

Solutions for deepwater

In the May/June edition of *OffshoreMarine*, we introduced one of the designs in the SemiTEC™ suite of products, the DeepDraft™ Semi technology. In this issue, *OffshoreMarine* features the Extended Tension Leg Platform (ETlp®) technology, one of the designs in FloaTEC LLC's TlpTEC™ suite of products.

As an evolution of the conventional TLP design, FloaTEC LLC, developed the ETlp® (Extended Tension Leg Platform). The ETLP is designed to enhance features of the conventional TLP with particular focus on the following:

- Wider tendon base for greater pitch stiffness (stability)
- Smaller spacing of deck supports for more efficient structure
- Lower rotational inertia for hull and deck to lower pitch and roll natural period
- Large moonpool to accommodate conventional top tension risers

Advantages of the ETlp®

The ETlp® column spacing is independent of the tendon spacing, thus reducing deck structure and steel weight. In addition, de-coupling of the tendon porch separation distance from the topsides offers maximum design flexibility.

Other features and advantages of the ETlp® design include:

- Optimum column spacing for deck support, thus improving hull weight efficiency
- Reduced wave and current loading, resulting in improved tendon responses
- Lower tendon forces which reduces the effect on the hull steel
- Conventional tensioners can be used for production and drilling risers
- No high-risk elements needed, such as

riser guides, buoyancy cans and keel joints

- Availability of 3- or 4-column layout, therefore maximising design flexibility
- Reduced risk from an unconditionally stable hull

One of the main benefits unique to ETlp® technology is the significant steel weight savings in deck and hull steel. The design also allows for flexibility in construction, quayside integration and commissioning, and optimisation of the drilling configuration. Due to the need for fewer tendons compared to the conventional TLPs, the mooring system is also simplified.

ETLPs have been successfully designed, fabricated, and installed at the *Kizomba A* and *B* locations offshore Angola and the *Magnolia* location in the Gulf of Mexico.



The Extended Tension-Leg platform design is a proven concept, with units that have been successfully designed, fabricated, and installed at the *Kizomba A* (left) and *B* locations offshore Angola and the *Magnolia* (right) location in the Gulf of Mexico