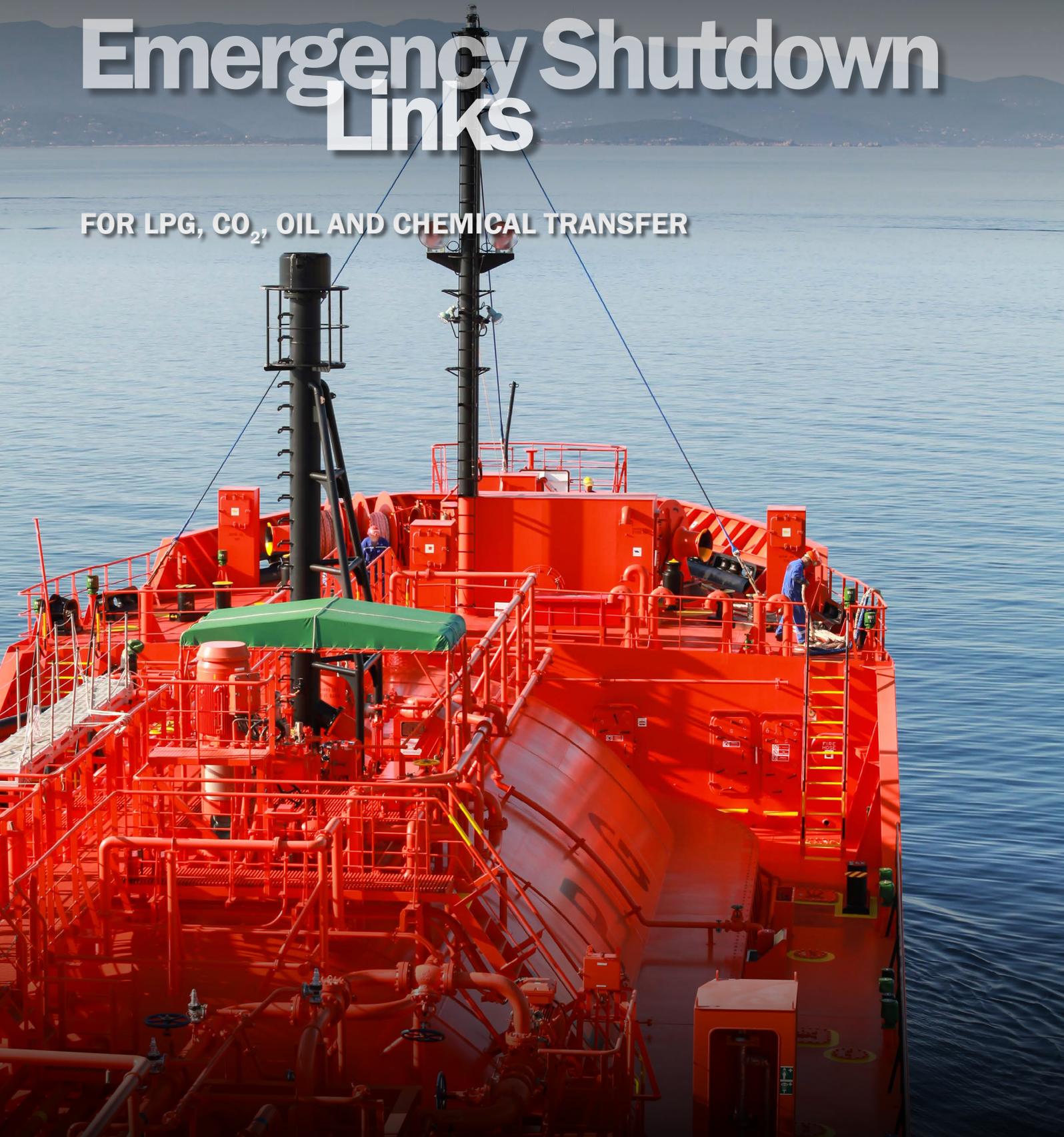


# Emergency Shutdown Links

FOR LPG, CO<sub>2</sub>, OIL AND CHEMICAL TRANSFER



# Emergency Shutdown Systems for energy transfer

The transfer of hazardous liquids in a marine environment necessitates the use of linked Emergency Shutdown (ESD) systems. It is critical that, should an emergency arise during transfer operations, the process can be shut down in a safe and controlled way.

Guidelines to the oil and chemical transfer arena issued by OCIMF and CDI are now common practice and add to the previously existing IMO regulations covering LNG and LPG transfer.

Shutdown systems on shore and ship must be interlinked so that they mutually shut down in case of emergency, with the ship and terminal ESD systems linked via an electrical umbilical using industry standard connectors.

## EMERGENCY SHUTDOWN LINK FROM TRELLEBORG

Trelleborg Marine and Infrastructure's Emergency Shutdown Link (ESL) system meets and exceeds the requirements of industry guidelines. The system, critical to the transfer of hazardous liquids in a marine environment, links the emergency shutdown systems of both the cargo discharger and receiver, to enable controlled and mutual shutdown in emergency situations.

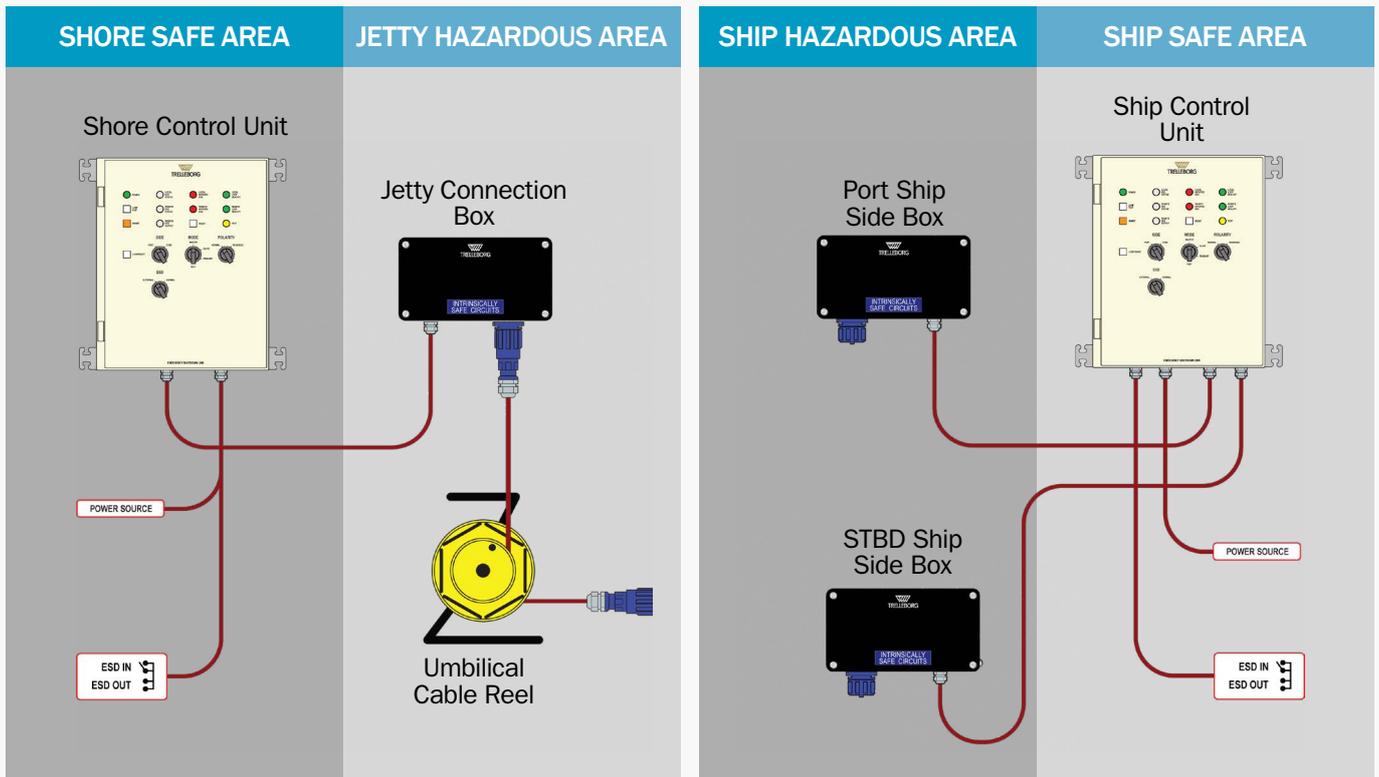
The system features the recommended, industry standard 5-pin twist connector that has been used for many years in other transfer applications. Intrinsically safe circuitry, suitable for hazardous area use, ensures galvanic isolation between ship and shore.

Trelleborg's ESL is primarily aimed at LPG, CO<sub>2</sub>, oil and liquid chemical transfer operations. It supersedes and is an improvement on earlier pneumatic-only systems which are slower in operation and therefore less appropriate as an ESD solution.

As well as meeting the OCIMF and CDI guidelines, Trelleborg's ESL naturally meets the recommendations and Guidelines for Linked Ship/Shore Emergency Shutdown of Liquefied Gas Cargo Transfer, as updated by SIGTTO in 2021 and included in ISO 20519:2017 – Specification for Bunkering of Liquefied Natural Gas fueled vessels.



## TYPICAL SYSTEM CONFIGURATIONS FOR SHORE AND SHIP



## FEATURES AND BENEFITS

- | For ship-to-ship, ship-to-shore and shore-to-ship applications
- | Used in LPG, CO<sub>2</sub>, liquid chemical, oil transfer and some LNG fueling applications (back-up pneumatic also supplied)
- | Suitable for use in SIL2 environment under IEC 61508
- | Ensures galvanic isolation between ship and shore
- | 'First up' indication for ESD location
- | Suitable for Ex ia IIB hazardous area applications
- | Meets current SIGTTO guidelines for all liquid gas transfers
- | Meets current OCIMF and CDI guidelines for oil and chemical transfers
- | Meets ISO 20519:2017: Specification for Bunkering of Liquefied Natural Gas Fueled Vessels

### GET IN TOUCH

Website | [trelleborg.com/marineandinfrastructure](https://trelleborg.com/marineandinfrastructure)  
Email | [sales.TMSUK@trelleborg.com](mailto:sales.TMSUK@trelleborg.com)

LEARN MORE  
ABOUT EMERGENCY  
SHUTDOWN LINKS





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.

Trelleborg Marine and Infrastructure is a leading provider of premium solutions for critical marine, port, and built infrastructure applications. Its innovative polymer and smart technology solutions enhance operational efficiency, safety, and sustainability.

[WWW.TRELLEBORG.COM/MARINEANDINFRASTRUCTURE](http://WWW.TRELLEBORG.COM/MARINEANDINFRASTRUCTURE)



[LinkedIn: Linkedin.com/company/trelleborg-marine-and-infrastructure](https://www.linkedin.com/company/trelleborg-marine-and-infrastructure)

[YouTube: Youtube.com/c/TrelleborgMarineInfrastructure](https://www.youtube.com/c/TrelleborgMarineInfrastructure)

[Facebook: TrelleborgMarineandInfrastructure](https://www.facebook.com/TrelleborgMarineandInfrastructure)

[Twitter: @TrelleborgMI](https://twitter.com/TrelleborgMI)

Trelleborg Marine and Infrastructure  
Email: [sales.TMSUK@trelleborg.com](mailto:sales.TMSUK@trelleborg.com)