



November 2017

Trelleborg Receives API 17L1 Design Certification for Type 3 Clamps

Trelleborg's offshore operation in Skelmersdale, England, has been certified for the design of its Type 3 Clamp under the American Petroleum Institute's specification for flexible pipe ancillary equipment (API 17L1 Ed. 1 2013). This is an important milestone, as the full suite of qualification requirements relating to the design methodology of Trelleborg's clamps and Distributed Buoyancy Modules (DBM) is now complete.

Tom Perry, Product Design Manager within Trelleborg's offshore operation, states: "Meeting stringent global standards to remain operationally and environmentally compliant is important to our customers and to Trelleborg. Receiving full industry-recognized accreditation from an independent verification agent, demonstrates our dedication to execute projects and designs to the required standard, providing customers with additional confidence and peace of mind."

The Type 3 Clamp is a design primarily comprising of a syntactic foam clamp body split in to a number of segments, an upgraded titanium tensioning system and high tenacity straps. Typically used in high load capacity and lower pipeline compliancy applications, this clamp provides an axial restraint on the client pipeline/flexible riser to locate a Distributed Buoyancy Module (DBM). The clamp can also be used for other applications, for example in support of Ballast Modules or Ballasted Uraduct, used within a riser configuration or to increase the submerged weight along the riser section for additional stability.

The certificate was awarded by Lloyds Register EMEA, acting as an independent verification agent. The design verification was completed by conducting a thorough audit of all design documentation and calculations as well as supporting material qualification and test data.

The API 17L1 specification defines the technical requirements for dimensionally and functionally safe, interchangeable flexible pipe ancillary equipment that is designed and manufactured to uniform standards. These industry standards determine the minimum requirements for the design, material selection, manufacture, documentation, testing, marking and packing of flexible pipe ancillary equipment.

Trelleborg DBMs are typically used between a subsea structure and a surface vessel or platform to reduce top tension loads and to maintain project specific riser configurations. The Type 3 Clamp, as well as the API 17L1 approved Type 4 Clamp, which includes internal rubber segments allowing for larger pipeline tolerances and contractions, were developed with a semi-automatic hydraulic installation tool to allow for quick installation of the clamp on board vessels and platforms.

Trelleborg's offshore operation currently holds API certificates for bend restrictors, bend stiffeners, distributed buoyancy modules, Uraduct®, Type 3 and Type 4 Clamps.

For additional information visit the [API17L Certificate page on the Trelleborg offshore operation's website](#).



~ENDS~

For press information:

For additional information on Trelleborg solutions for all offshore and subsea markets, please call Ruth Clay, Mobile: +12817405755; ruth.clay@trelleborg.com, [@OffshoreInsight](#), [LinkedIn](#).

Notes to Editors:

Trelleborg's offshore operation and Trelleborg Group

Using advanced polymer material technology, Trelleborg's offshore operation provides high integrity solutions for the harshest and most demanding offshore environments. As part of the Trelleborg Offshore & Construction Business Area of Trelleborg Group, **Trelleborg's offshore operation** specializes in the development and production of polymer and syntactic foam based seismic, marine, buoyancy, cable protection and thermal insulation products, as well as rubber-based passive and active fire protection solutions for the offshore industry. Within its portfolio are some long established and respected brands including, CRP, OCP, Viking and Emerson & Cuming. Trelleborg's offshore operation has been providing innovative solutions to the industry for over 30 years. www.trelleborg.com/offshore

Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Its innovative solutions accelerate performance for customers in a sustainable way. The Trelleborg Group has annual sales of SEK 31 billion (EUR 3.23 billion, USD 3.60 billion) and operations in about 50 countries. The Group comprises five business areas: Trelleborg Coated Systems, Trelleborg Industrial Solutions, Trelleborg Offshore & Construction, Trelleborg Sealing Solutions and Trelleborg Wheel Systems, and the operations of Rubena and Savatech. The Trelleborg share has been listed on the Stock Exchange since 1964 and is listed on Nasdaq Stockholm, Large Cap. www.trelleborg.com.