



TALLERES INDUSTRIALES, S.A.

24/7 SHIP REPAIRS AND MARINE SOLUTIONS

MAGAZINE 26th Edition



MAIN FEATURES

**MAJOR STRUCTURAL
REPAIRS AT CRISTOBAL**
7.5 Tons of Steel Renewal
at Cristobal
PAGES 5 - 7

**MONSTER ENGINES
TRANSITING BY ROAD
ALONGSIDE THE PANAMA
CANAL**
Final Loading Stage of Iconic
Heavy Lift Project
PAGES 10 - 11

**PANAMA IS IN GOOD
HANDS WHEN IT COMES
TO POLLUTION CONTROL**
Where we are in the
Atlantic & Pacific
PAGES 4 & 15

TABLE OF CONTENTS

- 2 **People** – Panama a great country to be proud of!
- 3 **Editorial** – “Our Founder and His Legacy to the Management Team”
- 4 **Pollution Control** - Map of Talleres Equipment at Balboa
- 5 **Amazing Jobs** – 7.5 Tons of Steel Renewal at Cristobal
- 8 **Marine Solutions** – “Crane Barge 24/7 at Balboa”
- 9 **Talleres on the field** – Leaders on The Battlefield
- 10 **Amazing Jobs** - Final Loading Stage of Iconic Heavy Lift Project
- 12 **Safety** – Underwater Services with the Highest Safety Standards
- 13 **Marine Solutions** – Stern seal Renewal Afloat
- 14 **Safety** - Drills! Always Ready for the Unexpected
- 15 **Pollution Control** - Map of Talleres Equipment at Cristobal
- 16 **Marine Solutions** – Above Water Line Cleaning During Waiting Time at the Panama Canal
- 18 **Next Edition Preview** – Coming up on our December Special End-of-the-Year Edition!

PANAMA A GREAT COUNTRY TO BE PROUD OF!



November is a special month for all Panamanians. It is the month of joy and patriotic prouddness when we wave our flag throughout the country celebrating our independence from Spain in 1821 and from Colombia in 1903. Given a historic perspective, in 1492 Christopher Columbus discovered America and on his 4th trip in 1502 he touched Panamanian soil and throughout our more than 500 years of evolution, we have become the key trade route of the world.

With our unique geographical location, the Panama Canal, and ports on both oceans, we are known as the "Hub of the Americas", the world's most connected country with the largest ship registry. We have a maritime heritage and as a country we understand the need of the shipping industry. Viva Panama!

Lino Arosemena, CEO along with his wife **Monica**.



talleresindustriales -shiprepairs



@talleres_industriales



talleres industriales

“OUR FOUNDER AND HIS LEGACY TO THE MANAGEMENT TEAM”



RAFAEL AROSEMENA / FOUNDER

During our strategic monthly meeting held in October, we had a special guest who brought his wisdom and experience to the management team. Our founder and mentor Rafael Arosemena joined us for this important event and pointed out several key aspects that represent the essence of our business. Values, Service Excellence, Social responsibility, and Efficiency to manage resources are four pillars that he encouraged us to keep us going forward.

Mr Arosemena is a source of inspiration for all of us because he has the capability to merge the experience gained in the past with the challenges of today's business world, to face and prepare for the future. We were pleased to exchange ideas and strategies with our founder who showed us once again his visionary spirit, the human side of the business and the importance of having a positive attitude on what we do.

As a management team, we strongly believe that we must keep an open mind to create business value, open heart to receive constant feedback and open will to make things happen.

TALLERES POLLUTION CONTROL ALL OVER THE PACIFIC ENTRANCE OF THE PANAMA CANAL AND PORTS



POLLUTION CONTROL CONTAINER - EQUIPMENT - OIL BOOMS, SKIMMERS, ABSORBENTS PADS, ACCESSORIES



LICENSE POLLUTION CONTROL BOAT WITH OIL BOOM AND EQUIPMENT



TANK FARM



TOURIST ATTRACTION (BEACH)



7.5 TONS OF STEEL RENEWAL AT CRISTOBAL



It was Sunday early morning when we were advised of a major collision on a 1350 TEU Container Ship during Panama Canal north transit. Upon completion of transit vessel anchored at Cristobal waiting for the insurance and class surveyors to inspect the vessel.



We were invited to go onboard along with them to make surveys and develop a repair plan for this loaded container vessel. Damage was extensive above and below water line on port side aft area involving her void space, ballast tank, twin deck, and engine room storage tank.

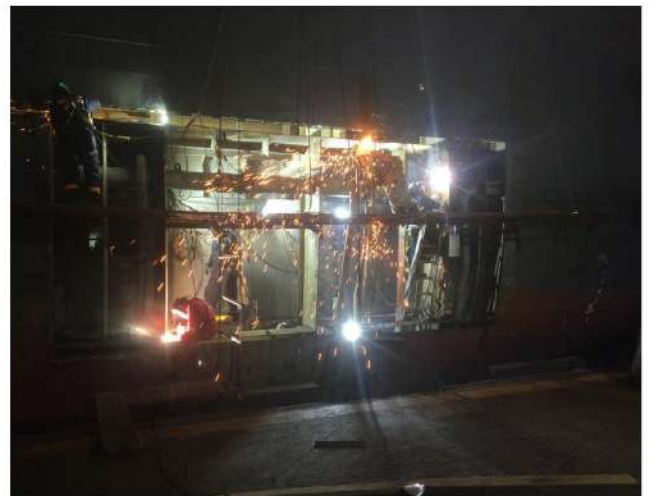


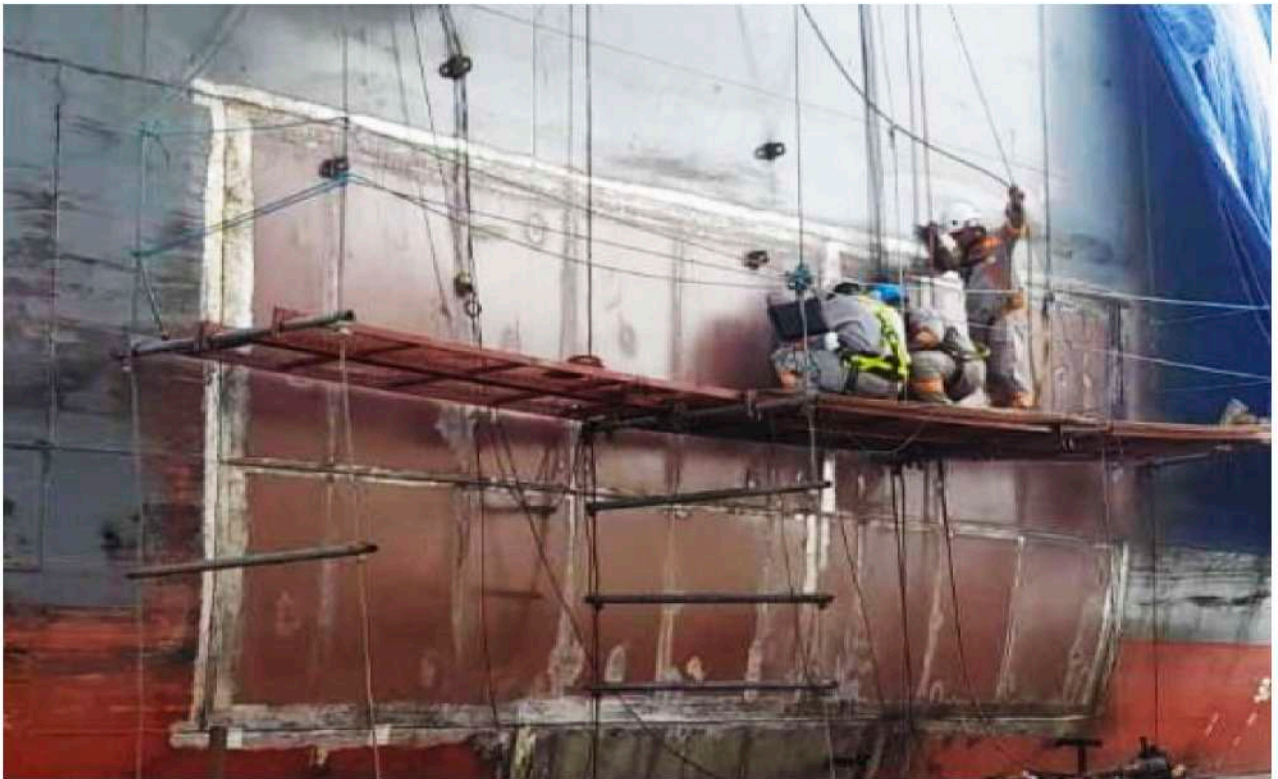
An additional component gave a higher degree of complexity to this repair, her fuel lines broke inside the engine causing an internal spill inside the engine room. Once a detailed repair plan was presented to class, insurance and client, the job was automatically approved. Repair plan consisted in performing a cold temporary repair at anchorage to achieve water tightness before moving vessel to repair berth for permanent repairs.

Once alongside, the vessel heeled to starboard to allow the damaged areas below water line arise to be able to work on a dry environment and then another challenging job started for Talleres in which tight deadlines and adverse weather played a key role.



First team to intervene was the Tank Cleaning Division along with marine chemist for assessment of areas to be cleaned. Cleaning and pumping of oily water product were done within 12 hours and after receiving the green light by the chemist immediately the scaffolding performance started installing staging's in the working area.





All production welding was carried out with certified welders and all seams were inspected by NDT technicians to the satisfaction of all parties involved. Finally, plates were prepared to be painted according to the original painting scheme and following the paint makers protocols and procedures.

Ventilation ducts were installed and cutting of damaged areas started. More than 7500 kg of steel had to be renewed between the two sections of shell plate that had measurements of 7300 mm x 3200 mm x 12 mm and 2400 mm x 1000 mm x 12 mm plus affected web frames, single frames, longitudinal frames, and deck plates. Likewise, affected piping system was renewed.



“CRANE BARGE 24/7 AT BALBOA”



Since last year, crane barge Camila has been working in several projects. To mention a few, removal of machinery from aboard, windlass repairs, removal of lifeboat for repairs, lifting of heavy equipment onboard vessels, and anchor repairs. Having the crane barge Camila as part of our fleet has given us the opportunity to expediate solutions and accomplish turnkey projects in order to meet our customer's needs.



EXECUTIVE OPERATIONS MANAGEMENT TEAM

"Leaders on The Battlefield"



Maurice Cohen
Project Manager
STS / Tank Cleaning
Pollution Control



Ángel Martínez
Project Manager
Electrical Service Engineer
Lifeboat Technician



Agustín Rodríguez
Rewinding Workshop
Supervisor



Jaime Robinson
Project Supervisor
Painting / Tank Cleaning
Pollution Control



Uberto Buckley
Painting & Blasting
Division Manager



Rodrigo Lara
Senior Diving Supervisor



Salomón Moreno
Diving Supervisor



David López
Diving Supervisor



Alberto Obando
Diving Supervisor



Abdul Aparicio
Diving Supervisor



Roberto Estrada
Diving Supervisor



Dayberto Labastid
Diving Support Engineer

FINAL LOADING STAGE OF ICONIC HEAVY LIFT PROJECT



On one of the final stages of this amazing project the challenge was to transfer the cargo from the source to the delivery location in the most efficient way, trying to obstruct the least possible and not interfere with the citizen's daily routines.

There were so many parties involved, so the planification had to be done in the most meticulous way.





The transportation of the last engine took less than 3 hours including all the stops, ups and downs, detours, and cambers.



During the loading sequence we had a team ballasting and de-ballasting to compensate all the weights that were loaded into the barge and avoid any trimming or heeling.

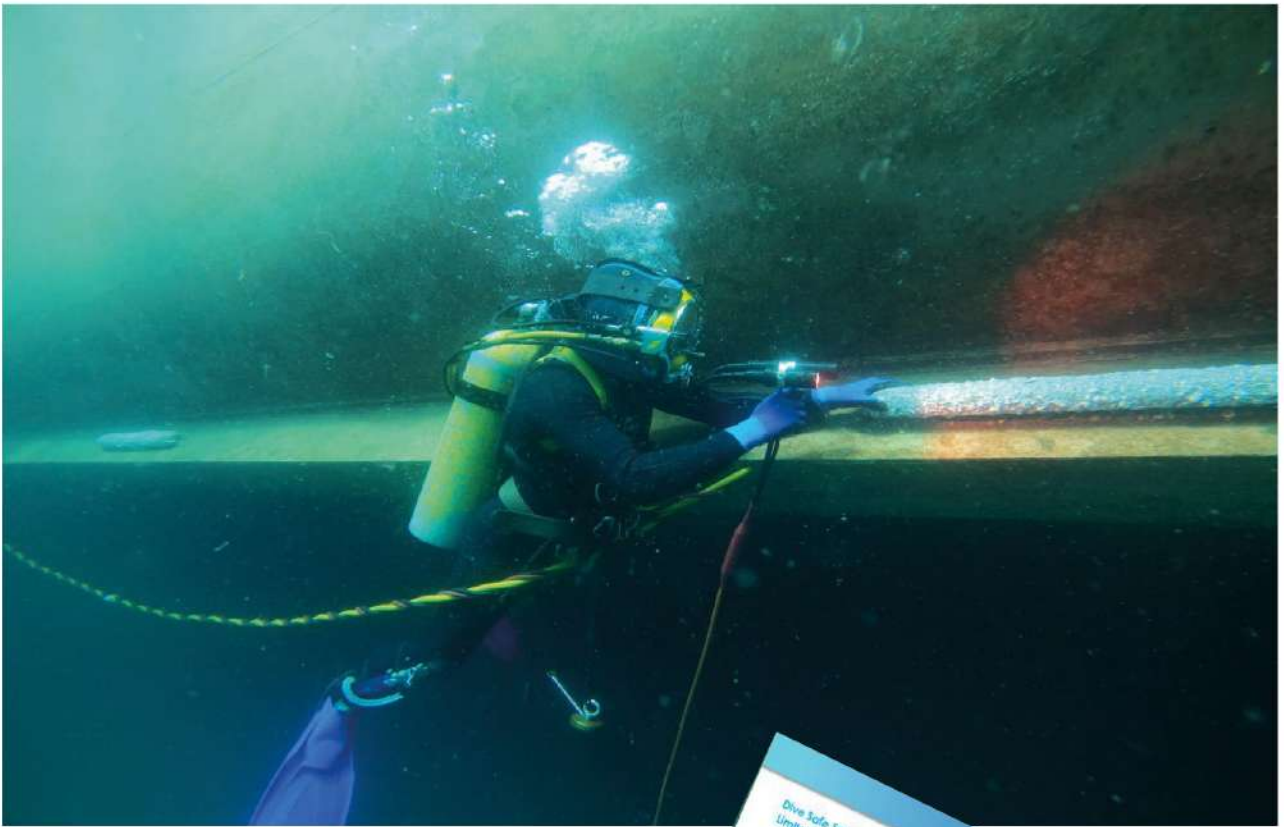


Finally, and thanks to the special trailer with active suspension mechanism, we were able to smoothly load all the engines and alternators into the barge, in a sequence where stability was maintained.



At the same time, we had another team performing the lowering of the engines and then the lashing of the same. Finally, to gain more stability, we lowered the height of the engine's support base in the reverse way which they were loaded into the trailer. For this job, we manufactured special tools for the hydraulic hacks which helped them to stay fixed in position considering we were doing the job on top of the barge.

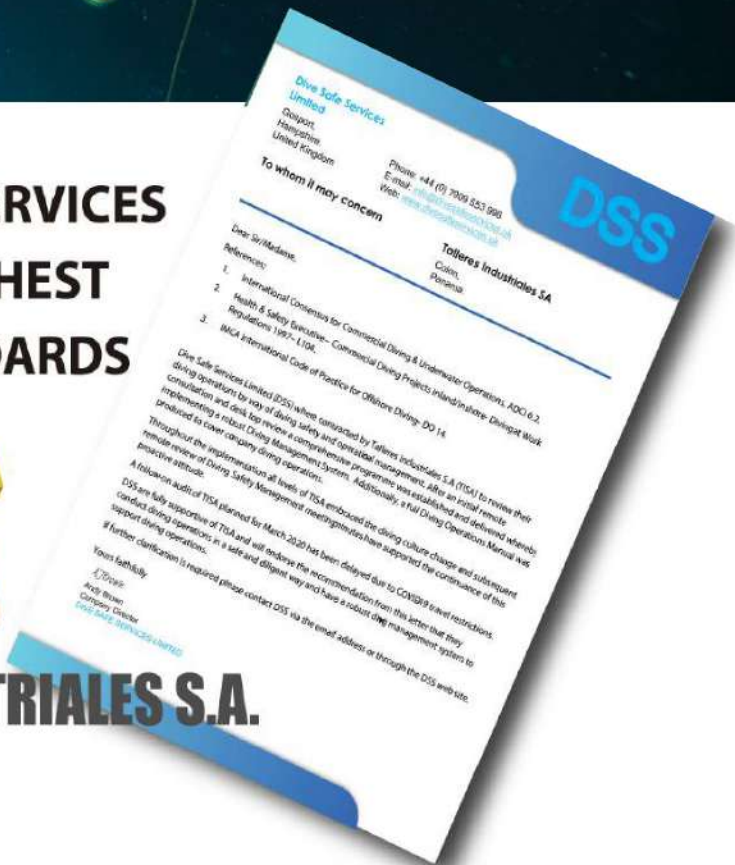




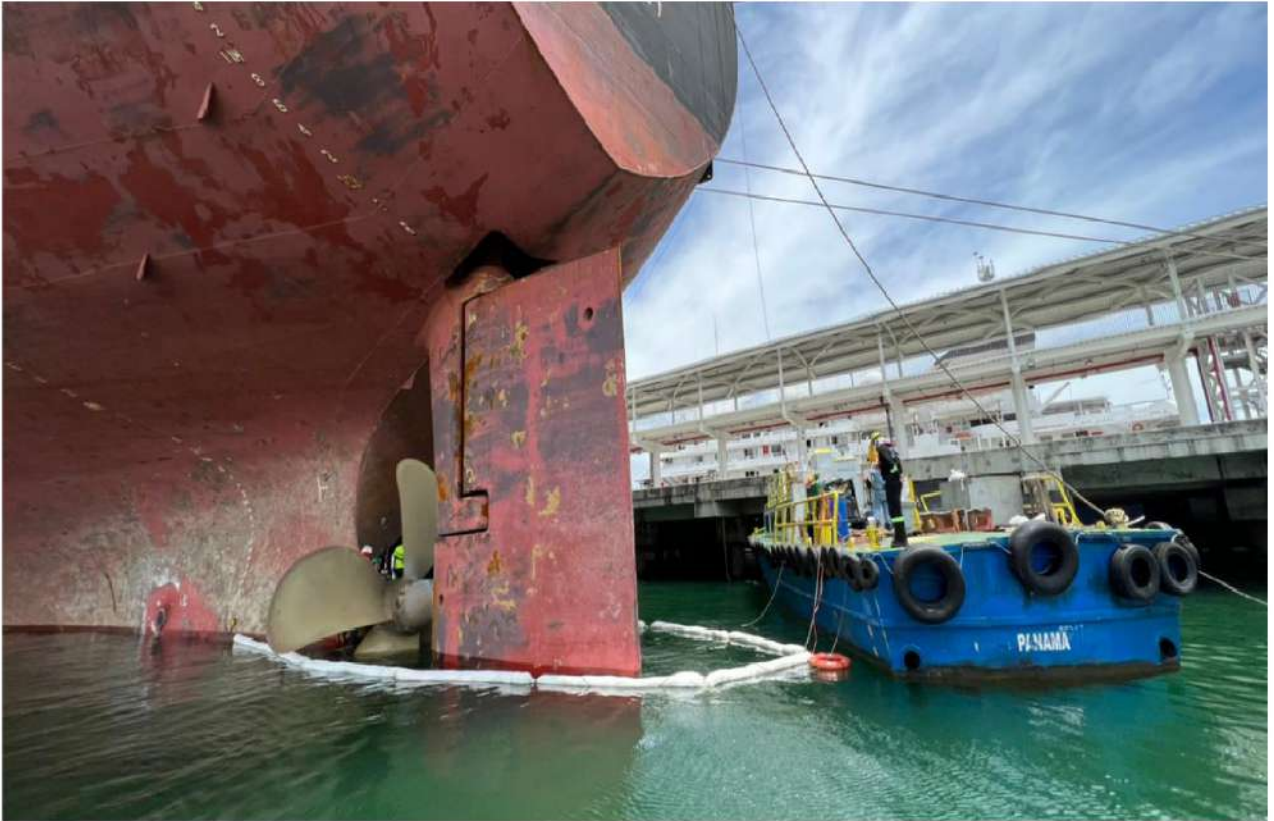
UNDERWATER SERVICES WITH THE HIGHEST SAFETY STANDARDS



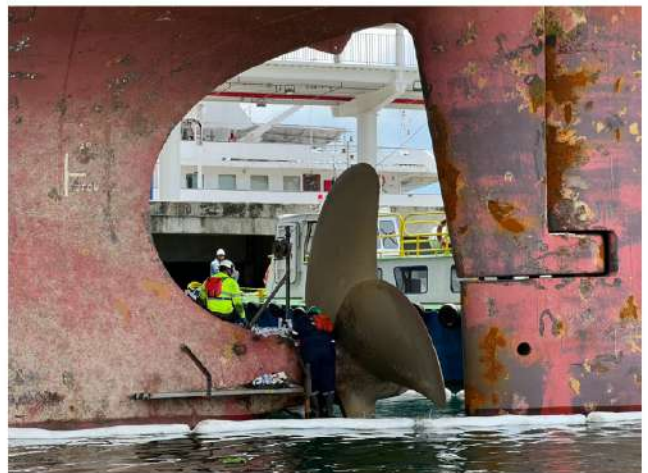
TALLERES INDUSTRIALES S.A.



STERN SEAL RENEWAL AFLOAT



Talleres' ecosystem is at the seas. Our daily routine involves giving afloat solutions to ship managers who need fast, safe, and cost-efficient services in the middle of complex, time consuming situations. Our daily playground is at both anchorages of the Panama Canal. To have fun we need to reach the site, and this involves having a fleet of fully equipped boats and working platforms to perform our tasks. We must also come with human talent to be able to come with unplanned solutions for clients who need unconventional repairs. We perform all types of dry dock repairs at anchorage and every day we specialize more to make it even more cost-effective. Stern Seal Renewal Afloat is done in combination of OEM seal makers service bonding engineers, while the vessels are



in afloat conditions at anchorage during their waiting period avoiding the off-hire costs. Panama has been chosen as a key location for these kinds of jobs.

DRILLS! ALWAYS READY FOR THE UNEXPECTED

Oil Spill Response Exercise on a Bunker Terminal at the Atlantic side of the Panama Canal



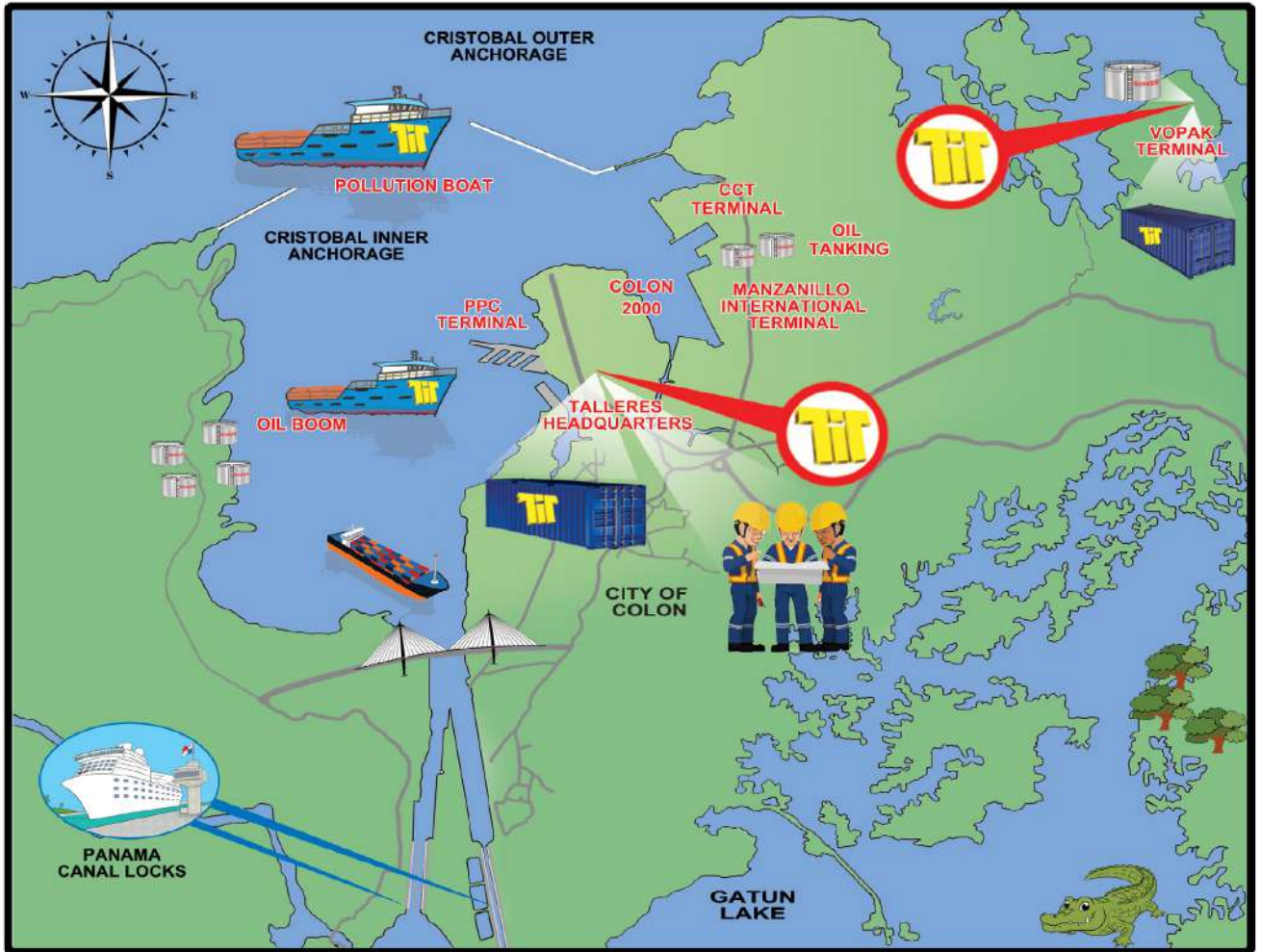
Talleres Industriales is ensuring all its strategic partners that have trusted the protection of their facilities and waterways to us that we will be ready to attend in case needed.



By constantly coordinating oil Spill Response trainings and drills, this enables us to perform safely and effectively in the case of an emergency.



TALLERES POLLUTION CONTROL ALL OVER THE ATLANTIC ENTRANCE OF THE PANAMA CANAL AND PORTS



POLLUTION CONTROL CONTAINER - EQUIPMENT - OIL BOOMS, SKIMMERS, ABSORBENTS PADS, ACCESSORIES



LICENSE POLLUTION CONTROL BOAT WITH OIL BOOM AND EQUIPMENT



TANK FARM



ABOVE WATER LINE CLEANING DURING WAITING TIMES AT THE PANAMA CANAL



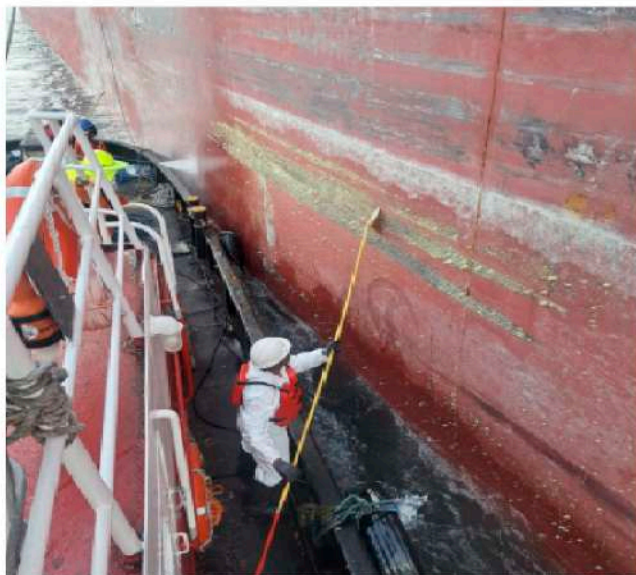
Talleres Industriales (TISA) is commonly asked to attend vessels to perform above-water-line hull cleanings at Pacific and Atlantic Anchorages. The vessels that request the service mostly in ballast condition and showing heavy fouling on all areas of the hull approximately 2 to 4 meters above the water line.





Polyurethane scrapers and hard bristle brushes are used to remove the heavy marine growth, followed by a high-pressure wash with fresh water in all hull areas. TISA team procedures for cleaning above water line level are to start with the vertical side flat area on the aft section and work their way up to the bow. Once the first side is completed and in case two teams are not working simultaneously, the team works on the opposite side aft vertical flat area, and again, working our way up to the bow.

The bow and aft areas are the last to tackle since they are the most complex sections and time consuming to clean because of the curvature.



Anyhow we at Talleres we are ready to take on any challenge and adapt to the existing environment and shape of the vessel. Experience and proper equipment are the key to get the job done in no time!



COMING UP ON OUR DECEMBER SPECIAL END OF THE YEAR EDITION! AMAZING JOBS OF 2022

RECORD BREAKING HEAVY LIFT PROJECT AT THE PANAMA CANAL



DRY DOCK AT SEA OF A POST PANAMAX VESSEL

