



Tales from the Deep

Subsea Solutions Alliance

4 underwater seal repairs- 3 continents in 2 weeks

The SSA was put to the test in the month of May. With four underwater seal replacement repairs necessary throughout the world, the members of the SSA banded together to answer the call. Three (3) underwater seal replacements on three (3) different continents were performed simultaneously. With only a few days notice, SSA was able to dispatch equipment and a full contingent of divers to the remote port of Montevideo



Uruguay to perform an emergency seal replacement to a 4000 TEU container vessel with a 850 mm diameter seal. While at the same time, equipment and a team of divers was dispatched to Mallorca, Spain to attend a Passenger vessel with a size 600 mm diameter seal just after completing a job in Durban, South Africa on a 8500 TEU container vessel with a size 1030 mm diameter seal. Lastly, in combination with a cold straightening repair of a propeller with a bent and damaged blade, SSA divers performed an underwater seal replacement for a bulk carrier with a 580 mm diameter seal in Vancouver, Canada. The significance of these re-

pairs demonstrates the skills and resources available through the Subsea Solutions Alliance.

Utilizing their unique Blohm and Voss Industries GmbH approved underwater repair process with their exclusively "fit for purpose" habitat designed to develop a climate controlled DRY environment around the defective seal, SSA bonded the seal to original factory specifications while working underwater thus providing a permanent repair for the vessel owner.

Underwater repairs yet again demonstrate their value by keeping vessels in service with minimal impacts on schedule.

All-Seas Enterprises LTD to the rescue

During a routine docking in Prince Rupert Sound, a harbor tug was struck by the docking vessels propeller. The rotating propeller pierced the small vessels shell plating in five places causing significant dam-



age to both the harbor tug and the vessels propeller.

ASE's dive team was immediately dispatched to perform repairs to BOTH the vessel and the harbor tug. Initially repairs to the vessels propeller were performed. Upon completion of the propel-

ler repair, the dive team focused on the repairs to the harbor tug.

A permanent shell repair was completed on the harbor tug with the insertion of a two meter by three meter section of plate.



Special points of interest:

- > Underwater Seal Replacements save the day
- > One underwater repair company for all services
- > Fuel savings Management
- > Underwater Tunnel thruster extraction

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Miami Diver delivers their new "Rig". The fully equipped trailer provides mobile dive support whenever and wherever needed.



Miami Diver- Servicing the Cruise Industry without fail

The month proved challenging for Kevin and Paul Peters and their merry gang of divers. Multiple jobs on various cruise vessels required their skill and tenacity. From underwater seal replacements on main propulsion units to the extraction of tunnel thrusters while discharging passengers and baggage, the team at Miami Divers kept the cruise



industry on schedule.

Services to the main propeller shaft seal on vessels in Bermuda took place this past month. At the conclusion of that job

a team was mobilized in Florida to perform the extraction of a leaking tunnel thruster for repair. The month concluded with two additional teams leaving Miami to support thruster extractions in Europe and the Northeastern USA simultaneously. With the SSA exclusive "Soft door" bulkhead system vessel schedules are minimally impacted while performing these services.



Adrie teaches his computer a lesson
Trident BV- The Netherlands

Trident sets a new standard for thruster service in Hong Kong

While performing one tunnel thruster extraction in Hong Kong using Soft door system, Trident's team of divers continued servicing clients needs by performing a propeller inspection for a propulsion system manufacturer and then

stayed in place to extract an additional thruster for repair.

The dynamic capabilities and cross training of the dive team allowed multiple jobs to be performed back to back without requiring the added ex-

pense of flying in specialists from around the world.



Kevin's Corner...
"That's Easy- do you want me to help you with that?"
Miami Diver Inc- Florida, USA



Fuel Management- What can a bunch of divers do about it?

Consider what it costs to operate vessels 2 to 3 knots slower and fuel consumptions 5 to 10 percent higher than design in today's market place. You will quickly come to the conclusion that regular and scheduled hull cleaning combined with propeller polishing pays off.

The members of the SSA have joined together to offer yearly cleaning contracts in major ports of call. With a vessels known trade route, the SSA can manage quarterly hull cleaning and propeller polishing to "flat line" the fuel consumption. No more peaks and valley's. Mini-

mal increases in consumption over years of operation.

It's like putting money in the bank. Think about what your vessel is doing sitting out on the hook waiting to go through the Panama Canal. What about a good cleaning?

Parker Diving- Restoring the History of San Diego

When the Port Authority of San Diego realized that Broadway Pier was in danger of collapse, the marine construction experts at Parker Diving were called. Over a period of one year, 168 pilings were restored. This

required that the existing piles be properly cleaned, the concrete scarified, rebar cages built around the existing piles and concrete forms be created. Once this was completed, the pilings could be properly poured, pro-

viding a permanent repair to the pier.

Broadway pier is located on San Diego Bay at the intersection of Broadway and Harbor Drive. Built in 1913, the pier has a long history of servicing passenger vessels. Presently, it serves as the auxiliary cruise facility for the Port of San Diego.



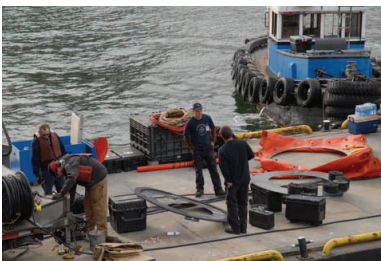
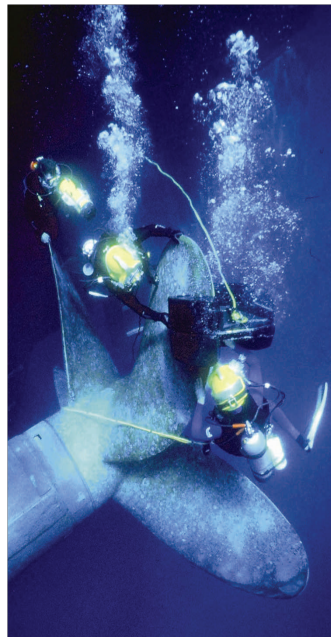
Jim- Are Monday's really that bad?
Parker Diving Inc.- Long Beach, USA

One Call and That's all- Subsea Solutions Alliance delivers

When a vessel entering Vancouver this month with severe propeller damage combined with a leaking aft propeller shaft seal, the experts at SSA were called into action. While still at the anchorage, the propeller experts from All-Seas Enterprises in Vancouver mobilized the necessary resources to support the repair. Within a day, the severe bends in the propeller

Inc, the team from All-Sea Enterprises was able to restore the propeller to it's prior condition.

Upon conclusion of the straightening process, the vessel was maneuvered into the port of Vancouver for an underwater replacement of it's after propeller shaft seal. The team of experts from all members of the SSA performed the critical seal repairs and the vessel departed on its voyage.



blades were removed and cracks repaired. Utilizing the cold straightening process under license from Subsea Propeller

Sea trials were conducted by the owner and they were pleased to report that the vessel performance was restored to its original condition prior to the propeller damage.

"Vessel performance was restored to its original condition prior to the propeller damage."

It's a tough life being a Diver- at least Vince Cummings thinks so.....
All-Sea Enterprises- Vancouver Canada



We're on the web
subseasolutions.com

Subsea Solutions Alliance (SSA) is a consortium of underwater ship repair specialists- All-Sea Enterprises LTD of Canada, Miami Diver Inc of the Eastern USA and the Caribbean, Parker Diving Inc of the Western USA and Trident BV of the Netherlands. With a dedicated staff of over 90 divers globally, SSA has revolutionized the methods of repair for ship equipment underwater. From the replacement of Propeller shaft seals to the exchange of thrusters, SSA has become the OEM's choice for all types of complex repairs. With class approved techniques established and a highly trained staff in both underwater ship repair and propulsion equipment maintenance, SSA is the clear choice for vessels operating in sensitive environments and on critical trade routes. SSA continues to reinvent the methods of ship repair. As the demand for in place ship repair grows as vessel owners and operators are requiring their vessels to remain in the water longer between dockings, SSA continues to invest to meet the challenge set by the industry by continuing to develop equipment to strategically place throughout the world. Miami Diver Inc. has just completed the implementation of a full dive and repair facility in the Republic of Panama within the Canal Zone.

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Landing Lights Required- Training facility modifies sky line!

The sky line in Long Beach will never be the same. Parker Diving has completed the construction of the second in-house training facility for the Subsea Solutions Alliance.

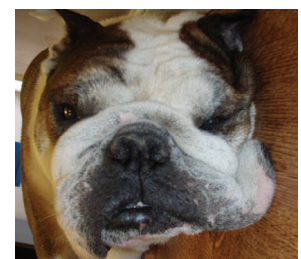
With a tank large enough to deploy the largest habitat, training jigs developed for underwater seal replacement training, flexible door installation training, underwater seal bonding and under-

water welding and certification, the Subsea Solutions Alliance has the



capability to train personnel in all aspects of underwater equipment repair on two coasts of the United States.

With all welding procedures class approved and OEM authorization to perform permanent repairs to vessel equipment and sealing systems, the diving teams must be multi-skilled in various disciplines. Strong mechanical skills, welding skills as well as diving skills are necessary to support the expert services provided by the companies of the Subsea Solutions Alliance.



Moe Knows BEST!!- Someone needs to keep a watchful on the boys at Miami Diver