

Innovations changing face of marine transfers

IT'S A FACT: Offshore personnel transfers are inherently dangerous. When employees are hanging in mid-air 80 to 100 ft over water, the risks are undeniably great. Since the 1950s, the **Billy Pugh Co.** rope basket has been the drilling industry's recognized standard of marine transfers. It was even inducted into the Offshore Energy Center's Offshore Hall of Fame in 2001 as a technology pioneer. In recent years, however, as the

industry increased its focus on safety and on improving the working environment for rig crews, alternative transfer methods have entered the market, and Billy Pugh itself has developed an improved model of its traditional rope basket.

Here's a look at two personnel transfer devices from Texas-based **Billy Pugh** and Aberdeen, UK-based **Reflex Marine**.

Reflex Marine: The Frog

OFFSHORE PERSONNEL TRANSFER in the drilling industry isn't as good as it can be, and **Reflex Marine** wants to raise industry standards, said **Brian Morr**, US representative for the UK company. Their device, the Frog, has been on the market since 2000, and more than 250 units are being used in 28 countries, he said.

In designing the Frog, Reflex Marine began by compiling data on crane transfer incidents, and analysis indicated that the top 3 categories of incidents were falling (25%), vertical impact (25%) and lateral impact plus falling (21%). The Frog specifically addresses these risks, with features such as:

- Seats and seat belts to protect against falls. "The Frog doesn't take off until everyone's strapped in," Mr Morr said.
- Suspension protects against heavy landings.
- Hard protective frame prevents lateral impacts/collisions.
- Self-righting buoyancy minimizes risk of immersion.

A special feature of the Frog is its marine ambulance capability, Mr Morr pointed out. By taking out 1 of the 3 seats on the unit, the Frog becomes a stretcher facility where a medical officer can travel with the casualty.

Mr Morr acknowledged that acceptance of the Frog has been slow to come in the Gulf of Mexico. "It feels quite different" from traditional rope baskets, he said, but passengers soon get used to it, and the majority of those who try it don't want to go back to the old way." 📌



A Frog transfers workers on ENSCO 92 in the North Sea. The Frog, which has a lifespan of 10-15 years, can be used safely under harsh weather conditions, Reflex Marine said.



For BP's Thunder Horse project, Billy Pugh Co. developed the 12-person version of its X-904 personnel transfer device to move more than 500 people a day.

Billy Pugh Co.: X-904

WHEN PAUL LIBERATO, president of **Billy Pugh Co.**, was asked if he believes the X-904 model will eventually replace their traditional rope baskets entirely, his reply was a decisive "absolutely." Although it has only been on the market since 2004, the X-904 has seen strong uptake and already makes up roughly 10% of Billy Pugh's total production, he said. "There has been no resistance to change, because we've kept the essence of the ride the same, so crews are comfortable with them. Like the traditional baskets, the X-904s are small and collapsible, making them easy to store on space-constrained rigs. They also come in various sizes — for 4, 6, 8, 10 or 12 people per lift, depending on client needs," he said.

Among the features added to the X-904 are:

- Personnel now step inside the basket, and rigid rigging lines outside provide side impact protection.
- A quick-release device provides fall restraint while still allowing riders to get on/off quickly. "It uses the same hardware as the head-and-neck-support device used in the auto-racing industry," Mr Liberato pointed out.
- Aluminum alloy construction provides overhead protection.
- Space is available at the center of the X-904 for a stretcher and medical officer.

John Auth, HSE manager at **Diamond Offshore**, was among the first to approach Billy Pugh Co. about improving its basket about 4 years ago. "There were a lot of things we liked about it, but we also knew it could be better. And that's what we did — we made it better," he said. The X-904 is now the company standard at Diamond Offshore. 📌