



Single-Lift Removal of the Shell Brent Delta Topsides

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Single lift removal of the Shell Brent Delta topsides



Patrick Rijnveld, Lead Engineer
Decom Offshore 2017
Aberdeen, 24 May


30 years of pioneering spirit

Brent Delta

- Location: northeast of the Shetlands
- Platform weight: 24,000 t
- Water depth: 140 m

Scope of work

- Engineering, procurement and removal of the Brent Delta topsides
- Pre-lift preparation work including design of under deck lift points and strengthening of the module support frame
- Cutting of the platform legs
- Design and fabrication of lifting yokes, support stools and grillage
- Transfer of topsides and load-in to recycling yard (Hartlepool, UK)



2. Pioneering Spirit

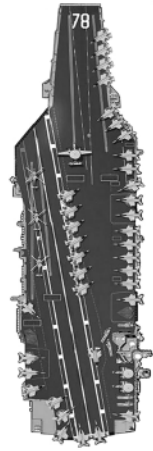
Hull length:	382 m
Hull width:	124 m
Slot length:	122 m
Slot width:	59 m
Thruster capacity:	66,000 kW (88,500 hp) = 12 x 5,500 kW
Installed power:	95,000 kW (127,000 hp)
Transit speed:	14 knots
Ballast capacity:	37,000 t/h
Accommodation:	571 persons

The size of *Pioneering Spirit*

Titanic



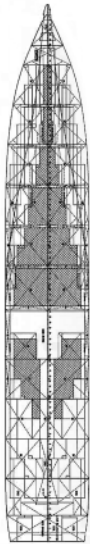
Nimitz class
aircraft carrier



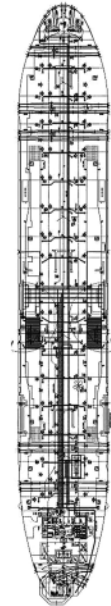
Allure
of the seas



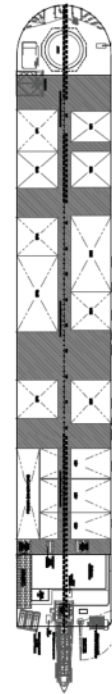
Emma
Maersk



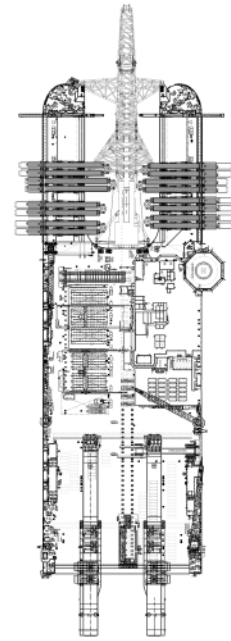
Seawise
Giant



Prelude



Pioneering Spirit





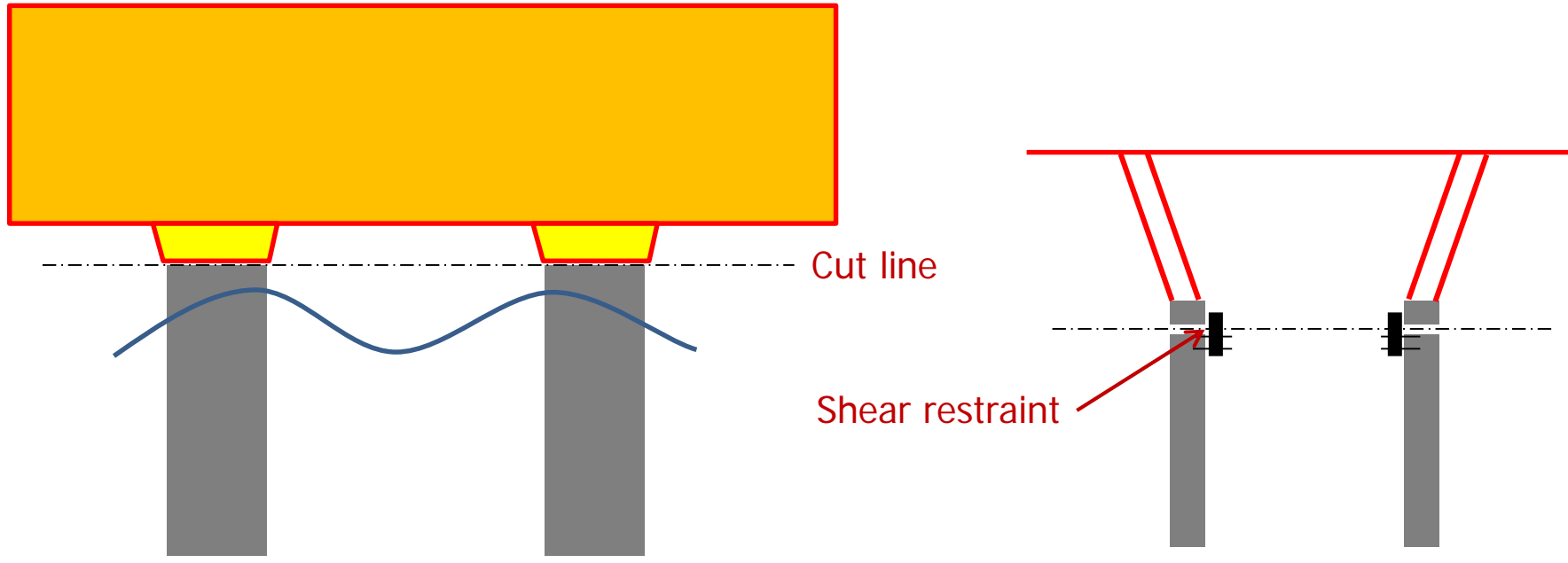
*Installation of the 12th topsides lift system beam, September 2015
Pioneer Spirit, Maasvlakte 2, the Netherlands*



*Positioning around the platform, 20 August 2016
Yme field, Norwegian sector of the North Sea*

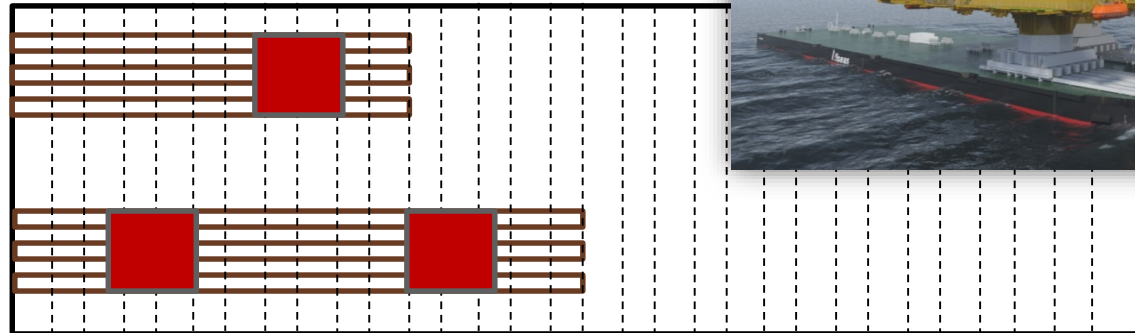
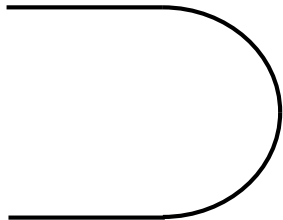
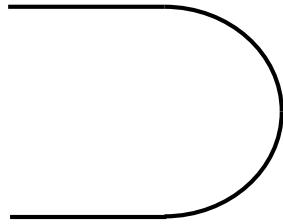
Leg cutting

- The legs had to be cut one year in advance
- A connection was required to keep the topsides connected to the legs after cutting: 'shear restraint'



5. Iron Lady outfitting

The platform had to be transferred to Allseas' *Iron Lady* barge, to allow load-in onto the quay



Iron Lady

Set sail for Brent Delta...



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