



KONGSBERG

IN-LINE TENSIONER (ILT)

KONGSBERG MARITIME DECK MACHINERY

In-line Tensioner (ILT)

The In-line Tensioner (ILT) combines chain securing and remote tensioning in one unit.

Eliminating the need for onboard floater winches leads to reduced CAPEX.

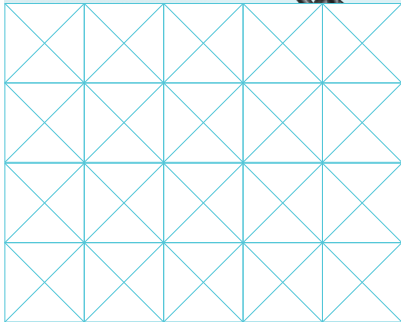
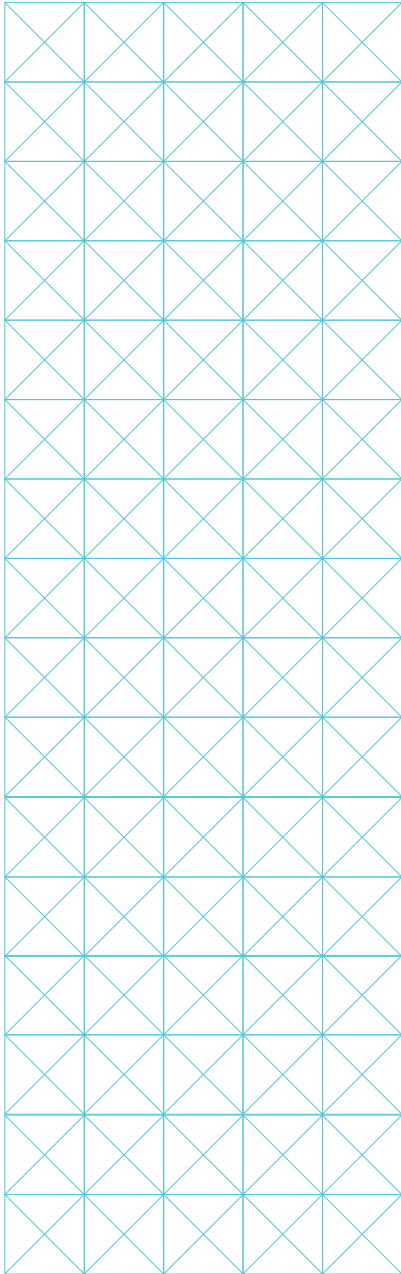
Having mooring winches installed onboard the floater itself is not cost-efficient, acknowledging that the floater will remain at location for a prolonged period without the need for re-positioning. The hook-up and tensioning of the floater is made possible by using the ILT and utilizing a typical spot-market AHT-vessel to apply tension.

Utilizing the pulley block effect leads to a larger range of suitable AHT-vessels to perform the hook-up and tensioning thus reduced OPEX.

As the chain runs over a sheave in the ILT and the angle of wrap around the sheave is large, the reaction load on the floater leg will be considerably increased compared to the applied bollard pull from the AHT-vessel. The anchor line on the opposite side of the floater from the one tensioned will have the same chain pulley block effect.

DESCRIPTION

An In-line Tensioner (ILT) is an anchor point for the mooring chain installed on the mooring line of a floating offshore unit. The ILT enables the mooring chain to be tensioned by an anchor handling vessel (ATH-vessel).

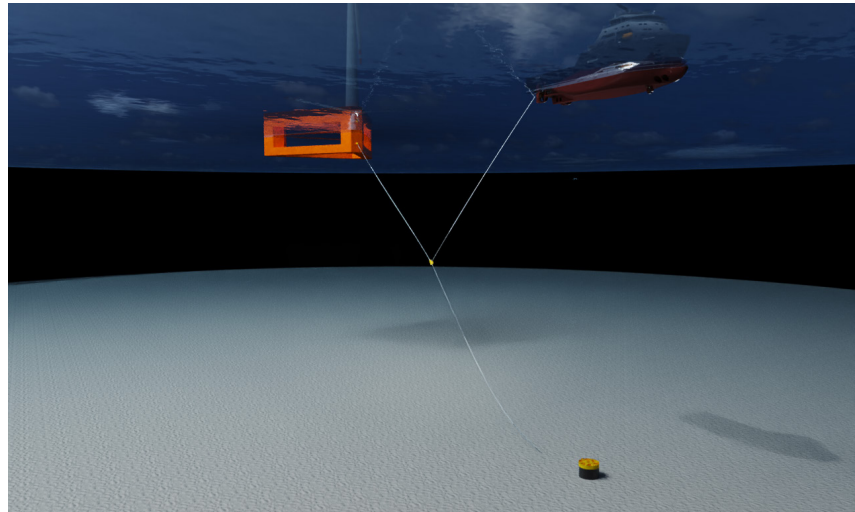


Operational advantages

The structural integrity of the mooring chain is ensured by a robust self-locking chain stopper system, designed to optimize the lifetime of the resting chain link and minimizing any Out of Plane Bending. The chain stopper system itself consists of a minimum of moving parts thus is maintenance kept to a minimum.

The chain stopper pawl can be activated by ROV from the vessel.

The ILT is designed according to offshore standards and is built on decades of experience from the O&G Industry.



The solution has the following characteristics and benefits:

- Mooring chain dimension 76 mm to 220 mm and chain quality R3-R6.
- Tensioning done by bollard pull from an AHT-vessel.
- The chain load is held by a fail-safe pawl mechanism.
- Chain release is remote controlled and can be activated by ROV from the AHT-vessel.
- The pawl and sheave design secures large contact surface on the chain link, optimizing the stress distribution and the out of plane bending properties.
- Few moving parts, making the solution robust and reliable.
- The design enables easy access for inspection.

The In-line tensioner allows for smooth passage of the platform chain, temporary installation chain or any work wire.

It is equipped with lifting lugs for handling and has sufficient strength to be deployed over a stern roller. The chain is locked in the In-line tensioner by a self-closing stopper pawl. The stopper pawl can be release with assistant from a ROV.