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Mooring and Offloading Systems
Offspring International

Offspring International Limited (OIL) is a leading supplier of single point mooring systems to the offshore industry worldwide. Well established over 25 years, OIL provides high quality, single point and conventional buoy mooring and offloading systems, hoses, breakaway couplings, pressure surge protection and navigational buoy moorings.

Offspring International is a dedicated team of mooring professionals; bringing together over 150 years combined experience in the design, supply and deployment of offshore mooring systems. We are an active member of the Oil Companies International Marine Forum (OCIMF), contributing our knowledge and experience to Single Point Mooring (SPM) best practice.

Industry-leading SPM Product Range

Offspring International combines in-depth technical and practical experience with industry-leading mooring systems and products. As the exclusive worldwide agent for Lankhorst Ropes Offshore Division, Royal Lankhorst Euronete Group, part of the Wireco WorldGroup, OIL offers a full range of Single Point Mooring (SPM) products manufactured and supplied in strict accordance with the OCIMF 2000 “Guidelines for the Purchasing and Testing of SPM Hawsers”.

Through international agent agreements with leading hose manufacturer EMSTEC GmbH, and emergency disconnect systems specialist MIB Italiana, Offspring also supplies a range of EMSTEC offloading hoses and the innovative MIBreak marine breakaway coupling.

In keeping with tanker loading Best Practice, OIL has developed the Oiltech Surge Protector, designed to eliminate the risk and disruption of pressure surges damaging the offloading buoy and supporting pipeline infrastructure.

Using the latest computer aided design technology; OIL is able to produce “As Built” drawings and fully documented manuals for any mooring system to accompany the QA and/or independent inspection authority certification.

Offspring International values long-term, customer relationships and so a commitment to excellence in customer service is one of our key strengths. We go beyond the normal, high level of pre-sales technical advice and project management expected when delivering mooring systems on-time and within budget, to include post-installation reviews and through-life operator support.

Mooring Systems – Experience and Know-How

Offshore mooring systems are subject to increasingly demanding operating environments. The design of the mooring system and the integrity of its components are critical to ensuring optimum in-service performance, longevity and operational safety.

OIL offers complete CALM buoy and conventional buoy mooring systems, from design and supply of the entire offtake system, to replacement of mooring hawsers, hoses, pressure surge protection and associated hardware. Based on experience of providing SPM systems for terminals around the world; we take a systematic approach to assessing the offshore environment, hawser and hose design, testing, and installation conditions.

Hawser and Rope – Innovation, Higher Performance

Offspring International, working with Lankhorst Ropes, has been instrumental in driving up rope performance standards in SPM applications. Through innovative technical solutions and a commitment to customer service, the company has led the development of integral hawser flotation technology and new, higher performing offshore ropes.

Industry Leading – rope development, manufacture, test and rigging facility

Lankhorst Ropes Offshore Division has a dedicated rope production facility for the design, production, rigging and testing of deepwater mooring ropes and single point mooring (SPM) hawsers at Viana do Castello, on the coast about 80km north of Porto, Portugal.

The factory covers some 3,600m² production facilities together with 2,400m² storage area. In addition to state-of-the-art rope production machinery, the factory includes a large SPM make-up and storage area. With access to Lankhorst Ropes’ industry-leading test machine, OIL is able to develop new SPM ropes, and qualify prototype ropes in accordance with international standards and customer specifications.
OIL offers a range of bespoke packages for both single point and tandem offtake mooring systems. From the supply of the entire offtake system to replacement of mooring hawsers, chains, hoses, pressure surge protection, and all associated hardware.
**Single Point Mooring – bespoke supply**

OIL’s range of bespoke packages for single point and tandem offtake mooring systems includes:

- **Mooring hawsers**
  Compliant with OCIMF 2000 Guidelines including chafe chains, pick-up and messenger ropes, support buoys, hawser shackles, associated fittings and load monitoring equipment.

- **Floating & Submarine hoses**
  OIL offers a comprehensive range of OCIMF GMPHOM 2009 compliant hoses from EMISTEC. These include single carcass and double carcass hose construction for submarine, catenary and floating applications. Designed and manufactured to ISO 9001 and GMPHOM, 2009, prototype hose manufacture and testing witnessed and verified by DNV is available. OIL also offers a range of ancillary items enabling the safe installation and operation of offloading hoses including the Oiltech Surge Protector and hose mounted LED Floating Hose Winker Light providing a flashing warning light alerting passing vessels to the presence of floating hoses.

- **Surge Protection Systems – Oiltech**
  The Oiltech Surge Protector reduces the risk of loading pressure surges to crew, environment, hoses and pipelines. It provides a rapid response to surge events – less than 2 seconds – for single point mooring, conventional (CBM) and multi-buoy moorings (MBM).

- **‘Next generation’ breakaway couplings**
  The MIBreak breakaway coupling is designed to minimize the effect of tanker breakout and internal pressure surge events. Its ‘next generation’ rapid response, petal valve design minimizes oil spills, yet is easy to reset on-site. Seamlessly integrated within the flexible hose string, MIBreak provides passive monitoring and a full-bore design ensures uninterrupted flow and zero pressure loss. Its innovative petal valve closure design sets a new benchmark for minimal oil leakage and optimises surge protection. The breakaway coupling requires no external energy source. Importantly, once activated it can be reset on-site. There is no need to return to factory for reassembly, allowing terminal operations to quickly resume following an incident.

**OCIMF compliance across all systems**

All OIL SPM systems and products offer outstanding operational performance, reliability and safety. Additionally OIL follows the latest OCIMF guidelines and recommendations for our mooring systems.

- **OCIMF 2000 “Guidelines for the Purchasing & Testing of SPM Hawssers”**
- **OCIMF 2007 “Recommendations for Equipment Employed in the Bow Mooring of Conventional Tankers at Single Point Moorings”**

**Conventional Buoy Moorings**

In addition to SPM systems, OIL is able to supply Conventional Buoy Mooring systems providing effective mooring for tankers 5,000 to 50,000 DWT and larger at shallow water terminals. Comprising supply and installation of mooring buoys, pipeline end manifold (PLEM), offloading hoses, and telemetry and control, OIL provides full engineering design and specification of the CBM including mooring system, buoys, PLEM and hose interface.

**Navigational Moorings – High performance, secure moorings**

Offspring International supplies a range of high performance, chain moorings for synthetic and steel navigational buoys. Designed for a wide variety of environments both inshore and offshore, the mooring system includes marker, pendant chain, swivel piece, bridge chains and shackles, as required.

The mooring system is well proven – OIL has been supplying navigational moorings since 1991. Over this time we’ve provided mooring systems for buoys used for long-term navigation aids, as well as hazard warning systems, windfarms, ports and harbours, LNG facilities and offshore platforms.

**Offspring International – Strength and Depth**

Based in Dudley near Birmingham, UK, and with a branch office in Laguna Hills, California, USA, OIL has a worldwide customer base together with a comprehensive international network of agents.

For all your offshore mooring requirements, Offspring International has the experience and know-how to design, supply and install offshore mooring systems that are fully optimised and compliant with industry standards and best working practice.

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