safeguard peace and stability in the South China Sea," he told a daily news briefing. Japan's ambassador, Kenichiro Sasae, said the United States, Japan and Britain discussed greater naval cooperation at a meeting at the Pentagon in October and Tokyo welcomed greater British involvement in Asian security. Darroch said British Prime Minister Theresa May and U.S. President-elect Donald Trump discussed the importance of all NATO members meeting their defense spending commitments in a telephone call this week, their second since Trump's November 8 election.

Darroch said all NATO states had committed to spending at least two percent of GDP on defense, yet only five, including the United States and Britain, were doing so. "I think the criticism ... during this election campaign that a number of NATO countries aren't doing everything they can ... is entirely fair and we will see how the incoming administration wants to take that forward," he said. Trump has criticized European NATO members for not meeting their spending commitments and has also called on U.S. Asian allies Japan and South Korea to pay more for their defense or risk the alliances.

Trump has said he plans to build up the U.S. military, and advisers have said he will pursue a policy of "peace through strength" in the Pacific in the face of China's growing assertiveness. The advisers say Trump can also be expected to take a more "robust" approach to naval operations to assert navigation rights in the South China Sea, a vital global trade route. Source : The Maritime News/Reuters

Bit early for the carriers but maybe to placate Trump. Hope the Chinese don't take umbrage wrt investments in the UK.

Polish Navy will be modernised: President

Poland's naval fleet will be modernised over the next several years "after 27 years of neglect and underinvestment," the country's president said on Tuesday. Andrzej Duda was speaking during ceremonies marking 98 years since Poland's navy was re-established after more than a century of foreign rule. The navy continues its tradition even though it was almost completely destroyed during World War II, Duda said. Meanwhile, the period after communism ended in the country in 1989 marked a time when the navy was left neglected and underinvested, he said.

Poland regained independence on 11 November, 1918, after 123 years of foreign rule. The navy was revived 17 days later, on 28 November, under a decree issued by the country's chief of state, Józef Piłsudski. Poland's navy now has a fleet of 40 warships and over 40 aeroplanes and helicopters. **Source : PAP, TVN 24**

Russian Navy Aviation receives further batch of SU-30M fighters



A separate naval air attack regiment of the Russian Navy has received several Sukhoi Su-30SM (NATO reporting name: Flanker-C) multirole fighters today, with one of them named "Irkutsk", the Russian Defense Ministry told journalists. "We are the first unit of the Russian Navy's air arm to have converted to the Su-30SM fighter. We like the capabilities of the aircraft. It is natural, therefore, that one of the warplanes in our regiment's inventory will bear the name of the city of Irkutsk, from which the Su-30SM hails," the Defense Ministry's press office quoted regimental commanding officer Andrei Kiselyov as saying. The press office explained that the decision to name the fighter Irkutsk had been made by the Naval Aviation commander. **Source : TASS**

Navy Recognition's comment:

Russia will replace all of its Su-24 Fencer bomber jets operating in the Black Sea Fleet on the Crimean Peninsula with Su-30SM Flanker multirole fighters by 2020, the head of the Russian Black Sea Fleet's Naval Aviation said Thursday. According to Irkut Corporation, Su-30SM are super manoeuvrable twin engine jets, equipped with phased array radar, thrust vectoring engines and canards. The fighter is able to use modern "air-to-air" and "air-to-surface" high-precision weapons. The Russian Navy Su-30SM are not intended for the Russian aircraft carrier **Admiral Kuznetsov** but operate from naval aviation bases on land. They have a two-tone dark gray camouflage and bear a St. Andrew's flag (Russian Navy Ensign) painting by the cockpit.

Growing Chance That Israel-Germany Submarine Deal to Be Cancelled, Shipyard Source Tells German Daily

Amid the controversy surrounding Israel's procurement of the German subs, source at German firm says sixth submarine to be delivered to Israel in 2019 will likely be the last. The chances of the Israeli-German sub deal falling through are increasing, a source at the German firm ThyssenKrupp has told the German newspaper Handelsblatt.

Handelsblatt printed on Monday an interview with the source, who said that **INS DAKAR**, Israel's sixth sub due to be delivered in 2019, will likely be the last one to be built in Germany's Kiel shipyards for Israel. He said he expected the deal to sell Israel three additional subs, which are at the centre of controversy lately, to be cancelled. Last week, Attorney General Avichai Mendelblit ordered a police investigation into the scandal. A statement from the Justice Ministry said that the decision to investigate was made after receiving additional information gathered while investigating a top security official on suspicion of bribery.

According to police sources, the probe will initially focus on the deal to purchase ships to defend Israel's natural gas off-shore platforms. On Sunday, it was revealed that David Shimron, Prime Minister Benjamin Netanyahu's lawyer, received some 700,000 shekels for representing Miki Ganor, ThyssenKrupp's representative in Israel. Shimron has represented Ganor over the past five years in various cases, some of which involved the naval deals with Germany and some on other issues, like real estate.

Haaretz discovered that Shimron's fees stood at 715,000 shekels for representing Ganur since 2012. Based on this sum, Shimron would have received \$3,000 every month for his work. According to attorney Ya'akov Winrot, who claims to be Shimron's lawyer, the appointment of Ganur as the representative for the German shipyards was made without any involvement from Shimron. **Source: Haaretz**

Colombian Navy launches third offshore patrol vessel ARC Santander



Photo: Colombian Navy

Colombian state-owned shipbuilder Cotecmar launched the third offshore patrol vessel for the Colombian Navy, during a December 1 ceremony in Cartagena. The vessel was named **ARC Santander** and christened in the presence of the Colombian president Juan Manuel Santos. ARC Santander is the third of six offshore patrol vessels built indigenously for the Colombian Navy. Construction of the vessel started in December 2014.

According to the Spanish-language website InfoDefensa, the vessel features several improvements over its two predecessors, **ARC 20 de Julio** and **ARC 7 de Agosto**. It has an upgraded armament with a 76 mm OTO Melara gun and a 25 mm M242 Bushmaster auto-cannon. The ship is also capable of reaching greater speeds and has an enlarged flight deck which can now embark an organic medium helicopter. **Source : Naval Today**

Nice looking ship – the vessel of the future for smaller navies that cannot keep up with pace of technology.

African Marine Solutions Group acquires Smit Amandla Marine

SMIT Amandla Marine, a market leader in the provision of specialist marine solutions in the Southern African region, has been acquired by African Marine Solutions Group (AMSOL), owned by a consortium including SMIT Amandla Marine management and employees, the Mineworkers Investment Company, Pan-African Capital Holdings and RMB Ventures. According to AMSOL Managing Director Paul Maclons, who joined SMIT Amandla Marine in 2004, the business opportunity for a management buyout was the catalyst for this transaction. "We are excited to build a great South African company and to remain relevant to our clients in the Energy, Mining, Ports and Maritime sectors into the future."

Delivering marine solutions to international standards to government and private sector clients, the company's track record and long term partnerships have ensured substantial growth and value creation since SMIT Amandla Marine was launched more than a decade ago. Mary Bomela, the CEO of the Mineworkers Investment Company, believes the acquisition supports the objectives of Operation Phakisa: "In facilitating the transformation of the maritime economy in South Africa, AMSOL is now in a unique position to support the continued growth and transformation of the sector in the region – with the transaction including SMIT Amandla Marine's business in Namibia and Mozambique. They bring their market leadership and expertise to the acquisition, and have been guided by a strong management team. We look forward to all the possibilities and how this will create a difference. "The sale of the business to AMSOL is in line with a stated commitment by shareholders to capacitate the company over time and return it to 100% South African ownership.

This ensures that the business remains relevant in its chosen markets, which include Africa and the Indian Ocean Island region, and is able to continue to meet expectations of local and international clients who demand high Safety, Health, Environmental Protection and Quality standards, and a commitment to localisation. Looking ahead, the

company's strategy will support sustainable regional economic transformation in a niche industry where barriers to entry remain high. Dr Iraj Abedian, the CEO of Pan-African Capital Holdings, underscores this point: "In identifying the synergy that consortium partners have in terms of a commitment to sound corporate governance principles, transformation, regional growth and value creation, we believe that AMSOL is now better placed than ever to continue meeting the needs of clients in the region well into the future, and to make a meaningful contribution to regional economic and investment integration."

The participation of permanent employees in a broad-based Employee Trust which will own 12% of the company ensures that when AMSOL excels, those who are at the coal face delivering value will benefit. "We are proud to be a part of restoring the ownership of this business into South African hands. SMIT Amandla Marine owes a large part of its success to its exceptional people and RMB Ventures believes that management's participation as shareholders will further entrench the business' focus on delivering a world class service to its clients," says Andrew Aitken of RMB Ventures. SMIT Amandla Marine will transition to the AMSOL brand by the end of 2016. **Source : Maasmond Clippings**

Russian Navy Slava class Cruiser Marshal Ustinov Completes First Trials After Modernization



Recent picture of **Marshal Ustinov** coming back from its first set of sea trials at the Zvyozdochka Shipyard in Severodvinsk in north Russia.

The **Marshal Ustinov** missile cruiser of the Northern fleet returned to Severodvinsk after the first test sortie following maintenance and upgrade, spokesman of the Zvezdochka Shipyard Yevgeny Gladyshev told TASS. "The cruiser sailed exactly a month and tested all systems of the warship. It covered over 4 thousand nautical miles. Besides the crew, there were close to 200 experts of the acceptance team from Zvezdochka and subcontractors onboard," he said.

Gladyshev said all exposed drawbacks will be eliminated in two-three weeks and in the end of December the **Marshal Ustinov** will sail out for the home port of call in Severodvinsk where the main base of the fleet is located. The maintenance and upgrade of the cruiser began in 2011. In particular, the gas-turbine generators and the main engines, hull systems and the main cable were repaired. The basic radio-electronic warfare complexes have been upgraded. **Source : TASS**

Navy Recognition's comment:

According to various sources, the **Marshal Ustinov** is being fitted with an advanced missile system, probably, the Kalibr (SS-N-27 Sizzler) or Oniks (SS-N-26 Strobile). The upgrade will provide the cruiser with the Podberyozyovik three-dimensional long-range target acquisition radar and Fregat-M2M sea-skimming target acquisition radar. There have been statements that the ship will not receive advanced air defense missile systems.

The Project 1164 Atlant-class cruisers are designed for dealing with enemy surface combatants and providing combat stability of Russian task forces in remote corners of the ocean. The development of the class began in the later 1970s. Four cruisers were built, of which three are in the Russian Navy's inventory.

The cruisers in the class displace a total of 11,500 tons and measure 186 m in length. They have a full speed of 32 knots, a range of 7,500 nm at 18 knots, a 130-mm AK-130 gun, antiship and air defense missile systems, 30-mm AK-630M anti-aircraft guns and torpedoes. They can carry a Kamov Ka-27 (Helix) helicopter or derivatives thereof.

General Dynamics to christen U.S. Navy's Colorado submarine

General Dynamics will christen the USS Colorado, the U.S. Navy's newest Virginia-class submarine, during a ceremony on Saturday. Company officials say the new vessel will be the branch's most advanced submarine to date, featuring some technology from Ohio-class platforms. Colorado will serve as the fifteenth ship of the Virginia-class.

Virginia-class attack submarines are marketed as the most technologically advanced variants employed by the U.S. Navy. The vessels are designed to track down and destroy enemy undersea platforms while also projecting power ashore. They are typically armed with Tomahawk cruise missiles, and can also support intelligence, surveillance, and reconnaissance missions.

The christening comes 4 years after the ship was formally named in April 2012. The upcoming ceremony will feature U.S. Navy Secretary Ray Mabus, who will be listed as the principal speaker for the event. **Source : Space War**



New JOps deputy chief named, but no word on a new Chief

It appears no decision has yet been taken on who will become the next commander of the SA National Defence Force's (SANDF) Joint Operations Division. Rear Admiral Derek Christian, officially Deputy Joint Ops Chief and acting Chief since the death of Lieutenant General Duma Mduyana, retires at end of February next year. He will be replaced by current Brigadier General Eddie Drost of the SA Army who will become a major general when he moves to his new post on March 1.

No appointment as Chief Joint Ops is contained in the as yet unreleased promotions and transfers signal for generals and admirals. The deputy chiefs of the SA Air Force, SA Navy and SA Military Health Service (SAMHS) will all be leaving their respective arms of service. Major General Jerry Malinga is due to retire as SA Air Force number two in June next year and will be replaced by Major General, currently Brigadier General, MI Buthelezi.

Rear Admiral Hanno Teuteberg has decided to voluntarily leave the SA Navy using a MEM (members exit mechanism) and his last day in uniform will be March 31 next year. Taking over from him in the Visagie Street, Pretoria building housing the Navy Office will be Rear Admiral Guy Jamieson, currently a JG. The post of Chief of Naval Staff (CNS), vacant since the departure of Rear Admiral Rusty Higgs after 40 years of service three months ago, will be filled by current Rear Admiral (JG) AE Kubu who becomes a full rear admiral on assumption of the CNS post.

At SA Military Health Services headquarters in Kasteelpark, Major General HC Grobler retires at the end of July next year. His post will be taken by current Brigadier General N Ndhlovu, who will earn his second star when he becomes the number two military medic in the country. **Source : defenceWeb**

Our congratulation to all on their promotion – all capable and deserving. I am sure CJOps will be appointed before RAdm Derek Christian retires and will probably be of the same service.

READER COMMENT

1. Ref Iranian Navy claims – "Well, I now understand why Durban has been so cool and cloudy for the last umpteen weeks. It's all the fault of the Iranians who have replaced our Indian Ocean with chilly Atlantic waters."
2. The airborne laser depth sounder has been in use with the Ozzies from the late 1990's. It can unfortunately only work in shallow water down to about 30-40 meters in clear water. They use it over those vast fairly shallow waters to the north of Australia. When I visited the Hydrographic Office in Sydney in 1995, whilst researching the Defense GIS (Geographic Information System), they offered it to us but unfortunately we are still stuck still stuck in "by the mark". Whilst I was on the survey recorders course in Saldanha in 1956 the engine of the survey launch broke down and we had to do our practical in the HDML with the hand lead. Man did I appreciate the invention of the echo sounder after that episode!

Great closing comment – have a great weekend!

AGS