

Offshore - FPSO & SPM Topsides

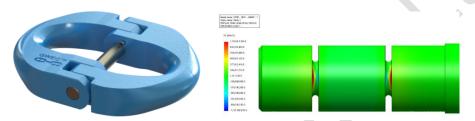
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## **Weak Link Connector**

(Product Code STDR - 3060)



OCIMF Recommendations for Equipment Employed in Bow Mooring of Conventional Tankers at SPM, 4<sup>th</sup> Edition, 2007, suggests that terminal operators '....positively protect from mooring loads in excess of the minimum yield load through the application of weak links'.

The GWEC™ 'Weak Link Connector' is designed specifically to satisfy this requirement. Intended to fit between end link of Shuttle Tanker Anti-Chafing Chain and HD Wide Body Rope Shackle it addresses the need that (they) '....should be sited to prevent hawser whiplash...'

Shear pins are subject to Finite Element Analysis (FEA) to accurately model required breaking loads prior to IACS independent verification of actual breaking trials within strict failure criteria (+/-5%). Components are assembled in such a way and machined to extremely fine tolerances so that load transfer is accurately maintained and controlled.

So far as we know Griffin-Woodhouse Ltd. is the only manufacturer currently offering an independently approved 'Weak Link System'.





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Terminals supplied to-date include -

- ExxonMobil, FPSO Falcon, Nigeria 8 x 270MT +/-5% c/w ABS 3.1 Cert.
- COTCO, FSO Kome-Kribi 1, Cameroon 4 x 200MT +/-15% BV 3.1 Cert.
- Total E&P, SPM Djeno Terminal, Congo 3 x 1409kN +/-9% c/w BV Class Cert. (2010) 2 x 1300kN +/-10% c/w BV Class Cert. (2013) 2 x 1300kN +/-10% c/w BV Class Cert. (2014)
- GyunGsang, FPSO BP Skarv, Norway 3 x 297MT +/-5% c/w DNV 3.1 Cert.

- BP, FPSO QUAD 204, North Sea UK 2 x 300MT +/-5% c/w DNV 3.1 Cert. 4 x 17.5MT +/-10% c/w DNV 3.1 Cert.
- CNOOC, FPSO Enping, South China Sea 1 x 250MT +/-5% c/w BV Class Cert.
- COTCO, FSO Kome-Kribi 1, Cameroon 5 x 200MT +/-10% c/w ABS 3.1 Cert.
- Total E&P, FPSO Pazflor, Angola
  1 x 200MT +/-5% c/w BV Class Cert. (2011)
  1 x 200MT +/-5% c/w BV Class Cert. (2014)

