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PTX

PROTECTED TRANSFER SYSTEM

Zero-spill Separation in Emergency Scenarios during STS Transfer

Gall Thomson
proven technology

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PTX

Conceived by operators and designed by experts to engineer out the risk of spillage

WHAT IS THE PROTECTED TRANSFER SYSTEM (PTX)?

The PTX is a dry-close Emergency Release Coupling system which has been class-approved by Lloyds Register and proven in service across into the 100s of operations as of Spring 2025.

It is designed to mitigate the risk of oil spills within the Ship-to Ship (STS) transfer of crude and oil products.

PTX has been jointly developed in the UK by SafeSTS and Gall Thomson, and pools decades of combined procedural and critical safety system experience. This includes 1000s of safely executed offshore STS transfer operations combined with pioneering designs, manufacturing and testing of STS deck transfer protection systems since their conception nearly twenty years ago.

The PTX comes in a range of sizes from 6” to 24” and is installed compactly at the manifold, resulting in no head loss, where it sits passively until required.

When required, it is remotely activated from a safe distance via hydraulic signal (with manual over-ride if needed). This could be for example in an emergency scenario due to mooring failure (which industry statistics indicate to be the root cause of over 70% of recorded STS incidents). But it could also be activated on a precautionary basis either due to deteriorating weather or a number of other possible scenarios.

WHY IS THE PTX NEEDED?

STS transfers of crude, clean and dirty oil products have been taking place for over 50 years, with approx. 12,000 transfers taking place annually from around 250 lightering locations in 85 countries around the world.

Be they offshore (34%) or in port (66%), the risks associated with transfer operations are well known and recognised across the lightering sector and have been mitigated over time by innovations such as double-hulled tankers.

However, changing weather patterns are clearly now creating new risk factors - including higher sea states, stronger winds and more frequent extreme weather events.

All at a time where the hydrocarbon industry is under greater scrutiny than ever before...

Unexpected mooring failure is widely recognised as the biggest remaining risk during any STS operations.

The PTX brings calm and control to the manifold during such an event, where otherwise there could be chaos.

It prevents potentially-catastrophic consequences for the personnel, vessel and equipment involved - as well as the surrounding marine environment.

WHAT DOES A PTX DO?

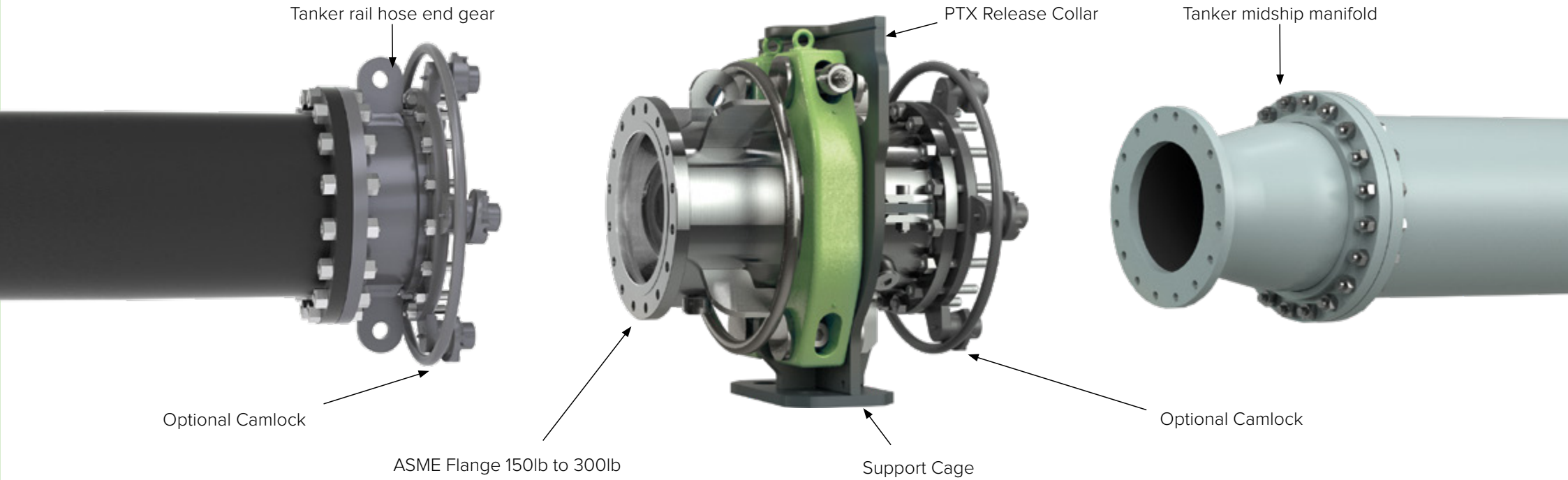
- Brings control to unplanned / emergency separation events
- Provides zero-spill certainty
- Easily integrates into existing processes
- Mitigates risk / lowers the ALARP risk bar in existing STS locations
- Allows STS to happen where it may not otherwise be allowed to.

WHAT DOES A PTX PREVENT?

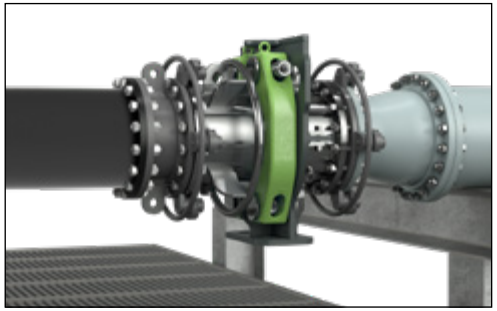
- Injury to personnel
- Damage to transfer equipment
- Damage to vessel infrastructure (manifolds, cranes)
- Damage to environment (spill)
- Ultimately, reputational damage

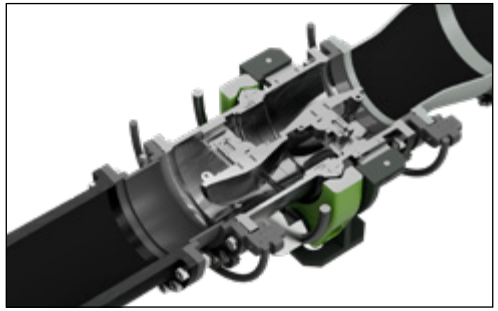
QUICK TO CONNECT AND DISCONNECT

PTX allows for quick and simple integration with the existing system.



PASSIVE

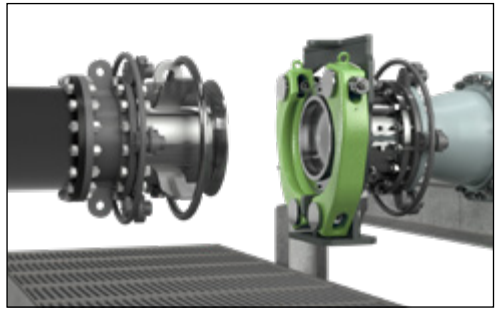


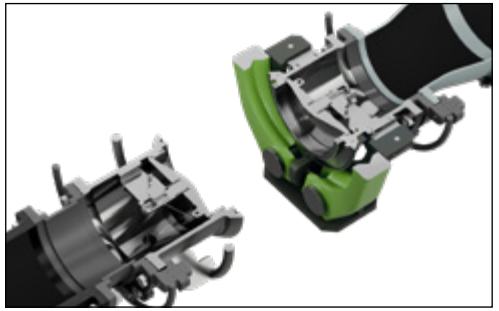


1/ The PTX Release Coupling is quickly secured with Ratchet Camlock couplings. The portable HPU is then connected to the PTX Release Collar.

2/ Flip-Flap valve discs are locked open and positioned in line with the flow – offering minimum headloss.

ACTIVATED





3/ The HPU signals to the PTX Release Collar and the coupling parts. The energy of the bias springs flip the discs through a controlled arc.

4/ The activated discs are seated and sealed – providing 100% leak-free shut-off.

TESTIMONIALS

"Congratulations for your ingenuity, desire, and persistence towards safe STS operations... I hope it brings more companies to recognize PTX being the standard."
Fortune 500 Downstream Player

"Integrating PTX is an epitome of Safe Operations which will ensure commitment to maintaining a secure pollution free marine environment. Your efforts are truly appreciated and make a significant difference in our overall safety standards."
Asian Oil Major

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