

SHIPYARD LOG

Pearl Harbor Naval Shipyard & IMF News Since 1946

April 2016

A woman with long brown hair, wearing safety glasses and a white lab coat, is smiling while working in a laboratory. She is holding a pipette and appears to be transferring liquid into a small vial. The background shows laboratory equipment and shelves with various bottles.

**QUALITY
ASSURED**

[Commander's Corner]

A focus on First Time Quality

Aloha, and thank you for reading the April edition of the Shipyard Log. This month highlights and celebrates our commitment to Quality. Similar to safety, there is a difference between merely talking about quality and making it a measurable part of our daily cadence. We don't need to take a survey to determine if we think quality is important. The answer is YES, so I won't waste your time writing about the virtues of quality. Talk is cheap and actions speak louder than words, so the more compelling question each of us faces is, "What is my contribution to quality?"



Code 130 Director of Quality Assurance Dan Yamane and Captain J. Kalowsky promote First Time Quality.

When we leave work at the end of each day, we have either improved or degraded the quality of our fleet, there is no in between. Quality is dynamic and unforgiving. Quality either gets better or it gets worse; it can never stay the same. If left untouched, quality degrades over time. "What is the Shipyard's contribution to quality?"

Here is how I answer that question through our Strategic Focus Areas.

Predictive Planning: This area involves creating accurate and executable plans to support waterfront execution of work. I don't need to tell you that schedule pressure is one of the greatest tearing down forces to quality. You know this from experience. Quality thrives on "why" and "how." As we improve the accuracy of our programming and planning, we will re-center deckplate focus on "why" and "how" work gets done, vice "when".

Employee Development: Without a doubt, the

person each day who has the greatest influence on the quality of mission readiness for the Pacific Fleet is a Pearl Harbor mechanic. Every investment into the competence and readiness of our workforce directly increases 1XQ (see page 4.)

As a learning organization, we not only develop through training, but we develop from our mistakes. My favorite tool for enhancing development through mistakes is the Human Factor Analysis and Classification System (HFACS). It helps to identify the organization, supervision and environmental preconditions that lead to errors and violations. This year the Quality Assurance Director and I will be exercising the HFACS method more effectively in our critique program.

Innovation: Your ideas for continuous improvement, paired with the industry's best technology is a force multiplier for efficient and sustainable methods of repair. Just this year you have made significant contributions to quality through laser cladding, automated welding, transducer installation, motor generator testing (see page 6-7), freeze seal isolations and phased array ultrasonic testing.

Capabilities: Creating the environment that supports our work team's ability to do what they do best (Keeping Them Fit to Fight). That environment includes the places we work, the tools we use and the "quality" of life we share. I know that my work is affected by my environment and I will assume that yours is, too.

We are not alone in our commitment to secure safety and service through quality. Boeing Vice President for Operations and Supplier Management John Van Gels once put it this way: "It takes the right culture and environment to support all of these activities – one that encourages employees to speak up when something isn't right. And it takes managers who will do what they can to make things right. It's never easy to step forward and say there's a problem. Schedules may slow or costs increase. But, believe me, the personal integrity that makes us come forward with a concern means everything when it comes to quality. In the end, our commitment to doing the job right the first time will lower costs, and it will improve our performance and competitiveness across the board." Gels said he'd like to claim First Time Quality as his mantra, but he says it's not really his; it belongs to all Boeing employees – just like it belongs here to each of us.

Thank you for keeping quality at the top of your list of priorities. Team Pearl is who we are and First Time Quality is what we do. See you on the deckplates!



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ON THE COVER: Code 134.4 Chemist Lindsey Shank prepares a sample to be analyzed for trace metals in accordance with the Clean Water Act.

Photo by: Justice Vannatta

Pearl Harbor Naval Shipyard hosts International Management Course

**Story by Jensin W. Sommer
Congressional & Public Affairs**

Twelve international naval officers have gathered at Joint Base Pearl Harbor Hickam to attend the 6-week International Shipyard Management Course (ISMC) hosted by Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility (PHNSY&IMF) Feb. 29 – April 15.

Since its inception 17 years ago, 152 naval officers from around the world have graduated from the annual course managed, executed and funded by the Naval Education and Training Security Assistance Field Activity (NETSAFA), based in Pensacola, Fla.

This year's attendees are junior and senior officers from the navies of Indonesia, the Republic of Korea, the Republic of the Philippines, Pakistan, Bangladesh, Algeria, Tunisia and Uruguay. During the course, they will learn about shipyard project

management, capabilities, docking and undocking processes, security, quality assurance, safety and how to establish analysis programs. They will also visit various local cultural and military installations in Hawaii. One of their first tours was to USS Paul Hamilton (DDG 60) where they were hosted by the destroyer's Commanding Officer Cmdr. John Barsano and Executive Officer Cmdr. Danielle Defant.

Lt. Cmdr Mitt Abdessaid, an electrical engineer from the Algerian Navy, expressed appreciation for the cleanliness of the ship, and the warm welcome and professionalism of the crew during the ISMC visit on March 1. This was Abdessaid's first time onboard a U.S. Navy destroyer.

"We do not have destroyers in our Navy, mainly just corvettes, which are like frigates," Abdessaid said. "Most of the ships in our Navy were made in Russia, so they are quite different. It was interesting to see how American ships are designed with Sailors' life quality at sea as an important factor."

Photo by Justice Vannatta



First Time Quality

Story by Justice Vannatta

Here at Pearl Harbor Naval Shipyard we have always taken tremendous pride in our workmanship. Our performance acumen has always been driven by excellence and precision, with an extra emphasis on Quality. With such a storied history and reputation for superior craftsmanship, we are honored to carry on our Shipyard's legacy of skill and expertise.

TEAM Pearl is a Learning Organization, and we understand that there is *always* room for improvement. In order to improve, we must not only continue to work together as a team, we must also find innovative ways of working smarter, and creating new ways of being more efficient in our processes to help expedite our mission.

To maximize our personal performance potential, we must first practice humility and identify our own weaknesses. The critique process is one of the learning tools the Shipyard uses to improve productivity. Year after year, we invest a lot of time and resources in executing this process to better understand and correct our deficiencies, and thereby improve our processes and behaviors. A recent deep dive into our data process exposed a lot of "Quality" concerns, in particular, "First Time Quality" (1XQ).

Quality, by definition, produces a product free from defects, deficiencies and significant variations. Quality is achieved through strict and consistent commitment to exact standards that, when met, will result in product uniformity to satisfy specific customer or user requirements. Unlike 1XQ, Quality does not include time duration or cost.

As an example, let's say you had a budget of \$50,000 to rebuild a classic car and six months to have it showroom ready. If you delivered it to the customer *exactly* as they wanted it, but it took you one year and a \$100,000 to do so, your efforts would not be called First Time Quality.

TEAM Pearl consistently completes quality repairs and



maintenance on U.S. Pacific Fleet ships and submarines, but we don't always return them to the Fleet within the time allotted for the availability or within the budget scheduled for the work. That is the distinct difference between Quality and First Time Quality. A job performed with First Time Quality will automatically meet all cost, schedule and customer expectations.

A negative Mental Model that lives on at PHNSY says, "If you're not working on the project, you're not affecting the project," but evidence to the contrary abounds. The truth is that everyone who works here has a hand in our mission's success. The definition of Quality is based not on what we produce, but on how we produce it. We are all involved in the 'Line of Quality' that directly connects every individual worker to everything we do. The Line of Quality is the link that connects every process and role to ensure each availability's success. Every integral process step must be completed with proficiency, or overall Quality may begin to suffer.

You don't have to look very far to find Quality at our Shipyard. It is everywhere. We have Quality of training, tooling, safety, production, leadership, planning, performance, measuring and standard-keeping, just to name a few. One of the most important but also perhaps most taken-for-granted areas in which Quality is needed is communication. A high-Quality, i.e., efficient, briefing could be the difference between success and failure.

First Time Quality is essential in our line of work because *lives* depend on it. We "keep them fit to fight." We repair and maintain the Navy's submarines and ships to preserve our Fleet's integrity and protect those who go to sea in these

vessels in service to our nation.

Ask yourself, in your day-to-day operations, how mindful are you that how well you complete your daily assignment actually affects the lives of others? Now dig even deeper and understand that your performance of everyday tasks could also directly affect their families' safety and future, and that of our families as well.



Can you imagine the degree of trust our brothers and sisters in arms have in us that we will perform our jobs correctly? They entrust their lives to us and the work we do -- to people they have never met, and in most cases never will. And yet, honorably and selflessly, they risk their lives to protect ours. How heroic is that? Think about this, our United States Navy entrusts us to maintain nuclear submarines for the most powerful Navy in the world! What an AWESOME responsibility we have. What an AWESOME opportunity!

Our Shipyard commander, Capt. Jamie Kalowsky, has issued TEAM Pearl a challenge. We need to increase our work capacity by 60,000 Man days for Fiscal Year 2016.

So how can we affect that bottom line from our individual level? The answer lies in our daily work practices. Studies show that workers who feel they are a part of a movement (i.e., empowered) will be more engaged and more inclined to produce at a higher rate. If you be-

come an "engaged" worker, proud to be flying the PHNSY banner, you will see First Time Quality as the new standard for how we conduct business. Most of us will make a career and retire from Pearl, why not choose to be excellent in your career? Why not choose to win?

It is time for all of us to raise the bar and start producing at a World Class Level. That's the expectation if you're on TEAM Pearl. It's up to all of us to hold ourselves and each other accountable to First Time Quality. From the Shipyard commander to the 1st year apprentice, our accountability is a reflection of our personal mastery and ultimately our TEAM's success.

Like pride, attitude and integrity, First Time Quality is more than an ideal. It's a behavior. It's a frame of mind. It's a decision. Everyone has an opportunity throughout their day to perform and promote First Time Quality. If every one of us espouses the shared visions of Safety and First Time Quality, we would immediately start to see improvements in all areas of our Shipyard. We would begin to redefine who we are and carve out a reputation of true excellence. We would witness our morale skyrocket and the word rapidly reverberate throughout our industry, labeling Pearl Harbor Naval Shipyard as the premiere Quality shipyard of choice.

We are all committed to the importance of our mission and we strive together to provide an environment that fosters excellence, integrity and respect, so we can perform to the highest of standards. That commitment is based on our devotion to our nation, our Navy, our Shipyard and each other. We Learn, We Improve, We Deliver!

X51
TEST UNIT
474-8483

10,000 LBS

PROPERTY OF
ALCATRAZ
PENITENTIARY
SWIM TEAM
SAN FRANCISCO



Improvement begins with II

Story by Brent Hashimoto
Code 270.4 Electrical Engineer

For those who may not be familiar: All generators change mechanical energy into electrical energy, which is the easiest way to transfer power over distances. Fuel is used to operate the diesel or prime mover. The fuel is converted into energy to turn the generator. The generator's movement, magnetic field and associated wiring change this mechanical energy into electrical energy. Wires and cables deliver this power to the electrical loads. The motor is designed to change electrical energy back into mechanical energy to do work.

A research and development (R&D) team here at Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility (PHNS&IMF) has formulated a long-term plan to improve testing procedures and end user operation.

Workers in the Shipyard's Electrical Shop (Shop 51) and the motors section (Code 270.4) of the Engineering and Planning Department recognized that the equipment used here for many years to test Ship's Service Motor Generators (SSMG) was outdated and unsustainable because its manufacturers were either no longer in business or did not support rebuilds due to a lack of demand. The team's challenge was to design, build and test in-house, modernized testing equipment to replace the older version.

Because the SSMG is a complex system of interconnected components that requires very specialized equipment to test, di-

agnose and correct problems, the R&D team needed a number of different skill sets. Personnel from Shop 51 and Code 270.4 were joined by workers from the Sheet Metal Shop (Shop 17), the Paint/Sign/Corrosion Control Shop (Shop 71) and the Shipyard's Electrical Community of Practice.

Shop 17 provided Computer Aided Design (CAD) support to cut out intricate pieces of sheet metal. Shop 71 painted the sheet metal pieces to protect and preserve its integrity. Shop 51 machinists cut heat sinks (passive heat exchangers that transfer the heat generated by an electronic or mechanical devise into a coolant fluid in motion) and bus work (creating metallic strip or bar that will conduct electricity within an electrical apparatus) out of raw



bar stock (usually copper, brass or aluminum). Shop 51 and Code 270.4 installed and tested electrical components.

The first build was re-designing the SSMG Black Band Test Equipment that had design flaws, was more than 30 years old (so could not be repaired or replaced), weighed 160 lbs. and was cumbersome to stage and operate. Using a design initially developed at Portsmouth Naval Shipyard, the R&D team built its new Black Band design using modern electrical components that could be ordered easily, weighed only 45 lbs. and could be easily staged and operated.

The team's second build was to create an application-specific load bank, designed to test and certify the SSMG's static exciter. Code 270.4 created the electrical design using AutoCAD and personnel from Shop 17 and Shop 51 assembled it. The application-specific load bank is much safer, easier to use and more compact than previous methods, replacing older versions that could weigh more than 10,000 lbs. and require a forklift for movement.

The third build was to design and fabricate an open-loop test cover for the SSMG Alternating Current (AC) and DC regulators. Open-loop testing itself was a great tool to discover problems within the regulators, but it was cumbersome to use, required multiple sources of temporary power and many test connection points. The R&D team's test covers allow for simpler installation and testing, while providing an electrically safe protective barrier between the worker and the energized panel.

The R&D team is actively working on two additional projects: a spark detection project for the SSMG, and a portable over-speed trip test device for Shop 51 personnel to take on fly-

away jobs to Guam and other locations.

"We have really amazing people at Pearl Harbor," says Shop 51 Test Bench Work Leader Tommy Tran.

"This R&D team has only worked together for a short while, on a part-time basis, through the ECoP.

We all have projects to support and pre-planning work to do for our normal work, and we can still put out novel products to support SSMG testing. It's hard to imagine what we could do if we could work on R&D projects full time!"



From this

"We have really amazing people at Pearl Harbor."

To this

In focus: C130 Quality

The seven-division, diverse and specialized Quality Assurance Department, Code 130, provides the Shipyard the capability to verify and validate quality in workmanship to meet standards the Navy has come to expect from Pearl Harbor Naval Shipyard & IMF (PHNSY&IMF).

Contract Oversight Division, Code 132, provides contractor oversight for the multi-ship multi-option (MSMO) contractor performing surface ship maintenance for the Hawaii Regional Maintenance Center. Code 132 also provides oversight of Alteration Installation Team work on surface ships and submarines. The contractor oversight function includes, but is not limited to procedure reviews and evaluations, product verification, inspections and audits, non-destructive testing and contractor corrective actions.

Non-Nuclear Inspection Division, Code 133, performs waterfront inspections and verification of non-nuclear submarine work here and sometimes work done at Guam by PHNSY&IMF personnel. Code 133 also performs receipt inspection and material oversight for level 1 and controlled industrial material.

Laboratory Division, Code 134, is responsible for waterfront laboratory support, analytical and environmental sampling, and material engineering. It conducts waste and pure water analysis, gas testing, hull casting hardness inspections and oil analysis.

Non-Destructive Test (NDT) Division, Code 135, performs non-destructive testing for non-nuclear work, which involves inspection of material/components without affecting the future usefulness of the item. NDT inspectors are certified in several different methods, including visual, liquid dye penetrant, magnetic particle, eddy current, ultrasonic and radiographic inspection. The Shipyard has the Naval Sea Systems Command lead to improve and integrate technology into non-destructive testing for phased array ultrasonic inspection of structural applications.

Engineering and Assessment Division, Code 136, is responsible for Shipyard programs that directly support problem solving and continuous improvement. It also performs independent auditing of Shipyard programs and processes.

Welding Engineering and NDT Examiner Division, Code 138, provides the technical expertise for non-nuclear and nuclear welding and certifies all department Code 132, 135 and 139 NDT inspectors. Code 138 is consistently bringing technology into the Shipyard.

Nuclear Inspection Division, Code 139, performs independent verification and inspections of nuclear work, including NDT visual and liquid penetrant inspections here and occasionally at Guam.



Shop 38 Machinist Apprentice Geoffrey Kop and Code 133 Marine Machinery Inspector Leader Wade Taguchi perform a “controlled fit-up” of a mechanical seal on a seawater pump during a recent submarine availability. Controlled fit-ups require Code 133’s presence to ensure the correct material is installed and the fit-up is performed in accordance with all applicable requirements.



Code 132 Quality Assurance Inspector Gene Christmas conducts a critical surface ship coating inspection prior to blasting.

Code 133 Marine Machinery Inspector Leader Ryan Ramiro inspects a submarine safe component in the Non-Nuclear Receipt Inspection area. Code 133 inspects and certifies non-nuclear controlled materials for conformance to technical requirements and end use upon receipt from the supply system or from other activities prior to issue to the projects.



Code 133 Marine Machinery Inspector Leader Chad Ganoot inspects a valve for leakage in the Shop 31 valve section while Shop 31 machinist apprentice Shari Iha looks on. Valves are pressurized and tested on the test stand prior to being considered acceptable for shipboard use.

Code 138.3 Lead Ultrasonic Test Examiner Cory Arthur performs a Phased Array Ultrasonic Test on a submarine hull tee weld in conjunction with a monitoring Inspection.

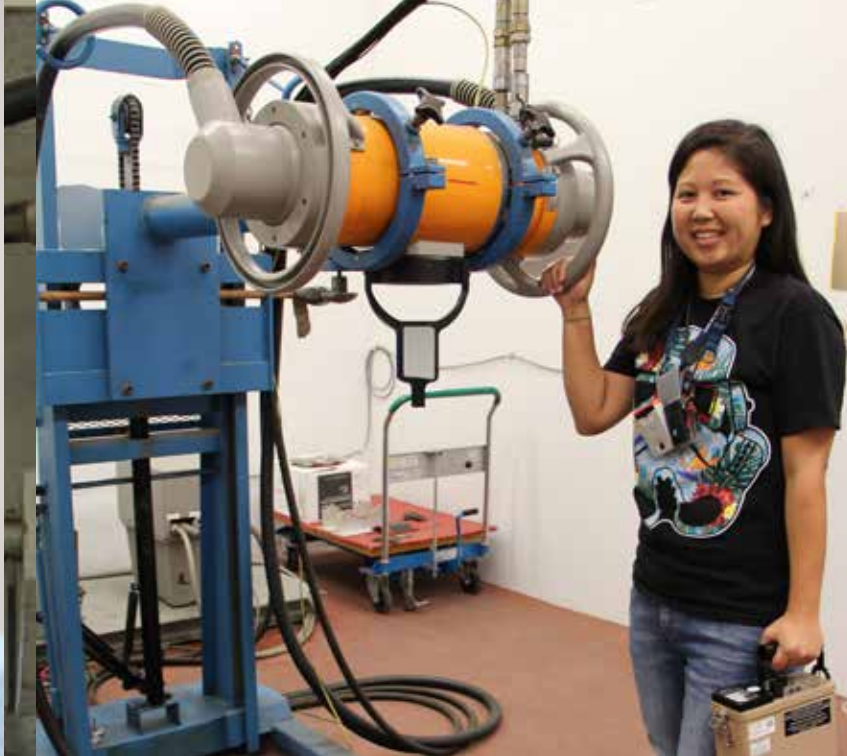


Code 139 Nuclear Inspector Brandon Kaohi performs chemical etching on level 1 material to properly identify the material for traceability.





Code 139 Nuclear Inspector Krystal Hangai performs an intricate visual inspection of material hardware in preparation for process installation.



Code 135 Non-Destructive Test Inspector Leila Tamamori sets up the x-ray machine tube head in preparation for validating the weld quality for a welder qualification test assembly.

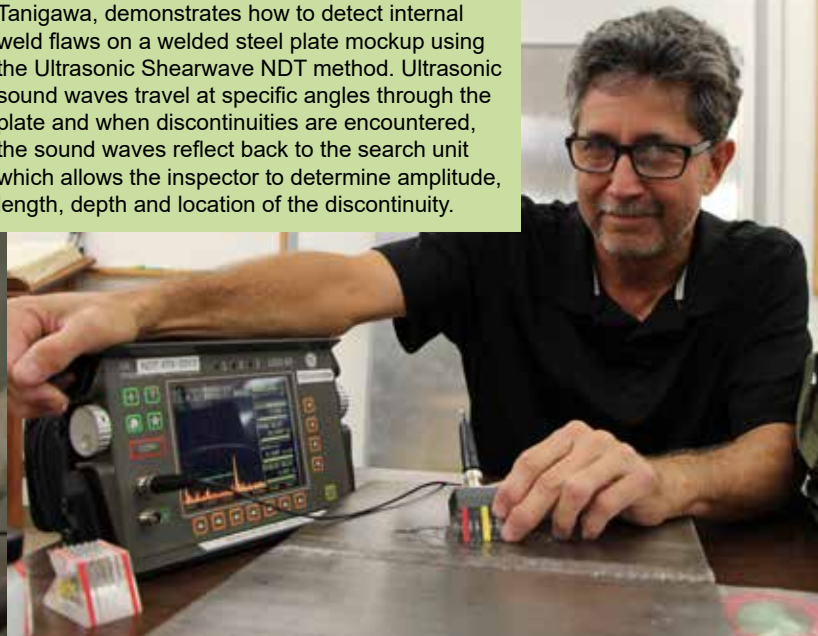


Code 134 Materials Engineer Ric H... universal test frame.



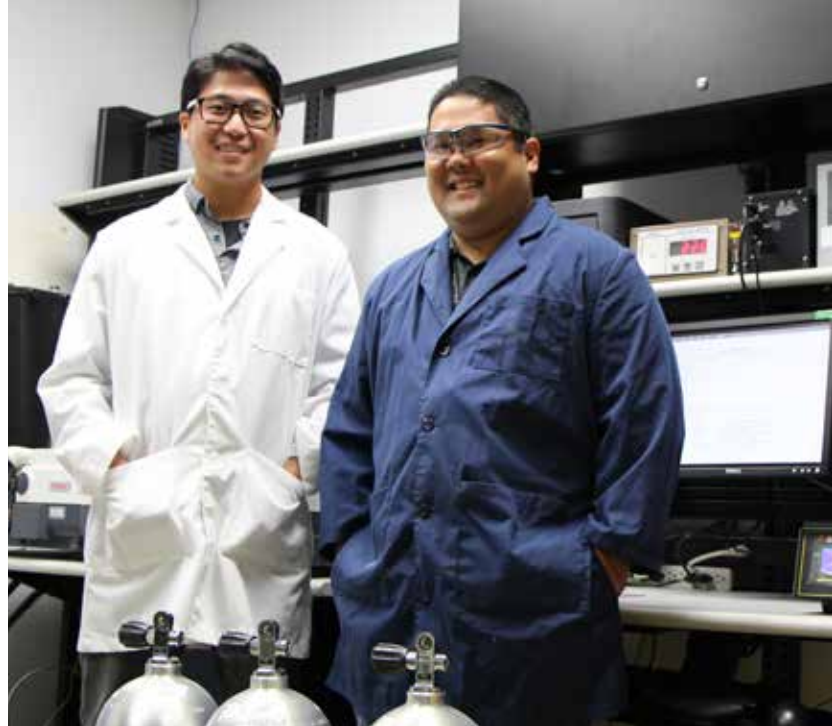
Code 132.2 Quality Assurance Specialist Duane Kuni inspects an electrode oven for filler metal control to ensure proper temperature control.

Code 135.2 Quality Assurance Specialist Ken Tanigawa, demonstrates how to detect internal weld flaws on a welded steel plate mockup using the Ultrasonic Shearwave NDT method. Ultrasonic sound waves travel at specific angles through the plate and when discontinuities are encountered, the sound waves reflect back to the search unit which allows the inspector to determine amplitude, length, depth and location of the discontinuity.





Code 134 Chemists Barry Kawakami and Jason Kuniyoshi perform a wear particle analysis in support of the Joint Oil Analysis Program.



Code 134 Chemists Kevin Akamine and Derek Mukai perform a breathing air analysis using a Fourier Transform Infrared Spectrometer to determine chemical composition to ensure the safety of Shipyard personnel.



Code 135 Non-Destructive Test Inspector KC Kaleikini interprets radiography film for weld defects.

Code 132 Quality Assurance Specialists Lawrence Patton and Kauai Aranita provide government Nondestructive Testing oversight of contractor work on the external stern tube of a surface ship.



Ric Kruger performs mechanical properties testing on a 400,000 pound capacity

C138 Welding Engineers David Narahara and Craig Mitsui fit check a bore torch that will be used to conduct weld build-ups on shaft couplings using the recently acquired welding machine.



Joint Leadership Venture hosts program on effective supervision

Story by W. Nomana Angelo
Code 701 Lifting and Handling Deputy Director



Code 730 Crane Maintenance General Foreman Kirk Gosnell and Human Resources Specialist Lyn Lytton give an insightful testimony on managing disciplinary action.

On March 24 the Learning Organization Steering Group’s Joint Leadership Venture sponsored a leadership refresher focused on the “how’s” and “why’s” of disciplinary action. The training was designed for general foremen and division heads from production shops, engineering and support codes to address the gaps in the Shipyard’s organizational culture assessment regarding accountability and fairness.

All managers and supervisors are expected to enforce accountability and discipline as well as improving conduct and behavioral issues at the lowest level to promote efficiency of service. As a part of a Learning Organization, leaders play an important and vital role in shaping culture and upholding the standards and expectations necessary to succeed as a shipyard. A challenge for leaders to pass on what they learned from this event to other leaders in their area was given to those in attendance. The benefits of this include the standardization of the message that is conveyed across the command as well as providing leaders the opportunity to coach, mentor and share their knowledge with others in our Shipyard. By mentoring our inexperienced leaders on one of the difficult aspects of being a supervisor/manager, we are one step closer to effective supervision.

The topics covered in the leadership refresher included: guidelines for effective administrative/disciplinary actions; leave administration and how it affects discipline; harassment and bullying in the workplace; management’s right to manage; and range of accountability, which includes discipline and awards. Although this is not the cure all, it is a step in the right direction in setting standards for our leaders and creating a shipyard that takes care of its people.

This event would not have been possible without the hard work, dedication and courage of our presenters: Lyn Lytton, Kirk Gosnell, Kamuela Unga and Lloyd Aragon. I would also like to thank those who worked behind the scenes: Momi-lani Loveland, Renee Nicolas, Constance Collins, Dara Watanabe, Melissa Lamer-son, Eric Kimura and Patrick Morrissey.

March Civilian Newcomers	March Military Newcomers	March Service Awardees
Omar Abing, C900T1 Dale Akeo, C1100 Ryan Campos, C900 James Grey Crockett, C200 Christine Iha, C130 Linda Le, C200 Jennifer Mills, C109 Eugene Moniz, C2300 Thomas Rackleff, C200 Shawn Songwut, C700 Fred Zaha, C200	MMW2 Dominique Liggins, C210 LCDR Paul Murch, C103 GSCS Andrew Anderson, C103 FC2 Natalia Georgulas, X-Div LTJG Paul McDonald ITC Steven Trevaskis, C210 FC3 William Burritt, X-Div FC2 Candice Folck, X-Div BM2 Jesse Lopez, X DIV MMACM Ruben Aguirre, C103 ET3 Samuel Chittenden, X-Div HT1 Brett Robinson, C135 CTR3 Evelyn Kerbajian, X-DIV GM1 Yang Fang, X-Div STG1 Larry Sehorn, X-Div MMN2 Sean Hukill, C960 EM1 Scott Parmalee, C102	<u>10 Years</u> Thomas Grow Justin Merhib Gregory Swanson Kurt Uyehara Joseph Yamamoto <u>20 Years</u> Philip Tefft <u>25 Years</u> Jodi Higuchi Eddie Jongolnee <u>30 Years</u> Guillermo Delacruz Matthew Walker <u>35 Years</u> Allan Ho Noreen Nascimento <u>45 years</u> Isaac Tokuda <u>50 Years</u> Robert Alameda Henry Keanini

Fair winds & following seas to March Retirees

*Mark Hironaka
Iris Mizokami*

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