



SESAM SOFTWARE

KEPPEL TRUST IN SESAM SPANS TWO DECADES

Customer story - Keppel Offshore & Marine

The Deepwater Technology Group at Keppel Offshore & Marine has been using DNV GL's Sesam™ products extensively for semisubmersibles for almost 20 years.

Since the early 1990s, Keppel's Deepwater Technology Group (DTG) has used Sesam for its semisubmersible design. DTG, a technology division of Keppel Offshore & Marine (Keppel O&M), provides design and engineering solutions spanning semisubmersibles and various floating structures such as drilling tenders, accommodation semisubmersibles and drillships.

In recent months, Sesam was used in the design of the sixth generation deepwater semi-submersible DSSTM 38E where Keppel O&M secured a USD 809 million contract from Sete Brasil in December 2011. In April this year, Keppel O&M signed

a Letter of Intent (LOI) with Sete Brasil for five additional semi drilling rigs based on this design. The contract is worth USD 4.12 billion.

The DSSTM 38E design is innovative and cost-effective, rated to drill to depths of 10,000 metres below the rotary table in 2000 metres water depth. Scheduled for delivery in 2015, the rig is intended to support the exploration of Brazil's estimated 50 billion barrels of deep sea oil and gas reserves. With improved capability and operability, the rig is suited to the stringent requirements of the deepwater "Golden Triangle" region.

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Anis Hussain, General Manager, Keppel Offshore & Marine Deepwater Technology Group

“As the exploration of oil and gas reserves moves to less hospitable terrains and becomes more complex, technological capability is a key differentiator in the ability to remain at the competitive edge,” says Mr Anis Hussain, General Manager of DTG. “The drawdown of global oil and gas reserves has driven the search for hydro-carbons further into the ultra-deep realms of Brazil, the Gulf of Mexico, West Africa and the North Sea.”

“With the additional orders of DSSTM 38E design, this shows that we continue to reap the fruits of our technology efforts by winning the continued confidence of our customers,” says Mr Hussain.

Keppel O&M, a global leader in offshore rig design, has developed a range of proprietary solutions that have gained wide market confidence. By using software solutions such as Sesam, Keppel O&M deliver high quality projects safely, on time and budget.

A key factor for semisubmersible design is to properly compute the fatigue life for critical connections. Sesam for floating structures, the hydrodynamic analysis package of Sesam, was used to efficiently simulate and calculate the causes of damage.

Sesam for fixed structures, the structural analysis package of Sesam, was used to compute the global strengths and refined fatigue.

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DSSTM 38E design from Keppel Offshore and Marine

KEPPEL IN BRIEF

Keppel Offshore & Marine is a global leader in offshore rig design, construction and repair, ship repair and conversion, and specialised ship-building. Headquartered in Singapore, Keppel Offshore & Marine has 20 yards and offices worldwide.

PROFILE

- Customer name: Keppel Offshore & Marine
- Web address: keppelom.com
- Market: Offshore rig design, construction and repair, ship repair and conversion, and specialised shipbuilding
- Employees: 30,500
- Solution/product: Sesam

BRIEF ACCOUNT

Why we chose DNV GL - Software:

- DNV GL's proficient engineering knowledge embedded in the software
- Advanced software features that meet our requirements and increase efficiency

This is what we gained:

- Proven software and numerous deliveries of successful projects over two decades
- Seamless way of transferring models to conduct different analysis
- Enables qualified decisions in design
- Reduced costs and value for money