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### Yale Cordage

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tions Alliance's clients are domiciled outside the U.S. They've been involved in a great deal of work involving rigging within the last few months, like a recent job that included removing three stabilizer fins off a cruise vessel for repair while the vessel remained in service cruising exotic European ports of call, and the removal of a 50+ ton rudder which was chronicled in an episode of National Geographic Channel's World's Toughest Fixes (see WRN's Feb. 2010 issue.)

The Subsea Solutions Alliance does underwater welding on rigging pad eyes. The rigging part of their operations is critical. If 23 tons are going to be lifted out of the water there must be a rating on the pad eye. Usually at a shipyard there is access to a crane, but when a crane is not available, they've had to get innovative in the way they rig things, especially with cruise vessels, as they have very limited time in the port and repair work must be done without disruption of the passengers. Additionally, at cruise terminals around the world, they typically do not have sufficient crane capacity or the ability to bring in mobile cranes to the terminal as this would affect passenger cargo operations and the like. That's really where the alliance excels, according to Peters.

### A true friend of cruise lines

Peters grew up in Minnesota and after four years in the Marine Corps stationed in Hawaii, he decided that if he could find an occupation where he really didn't have to deal with snow anymore, he would have it made.

Fortunately, he ended up in Florida, and now has more than 25 years of experience in his work. The innovation he and his company can now bring to the table has basically been driven by the cruise industry, with nearby Miami and Fort Lauderdale being the capitals.

If a cruise ship has to go to dry dock their off-hire rate is a million dollars per day, and two days of work will ruin a seven-day cruise, destroying vacations of 3,000 people or more, according to Peters. "The cruise lines cannot even measure the cost of the bad press they would receive for such an event. Repeat customers do not come when that happens. With all the conditions involved with fast underwater repair without disrupting a cruise, we really had to get innovative."

The Cruise industry, pioneered and pushed Peters and The Subsea Solu-



Welder Jason Cooper (front) and Daniel Haakinson (rear) using the "ferry" to get on land. This picture is taken from the cofferdam, where the welders were working. They are using the boat to get on the float and on land.

tions Alliance to develop their underwater work. The industry worked together with The Subsea Solutions Alliance to practice never performed repair alternatives in order to improve the techniques so that they could be performed in a time frame suitable to meet a cruise vessel's itinerary. Customer's would bring ships in early, The Subsea Solutions Alliance in turn installed the cofferdams, got all the bugs worked out on the rigging and then performed previously unheard of in-water repairs.

At the end of the day if cruise lines spent a couple of hundred thousand dollars on a repair and ended up in turn saving millions of dollars, it was well worth any efforts involved. The technology they developed in turn is used in work on tankers, bulk carriers, and container ships – overcoming the doubts of these very conservative industries.

The SSA is used to long, hard work weeks. One case in particular involved a ship doing ten-day cruises to various locations around the Mediterranean. Over the cruise the vessel had some five different ports where repairs of the stabilizer fin can be done. The Subsea Solutions Alliance was on the ship setting the rigging, welding the rigging pad eyes and dismantling the parts they are able to dismantle. When they reach a suitable port, the SSA was given one 12-hour window in which to complete their work.

### Flexibility of U.S. suppliers is key

Rigging is quite critical to the work