

MARINE

SYSTEMS & EQUIPMENT



Keppel

**Offshore Technology
Development**

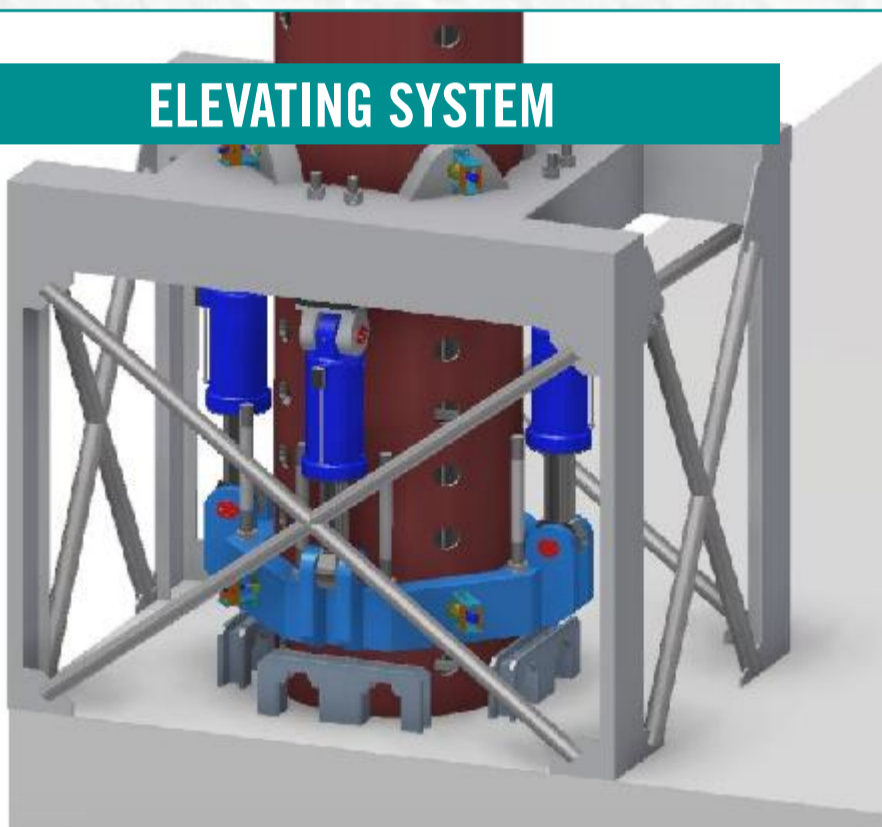
MARINE SYSTEMS

At Offshore Technology Development (OTD), we understand the importance of meeting tight budgets and deadlines to effective technical solutions. We work towards customer's wants and needs in providing cost effective solutions to you in both Offshore and Marine industries, optimising your vessels' safety and capabilities.

OTD OFFERS A FULL LINE OF MARINE SYSTEMS AND COMPONENTS including elevating systems, skidding systems, winches, and etc. Our expert engineers, inspectors, and project managers possess the necessary skills to deliver the components of highest quality design you require on specification, on time, and on budget.

Priding ourselves to be designers of Marine systems/ products, we have been developing innovative solutions to cater for our clients' needs. We are the specialist in designing & delivering CUSTOMISED SYSTEMS/ PRODUCTS to various clients with ANY specific/ special requirement.

ELEVATING SYSTEM



- **ELECTRIC RACK & PINION JACKING PINION**
- **HYDRAULIC RACK & PINION JACKING**
- **HYDRAULIC CYLINDER JACKING SYSTEM**

We offer a cost effective and reliable system solutions on 100 over vessels worldwide, OTD elevating systems are electric/hydraulic driven rack and pinion or hydraulic cylinders elevating system designed and built in compliance with ABS/ DNV rules for self-elevating platforms/vessels. Capable of lifting loads up to and above 93,600 kips, they are suitable for elevating decks/structures of the world's largest vessels.

SKIDDING SYSTEM



- **GRIPPER (HYDRAULIC)**
- **LIFT & ROLL SYSTEM (HYDRAULIC)**
- **HYDRAULIC CYLINDER SKIDDING SYSTEM**
- **ELECTRIC RACK & PINION SKIDDING SYSTEM (VFD & DOL)**

Having track records of skidding massive structures of weights up to 3,700 tons, the OTD Skidding System is designed to move heavy structures such as the Cantilever structure on Jack-up rigs, A-Frame structures on floating crane vessels, structures for work-over and such.

The systems run on either electrically driven rack and pinion or hydraulic actuated cylinders and were built in compliance with Classification rules.

WEIGHING SYSTEM



- **ELECTRONIC TYPE WEIGHING SYSTEM**
- **HYDRAULIC TYPE WEIGHING SYSTEM**

In view of the market's need of precision and immediate data monitoring of tank status, OTD Weighing System is a monitoring system that measures the weight of contents in tanks with the aid of electronic hydraulic load cells.

LNG TRANSFER SYSTEM



- **SHIP-TO-SHIP LNG TRANSFER SYSTEM**

With proliferating use of floating regasification and liquefaction for the transportation of Liquid Natural Gas (LNG), the industry requires high quality LNG transfer systems. OTD offers an efficient ship-to-ship LNG transfer system that minimises both human intervention and connection time. Multiple hoses are lifted together, such that hoses can be connected simultaneously, improving productivity when comparing to the conventional way of fitting hoses one at a time. This method of handling also reduces human intervention and, therefore, curtails the risk of human error.

WINCH SYSTEM



- **MOORING WINCH**
- **ANCHOR WINCH**
- **TRACTION & STORAGE WINCH**
- **WATER FALL**
- **RISER-PULLING**
- **CHAIN JACKING**

Having delivered winches since 2005, OTD offers a customised range of winch and fairlead solutions for jack-up rigs and semi-submersible rigs that are designed in accordance to ABS/DNV rules. Employing cost effective solutions, all winches are designed and built with due consideration to five core requirements: Safety, Reliability, Easy Handling, Low Maintenance & Environmental Friendliness.

THRUSTER SYSTEM



- AZIMUTH THRUSTER
- TUNNEL THRUSTER

To expand the OTD product front in the Offshore Sector, OTD has a joint collaboration with ZF Marine Krimpen to co-develop/ market this thruster technology. We ensure our clients high quality and reliable thruster systems.

GREASING SYSTEM



- RACK & PINION GREASING SYSTEM

To ensure hassle free maintenance on critical components on vessels, OTD came up with a semi-automatic greasing system. The Rack Greasing System distributes grease to the rack teeth and pinion teeth during a rack-and-pinion jacking operation. This cost effective system eliminates the need for manual greasing during every rack & pinion movement operation.



Keppel

**Offshore Technology
Development**



55 Gul Road, Singapore 629353

Tel : (65) 6863 7409

Fax : (65) 6862 3465

Enquiries : enquiry@keppelotd.com

Support : support.otd@keppelotd.com