

Connections

THE CROWLEY MAGAZINE

ISSUE 1 2008



***If We Can Think It,
We Can Build It***

ATB program proves once again
that Crowley can do anything,
anytime, anywhere, on water.

New Look, New Focus

Welcome to *Connections*, Crowley's new magazine for employees, customers and others interested in the world of Crowley. Between these pages and in subsequent issues you will learn about the people, places and diverse business enterprises that connect us all in some form or fashion.

Consider our environment. Regardless of your political leanings and your beliefs on whether there is such a thing as man-made global warming or cooling, we can all agree that there are things we can do to keep the environment cleaner and to conserve our natural resources. In this issue, Jenifer Kimble takes a look at some of the many initiatives Crowley has underway to conserve resources and protect the environment – from installing new, more efficient tug propellers and fuel injectors, to using ultra low sulfur diesel, to reducing truck idle times, to going paperless and much more.

In Coos Bay, Oregon, Crowley's marine salvage company, TITAN, is attempting to remove the remains of a wrecked freighter from the surf. The shipwreck, a portion of which is buried in up to 30 feet of sand, has been an eyesore on the beach for over nine years. Mabel Perez takes a look at this job, plus gives you an inside view of the world of high-stakes marine salvage and wreck removal.

Also in *Connections* – when it comes to transporting petroleum products via Articulated Tug-Barges (ATBs) on the West Coast of the United States, skeptics said it couldn't be done given the volatile winds and seas that are characteristic along the coast. Crowley proved them wrong, and touched off a boom in ATB construction. In Central America, we take a look at the changing dynamics of sourcing and manufacturing, and how Crowley, through its container shipping and logistics services, is helping companies compete with China and India by providing speed to market. And, you will want to read the heartwarming story about Crowley employees who are helping to make life better for people from Alaska to Central America and points in between through their charitable outreach.

We hope you enjoy this first issue, and certainly invite you to stay connected with Crowley.

Sincerely,


Mark Miller



Connections

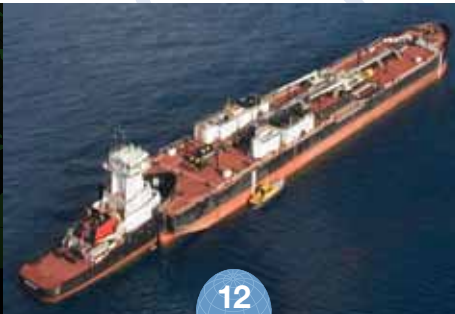
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A GREENER TOMORROW TODAY

Crowley's proactive
environmental initiatives

By Jenifer Kimble

No matter where you look these days, everyone - everywhere - is talking green. With carbon reductions and footprints and hybrids and warming or cooling, emissions, etc., it's not difficult to get confused by the terms while - at the same time - being intrigued by the concept of each. It's nice to know that - though these things are this year's hot topic- none of them are new to Crowley. From coast to coast it's evident that business really is greener on the Crowley side.

Building on a History of Environmental Stewardship

Crowley has a long history of environmental protection. A Crowley *Safety in Towing* handbook published in 1970, twenty years before the Oil Pollution Act of 1990, contains operational procedures to prevent spills that many years later became law. This early interest in keeping our harbors and oceans clean has developed into a strong company culture of environmental stewardship.

Recent examples are Crowley's certification to the international standard ISO 14001 Environmental Management System; certification of the Articulated Tug Barge (ATB) 650-3 by Lloyds Register Group under its Green Passport program; and special recognition by several prestigious government organizations of Crowley's environmental stewardship - including the Chamber of Shipping of America, the U.S. Coast Guard's William Benkert award for environmental excellence, Washington Department of Ecology Exceptional Compliance Program, and the Pacific States / British Columbia Oil Spill Task Force Legacy Award.



ATBs

The ATBs are the newest and most environmentally friendly vessels in Crowley's fleet. They have an impressive record of zero spills during their 1,000-plus voyages and boast other environmentally friendly traits as well. The Reliance Class ATBs were designed to reduce immediate environmental effects such as emissions and wastewater, while others are designed to protect the environment in the unlikely chance that a large spill occurred. With the support of major customers like Shell and BP, the ATBs run a minimum of 50 miles offshore. This way, if there were an accident, the vessel is far enough offshore to allow sufficient time for rescue and abatement of contamination to area beaches and resources.

The tug's design incorporates the use of wing ballast tanks, engine room inner

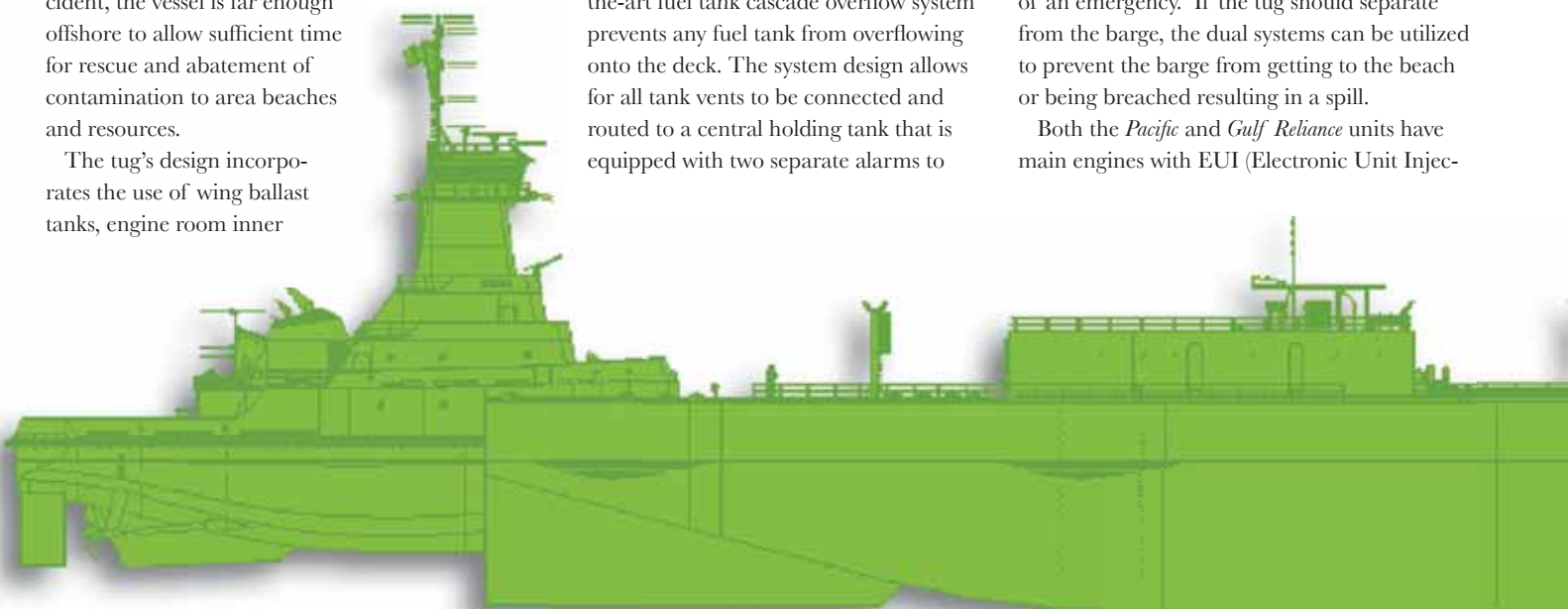
bottoms, and a fuel tank cascade overflow system. Basically, this means the ballast tanks are designed like wings surrounding and protecting the outside of the vessel where a strike may occur. It also means that the fuel tanks are protected preventing the chance that fuel would escape during a collision. The inner bottom construction provides an extra level of security to the engine room should the vessel run aground. Thanks to this extra layer, the engine room would not flood and the vessel would continue to be under complete control of the captain, allowing it to maneuver the barge out of harm's way. The state-of-the-art fuel tank cascade overflow system prevents any fuel tank from overflowing onto the deck. The system design allows for all tank vents to be connected and routed to a central holding tank that is equipped with two separate alarms to

Crowley was issued a Green Passport certification by Lloyd's List during the build of the *Resolve/650-3* ATB. The Green Passport ensures that the vessel will carry a history of the materials that were used in its construction and subsequent operations throughout its working life.

notify the engineer should a tank inadvertently be overfilled.

The barges were designed and equipped with a dual emergency retrieval system, one in the bow and one in the stern. These systems provide two separate retrieval hawsers (thick ropes or cables used to tow a ship) in the event of an emergency. If the tug should separate from the barge, the dual systems can be utilized to prevent the barge from getting to the beach or being breached resulting in a spill.

Both the *Pacific* and *Gulf Reliance* units have main engines with EUI (Electronic Unit Injec-



tion) technology to reduce emissions. Engine timing and fuel metering are controlled electronically through an onboard computer that distributes fuel to the engine based on power requirements and can electronically control the fuel to air ratios and emissions released into the atmosphere.

The tugs are designed and outfitted with grey water holding tanks to capture all grey water (non-industrial wastewater generated from domestic processes such as dish washing, laundry and bathing) when in port to reduce pollution. All engine and slop water including produced water, ballast water from oil cargo and deck water are all discharged ashore to licensed waste disposal contractors even though the vessels are equipped with OWS (Oily Water Separators) in the event of an emergency.

The ATBs are ECOPRO members and have been for the past five years. ECOPRO is a voluntary program established by the State of Washington. It recognizes members of the marine transportation industry that operate in the state waters demonstrating their willingness to go above and beyond the existing standards in the protection of the environment. There are 31 requirements ranging from navigation watch procedures, manning requirements and ship routing, to remote shut down of cargo systems. Membership requires that all standards are met and maintained. The company also recently participated with the State in the revision of the policies and procedures for membership. Crowley is a leader in the Environmental Protection arena and has demonstrated its desire to set the standards for others to follow.

Tugs

The company recently invested in engine modifications on all 14 of the tugs used in its Puerto Rico barge service. Already more energy efficient, these tug and barge arrangements have the ability in a week to save over 300,000 gallons of fuel over traditional trucking transport. And, though there is no bridge to Puerto Rico to provide an alternate for water

transport, if there were, it wouldn't be efficient. Trucking the same number of containers to the island (over 1000) that Crowley's triple-deck barges carry per week, would require the same number of trucks filled collectively with nearly 400,000 gallons of fuel. This versus the 64,000 gallons that each of the three tugs burn south-bound is a no-brainer for fuel conservation and emissions.

Those numbers alone speak volumes to Crowley's environmental efficiency. Combine that with a desire to provide ever-increasing value and service to its customers and you'll have even better return. Crowley is working to reduce all three types of exhaust emissions (visible smoke, particulate matter and nitrogen oxides (NOx)), while working to achieve heightened performance with decreased fuel consumption.

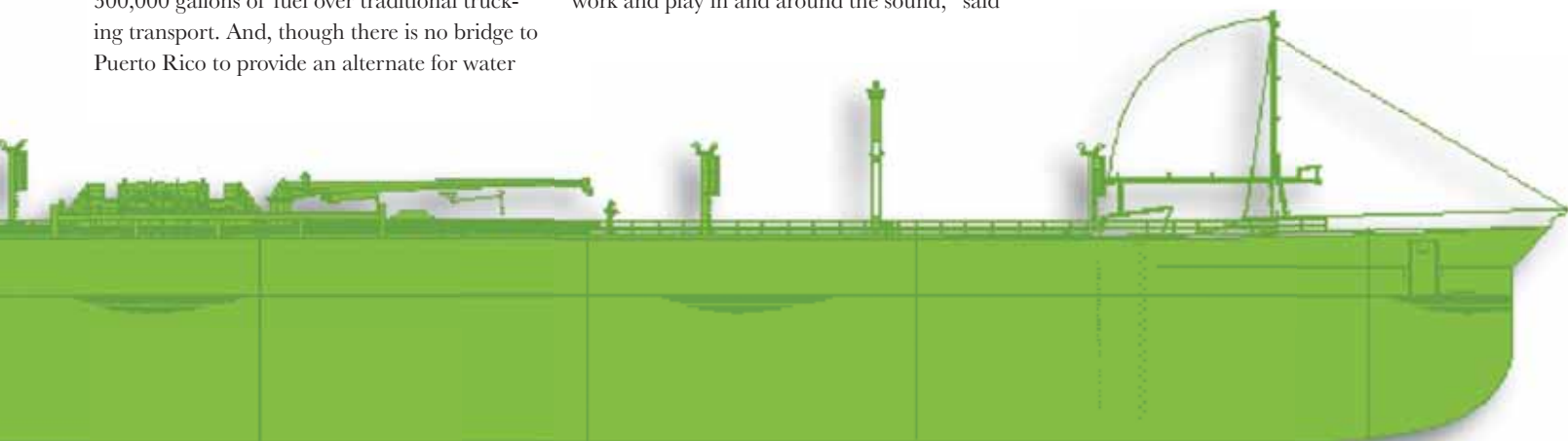
Through a series of engineering upgrades, Crowley has partnered with General Electric, Rolls Royce, Marine Systems and Interstate Diesel to reduce exhaust, cut engine lubricating oil consumption and save fuel.

In addition to using low sulfur diesel fuel on the East Coast and Ultra Low Sulfur Diesel (ULSD) on the West Coast, Crowley has installed ECOTIP fuel injectors in the tugs. This has helped reduce the amount of particulate matter released into the atmosphere by 44 percent and the clarity of stack emissions has improved by 75 percent. Though the cost of the ULSD fuel is about four cents more per gallon than regular diesel, the environmental impact is worth the extra cost. ULSD provides a significant reduction in sulfur content even over that of low sulfur diesel, reducing it by an additional 16 percent or from 500 PPM to 15 PPM.

"Although we are not required to switch to ultra low sulfur diesel in Puget Sound, we felt that this was the right thing to do for the environment and for our fellow citizens who live, work and play in and around the sound," said



Enhancements to Crowley's Puerto Rico fleet include new propellers, pleated paper air filters and four-pass aftercoolers.



Crowley uses Cold Ironing at many of its berths to power tugs while they are docked. This use of shore-side electrical equipment mitigates air pollution by significantly reducing, and in some cases, completely eliminating harmful emissions from diesel engines.

Crowley Vice President Chris Peterson. “We’ve been running our California harbor tugs on ultra low sulfur diesel for some time now and have wanted to do it here, but the fuel was unavailable until mid-April at which point we immediately migrated the tugs to it.”

Crowley’s switch to ultra low sulfur diesel is a component of its Safety, Quality & Environmental (SQE) certification from the American Bureau of Shipping (ABS). Having achieved its environmental certification in late 2007, Crowley is one of the few tug companies to be fully SQE certified.

“Being E-certified means that we have a recognized and approved program in place for minimizing our environmental impact with our tug operations,” Peterson said. “Our vessels are audited to certain environmental standards as well as to safety and quality standards.”

Also contributing to improved fuel efficiency, cleaner burning engines and reduced stack emissions are air filters with a pleated paper design. These filters provide less restriction of airflow into the engine and better air cleaning prior to entering the tug’s turbocharger thereby maintaining efficiency.

Additionally, the East Coast tugs have special four-pass aftercoolers instead of traditional



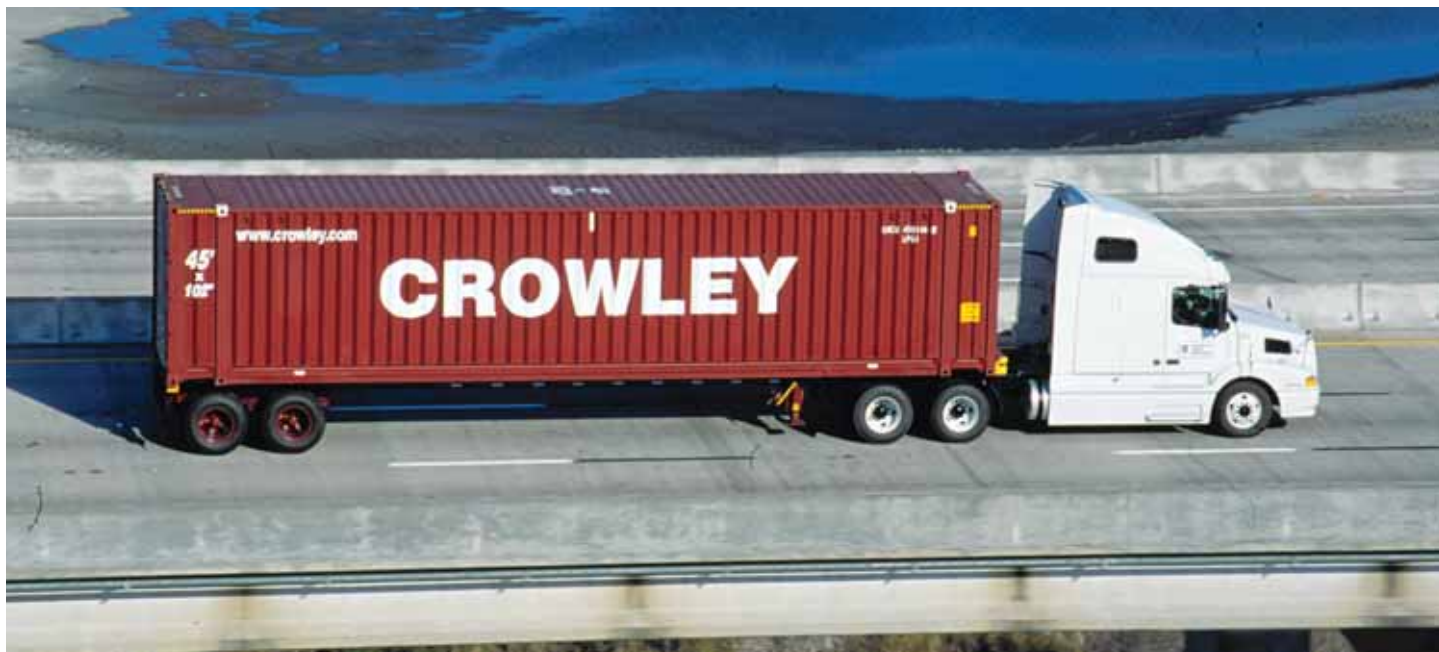
two-pass coolers, ensuring that the air temperature is lowered and density is increased as the air enters the engine. The cooler, denser air flowing into the engine allows for more complete combustion and increased fuel efficiency while maximizing the engine’s power. Vent modifications and stronger vent fans in the engine room keep the air pressure up and the temperature down. The further cooling of this ambient air temperature again increases efficiency and reduces fuel consumption and stack emissions.

New extended life, emissions-reducing power assemblies have been installed for testing

purposes in some of the tugs in the fleet. Also proving their worth are custom designed piston rings, which require less oil for operation.

The final piece of Crowley’s move towards more efficient, environmentally friendly tugs is the development and installation of new generation Rolls Royce propellers. The new generation work wheels provide state-of-the-art hydrodynamic design, which significantly improves cavitation performance and overall efficiency. The combination of these different modifications has all worked together to decrease oil and fuel consumption while not compromising efficiency and speed. The modifications have allowed Crowley to maintain the service schedule and sailing frequency to





which the people of Puerto Rico have become accustomed.

The company is installing shore power at all of its “home dock” facilities on the West Coast so that tugs do not have to run their main or auxiliary engines while at the dock. This “cold ironing technology” is not new to Crowley as it is already installed in both Seattle and San Francisco. It will however be new to the company’s port of Los Angeles and San Pedro berths. Cold ironing permits some equipment such as refrigeration, cooling, heating, lighting, etc. to be run while mitigating air pollution traditionally produced by the idling diesel engines. When shore power isn’t in use or isn’t available at the dock, the company’s new class of harbor tugs are equipped with a small “house generator”. This smaller generator is also capable of running the lights and galley services, but is nearly silent and boasts ultra low emissions and extreme fuel efficiency.

To minimize wasted fuel, Crowley has negotiated an agreement with the port of Los Angeles to utilize various intermediary ‘lay-berths’ in and around the port. This allows the tugs to tie up at various facilities between ship assist jobs, significantly reducing the need to run back to the ‘home dock’ during idle periods.

Recycling and certified hazardous waste handling facilities have been added to the home

docks on the West Coast. These facilities are reducing Crowley’s contribution to the overall waste stream and ensuring that any hazardous or oily wastes from the tugs are properly handled.

To protect the local interests in Puget Sound, Crowley is working with the Lummi Native American tribe in western Washington state to identify areas that are predominant crabbing grounds. With this education, the tugs and tows can avoid these areas and eliminate damage to crab gear. This is important from an environmental standpoint because a damaged crab pot is simply cut from the float line. It remains in the water and continues ‘fishing’. Unused,

Crowley’s latest equipment acquisition will include 20 containers constructed with recycled composite-material floors to replace the traditional wood floors found to be prevalent in the cargo industry.

damaged pots can needlessly destroy over 150 pounds of crab per year significantly affecting the local ecosystem.

Land Operations

To minimize emissions in its trucking operations, Crowley has joined SmartWay Transport Partnership. This voluntary program, which is affiliated with the U.S. Environmental Protection Agency, addresses energy efficiency in the

According to the U.S. Department of Energy, proper tire inflation can improve gas mileage by more than 3 percent overall, which means carriers will use less fuel, and in turn promote a healthier, greener environment. Crowley has an aggressive tire monitoring and inflation program underway.



transportation industry. Crowley has committed to developing strategies that will reduce idle time and improve miles per gallon in its trucking operation and in its trucking partnerships.

One such strategy is the examination of its 22,000-piece equipment fleet to ensure proper tire inflation. This seemingly small effort can actually lead to improved fuel economy and a reduction in carbon emissions. In fact, according to the U.S. Department of Energy, proper tire inflation can improve gas mileage by more than three percent overall. For some, three percent less fuel usage may seem like a small number but, the savings could be significant with the tens of millions of miles Crowley equipment travels each year.

The company also recently committed to the acquisition of 1,500 new containers and chassis. Making this latest equipment buy special are twenty 45-foot (102-inch wide) containers with recycled, composite-material floors, which are considered more environmentally friendly than traditional wood floors.

"Acquiring these prototype shipping containers with recycled, composite-material floors is a small, albeit important step, in lessening our environmental footprint," said John Azzo, director of materials management. "We're going to try these new containers, see how they perform, and if all goes well, acquire more of them in the future."

Aside from the environmental advantages

of using recycled floors, there should be other benefits as well. According to the manufacturer Singamas - the recycled material is tougher than wood and more resilient against wear and tear; it's also water resistant, decay-proof, mold-resistant, corrosion-resistant and does not

Acquiring these prototype shipping containers with recycled, composite-material floors is a small, albeit important step, in lessening our environmental footprint.

- John Azzo, Crowley

have to be treated with chemicals. The recycled materials used to construct the flooring of these containers should prove more durable providing additional time between maintenance cycles.

Beyond Emissions and Fuel Savings

In 2007, the liner services documentation

group contacted each customer to set up internet bill of lading release locations. The goal of this was to eliminate the amount of paper used in the documentation process and reduce costs. Crowley currently releases 75 percent of its customers' bills of lading and invoices to e-mail addresses. An additional 12 to 15 percent of the documents are released via electronic data interchange (EDI) directly to the customer. Combined, this means that about 90 percent of the former paper bills have been converted to electronic exchange. If you imagine that the average bill is eight pages and Crowley prints well over 100,000 per year just on the Puerto Rico/Caribbean side of the house, this small change has resulted in almost one million fewer sheets of paper used per year which equates to 120 trees. This is substantial over the long haul.

"Even though we have achieved a high level of participation in this paperless program, we do have a few customers that want to receive their bills the traditional way," said Deena LeBlanc, manager, freight services. "But, we haven't given up on them. Our goal is to go 100% paperless so periodically we do go back and contact them to see if changes have been made allowing them to accept the document through e-mail. Also rather than mailing multiple copies, we only send one invoice and one bill of lading. For those who request a fax, we use Outlook rather than printing copies and using the fax machines."

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Crowley is dedicated to conservation and focuses on ways to increase its eco-commitment throughout the design and build process.

On the technology front, Crowley spent 2006 and 2007 replacing all of the desktop computers in the company with new, more energy efficient machines resulting in an estimated 23 percent reduction in energy consumption. And, through the use of virtualization in the company's data center, 60 servers were collapsed into 22, thus reducing the energy used by approximately 30 percent.

The company is now in the process of replacing the CRT (cathode ray tube) computer monitors with flat panel monitors. Studies have shown that the flat panel monitors consume about 30 percent less energy and produce significantly lower heat emissions, which will also translate to lower cooling costs.

Looking to the Future

"The proof of environmental stewardship is walking the talk and this is clearly demonstrated by an enforced environmental policy, use of 'green' chemicals and materials in the workplace, annual environmental goals and targets, fuel efficient vessel operations and new vessel designs that reduce environmental impacts and provide redundant systems to prevent pollution," said Charlie Nalen, Crowley's vice president, environmental safety and quality assurance.

While past efforts are historical evidence of the company's commitment to the environment, its environmental stewardship is ongoing and growing. The company continues to invest in new equipment and methods of operation that will ensure that Crowley operates in a way that respects and preserves the very diverse and complex environments in which it does business.

Crowley is increasingly concerned with achieving and demonstrating sound environmental performance by controlling the impacts of its activities and services on the environment, consistent with its environmental policy and goals. The company complies with increasingly stringent legislation, concerns expressed by its customers and local communities. To be more effective and consistent throughout the organization, Crowley subscribes to ISO 14001:2004. This is an International Environmental Standard containing specific requirements to help create an environmental management system that is rooted throughout the organization. Crowley takes their environmental program one step further by having an



outside internationally recognized organization audit and certify that it complies with this standard. Crowley has identified environmental aspects and risks associated with its activities, services and processes and determined which ones of those it can control and influence. The company has determined what aspects are significant and developed a plan to minimize impact to the environment. Currently, its environmental plan includes reduction of the use of paper on vessels and in offices to preserve natural resources; changing from unfriendly cleaning materials on the vessels to environmentally friendly chemicals and swapping lead acid batteries for sealed acid-less batteries thereby eliminating the introduction of acid to the environment.

From participating in Right Whale research to using shore power to supply lights and air conditioning to docked tugs, Crowley is looking at a myriad of ways to preserve the earth. The latest initiative is the design of an environmentally friendly tug. The tug's natural gas engines' ultra low emissions do not produce any smoke that would be visible if released through a traditional smoke stack.

"While running on natural gas, the tug would emit almost no sulfur, less carbon dioxide, much less particulate matter and significantly less nitrogen oxides than tugs running on diesel fuel," said Ed Schluter, vice president, vessel

management services.

This new Ultra Low Emission tugboat would be classed by Det Norske Veritas (DNV) as Clean Design Gas Fueled. DNV is unique among classification societies with successful experience with natural gas powered vessels.

So while the world of green can be a confusing one, Crowley is setting the standards for others in its industry. Customers are demanding more focus on the environment from their vendors, and Crowley is continuing to look for even more ways to leave the environment better for future generations. [Connections](#)

Quick Facts

Vessels:

- Grey water holding tanks while in shore
- Ballast water management program
- Use of recycled oil
- Ultra Low Sulfur Diesel used where available
- High performance fuel injectors
- Fuel efficient Rolls Royce propellers

Shoreside:

- Recycling program for solid wastes
- Energy conservation
- Smartway Transport Partnership
- Spill cleanup kit availability
- Spill containment areas



Defying the Naysayers

By Jenifer Kimble

Advisors said it couldn't be done. Banks didn't want to lend the money. Even Mother Nature tossed a few curve balls. But, the wit and determination of Crowley's technical and petroleum services teams could not be stymied. Now, with a working fleet of eight Articulated Tug Barges (ATBs) and nine more under build contract, Crowley is taking domestic waterborne petroleum transportation to a whole new level of safety, efficiency and cost effectiveness.

Captains can't wait to get their hands on these elite vessels, which Captain Buddy Davis refers to as a "convertible sports car with all the bells and whistles," and customers are willing to commit to multi-year charter agreements before the first piece of steel is laid. But, this wasn't always the case.

The petroleum industry, which is quickly coming to grips with OPA 90 (Oil Pollution Act 1990) standards requiring the phase out of single hulled tankers and barges, has been scurrying to find new vessel tonnage to meet their requirements.

Double-hull tankers are expensive and towed tank barges are too slow to be readily competitive and more apt to be impacted by weather and rough seas. Crowley's solution was to develop large, fast ATBs that operated like tankers, but delivered petroleum at a lower cost per barrel.

But first, the company had to overcome the argument that an ATB would never work in the West Coast trade lane where winter weather brings ruthless swells causing most pushed barges to take a traditional tow approach to transit the churning seas. An ATB, on the other hand, has an articulated, or hinged, connection system between the tug and a notch in the stern of the barge, which allows movement in one axis, or plane in the critical area of fore and aft pitch.

Faced with the high cost of building new ships in U.S. shipyards – a Jones Act requirement – Crowley's commercial and operations groups were handed a perplexing challenge – build an ATB that could carry the product and do it better, faster, safer and cheaper. So what would Ed Schlueter, vice president of marine technical services, say to that challenge? "No problem! If we can think it, we can build it."

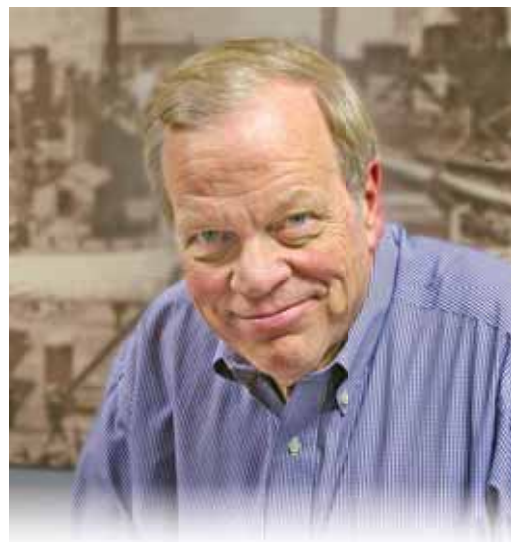
A Leap of Faith

So how do you convince a customer to sign on the dotted line for a vessel that not only hasn't been built, but isn't even tested in the market in which their products need transport? You send in your most committed team members to assure them that their loyalty isn't misplaced. And, you keep sending them, again and again.

Steve Collar recalls multiple meetings with Roger Van Duzer who was manager of marine operations for Shell at the time. "It took three years of persuasion to get Shell to sign on the dotted line," recalls Collar. "They were interested in ATBs as they were running them in their East Coast trade but were somewhat skeptical about their implementation on the West Coast. Their success on the East Coast, while they watched the traditional towed barges sit in harbor as their ATB product moved convinced them to give it a try."

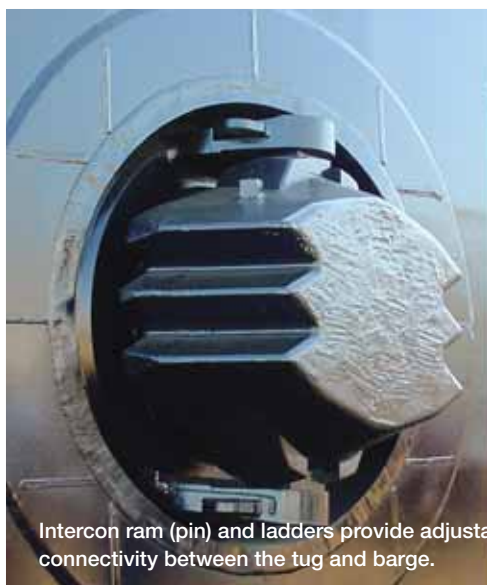
And, there was a fallback plan, they were utilizing one of Crowley's tankers at the time so if this didn't work, production wouldn't cease. With that assurance, Shell took a leap of faith and signed based on successful model testing.

"For Shell, it was a series of events coming together that led us to our decision," recalls Van Duzer who is now vice president, Moran Shipping Agents. "The tankers in the trade were too large and provided economical obstacles for our shipments, and the towed barges were chal-



*No problem!
If we can think it,
we can build it.
- Ed Schlueter,
Crowley*

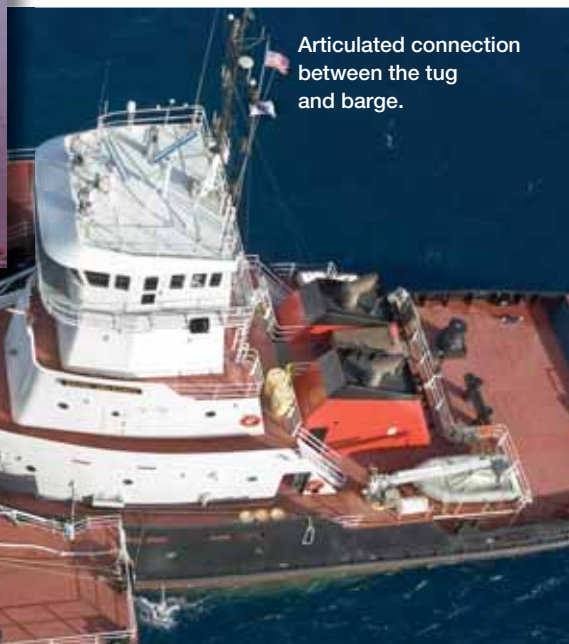




Intercon ram (pin) and ladders provide adjustable connectivity between the tug and barge.



standard loomed on the horizon, building a vessel in the U.S. at a reasonable price seemed less and less of a reality. Add to the mix the fact that with an ATB you can move the same amount of product at about half the cost of operating one of the mammoth tankers and you've got yourself a deal, or so said Tosco (Conoco) to the 550-2, BP to the 550-3 and Shell again to the 550-4.



Articulated connection between the tug and barge.

lenged with schedule integrity and speed."

"We were running ATBs successfully on the East Coast but were well aware of all the 'urban legends' surrounding West Coast ATBs. But, I along with Bruce Kennedy, the chartering manager, were confident in our partnership with Crowley. We realized that if Crowley believed it could be done and was willing to go through the model testing phase and invest their resources to the project, then it would be a success. Crowley doesn't gamble their resources cavalierly and they have a very good group of dedicated and knowledgeable operations and engineering people to prove it would work. We were also comforted by their willingness to work with the Shell refineries in Anacortes and elsewhere both before and after delivery to fine tune the vessels to meet Shell's expectations," Van Duzer said.

With one customer onboard, securing others came more easily. As a matter of fact, each of the ATBs built to date, and those on the drawing board, are chartered on multi-year agreements prior to the first step of construction, which says a tremendous amount about the type of relationships Crowley has developed with its petroleum customers over the years.

To provide additional expertise along the way and make sure that all bases were covered during the build process, Dave Roggenbeck, vice president of engineering, was on site throughout the construction of the 155,000-barrel, 550 series. To give the customers additional comfort, once the build process was complete, Roggenbeck headed to Long Beach to take over ATB operations during the first critical years of the new program.

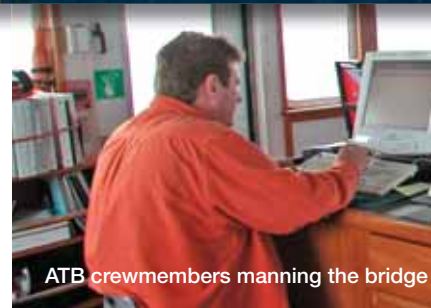
So with Shell taking the 550-1, contracting for the 550-2 became a priority. As the tanker market continued to tighten and the 'double-hull'



Though it wasn't all smooth sailing, the ATBs were taking the market by storm and, at a size about half that of tankers, met the customer needs much better. The aging refineries on the West Coast were built closer to World War II than to modern day, and couldn't handle the full tankers anyway, so why not give them what they needed? Crowley did – again and again.

Building on Success

Crowley, having acquired Marine Transport Lines in 2001 and integrated their personnel into the company's ranks, saw new business opportunities for ATBs, including chemical transportation in the Gulf. Thanks to Bill Taylor, a long-time MTL captain who came ashore to lend his expertise in operations, the need to create an ATB with cargo flexibility was realized.



ATB crewmembers manning the bridge

Knowing their depth of knowledge and commitment to the fleet and crews of these ATBs made Shell comfortable that this would be a success. I was comfortable that the decision I made to trust Crowley was the right one. - Roger Van Duzer, formerly of Shell

Building on the success of the 550 series ATBs, Crowley developed plans for a 650 series with 185,000 barrels of capacity and a more sophisticated tank cleaning system for greater cargo flexibility. The increase in capacity made the vessels more compatible with trade in the Gulf and along the East Coast where refineries are newer and didn't pose the same small load restrictions that they did on the West Coast. To accommodate those 30,000 extra barrels, the barges in this series were constructed one tank longer, while the tugs only needed slight modification.

The first two ATBs in this series, the *Pacific Reliance/650-1* and *Gulf Reliance/650-2* had a change of arrangement on the barge, which eliminated under deck piping and outfitted each tank with its own pump. This allowed them to carry EZ chemicals like parazylen (a chemical used to make plastic water bottles among other things) and clean and dirty petroleum products (gas/oil and fuel oil respectively) without having to be completely drained and cleaned between tanks of cargo.

Not to allow the series to hit the market without its fair share of drama, the tugs were changed midstream so that the *Resolve/650-3* and *Integrity/650-4* were switched to heavy fuel engines instead of the more traditional diesel engines. These two new entries would burn only 30 tons of fuel per day saving the charterer approximately \$4,500 a day in fuel costs. Easy enough right? Well, not exactly. In order to accommodate these new engines, the tugs had to be lengthened eight feet. But, with the market dictating that opportunities were in the heavy fuel vessels, the build and design team once again went to work to make it happen.

Again, coming back for more, Conoco Phillips was the first customer of the new 650-class followed by Shell then BP, which took the next four and Marathon, which is signed on for the 650-7 and 650-8.

Not intending to rest on their laurels, the team immediately began work on yet a



We will continue to move towards new technology to reduce costs to our customers. We know that we must continue in our operations evolution to stay competitive - and you can bet we will.
- Steve Collar, Crowley



bigger and faster series, the 750-class. These three new 330,000-barrel vessels will by far be the largest in the Crowley family with 75 percent more capacity than their predecessors. And, each with its own 16,320-horsepower tug pushing from behind, will be the fastest ATBs built to date - making a speed of 15-knots or about 17 miles per hour, which will approximate the speed of a tanker.

To date, all of these 750s are under charter as well. Most will serve as replacement vessels for single-hulled tankers that will no longer be permitted to





Since their launching, the ATBs, all combined, have moved a total of 147,825,635 bbls through May of 2008 and have had ZERO spills. This is a remarkable record which has earned the fleet accolades from customers and industry groups alike.

trade. A charter on any of the ATBs (regardless of class) consists of the charterer (oil company) paying a day rate for the vessel plus fuel costs. The day rate for an ATB with a nine-man crew is more attractive than the day rate for a tanker with 15 men.

Paving the Way for the Future

These vessels have certainly created large shoes for any future vessel to fill but rest assured that the bar will continue to be raised. “We will continue to move towards new technology to reduce costs to our customers,” said Collar. “We have learned many lessons in the life of these ATBs and we have incorporated changes with each new build. Perhaps the most challenging task of all is that of continuous improvement. We know that we must continue in our operations evolution to stay competitive – and you can bet we will.”

“We have created and filled a niche with these vessels,” remarked Taylor. “These vessels are important to Crowley and important to our customers. They are a passion that we will share for many years to come.”

“Hats off to Crowley and its people who were passionate about this ATB program,” said Van Duzer. “Knowing their depth of knowledge and commitment to the fleet and crews of these ATBs made Shell comfortable that this would be a success. When I retired from Shell in 2003, I was comfortable that the decision I made to trust Crowley was the right one.”

The ATBs have made quite an impression on the customers who charter them, Crowley as the company that owns them and the crews

that operate them. This ‘never-gonna-work vessel’, has certainly helped the skeptics to see the light. The fleet all combined has moved a total of 147,825,635 bbls from their launching through May of 2008 and has had ZERO spills. Some of this is attributed to David DeBruler, marine superintendent and longtime Crowley employee. DeBruler is an expert in cargo transfer operations. His knowledge in setting up the barges and training the tug crew in cargo transfer operations has been one of the keys to Crowley’s safety record.

These ATBs exceed environmental regulatory requirements by being the first class of barges built, documented and maintained to the requirements of the American Bureau of Shipping (ABS) SafeHull as well as meeting all Safety of Life at Sea (SOLAS) international standards. In addition, crewing levels on their ATBs exceed USCG requirements. Crowley also utilizes an employee reward system, while corporate management keeps an open channel for feedback from employees and their union. This adds up to a team effort focused on spill prevention and vessel safety. The net result of all these efforts is that Crowley has set the model for operation of ATBs in all of its trade lanes. [Connections](#)

Quick Facts

- ZERO spills
- Fleet moved a total of 147,825,635 bbls from launch through May 2008
- May 2008 - fleet reached 1,001 voyage milestone
- First class of barges built, documented and maintained through ABS Safehull
- Meet all SOLAS international standards
- Barge capacity up to 330,000 bbls

Titanizing the Salvage World

By Mabel Perez

Shipwrecks and sunken treasure. Man's fascination with tales of the high seas conjures up a kaleidoscope of images - some of pirates holding Spanish conquistadors at bay and Greek explorers traveling the Silk Road in search of red fabrics as rich as Thai rubies.

The history between man, Mother Nature

and vessels is romantic and mysterious, a tale woven with colorful legends, superstitions and extraordinary circumstances.

Today, those stories continue to be woven in remote places where treasures may be shipped in steel containers, rather than in strongboxes and the main characters are professional divers, salvage masters and technical experts. Their

goal is complicated and execution is almost an art form - so much so, that few people dare to confront Mother Nature's fury, the mechanical intricacies posed by both modern and dated vessels or situations created by human error.

The experts at TITAN Maritime, though, are more than ready for the challenge.





From Yacht Broker to Salvage Expert

David Parrot's life has taken many different turns but each takes him back to the place where it all began – the sea. The 63-year-old's life at sea began when he was just six weeks old and he moved aboard his father's schooner in Newfoundland.

During the 1960's and 1970's the New Englander was involved in the yacht brokerage business. But after 15 years in that line of work, he needed a change.

In 1980, Parrot founded TITAN as a one-tug towing company. He became interested in tug boats after reading the book *The Grey Seas Under* by noted Canadian author Farley Mowat. The non-fiction book detailed the adventures of a salvage tug and its crew from 1930 to 1948 in Canada's maritime provinces. The New England native also sold a few tugs as a broker.

Parrot admits the yacht business was profitable and it was a decision he made carefully.

"It was a lucrative business and my wife had a hard time with my decision," Parrot said from Coos Bay, Ore. where TITAN is handling a project. "She didn't understand why I wanted to leave that... for this grungy job. I did it because selling boats on a one-on-one basis to people who didn't really use the boats didn't appeal to me anymore."

TITAN soon began making a name for itself. They were the new kids on the block and often took salvage jobs more as challenges even though they defied business logic. In 1982, TITAN completed its first project.

At first they were simply sub-contractors of a Dutch firm working on the project. When the Dutch firm bailed out due to financial reasons, TITAN stepped up the challenge.

The success marked the first of many for the company. The once-undercapitalized firm began expanding, buying more equipment, including tugs, barges and cranes which made TITAN a formidable salvage and wreck removal firm in the Caribbean. As the company grew in size and began handling jobs in more diverse locations, it became evident that having a lot of equipment was a moot point if it was far away from the location where the job was located.

Business partner Dick Fairbanks joined Parrot in 1988 and TITAN was taken to new heights. Against established norms, TITAN began selling their tug boats and other equipment and instead invested in the best, portable fly-away equipment. When they needed tugs, they chartered them from other companies.

"It works much better this way, because unless you have 1,000 tugs, you never have them in the right place at right time during an emergency," Parrot said.

The concept of chartering equipment has been well-received by TITAN clients. A majority of salvage companies own their own tugs and equipment. For clients, this means equipment often needs to be transported from far-off locations to the project, which sometimes jeopardizes a salvage job because of the time element involved. Transporting equipment also adds cost.

"It works out better for our clients and the insurance companies like it because they know we're looking out for the best interests of their clients. Other companies try to force them to use their tugs," Parrot said.

The lack of such equipment has made TITAN very mobile and allows the company to operate in every corner of the globe. The company's three strategically located facilities in Pompano Beach, Fla., Singapore

(Left) The *APL Panama* refloating was successfully completed with specialized gear that included a SkyCrane helicopter, three crawler stick cranes and five 300-ton hydraulic pullers.

One of the interesting things in our business is every job is different; no two jobs are the same. Every time the phone rings, it is a new adventure, with new challenges and difficulties. Todd Busch, TITAN



and the United Kingdom ensure TITAN is able to respond anywhere, quickly.

With noise in the background as workers continued to set up equipment in Oregon, Parrot reminisced about his journey from the one-tug company to a major international player. In 2005, Crowley Maritime Corporation acquired TITAN. Todd Busch, a longtime Crowley employee, was named vice-president and general manager.

Parrot and Fairbanks stayed on board to help guide the company and are still intimately involved in the business.

“It was a long struggle but I haven’t regretted it,” Parrot said.

Isolated Islands, Beached Boats and Tourist Attractions

Marine salvage work has an air of romanticism. Or at least that’s what most people envision.

“People are attracted to the romance, but it’s by no means a career choice for the average person. It’s a very hazardous and risky business that requires highly skilled employees,” said Rich Habib, TITAN’s director of salvage. “It’s also a very interesting business.”

When a ship is grounded, sinking, or experiencing trouble, near land or

far out to sea, insurance companies and underwriters call one or more of a handful of salvage companies in the world to see if they are capable of handling the job. From then on it’s a race against time.

“We’re not the only ones who get the call. It’s usually who can run faster and make an offer to help the baby who is turning blue,” said Mauricio Garrido, managing director of the Americas. “You have to make them feel comfortable that you have a handle on the situation and can succeed, because at the end of the day it’s a matter of trust and forming relationships.”

For TITAN – forming that relationship is extremely crucial and seems to have worked. The underdog of salvage companies, TITAN often competes with salvage companies that were established 150 to 200 years ago, according to Garrido.

Financially, negotiations are also risky, as most salvage agreements are made through the Lloyd’s Open Form (LOF), an agreement which allows salvors to conduct salvage operations without negotiating prices. In short, the “no cure, no pay” contract means salvage companies don’t get paid

A Turtle in Tristan da Cunha





People are attracted to the romance, but it's by no means a career choice for the average person. It's a very hazardous and risky business that requires highly skilled employees. - Rich Habib, Titan

unless they are able to complete the job. Salvage companies have to foot the bills during the project before they get paid by the insurance companies or ship owners. Sometimes the operational costs can reach tens of millions of dollars.

That was the case during the *APL Panama* salvage job in Ensenada, Mexico, one of the largest refloatings of a laden containership ever undertaken. TITAN safely delivered the 52,267 dwt ship with a capacity of 4,038 TEU to its owners in March 2006, less than three months after the ship went aground. All project expenses – which involved transporting specialized salvage gear from various depots in the United States and overseas – were borne by TITAN, including all the subcontractors. Some of the significant items included in the mobilization were 20 truckloads of salvage gear, five 300-ton hydraulic pullers, seven tugboats, a flat-deck barge upon which the pullers were mounted, three crawler stick cranes of varying sizes, a SkyCrane helicopter and a dredge, plus support staff and the salvage team.

Although, the company is still young, the team behind its success is the best in the business.

“TITAN has a unique ability to solve the challenges encountered, due to the vast experience of the team. Most of our key personnel have been at TITAN many years and have done many salvage jobs. One of the interesting things in our business is every job is different; no two jobs are the same. Every time the phone rings, it is a new adventure, with new challenges and difficulties,” Busch said.

A quick glance over TITAN's resume proves that the TITAN team has been around the block - or world - more than once.

Busch effortlessly lists off the places TITAN has made an appearance. There was the trip to Tristan da Cunha; Palau, Micronesia; Mukalla, Yemen; the Magdalena River in Barranquilla, Colombia and Ensenada, Mexico, among others. TITAN is also currently working on projects in Gibraltar, the English Channel and Cancun, Mexico. The salvage projects have been diverse and the challenges unique. Each project has given team members an opportunity to refine their skills and perfect the craft of marine salvage.

With a half-smile, half-smirk, while eating lunch at a Chinese restaur-

New Carissa in Coos Bay, Ore.



rant in Pompano Beach, Busch wasn't shy about bragging about his team's proven track record. The record includes completing jobs that other salvage companies couldn't successfully complete.

In late 2006, TITAN was contracted to refloat the *A Turtle*, a 10,500-ton semi-submersible platform that went aground in Tristan da Cunha. The island, dubbed the most remote inhabited archipelago in the world, is located in the South Atlantic Ocean, 1,750 miles west of South Africa and 2,088 miles from South America. The group of islands is made up of Tristan da Cunha, Inaccessible Island, The Nightingale Islands and Gough Island. About 270 people, who share just seven surnames, live on the island, which is only accessible via a seven-day chartered boat ride from Cape Town, South Africa.

The platform became separated from a tug, which was towing the rig from Brazil to Singapore for repair, before it became fetched up on the Island. After another salvage company's efforts to refloat the massive structure proved unsuccessful, TITAN was awarded the job.

Within 75 days, the TITAN crew successfully restored buoyancy, lightened and refloated the rig. The platform was later scuttled offshore in deep water at the owner's request.

Mark A. Russell, an underwriter for Gard Services in London, worked closely with Busch and Parrot on the *A Turtle* job in Tristan da Cunha. In a recent interview, Russell recalled the challenges TITAN was able to overcome.

The biggest challenge was overcoming the remote aspect of the job location and the small frame of time TITAN had to complete the job due to weather conditions. Russell said he had good communication with TITAN who kept him well-informed of the progress of the project.

"I think under the circumstances, TITAN's work was very good. I have no complaints," Russell said. "In terms of the weather, there was a particularly limited weather window, because at the end of February it starts to turn to winter."

The *New Carissa*, a project in Coos Bay, Ore. provides another current example.

The *New Carissa*, 640-foot wood-chip carrier, ran aground during a February 1999 storm, just north of Coos Bay. Several attempts by another company to salvage the ship, which later settled about 150 yards from the beachfront, have been unsuccessful. The initial salvage company was unable to refloat the ship before it split in two. After refloating the bow section, explosives and machine gun fire were used to try and sink the vessel in deep water. Both of those attempts failed and finally a U.S. Navy submarine sunk the forward section of the ship with a torpedo, but the stern section remained on the beach. Another salvage company attempted to remove the stern section, but failed.

Eight years later, TITAN experts are working on cleaning up the mess. The vessel's 1,500-ton stern remains half buried off Coos Bay while a separate section containing an 800-ton cargo hold and fuel tanks, is buried in over 30 feet of sand some yards away.

Senior Naval Architect Phil Reed, TITAN's director of engineering, is in charge of overseeing the technical aspects of the project. He helped plan the operation with Shelby Harris, the salvage master on the *New Carissa* project and Rich Habib.

Habib, a master mariner, began his career at the U.S. Coast Guard Academy in 1973 and holds an unlimited master license, the highest license a mariner can obtain. The plan for salvaging the *New Carissa*, according to Habib is going to require the *Karlissa A* and *Karlissa B*, TITAN's own 14,000-square-foot barges, to be positioned near the stern of the *New Carissa*. The six legs on each barge will be jetted into the ocean



(Right) *New Flame* wreck located off Gibraltar's Europa Point.

floor and provide a stable work area for crew.

The interesting part will begin when multiple 300-metric ton hydraulic pullers are used to lift up the 1,500-ton stern from its partially buried position in the surf. TITAN pullers are hydraulic pulling machines that have set the salvage company from other salvage companies who rely on tugs demonstrating one example of TITAN innovation.

Assuming a typical harbor tug is capable of 20 to 50-tons of pull; one TITAN puller is capable of doing the job of six to 15 tugboats. When comparing the pullers to the most massive salvage tugs, which are often 200-feet-long, expensive and hard to come by, TITAN pullers still come out on top. The most massive salvage tugs are only capable of 100 to 150-tons of pull making a single puller equal to two to three of those specialty tugs.

The puller is not the only piece of innovative equipment being used for the current project. Busch explained that Harris, with the help of others on the salvage team, developed a cable car, which works similarly to a gondola, to transport crew members and equipment from the beach to the platform barges.

“We use the word titanizing,” Busch said, explaining how team members often think outside the box and are open to exploring alternative, unconventional methods in approaching job challenges.

In Coos Bay, the surf is often rough and could potentially be dangerous for workers as they have to get on and off the jack-up barges. Environmentalists in Oregon also appreciate the concept because it allows workers to accomplish the job without disrupting the beach and its wildlife.

It Takes a Special Breed

Salvage masters and workers each bring a variety of life experience and salvage expertise. Many are professional divers, welders, engineers and heavy equipment operators. Some have spent 12 hours at a time in wetsuits, working underwater without a meal break. Some have slept in tents in mosquito-infested areas. Parrot even recalls a job where divers had to work alongside rotting chicken that was soaking in warm Caribbean waters.

Harris is a prime example of a typical salvage professional at TITAN. He’s a trained diver, rigger, welder and equipment operator. A true jack-of-all trades – Harris, like many others, has grown with TITAN and has worked up to his current position as salvage master.

Salvors are highly intelligent workers who tend to have a little bit of MacGyver in them, the character on a popular 1980’s ABC action-adventure television show who used science and wit to solve problems.

“The type of people we have are a special breed quite frankly,” Parrot said. “For every person we keep, we go through 10 to 15 before we find someone who lives and thrives with it and could deal with the foul conditions.”

The difficulty and high stress also tend to weed out the less knowledgeable salvors.

“They are drawn to the difficulty of the work and they stay,” Habib said. “They tend to be difficult to manage because of the hazards of the job and they’re not very forgiving of people who don’t know their facts. For them, this work is a matter of life and death.” [Connections](#)



Caring for the Communities We Serve

By Mabel Perez



Maria Elena Micheletti's voice trailed off as she spoke about her journey in building a home for children infected with HIV-AIDS in Honduras.

In the early 1990's there was little information about the disease in the Central American country. Fear and stigma loomed in the minds of many Hondurans and people were reluctant to get involved. As Micheletti and other volunteers struggled to obtain donations and garner community support for Hogar Amor y Vida, some children succumbed to the disease.

"Sometimes I feel like I can't take it anymore, that I can't take so much pain. But God has me here," Micheletti said, her voice cracking. "It's a struggle."

The elderly Honduran woman paused for a moment.

"But, I feel so much happiness when I see the children run and smile," she continued, her voice regaining strength. "I have the most beautiful smile looking up at me. Her name is Marbella and her eyes are so amazing. I wish I had them."

Hogar Amor y Vida (The Love and Life Home) was founded in 1994 by Micheletti and a group of community volunteers. Amor y Vida offers abandoned and orphaned children infected with AIDS a stable and loving home. It was the first home of its kind in Central America.

Located in Colonia del Valle in San Pedro Sula, the non-profit organization not only provides shelter for these children but, also offers education, healthcare and the hope of a brighter tomorrow.

Marbella, 8, whose name means 'beautiful ocean', is just one of 40 children who live at the home. Each has a unique story. Some were orphaned when parents died from complications of AIDS. Others were dropped off at the home by family members too poor to treat the disease or too fearful of keeping the child at the home.

AIDS, or acquired immune deficiency syndrome, is caused when a person's immune system is weakened by HIV, or human immunodeficiency virus, a retrovirus that weakens the human immune system by attacking certain types of white blood cells which are critical in the body's defenses of illness.

Giving Back

Over the years, Micheletti has relied on donations from a variety of sources to keep the home open. Her mission is simple.

"I want the kids here to live a dignified life. That is why I have 40 children here. I want to know each of their names and don't want them to become numbers," she said.

Crowley Brings Focus & Help

John Hourihan, senior vice president and general manager of Crowley's Latin America services, has witnessed a lot of giving at Crowley. Employees, along with the company, care about the communities they serve and often get involved in making a difference.

In 2005, Hourihan reevaluated charity efforts in Latin America. When he looked over all the things Crowley and its employees were doing for so many organizations, he was taken aback.

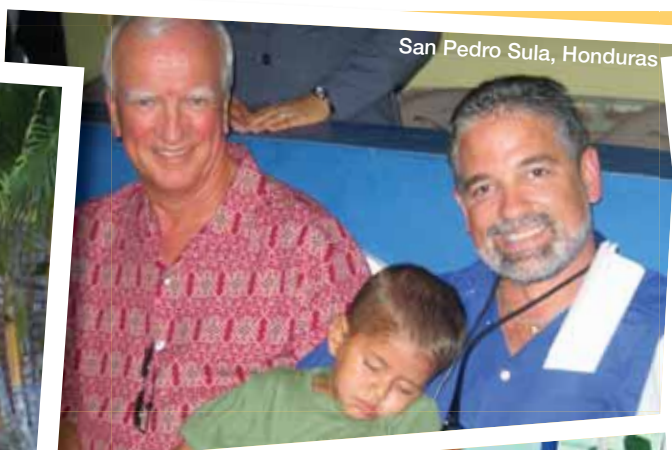
profit organization they wanted to help. The employees, with support from Crowley, soon began making an impact in their communities.

At Amor y Vida, Crowley's GM, Claudia Kattan, and the Honduras employees installed computers and mounted bookshelves creating a library and computer lab for children. Painted in the background, blue skies, a rich chartreuse shade of grass and a bright, ruby-colored Crowley farmhouse depict a carefree place, a sharp contrast from the reality the children face.

Wendy Mendoza, a sales coordinator in Honduras, is just one of the employees who visits Amor y Vida and recalls her first visit to the home. Mendoza, along with a handful of employees, helped build the computer lab for the children. Mendoza was surprised at how resilient the children were, despite their circumstances. Emotionally, Mendoza had prepared herself for the visit.



Maria Elena
Micheletti



San Pedro Sula, Honduras



San Pedro Sula, Honduras



"It had been a hodge-podge of giving over the years," Hourihan said.

For example, Crowley often transported goods for church and non-profit organizations to Central America charities. While it was great that Crowley was helping so many organizations, it was also hard to determine what impact the company was really making because Crowley was involved in so many different things.

Hourihan's solution was to ask general managers in each respective country to choose a charity they wanted to work with closely.

"The idea was to focus on one (charity) and really make a difference for that organization instead of doing many things," he said. "That to me was an important mantra. Instead of being all over the place, I thought we needed to focus on one and really make a difference."

General Managers and company employees in Central America were receptive to the idea. Each country independently proposed the non-

"I expected to see children with sad faces or with tears in their eyes due to their illness, and feelings of loneliness, the lack of love and needs, but I was surprised when I saw those children. They were strong, always smiling, giving hugs, they don't look ill," Mendoza said. "It touched my heart and reminded me that sometimes as human beings we collapse at the first obstacle that appears in our lives. Instead, we need to give thanks each day for the blessings we have in our lives."

Still, it's a bright spot and an example of just one of the many employee outreach activities at Crowley.

Helping Hands from Alaska to the Caribbean Basin

Community outreach is not a new concept at Crowley. For years, employees from Alaska, to New Jersey to the tropical Caribbean and Central America, and dozens of locations in between have donated their

time, talent and treasure to improve the lives of the less fortunate and to ignite a spark of hope for a better future in their hearts.

In Costa Rica, Crowley employees made over 14 visits in 2007 to Escuela de Guarai de Heredia, an elementary school with 1,300 children between the ages of 7 and 14, located in a dangerous, crime-ridden area. Employees installed a new lunch room and they are currently working on restoration projects for second and third grade classrooms.

And in Guatemala, employees brightened the lives of senior citizens at Cabecitas de Algodon, an adult home; and Fundación Ayudame a Vivir, a foundation for children living with cancer. Crowley donated medicines, diapers, food stuffs, water heaters and a stove, among other items. Employees provided gifts for the residents, donated food items and spent numerous hours at both centers.

On an even broader, nationwide scale, hundreds of employees get

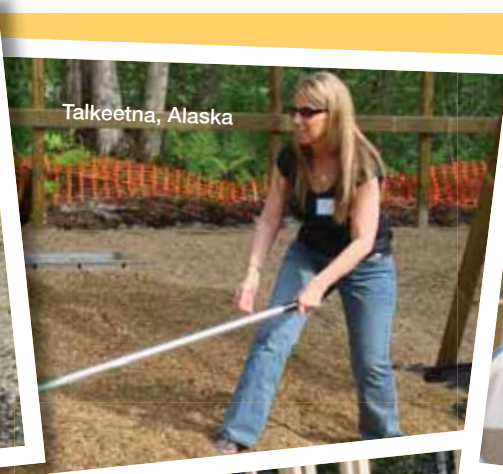
employees helped stock the shelves at a local food bank. Both efforts were part of the 2005 Make a Difference Day activity.

Employee involvement in charity activities and their own drive to make a difference has made charity efforts a success.

Deanne Dillenbeck, a 31-year Crowley employee, is just another example of the Crowley's giving culture. In addition to participating in Make a Difference Day, the San Pedro contract administrator, has been involved with several charities, including a battered women's organization for many years.

"I am a believer in giving back to your community. My life is blessed and it takes very little to make a big difference in someone's life," Dillenbeck said.

Other employees choose to give their time by getting involved with youths in their communities by becoming mentors through the Take



involved in Make a Difference Day, a day of giving established by *USA WEEKEND* Magazine. The annual event takes place every fourth Saturday of October.

Zoraida Jirau, director of human resources programs, helped organize Crowley's Make a Difference Day efforts. The efforts have been a success and brought the Crowley community together.

Crowley employee involvement was so significant that the company was among just 10 companies nationwide to be honored in 2005 by *USA WEEKEND* with an award and a \$10,000 check to donate to a charity of their choice. During the Make a Difference Day event in 2005, Crowley employees chose to help senior citizens in their communities. More than 1,800 employees in 23 cities got involved.

In Jacksonville, employees delivered 97 gift-baskets to low income seniors and foster grandparents. Almost 3,000 miles away in Seattle,

Stock in Children program. The mentoring program provides middle school and high school children with positive role models. In addition, students who successfully complete the program and maintain good academic standing are guaranteed a college scholarship as part of the Take Stock in Children Scholarship/Mentoring program.

Helping Hands is another Crowley pilot charitable giving program geared toward making donations to non-profit entities with which Crowley employees are actively involved. Helping Hands and Take Stock in Children are both programs sponsored by Crowley's Helping Hands Committee.

Much of the funding available for the Helping Hands program was made possible when Crowley stopped hosting annual company picnics, according to Jirau.

The pilot program focuses on impacting the areas of education, health

Giving Back

and wellness and encourages employees to get involved in organizations and events with this goal in mind. Employees can request donations on behalf of the organizations to which they belong. A total of \$40,000 was allocated for Helping Hands with \$25,000 slated for the Jacksonville location and \$15,000 for Seattle.

There are hundreds of other charity activities – some of which occur spontaneously thanks to the good-natured spirit of employees. In May, employee participants of the Puerto Rico/Caribbean Annual sales meeting donated money to help the Downs Syndrome Association in Puerto Rico.

In Miami, employees also showed another side of giving when they participated in an activity to improve the lives of our four-legged friends during the Humane Society's Adopt-a-Pet Walk. A handful of Miami employees, along with their furry friends raised several hundred dollars in hopes of raising awareness about pet adoption during the annual

mile section that is on both sides of our Crowley site, so it looks good," Hanson said.

In addition to cleaning the roadway, Hanson said Talkeetna employees and Crowley have partnered with up with the New Talkeetna Playground project. Employees worked together from June 4 to June 8 to build a playground for area children. The Crowley name is etched on a train engine in the park.

"All this really helps with customer interaction. Plus we have a chance to do something together outside of the office," Hanson said.

Inspiring One Another

Charity efforts are numerous at Crowley and the impact is real. What is not clear is who is impacted the most. Is it our employees who help and are touched by the work of these non-profit organizations? Or are



San Juan, Puerto Rico



El Salvador



Pennsauken, New Jersey



Port Everglades, Florida

event in 2007.

But charity and community involvement activities don't always have to be about donating goods. At Crowley's Talkeetna, Alaska branch, employees are giving their time to clean up the environment.

Employees Mark Forrester, Dan Maynard, Alonzo Tellier, Jacqueline Hanson and Donna Forrester adopted a stretch of highway on Talkeetna Spur Road near the Crowley office site as part of the Adopt a Highway program which focuses on keeping roadways free of litter. The latest clean-up effort was on May 9.

"For us in Talkeetna, we feel it's important in this small of a community to take part when we can, to mesh with the people, and become familiar faces in the community. We thought the Adopt a Highway was a very worthwhile project to take part in, so of course we have the two

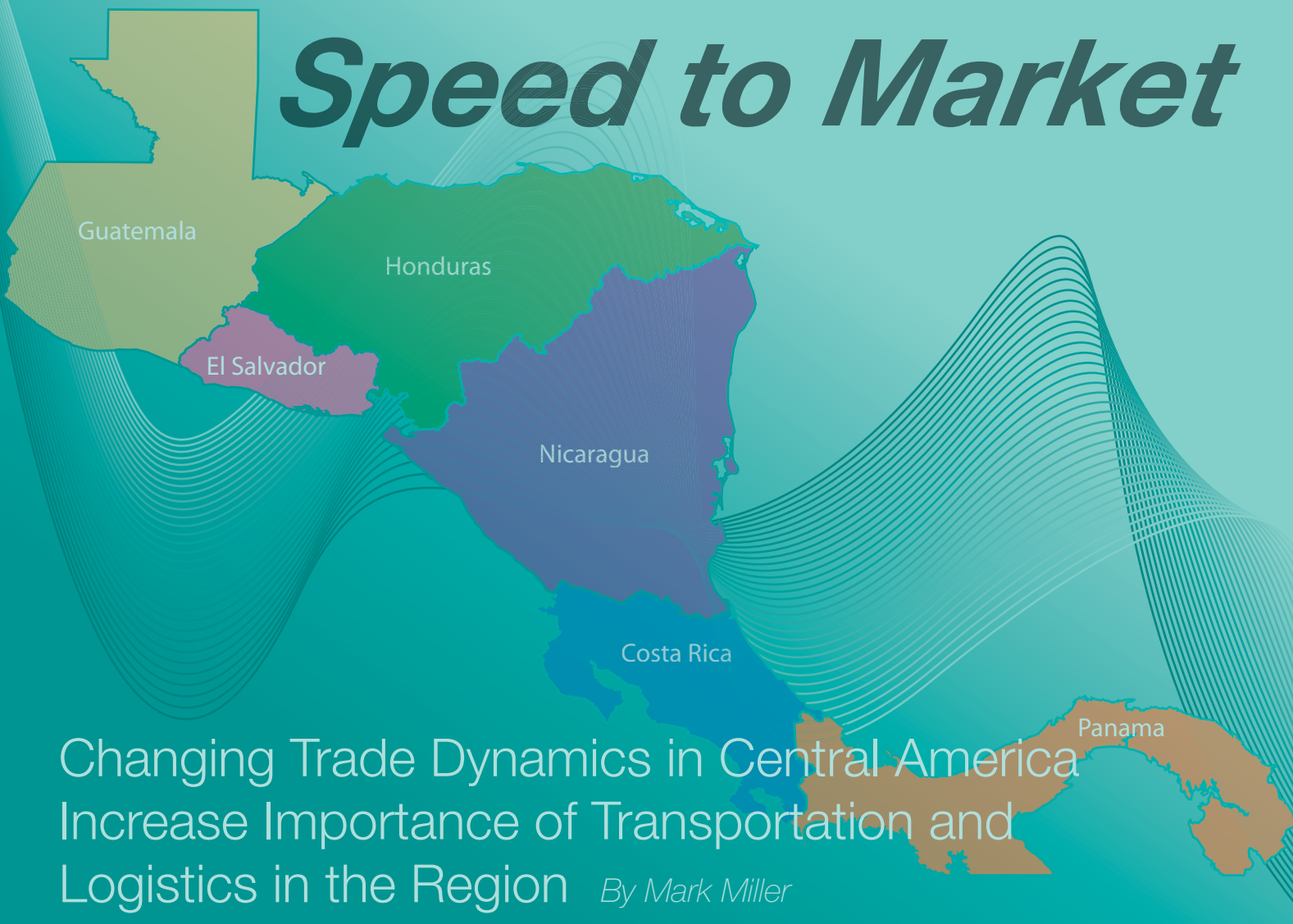
the people in the charity businesses motivated by those who choose to get involved?

Just ask Micheletti.

As she speaks about Crowley's work with her organization, music plays in the background. The sound of trumpets pierce the air and a guitar is playing a catchy, rhythmic chorus. A few seconds later, a trio of men began to sing. A child is laughing and interrupts Micheletti for a second.

"What is amazing to me is the quality of your beautiful company. To see the employees painting the walls," she said. "The fact employees are so conscious and aware of their community and neighbors and that they are willing to help - that impacts me and encourages me to continue in the work that I do." **Connections**

Speed to Market



Changing Trade Dynamics in Central America Increase Importance of Transportation and Logistics in the Region *By Mark Miller*

When Miley Cyrus, teen star of Disney's hit television show 'Hannah Montana,' recently caught flak for posing for provocative pictures in *Vanity Fair* magazine, retailers in the United States were probably grateful to be sourcing much of their 'Hannah Montana' fashions and other accessories in Central America instead of China or India.

No one knows for sure whether Cyrus' star will continue to burn bright or fizzle, but one thing is for certain – manufacturers in Central America are much better positioned to respond quickly to market trends than their counterparts around the world. Sourcing the same product in China, for example, would require months of lead-time to take it from conception to department stores in the U.S.

In Central America, terms such as "speed to market" and "full package provider," have become the new mantra for manufacturers

– particularly those who are apparel related – and for the shipping and logistics companies, like Crowley, who work closely with them to deliver on that objective. Sourcing, manufacturing and transportation dynamics have changed considerably over the past five years or so, making logistics services more important than ever.

The most significant changes have been driven by trade agreements. One such agreement between the U.S. and China, which reduced quotas for apparel entering the U.S., has touched off a boom in Chinese imports and a shift away from some large-scale manufacturing in Central America. The recently concluded Dominican Republic – Central America Free Trade Agreement (DR-CAFTA) with the U.S. has given manufacturers in Guatemala, Honduras, Nicaragua, El Salvador, Costa Rica and the Dominican Republic, the assurances they needed to make continued investment in facilities in their countries. DR-CAFTA superseded the Caribbean Basin Initiative agreement with

the U.S., which was seen as a tentative pact because it was renewable every two years. DR-CAFTA eliminates duties on about 80 percent of U.S. exports to those countries with the rest being phased out over the next decade, and keeps in place the ability of shippers in those countries to export duty free to the U.S.

René Chiquillo, director of administration and finance for Merlet Industries in El Salvador, a large wearing apparel factory in the country, recently explained how their business has evolved and the importance they place on logistics services.

Like most companies in Central America, Merlet participated in the 807 trade in the early 1990s. 807 refers to the old U.S. tariff schedule, which allowed wearables to enter the United States duty-free and quota-free if fabric was formed in the United States from U.S.-spun yarns and cut to shape in the United States. The business was later extended to the 809 trade, which allowed the cutting to be done in



This business is all about logistics, logistics, logistics. Failure to deliver is the worst thing you can do. When I have to get a load to a specific customer in the U.S., I always want to use Crowley. - René Chiquillo

Central America. The adoption in 2000 of the new parity legislation provided more opportunities for apparel manufacturers.

The Trend to Full Package

“Our interest turned to becoming a full package provider,” Chiquillo said. “We wanted to achieve vertical integration where we controlled every aspect of the apparel manufacturing process – from creating the fabric, to printing, to cutting, to sewing, to embellishment.” Doing it all allows companies to keep prices competitive and increase margins because they don’t have to pay profits to others on work they farm out.

“As the business moved this way, we recognized that we needed Crowley’s services,”

he said. “This business is all about logistics, logistics, logistics. Failure to deliver is the worst thing you can do. When I have to get a load to a specific customer in the U.S., I always want to use Crowley.”

Merlet utilizes Crowley’s liner services for its southbound shipments of yarn and northbound shipments of finished goods for retailers such as Wal-Mart, Dick’s Sporting Goods, K-Mart and others. The company also uses Crowley’s logistics services for customs brokerage in the U.S., warehousing and local distribution trucking in El Salvador.

Custom Made Services (CMS) in Guatemala is another apparel manufacturer that has embraced the full-package solution, producing

garments for Down East Outfitters, Teamwork Athletic Apparel and Hecho Latino Clothing Co.

Erick Sterkel, general manager of CMS, said, “We’re still being affected by Asian imports, because we are more expensive. We’re paying higher salaries and benefits – about a 42 percent fringe – but by taking control of everything, we’re saving all those profits (we would have paid third parties).”

Crowley provides a myriad of logistics services for CMS, including air and ocean freight shipments from Guatemala to the West Coast, customs clearance in Los Angeles and delivery to points in California.

Cutting fabric from patterns at SAE A International plant in Guatemala.



Storing yarn in Crowley’s warehouse at the Export Salva Free Zone in El Salvador.

Speed to Market

Que Hwang, president of STM International in Guatemala, is such a firm believer in speed to market that he named his apparel company Speed To Market (STM). “Mr. Q,” as he is known in Guatemala, says “The retail environment is changing and the market needs faster turn times. For example, this year we didn’t have any slow season. In a recession market, retailers want quick turn time to avoid extra inventory.”

Crowley, working with its customers like STM, is able to provide speed to market based on a number of factors, including proximity to market, frequency of vessel service, air freight services and more sophisticated logistics services in Central America.

William “Bill” Sullivan, general manager of Hilasal, one of the largest apparel groups in El Salvador specializing in towel manufacturing, says, “While we’re not as cheap as Asia, we do have logistical advantages. We are culturally similar (with the U.S.). Most employees have studied in, or visited the U.S., and through television and the internet there is a bond. And, we’re in the same time zone. It is easy for us to be comfortable with our customers.”

“Business is good because we offer very fast service,” he said. “When the economy is down, retailers place smaller, but more frequent orders. That way they can see what is selling well and reorder; working overseas, there’s no

way (given the lead times required). Lands End, for example, is advancing orders and reordering summer merchandise. Also, when things get hot, like Hannah Montana, we can crank out thousands of Hannah Montana towels in a very short time, and they leave here store-ready.”

Juan Fernando Lara, full package operations director for Koramsa, a major apparel company in Guatemala specializing in denim jeans, said, “We are three days to the U.S. by ship, which brings the product closer to the consumer and the selling window. We work with Crowley to get the right products to the right markets in the season they are going to sell.”

Koramsa customers include Old Navy, Abercrombie & Fitch, Gap, Hollister and others. The company relies on Crowley for its southbound and northbound ocean shipments, as well as trucking services between their plants in Guatemala and Nicaragua, which employ 9,000 and 800 people respectively.

As with Koramsa, timing is critical for many manufacturers in Central America, for a variety of reasons.

DuWest, a joint venture between DuPont and Westrade Inc., in Guatemala, which manufactures herbicides and pesticides, has to get its products to the U.S. when they are needed by consumers.

“We have to have service that is fast and reliable, because we’re talking about millions of dollars of exposure if the products do not

get to stores when they are needed,” said Luis Fernando García, export manager for DuWest. “Every pesticide and herbicide has a recommended season for use. If the season passes and we’re not there quick enough, the products have to be held until the following year.”

Jenny Hong, general manager of Impression Apparel Group in El Salvador, said, “Speed is everything. If there is a one-day delay, the customer can cancel the order. It’s a disaster. That’s why our relationship with Crowley is so important.”

Tecno Advance, a 19-year-old company in El Salvador that sells computers and related peripherals to retailers in Central America, has additional reasons speed to market is so important.

General Manager Aparicio Díaz Amaya, said “Speed is very important to us because technology is changing very rapidly. What is state-of-the-art today could be obsolete tomorrow.” Additionally, “the faster we get the products, the sooner we get paid, which is important because our credit terms are relatively short – only 40 days – and that starts when Crowley receives our products from suppliers into their Miami warehouse.”

Lorena Martinez, general manager of Karim’s Group, a Guatemalan-based intermediary buying and selling yarn to manufacturers, said Crowley’s transit time is enhanced by its frequency of vessel service.

Turning yarn into fabric in Guatemala.



Luis Mario Martinez Molina, head of logistics for HILASAL in San Salvador, watches towels being made.

Crowley Central America Service Offerings

Logistics

• Warehousing

Jacksonville, FL	34,000 square feet
Miami, FL	138,000 square feet
El Salvador	14,530 square feet
Guatemala	33,585 square feet
Honduras	19,612 square feet
Panama (Panama City)	26,500 square feet
Panama (Colon)	53,820 square feet

- Air Freight
- Cargo Consolidation
- Cargo Insurance
- Customs Brokerage
- Distribution (including pick & pack)

- Freight Forwarding
- Inland Transportation (*U.S. and Central America*)
- NVOCC Shipping - FCL and LCL
- SED Preparation
- Truck Brokerage U.S.

Liner Services

- 3 sailings/week Port Everglades, FL to northern zone Central America
- 3 sailings/week Gulfport, MS to northern zone Central America
- 2 sailings/week Port Everglades, FL to southern zone Central America

"You (Crowley) have three vessels every week (between Port Everglades, Fla. and Guatemala), while most companies have just one," she said. "That's a big advantage. If you miss a sailing with one of your competitors, you might have to wait a week, but with Crowley, there's another vessel almost every other day."

Increased Importance of Logistics

QST Industries Inc. in Guatemala, which supplies makers of jeans and casual pants with special material to line pockets and reinforce waistbands and button holes, is a significant user of Crowley's services in Central America. The company has a warehouse in Guatemala near Koramsa, which is a major customer, and sources about 70 percent of its material from

the U.S. and 30 percent from Asia and Pakistan.

"Given the way cargo is moving into, out of and between Central American countries, logistics has become more important than ever," said Astrid Moran, QST general manager. "Yet logistics is not something we want to be involved in. It's not our expertise. It's not our core business. Crowley is our partner in the supply chain. Instead of dealing with 10 different companies, we deal with one."

"We use Crowley to transport import containers and to truck product within Guatemala and from Guatemala to sewing factories in other Central American countries," she said. "We also warehouse product in El Salvador and Honduras with Crowley. We've tried other companies, but we've had to chase them. When

we deal with Crowley, we know your way of operating and things flow much more easily and reliably."

STM's Hwang, says "Crowley allows us to focus on our core activities of sales and manufacturing. We don't have to worry about anything (logistics related). You (Crowley) take care of us." Crowley provides warehousing, inventory control, local distribution and customs clearance in Guatemala for STM, who is next door to Crowley in the same free zone. In addition, Crowley provides import and export ocean and air freight services, customs clearance in Miami and local, in-country delivery of trims and accessories to assemble wearing apparel and finished goods.

Evergreen Packaging, a manufacturer of coated milk and juice cartons in El Salvador, uses Crowley to truck containers from El Salvador to Honduras, and to coordinate less-than-container-load (LCL) cargo shipments from Miami to other Central American countries. Attention to detail, albeit seemingly minor, is important to Evergreen.

"We have limited physical space here, so it's important that containers are spotted here when we need them and that the drivers are here on time," said Roldan Chicas, Evergreen's controller.

Hanes Brands Inc., which manufactures underwear, socks, athletic wear, intimates and more in Central America, is another big user of Crowley's logistics services. The company has 12 different locations in Guatemala, Honduras,

Embroidering pockets for jeans at Koramsa in Guatemala.



Crowley truck in downtown El Salvador.

We are three days to the U.S. by ship, which brings the product closer to the consumer and the selling window. We work with Crowley to get the right products to the right markets in the season they are going to sell.

- Juan Fernando Lara



Nicaragua and El Salvador and is growing. In addition to transporting southbound containers of yarn from the U.S. to Central America, Crowley provides trucking services between El Salvador, Honduras and Nicaragua for Hanes, as well as warehousing in the Export Salva Free Zone in El Salvador. Crowley is even helping the company with its space crunch by providing storage trailers.

“Crowley is our strategic partner,” said Nelson Ahues, Hanes planning manager in El Salvador. “We’ve tried other companies, but the relationship hasn’t been as successful.”

Crowley's View

Miguel Artiga, Crowley's logistics vice president in Central America, has watched business expand, contract and change over

many years. He's seen infrastructure improvements in the countries and rising standards of living. And he's seen the effects of trade agreements and government regulations. Overall, he carries a positive outlook for business growth in Central America.

“We’re seeing evidence all around us that we’re living in a global economy,” he said. “Products and raw materials are being sourced all over the world. Competition is increasing, and we’ve seen companies in Central America having to evolve to stay competitive. Speed to market has emerged as a competitive advantage.”

To that end, Crowley is working with customers in Central America to understand their needs and to offer solutions for making their supply chains more efficient and cost effective.

“René Chiquillo of Merlet calls it ‘customer intimacy,’ and I suppose that fits very well,” Artiga said. “There needs to be trust and understanding between us and our customers.”

“One of the things we want to avoid is pushing services customers don’t need or want,” he said. “Some customers choose to use us for all of their transportation and logistics needs, while others may just need a service or two like customs brokerage, air freight, or supplemental warehousing, and that’s fine. We will help wherever we can.”

“I am convinced that Central America will continue to be an important trading partner with the U.S.,” Artiga said, “especially as long as there is a demand for quality, low-cost goods that can be delivered with speed to market.”

[Connections](#)

Dry finishing jeans, at Koramsa, to provide a worn designer look.



Ro/Ro ship *Express* in the Port of Gulfport, Crowley's Gulf Coast gateway to Central America.

Historical Perspective

1934



Crowley's storied history dates back to 1892. Through the years the company has diversified its business and provided a myriad of services. The photo above shows a Crowley tug assisting in the delivery of the first transport of prisoners to the newly converted federal penitentiary on Alcatraz Island in 1934. Al Capone was among the convicts. 'The Rock' as the prison was called, operated until 1963 before assuming its current role as a historic site operated by the National Park Service.

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