

# Keel Laid for Future Littoral Combat Ship USS Cleveland



A welder authenticates the keel of Littoral Combat Ship (LCS) 31, the future USS Cleveland, by welding the initials of the ship's sponsor, Robyn Modly, wife of a Clevelander and former U.S. Navy secretary, who has embraced the city as her own.

*LOCKHEED MARTIN*

ARLINGTON, Va.— Lockheed Martin celebrated the keel-laying of the future littoral combat ship (LCS) USS Cleveland in June 17 ceremonies at the Fincantieri Marinete Marine shipyard in Wisconsin.

A welder authenticated the keel of LCS 31, the future USS Cleveland, by welding the initials of the ship's sponsor, Robyn Modly, wife of Thomas B. Modly, a Clevelander and former U.S. Navy secretary.

“I am humbled and honored to be the sponsor of a ship that bears the name of the great city of Cleveland, with its rich and storied history of support to our armed services,” Modly said. “I look forward to a lifelong relationship with the ship and her crew as they proudly serve the Navy and our nation.”

The laying of the keel celebrates an important milestone in the life of the future USS Cleveland (LCS 31) and marks a significant event for the construction of the nation's 31st LCS. The USS Cleveland will be the fourth commissioned ship in naval service, since World War I, named after Cleveland, the second-largest city in Ohio and home to countless Navy and Marine Corps veterans. With the city's deep ties to maritime service since the turn of the 20th century, LCS 31 will honor Cleveland's longstanding naval history.

“We are proud to build another proven warship that allows our

Navy to carry out missions around the world,” said Steve Allen, Lockheed Martin Vice President of Small Combatants and Ship Systems. “All of us at Lockheed Martin, including our hardworking team in Marinette, Wisconsin, look forward to working with the U.S. Navy to continue delivering highly capable and adaptable Freedom-variant littoral combat ships to the fleet.”

“Our team at Fincantieri Marinette Marine is proud to celebrate the keel laying of the LCS 31 with the gracious citizens of Cleveland,” said Jan Allman, CEO of Fincantieri Marinette Marine. “This milestone is a testament to the power of cooperation and forward thinking by the entire Freedom team and our customer, the United States Navy. It also bears witness to all the dedicated craftsmen and women working in our FMG system of shipyards.”

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## **Navy Seeks to Unleash the Potential of Unmanned Systems**



Chief of Naval Research, Rear Adm. Lorin Selby, observes an unmanned vessel on Pier 12 during Integrated Battle Problem 21 (UxS IBP 21) Distinguished Visitors Day at Naval Base San Diego, April 16. U.S. Pacific Fleet’s UxS IBP 21, April 19-26, integrates manned and unmanned capabilities into the most challenging operational scenarios to generate war fighting advantages. *U.S. NAVY / Mass Communication Specialist 2nd Class Natalie M. Byers*

ARLINGTON, Va. – The Department of the Navy (DoN) is producing an after-action review of the U.S. Pacific Fleet-led Unmanned Integrated Battle Problem 21 (IBP21), an exercise held April 19-26 in San Diego, California, the Office of Naval Research

said in a June 17 release.

“Advancements in technology have created the opportunity to provide our military with an operational advantage by developing improved manned/unmanned command and control capabilities,” said Dorothy Engelhardt, director of unmanned systems for the deputy assistant secretary of the Navy for Ships. “This enables our military to be more agile, lethal and decisive.”

During IBP21, numerous multi-domain unmanned platforms – including unmanned aerial, surface and underwater vehicles (UAVs, USVs and UUVs, respectively) – were put into real-world, “blue-water” environments, working in sync with manned platforms in actual combat drills designed to support Pacific Fleet objectives in the Indo-Pacific region.

“Large-scale exercises such as IBP21 are critical for the Navy and Marine Corps to make the transition to a hybrid manned-unmanned force in the future,” said Chief of Naval Research Rear Adm. Lorin C. Selby. “These demonstrations ensure what works in theory will work in the fleet—in an environment that is messier, dirtier and wetter than a lab. They also allow us to get valuable feedback from the Sailors and Marines themselves.”

Many of the platforms tested in IBP21 were supported by the Naval Research Enterprise (NRE), which Selby commands. Comprising the Office of Naval Research (ONR), ONR Global (the command’s international arm) and the Naval Research Laboratory, the NRE is tasked with providing the capabilities and long-term vision ensuring U.S. naval dominance today and into the future.

The purpose of IBP21 was to explore a variety of questions about how unmanned systems can be incorporated into fleet operations. For example: How can unmanned and manned systems work together effectively in diverse warfighting scenarios?

How can you integrate unmanned systems seamlessly into existing platforms? What is the best way to train Sailors and Marines to use such complex, evolving technologies?

So far, major takeaways from IBP21 include: Unmanned systems are resilient, enable better beyond-line-of-sight targeting, and improve battlespace awareness and command and control. They also provide significant advantages in ISR (intelligence, survival, reconnaissance) and Targeting and Fires capabilities, without creating additional risks to the mission or warfighters. The result—more effective offensive and defensive postures.

The testing of new unmanned technologies reflects the Navy and Marine Corps' commitment to rethinking concepts of operations, as noted in the widely publicized naval document "Unmanned Campaign Framework," which was recently released by the DoN.

The Unmanned Campaign Framework notes autonomy will complement, not replace, manned assets, and will provide warfighters far more options in combat.

Since the completion of IBP21, naval leaders, scientists and engineers have assessed what worked, what didn't and future actions for accelerating unmanned capabilities to the fleet and force.

These future steps include:

Continuing to leverage fleet experimentation exercises to execute the DoN Unmanned Campaign Plan

Creating a more iterative experimentation process to tighten the "test fast, operate, learn fast" concept

Improving industry partnerships and participation in fleet experiments and exercises

Improving the integration of secure communication networks to maximize effectiveness of manned-unmanned teaming

Developing concepts of operation and employment to quickly operationalize unmanned systems.

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# **HII                    Announces                    First International Order for REMUS 300 UUVs**



Four of Huntington Ingalls Industries' REMUS 300 unmanned underwater vehicles have been ordered by the Royal New Zealand Navy for use in mine countermeasure and survey operations.

*HUNTINGTON INGALLS INDUSTRIES*

NEWPORT NEWS, Va. – The Royal New Zealand Navy has placed the first international order for four REMUS 300 unmanned underwater vehicles (UUVs), Huntington Ingalls Industries announced in a June 21 release.

“We are pleased New Zealand is upgrading their fleet with new REMUS 300 UUVs,” said Duane Fotheringham, president of the Unmanned Systems business group in HII’s Technical Solutions division. “Technology has progressed significantly over the past few years, and the REMUS 300 represents one of the most advanced man-portable UUVs on the market today. We look forward to continuing our long-standing relationship with the Royal New Zealand Navy.”

New Zealand has a fleet of six REMUS 100 UUVs that are used for mine countermeasures and underwater survey operations. The Royal New Zealand Navy has also used its REMUS vehicles for search and recovery, including locating the wreck of the Princess Ashika ferry in 2009 and assisting with the White Island volcano search effort in 2019.

“We have a fleet of six REMUS 100 UUVs we have been using consistently for the past 14 years,” said Captain Garin Golding, Royal New Zealand Navy. “The flexibility and modularity of the REMUS 300 will allow us to tailor the vehicles to specific missions, further augmenting our capabilities.”

Designed for modularity and portability, the REMUS 300 can be reconfigured with a range of sensors and payloads to meet mission requirements. In addition to the four vehicles, New Zealand acquired high-definition camera modules and additional swappable battery modules. The sale was facilitated through New Zealand Ocean Technology, HII’s REMUS sales and in-country support partner. Delivery of the four REMUS 300s is expected by summer 2022.

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## **VTG Awarded NAVSEA Prime Contract to Expedite Delivery of Innovative Technologies**

CHANTILLY, Va. – VTG, a provider of force modernization and digital transformation solutions, has won a \$27 million, full and open, single-award, prime contract to support the Naval Sea Systems Command (NAVSEA) in overseeing and executing its Small Business Innovation Research and Small Business Technology Transfer programs, and assisting in the expedient transition of SBIR and STTR technologies, products and services to the fleet, the company said in a June 16 release.

“We are honored to support NAVSEA in harnessing the creativity, agility and entrepreneurial spirit of small businesses to deliver the highest-priority technology needs of

the Navy,” said John Hassoun, VTG president and CEO. “We look forward to leveraging our expertise across the defense and intelligence sectors to increase small business participation in federally funded research and development, foster collaboration between small firms and nonprofit research institutions, and stimulate the exciting technological innovations that will transform our nation’s sea power and benefit our national economy.”

Under the five-year contract, VTG will provide program and project support services to the NAVSEA SBIR/STTR programs by defining focus areas, developing topics and identifying small business proposals and contractors to participate in the program. The company will also be responsible for supplying expertise and knowledge to assist the program manager in developing strategies and plans, as well as policies, processes and procedures to increase the quality, efficiency and effectiveness of the SBIR/STTR programs. The work will primarily be performed at the Washington Navy Yard.

The SBIR program originated in 1982 as the government’s primary mechanism for engaging small technology businesses in R&D. It was designed to spur technological innovation, help meet federal R&D needs, increase private sector commercialization of innovations resulting from federally funded investments and encourage participation by minority and disadvantaged persons. The Navy has taken part in the SBIR program since its inception and has developed the highest commercialization success rate in the Defense Department. Last September, NAVSEA SBIR/STTR received the prestigious DoD Vanguard award for recognition of its outstanding work in supporting the Navy’s goal to “rapidly and adaptively procure innovative technologies from small businesses.”

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# SECDEF Announces Four Flag Nominations



Vice Adm. William R. Merz, nominated to be deputy chief of Naval Operations for Operations, Plans and Strategy, N3/N5, one of four nominations announced June 17. *U.S. NAVY*

ARLINGTON, Va. – Secretary of Defense Lloyd J. Austin III announced June 17 that the President has made the following nominations:

Vice Adm. William R. Merz, U.S. Navy, has been nominated for reappointment to the rank of vice admiral and assignment as deputy chief of Naval Operations for Operations, Plans and Strategy, N3/N5, Office of the Chief of Naval Operations, Washington, D.C. Merz is currently serving as commander, Seventh Fleet, Yokosuka, Japan.

Rear Adm. Francis D. Morley, U.S. Navy, has been nominated for appointment to the rank of vice admiral and assignment as principal military deputy assistant secretary of the Navy (Research, Development, and Acquisition), Washington, D.C. Morley is currently serving as director, Navy International Programs Office, Office of the Secretary of the Navy, Washington, D.C.

Rear Adm. Darse E. Crandall, Judge Advocate General Corps, U.S. Navy, for appointment to the rank of vice admiral and assignment as Judge Advocate General of the Navy, Washington, D.C. Crandall is currently serving as deputy Judge Advocate General of the Navy/commander, Naval Legal Service Command, Washington, D.C.

Capt. Max G. McCoy, Jr., has been nominated for appointment to the rank of rear admiral (lower half). McCoy is currently serving as commander, Naval Aviation Warfighting Development Center, Fallon, Nevada.

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# U.S. Coast Guard Welcomes New Vice Commandant



Adm. Linda Fagan relieved Adm. Charles Ray as the 32nd Vice Commandant of the Coast Guard during a Change of Watch ceremony at Coast Guard Headquarters, June 18, 2021. Ray retired after more than 40 years of service in the Coast Guard. *U.S. COAST GUARD / Petty Officer 1st Class Travis Magee*  
WASHINGTON – Adm. Charles W. Ray was relieved as vice commandant of the U.S. Coast Guard by Adm. Linda L. Fagan during a military change-of-command ceremony held June 18 at U.S. Coast Guard Headquarters, the service said in a release.

Ray served as the vice commandant since May of 2018 and led the Service's recapitalization of its legacy fleet of ships and aircraft while ensuring the Coast Guard's 81,000 active duty, reserve, civilian, and auxiliary members were "Always Ready" to answer the nation's call. Ray retired from the Coast Guard after 40 years of service and received the Department of Homeland Security Distinguished Service Medal from the Secretary of Homeland Security, Alejandro Mayorkas.

"I am extremely proud of the dedication and resiliency I have seen throughout our service and throughout my career," said Ray. "It has been an honor to serve with the men and women of the Coast Guard and it is my privilege to pass the reigns of vice commandant to Adm. Fagan, a true trailblazer and inspiration to so many."

Adm. Fagan most recently served as the commander of the Coast Guard Pacific Area, overseeing all Coast Guard operations in the Pacific, covering more than 74 million square miles of ocean, from the U.S. Western States to Asia, and from the

Arctic to Antarctica.

“Thank you, Adm. Ray for your service and your extraordinary leadership. You have made a tremendous, and long-lasting impact on our great service and we will strive to build upon your extraordinary work,” said Adm. Karl L. Schultz, commandant, U.S. Coast Guard. “Adm. Fagan, it is an honor to welcome you as the first woman to serve as a four-star admiral in the U.S. Coast Guard, and I congratulate you as you assume the duties as our 33<sup>rd</sup> vice commandant. I am proud to be part of this historic moment and look forward to leading the Coast Guard alongside of you.”

A change-of-command is a time-honored ceremony that signifies the absolute transfer of responsibility, authority, and accountability from one person to another.

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## USS Ford Completes First Shock Trial Event



The aircraft carrier USS Gerald R. Ford (CVN 78) completes the first scheduled explosive event of Full Ship Shock Trials while underway in the Atlantic Ocean, June 18, 2021. The U.S. Navy conducts shock trials of new ship designs using live explosives to confirm that our warships can continue to meet demanding mission requirements under harsh conditions they might encounter in battle. *U.S. NAVY / Mass Communication Specialist 3rd Class Riley B. McDowell*

ARLINGTON, Va. – On Friday, June 18, the USS Gerald R. Ford (CVN 78) successfully completed the first scheduled explosive event as part of Full Ship Shock Trials (FSST), the Navy said in a release. The first-in-class aircraft carrier was designed

using advanced computer modeling methods, testing, and analysis to ensure the ship is hardened to withstand battle conditions, and these shock trials provide data used in validating the shock hardness of the ship.

The U.S. Navy has conducted FSSTs over several decades, most recently for the littoral combat ships USS Jackson (LCS 6) and USS Milwaukee (LCS 5) in 2016; as well as for the San Antonio-class amphibious transport dock USS Mesa Verde (LPD 19) in 2008, the amphibious assault ship USS Wasp (LHD 1) in 1990, and the guided missile cruiser USS Mobile Bay (CG 53) in 1987. The last aircraft carrier to execute FSST was USS Theodore Roosevelt (CVN 71) in 1987.

The Navy is conducting the shock trial testing in accordance with Office of the Chief of Naval Operations Instruction 9072.2, and as mandated by the National Defense Authorization Act of 2016.

Ford's shock trials are being conducted off the East Coast of the United States, within a narrow schedule that complies with environmental mitigation requirements, respecting known migration patterns of marine life in the test area. The Navy also has employed extensive protocols throughout FSST to ensure the safety of military and civilian personnel participating in the testing evolution.

Ford is the newest and most advanced aircraft carrier in the U.S. Navy. The ship closed out a successful 18-month Post Delivery Test & Trials period in April, during which the crew completed all required testing, accomplished planned improvements and maintenance ahead of schedule, and learned valuable lessons to increase the reliability of Ford-Class systems. At the same time, the ship also served as the sole East Coast platform for conducting carrier qualifications.

Upon completion of FSST later this summer, Ford will enter a Planned Incremental Availability for six months of

modernization, maintenance, and repairs prior to its operational employment.

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# MBDA Tapped to Provide Sea Ceptor Missile to Brazilian Navy



MBDA will provide its Sea Ceptor air defense missile to Brazil's navy under a new contract. *MBDA*

MBDA has been awarded a contract to equip the Brazilian navy's new Tamandaré-class frigates with the Sea Ceptor air defense missile system, the company announced June 17.

Sea Ceptor is a smart weapon control system that, together with the fully-active Common Anti-air Modular Missile (Camm), provides comprehensive self-defense and local area air defense.

This will enable Brazil's Tamandaré-class frigates to protect themselves, consorts and fixed infrastructure against the full range of threat types at sea or in harbor, and in the most stressing operational scenarios. Sea Ceptor is in operational service with the Royal Navy's Type 23 frigates, and has been selected for the new Type 26 and Type 31 frigates.

Brazil joins Chile, New Zealand and Canada in a growing list of international Sea Ceptor users. The Camm missile has also been delivered to the British Army in the ground-based air defense role.

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# Boeing, ESG, Lufthansa Technik Partner for Potential German P-8A Poseidon Fleet Support



Boeing signed agreements with ESG and Lufthansa Technik that outline joint efforts to explore potential areas of collaboration in systems integration, training, support and sustainment work in anticipation of Germany selecting the P-8A as its next maritime surveillance aircraft. *BOEING*

BERLIN – Boeing signed agreements June 17 with ESG (Elektroniksystem-und Logistik-GmbH) and Lufthansa Technik that outline joint efforts to explore potential areas of collaboration in systems integration, training, support and sustainment work, Boeing said in a release. The signed memorandum of understanding may lead to more definitive agreements should Germany select the P-8A Poseidon as its next maritime surveillance aircraft.

“Together with ESG and Lufthansa Technik, we will offer indigenous and cost-effective support, training and maintenance solutions that will bring the highest operational availability to the German Navy to fulfill their missions,” said Dr. Michael Haidinger, president of Boeing Germany, Central & Eastern Europe, Benelux & Nordics. “Our partnership with ESG and Lufthansa Technik is another testimony to who we are and how we operate in Germany. We are shaping meaningful and long-term industry partnerships that impact the local economy.”

Boeing, ESG and Lufthansa Technik have identified

opportunities to collaborate in a number of areas and will explore these in more detail, including training and simulation, cyber security, systems integration, certification, environmental compliance, communications systems, electronic attack and electronic protect systems, aircraft and engine sustainment, component support services, predictive maintenance analysis and logistics services.

“This cooperation agreement underlines once again that we take our responsibility seriously when it comes to ensuring urgently needed capabilities,” said Christoph Otten, CEO of ESG. “As Boeing’s strategic partner for the P-8A Poseidon fleet, we are pleased to be able to make the Bundeswehr a viable offer characterized by effectiveness, efficiency and the reliable delivery of services. As a long-standing partner of the German Bundeswehr and Navy aviators, ESG stands ready with its proven core competencies, solutions, services and products, particularly in the areas of systems integration, aviation certification and secure communication systems.”

Lufthansa Technik has a long history in technical support of Boeing airplanes around the world. In addition, under Boeing’s Performance-Based Logistics program, Lufthansa Technik also provides hardware support to the Italian fleet of Boeing KC-767A tankers and has facilitated outstanding aircraft availability for the Italian air force.

“Lufthansa and Lufthansa Technik are partners with Boeing for more than 60 years. The companies know and value each other. This partnership is an excellent starting point for us to provide technical support at the highest level for this new aircraft, should our long-standing customer, the German Bundeswehr, procure P-8A,” said Michael von Puttkamer, Head of Special Aircraft Services, Lufthansa Technik.

The P-8A Poseidon offers unique multimission aircraft capability and is the only aircraft in service and in production able to meet the full range of maritime challenges

faced by European nations. With the P-8A, Germany will be able to leverage full integration and interoperability with NATO nations in the region. Additionally, the P-8A offers significant capability to meet Germany's collective defense obligations as part of Germany's NATO membership and commitment to EU defense and security, including the maritime domain.

Other German companies that already supply components to the P-8A Poseidon include Aljo Aluminium-Bau Jonuscheit GmbH and Nord-Micro GmbH.

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## **Metaspectral to Provide Canadian Defence with AI/ML Technology to Help Lookouts**



A crew member onboard Her Majesty's Canadian Ship (HMCS) St. John's performs lookout duty on the bridge during Exercise Joint Warrior, taking place off the coast of Scotland during Operation Reassurance, April 24, 2018. *FORMATION IMAGING SERVICES / Cpl. Tony Chand*

VANCOUVER, B.C. – Metaspectral, a company offering technology that makes it possible to derive real-time insights from AI using ultra-high-resolution, visible-to-infrared (hyperspectral) imagery, was one of a select few companies awarded up to \$200,000 as the first funding component of the Department of National Defence's Innovation for Defence Excellence and Security (IDEaS) program for the Better Than Meets the Eye challenge.

The Department of National Defence and the Canadian Armed

Forces (DND/CAF) were seeking innovative solutions to assist maritime lookouts in detecting, characterizing, and tracking objects of interest to improve the efficiency and safety of maritime operations.

“The role of the maritime lookout is crucial. They are often the first to observe danger at sea, and the safety of ships depends on them. A lookout must spot and quickly identify navigational hazards or other threats,” said, Migel Tissera, Metaspectral chief technology officer. “But we cannot ignore the fact that after long hours, lookouts may become fatigued and are more likely to be prone to human error. This is further compounded by fog and other weather conditions that can reduce visibility.”

The Navy will continue to rely on human lookouts but is also seeking innovative solutions to augment and support a lookout’s ability to see, accurately characterize, and track all items of interest within the range of vision, especially in conditions of low visibility.

“We are designing technology that will use machine learning to enhance the capabilities of marine lookouts. Our technology has the ability to collect and process unprecedented quantities of data from across the electromagnetic spectrum, creating ultra-high-definition images,” added Tissera. “Because we can compress data without losing quality, our technology retains more of the original images than has been previously possible. This will make it easier to spot items of interest in high detail.”

AI analysis requires high-quality data, the more data that can be efficiently processed, the better the result.

A prototype by Metaspectral is expected to be ready by the end of the year.

“Metaspectral is proud to be supporting the important safety and security operations of our brave Canadian armed forces,”

added Tissera. "This is just one of many practical real-world uses of our proprietary technology. We're grateful for the opportunity to demonstrate our talents and abilities in this portion of military research and development."