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TALLERES INDUSTRIALES, S.A.

24/7 SHIP REPAIRS AND MARINE SOLUTIONS

MAGAZINE 7th Edition



MAIN FEATURES

MAJOR STRUCTURAL REPAIRS ON THE STEM OF A VESSEL

Rebuilding the most difficult structural part of a vessel, just above the bulbous bow
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OUR UTM – NDT TEAM

Young, qualified, and committed engineers validating a vessel's structural conditions.
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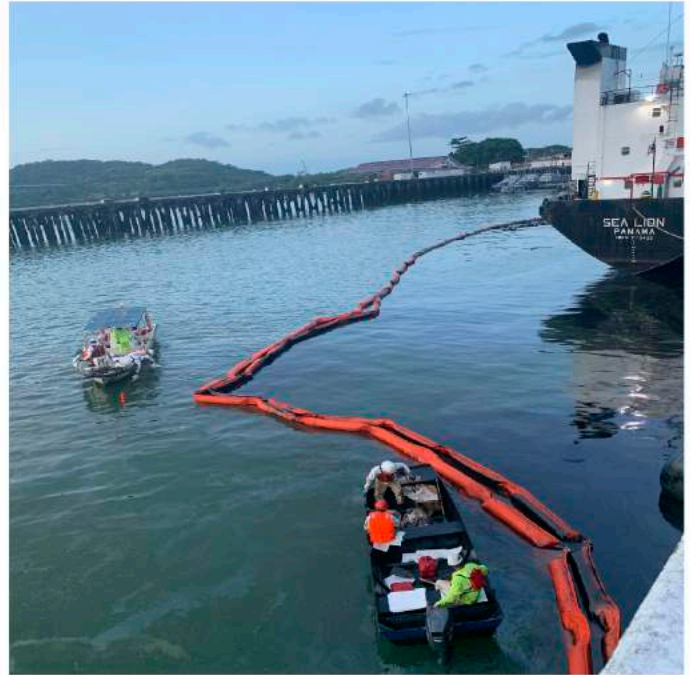
WHY DRY DOCK? - WE CAN DO ALMOST ANYTHING AFLOAT

Record-breaking structural underwater permanent repair – 8 meters in length
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OIL POLLUTION CONTROL DIVISION

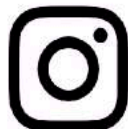


Talleres is providing top quality emergency spill response services to all ports in Panama, as well as bunkering operations to vessels crossing the Panama Canal. From small projects to large-scale operations or spills, Talleres can rapidly mobilize trained, experienced personnel and equipment, to almost any site within our country.

Talleres owns and operates a vast amount of specialized oil spill response equipment and consumables strategically placed in 20-foot containers in many Panamanian ports. Talleres has also oil spill control vessels, pre-positioned throughout the Panama Canal to attend to any incidents 24/7.



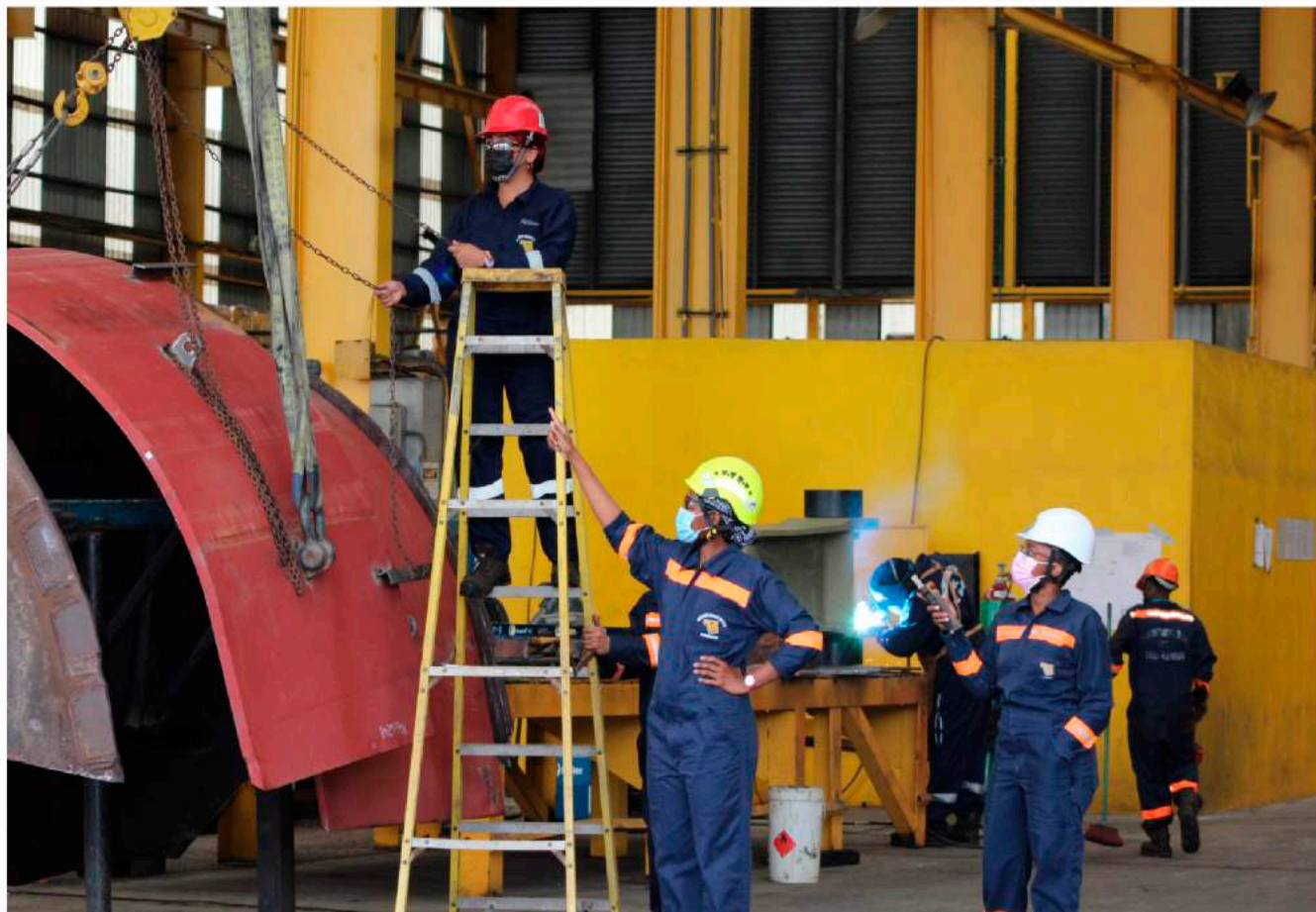
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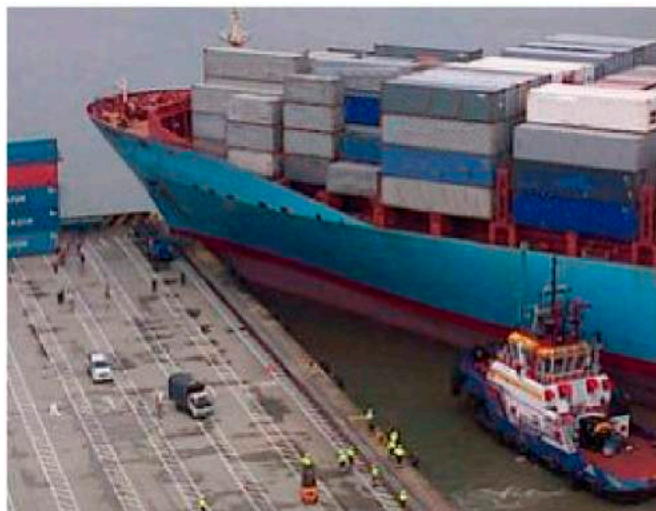


LEADING WOMEN IN THE SHIP REPAIR INDUSTRY

Organized, Dedicated, Responsible, Ethical, and Stunning are the main characteristics of Talleres' women, which everyday help us achieve our goals. These women are fully in love with the ship repair industry and have the correct DNA to deal with this traditional male-attributed activity. Talleres' women have demonstrated that with sacrifice and perseverance, they can achieve anything and even better than men. Nowadays, Talleres is looking out for and grooming our women for leadership positions.

They adapt quickly to the environment and pressure and have the desire to keep learning in a company where every day something new is learnt due to a multicultural ecosystem. We are proud of all our women who are willing to get out from their comfort zone and enjoy what they do, full of positive adrenaline, to achieve results and exceed the expectations of our clients and peers. We belong to a big family and every gender plays a key role, making our team stronger and reinforcing our values and commitment.

MAJOR STRUCTURAL REPAIRS ON THE STEM OF A VESSEL



From all the unique repairs that we have done, repairing the stem of a vessel at anchorage will always be considered one of the most challenging ones, due to the complexity of shapes and the thickness of the steel structure. The stem is the most forward and thickest part of a ship's bow and is an extension of the keel itself. On this mission we also had good weather conditions at the anchorage which had a great impact on the operation. But of course, there is nothing that our engineers cannot solve in our hospital's emergency room for ships.



Here are the facts on this outside-the-box mission: 75,000 gross ton container vessel of an overall length of 300 meters and 40 meters in breadth, collided the wharf at the terminal of Buenaventura, Colombia, during berthing maneuvers.



We were contacted almost immediately to mobilize to Colombia to inspect the damage and come up with a solution to perform temporary repairs to let the vessel complete its voyage, and then come to Panama for permanent repairs.





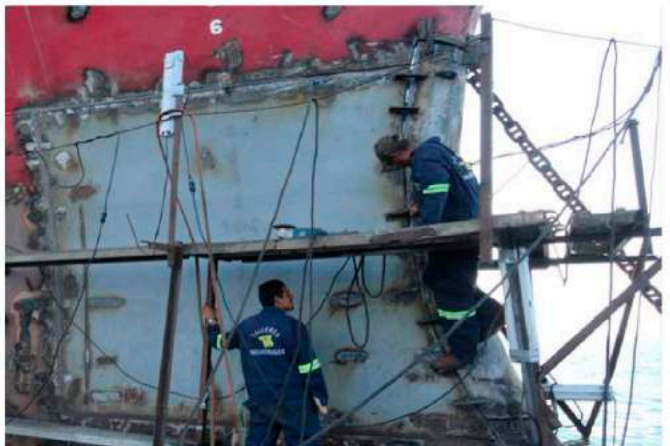
The day after the incident and during cargo operations, our production manager and steel foreman inspected the damage and arranged temporary repairs with a local contractor.



The agreed repairs basically condemned all manholes by welding steel plates on them and making the vessel's forward section watertight to allow it to complete its cargo discharge in South America and then to come up to Panama for permanent repairs. At the same time all necessary measurements were taken to start procuring all necessary resources for the prefabrication of a 6-ton high tensile compound shape block.



Upon its arrival to the Balboa anchorage in Panama, our floating deck barge, which included a crane and all the equipment and gears, was tied alongside its bow. Immediately, staging was built around the damaged sections, which were then cut. At the same time final measurements were taken to perform any final adjustments on the block being built at our main workshop.





Industrial rollers, heating machines, a press, and hydraulic jacks were used to achieve the perfect shape of the block. Once the 3,400 mm x 3,050 mm EH36 compound shape block was completed, it was transported to Balboa to be installed by our best fitters, who had to play surgeon for the delicate fitting and adjustment process. The outcome was perfect, making the external and internal production welding process easy

All welds were ultrasonically tested to satisfaction of the class surveyor and attending superintendent. For this magnificent repair, the final touch-up was very important – mechanical cleaning, grinding, and painting of all surfaces under the original specs. The repairs were completed to the full satisfaction of class surveyors, owners, and insurance representatives. We at Talleres, are eager and always ready for difficult and challenging jobs. No matter the season, no matter the complexity, no matter the location.



Eco-friendly, safe and affordable hull cleaning with HullWiper

Powered by Talleres Industriales

www.talleresindustriales.com



TALLERES INDUSTRIALES S.A.
1949 - 2019 - 70 años

WHO IS WHO IN OUR TEAM



Paula Gutiérrez
Warehouse Manager
In charge of the warehouse, as well as the special free zone Colon Maritime Investors and customs person in charge



Natalia González
Project Coordinator Balboa
In charge of the operation's logistics & coordination and project support at anchorages



Tanisha Andrade
Project Supervisor
In charge of the productive assets of the company (floating equipment, land transportation, generators)



Jessel Ibarra
Project Supervisor
In charge of the Non-Destructive Test and Ultrasonic Thickness Measurement projects

TALLERES, A PROUD MEMBER OF THE SPILL CONTROL ASSOCIATION OF AMERICA



TALLERES INDUSTRIALES S.A.
OIL POLLUTION CONTROL DIVISION



The Spill Control Association of America (SCAA) was organized in 1973 to actively promote the interests of all groups within the spill response community. Our organization represents spill response contractors, manufacturers, distributors, consultants, instructors, governmental and training institutions, and corporations working in the industry. Our membership spans the entire United States, and routinely supports industry clients and state and federal governmental agencies. Talleres Industriales is one of the first members outside the US Territory and is proud to be part of this esteemed organization. The SCAA promotes a healthy and vibrant all-hazards response posture, from the sharing of the best management practices in health and safety programs and workforce development initiatives, to taking on a proactive advocacy role with governmental entities.



PEOPLE WHO POSITIVELY IMPACTED TALLERES

In this second edition of this important article in which we mention significant individuals and their importance within our organization, we would like to introduce Mr. Domingo Paz.

Domingo came to Panama when we acquired Subservices (the first commercial diving firm in Panama) and got the Scamp Hull Cleaning Machines, which were then owned by Gibunco, where Domingo was their Diving Manager. He is one of the most professional divers in our industry. His human touch and empathy, his mastery to teach, and his sense of belonging, made him unique and helped us organize our diving department in Panama. Since then, we have kept in close contact with Domingo, who now runs his own diving firm in Algeciras, Spain.

Two years ago, we had the pleasure to have him in Panama for our half-century celebration. For all the ex-employees and current ones that know him, it was very emotional to share this special moment. Ship Repair is all about people who positively impact others. Once again, we thank Domingo for being part of our journey and wish him all the success in life.

OUR UTM – NDT TEAM



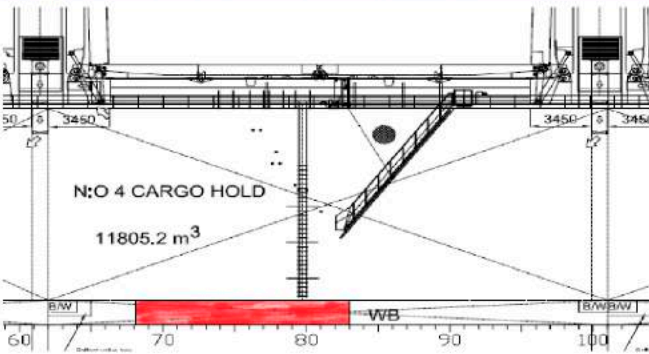
Within our group of companies, one of our youngest ones just opened a new division - the ultrasonic thickness measurements. On this new diversification, we have two experienced engineers in their mid-30s and the rest are young, enthusiastic, and full of energy engineers in their mid-20s. Even though they are young, they have a lot of mileage covered performing tests for the parent company Talleres Industriales' quality control processes every day for projects and floating equipment maintenance.



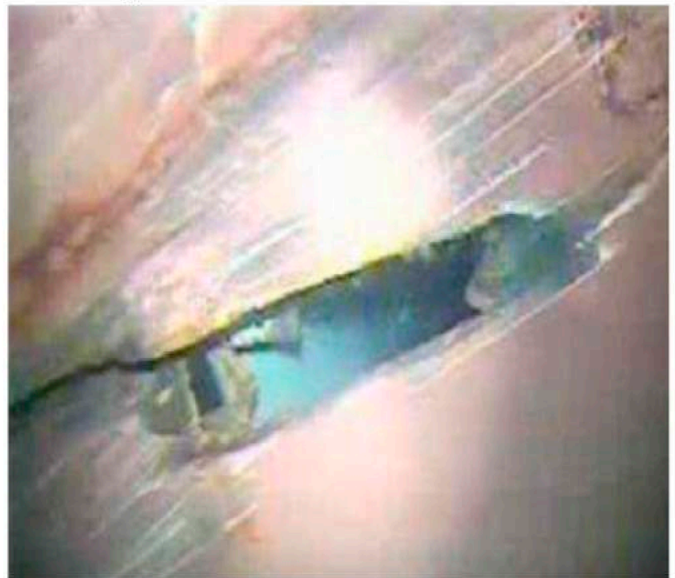
Our UTM project performing engineers are also qualified and certified NDT Levels I, II, and perform all types of visual, liquid penetrant, ultrasonic, magnetic particles, and vacuum box testing onboard vessels and in our workshop. We feel proud of this promising division that has a great future and career path for our team.



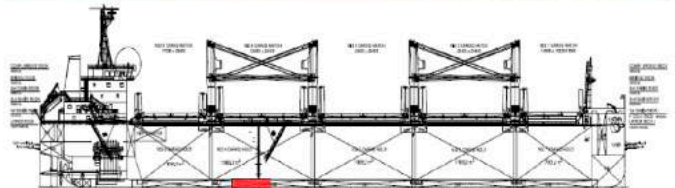
RECORD-BREAKING PERMANENT UNDERWATER REPAIR – 8 METERS IN LENGTH



A 25,303 gross ton Bulk Carrier ran aground at Buenaventura, Colombia, suffering major structural damage underwater on its external plating and internal girders.



Another record-breaking challenge came to our door, to perform a permanent underwater steel renewal on an 8-meter rupture on the No. 4 port side double bottom ballast tank of a brand-new vessel.



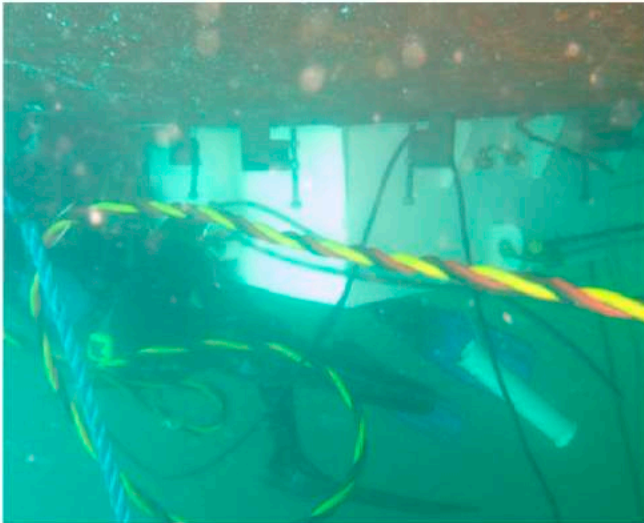


The grounding opened a rupture in the bottom plates of about 7,300 mm long and 200 mm wide transversally, located between frames 70 and 80. This grounding also caused damage to all the internal structures between the frames and the longitudinal structure. The complexity of the repair required immediate inspection by one of our team's experts, who immediately mobilized from Panama to witness the underwater survey.

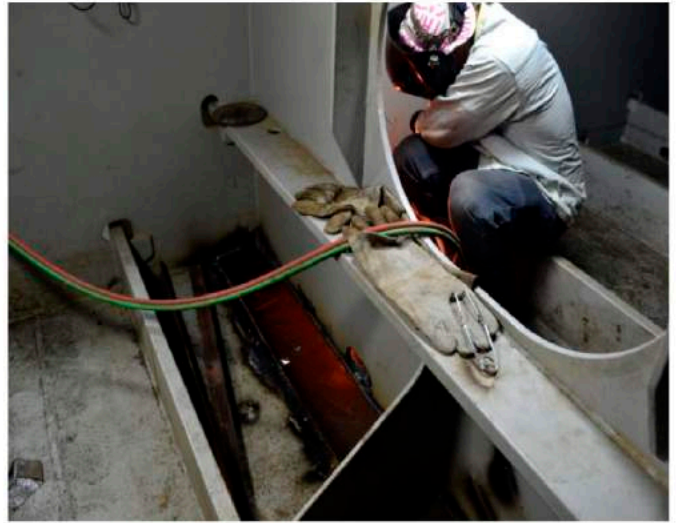


Once all assessments onboard were completed, we submitted our proposal for permanent repairs at Balboa, which were evaluated and accepted by the owners, insurance, and class. The vessel first had to discharge cargo at Callao, Peru, where temporary repairs were performed, as well as final measurements for the fabrication of the cofferdam. Data was taken in Peru and sent to our engineers in Panama. The fabrication of the 8-meter x 1-meter cofferdam itself resulted in an endeavor of its own, requiring our team of engineers to design and fabricate the structure with the right center of gravity and buoyancy, allowing for a safe handling and installation by our team of divers.





Upon arrival of the vessel to the Balboa anchorage, our floating platform, equipped with a crane and carrying all the repair gears and equipment, moored alongside to start repairs without any delays.



Once the cofferdam was securely installed by our qualified commercial divers, the tank was pumped dry, and the workspace was ready for the marine chemist's inspection to ensure that the environment was safe for hot works. Once we received the green light by our safety manager, a team of class approved welders and fitters started repairs.



The first stage involved cropping the damaged plate, which was done in sections. New 12.7 mm inserts, made of high tensile steel plate AH 36, were prepared and perfectly inserted in 4 sections, as well as 2 web frames and a longitudinal.

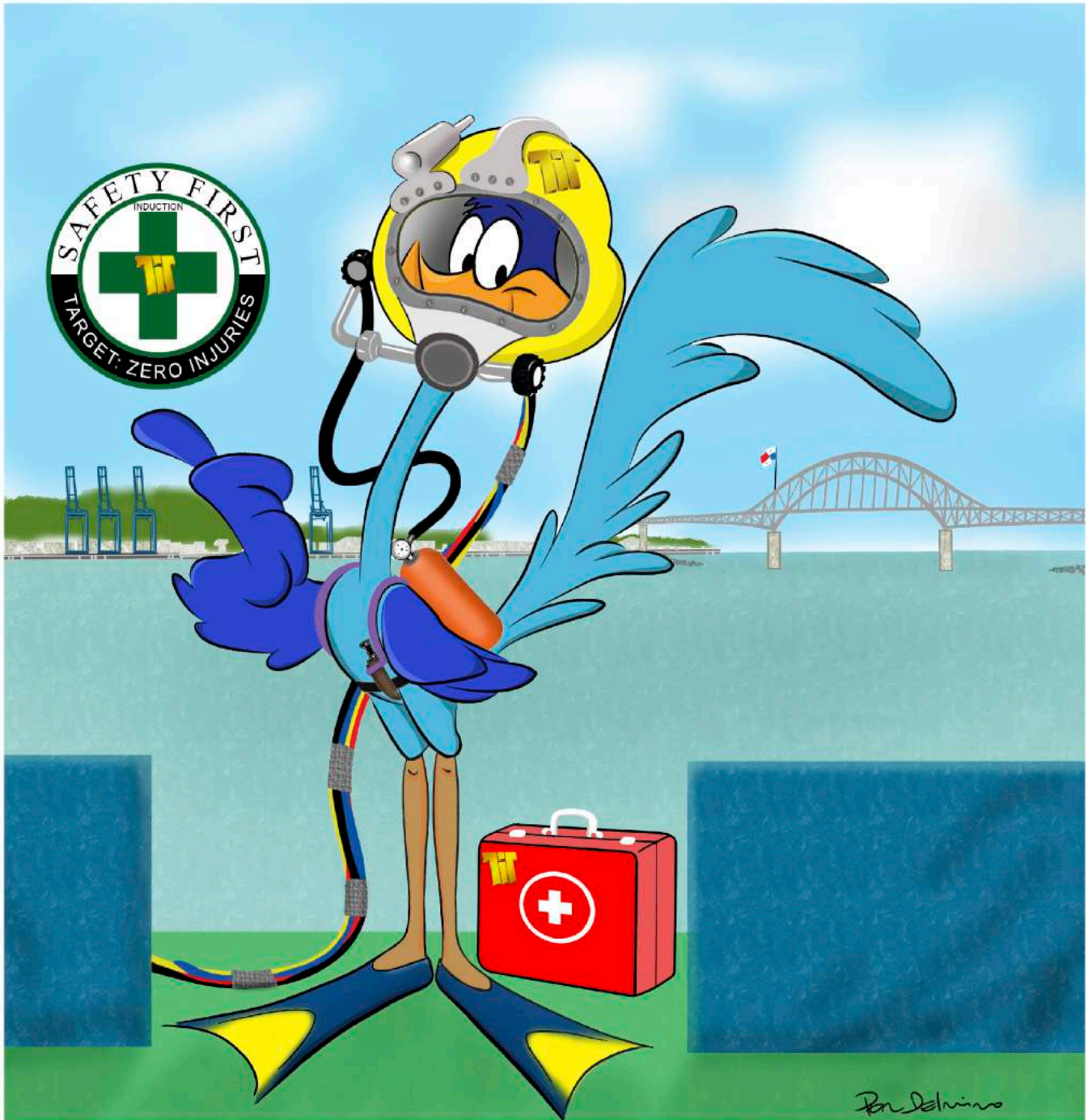




Class approved welders for full penetration welding were involved in the process. Upon completion of the welding, ultrasonic testing inspection was done to all welds to the satisfaction of the welding inspector and class. After the repairs were completed, the custom-made cofferdam was removed by the divers. Then a final polish of the welds was done underwater, and marine epoxy was applied to prevent corrosion on the new weld seams. Finally, underwater CCTV survey was performed, confirming that all was in perfect order. **No matter the test, situation, or adversity, Talleres is always willing to take the challenge.**



ALL OUR OPERATIONS ARE PERFORMED USING AIR SURFACE DEMAND AND TWO-WAY COMMUNICATION



SCUBA is strictly **“PROHIBITED”** in Talleres’ Operations