



Removing Large Offshore Platforms in a Single Lift: "Pioneering Spirit"

**51st Annual IPLOCA Convention
28 September 2017
Mexico City**

 **Ilseas**



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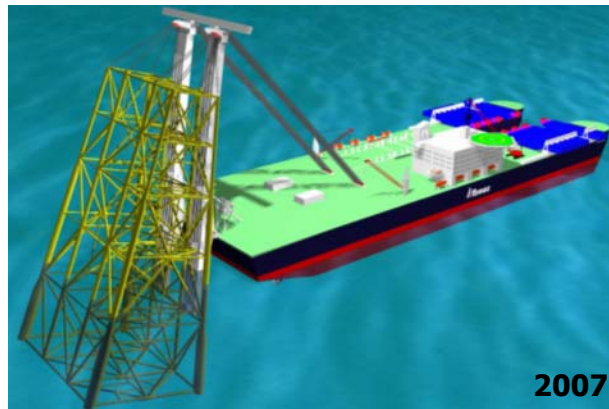
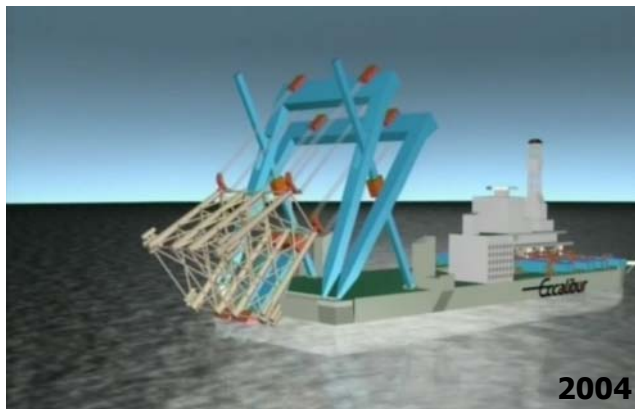
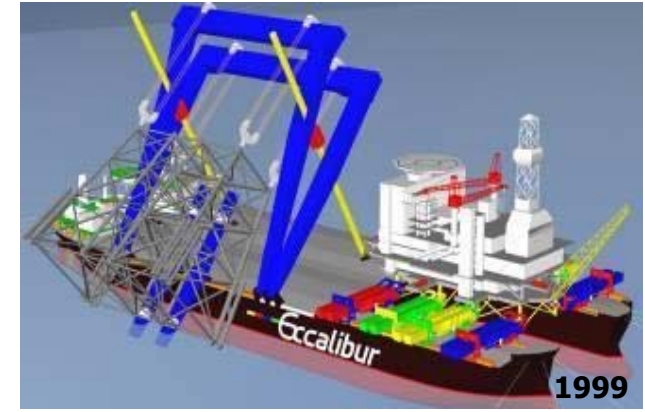
Solitaire

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History of the *Pioneering Spirit* concept





Heavy lift capacities of *Pieter Schelte*

Topsides lifting:	48,000 t
Jacket lifting:	25,000 t

Single-lift installation and removal of

Steel jacket-based platforms,

Topsides of gravity based structures, and

Topsides of floating platforms, notably SPARs

Size of *Pioneering Spirit*

Titanic



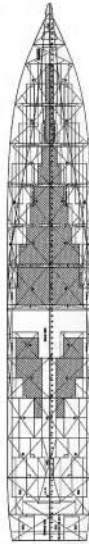
Nimitz class
aircraft carrier



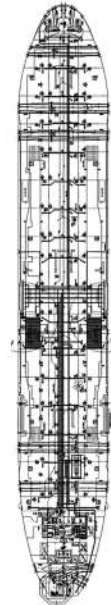
Allure
of the seas



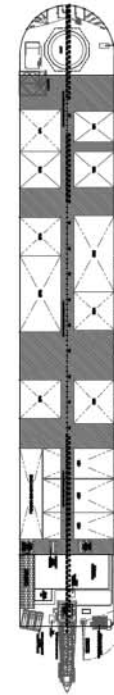
Emma
Maersk



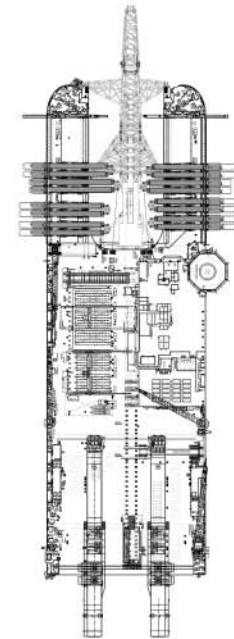
Seawise
Giant

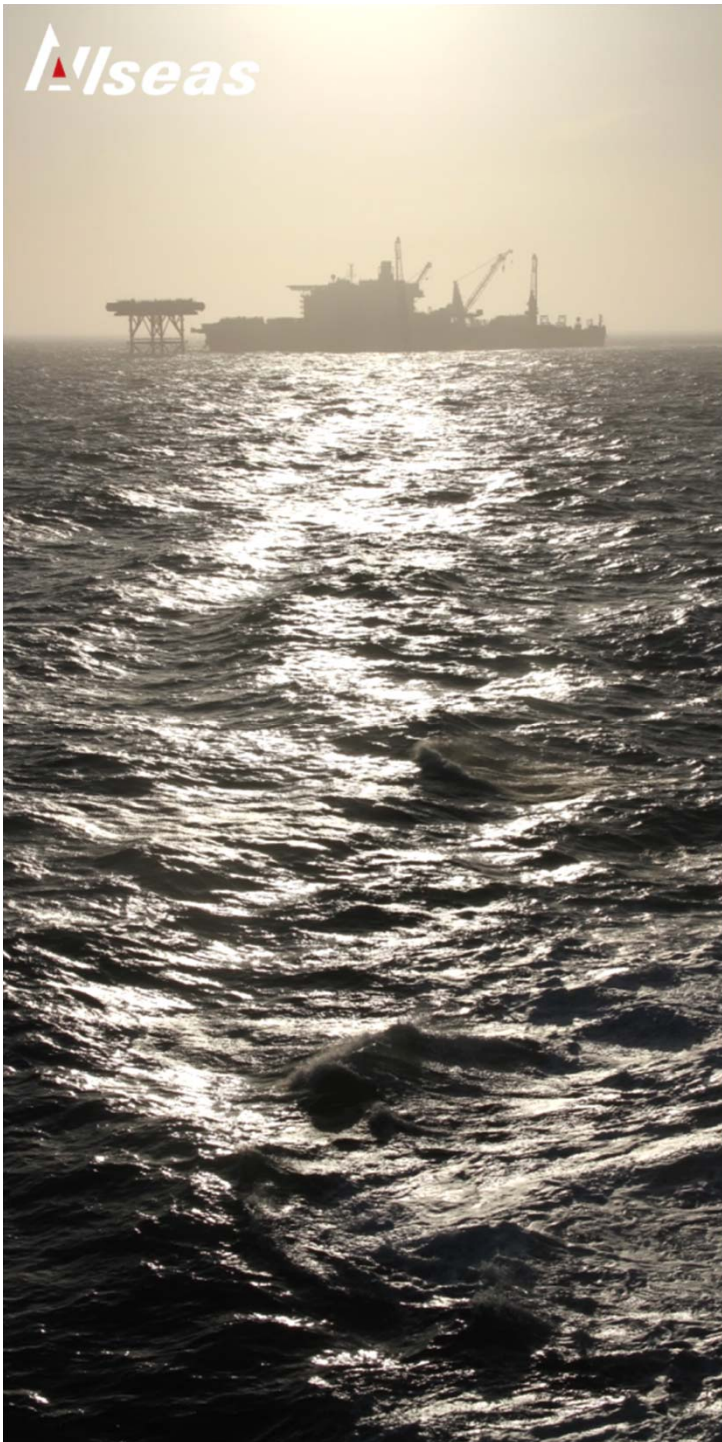


Prelude



Pioneering Spirit





Construction of *Pioneering Spirit*



*Block fabrication, June 2012
Daewoo shipyard, Yantai, China*



*Keel block 12A positioned in royal dock 4, September 2012
Daewoo shipyard, Okpo, South Korea*



*Installation of accommodation and bridge module, June 2013
Daewoo shipyard, Okpo, South Korea*



*Positioning the portside hull and the starboard hull next to each other, November 2012
Daewoo shipyard, Okpo, South Korea*



*Pieter Schelte alongside the D-quay, December 2013
Daewoo shipyard, Okpo, South Korea*



*Pieter Schelte in Cape Town for crew change, December 2014
Cape Town, South Africa*

The Iseas logo, featuring a stylized red triangle above the word "Iseas" in a bold, sans-serif font.An aerial photograph of the Pieter Schelte, a large black and white container ship, arriving in the Port of Rotterdam. The ship is loaded with colorful containers and has several cranes on deck. It is surrounded by several smaller tugboats, some of which are spraying water from their monitors. In the background, the port infrastructure, including storage tanks and other ships, is visible under an overcast sky.

*Pieter Schelte arrival in Rotterdam, 8 January 2015
Port of Rotterdam, the Netherlands*



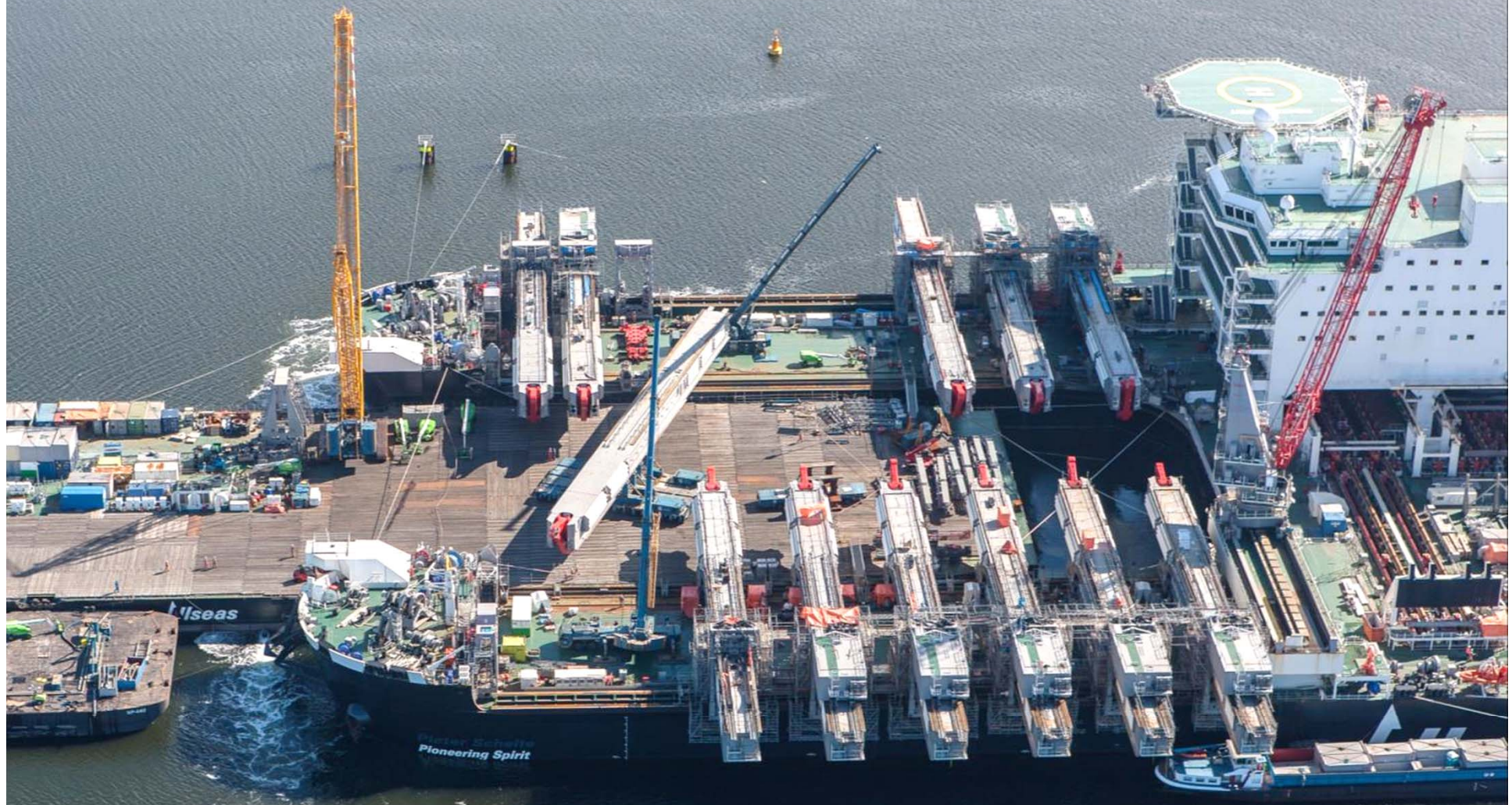
*The first topsides lift system beam on its way to the machining bed, October 2013
Cimolai, Monfalcone, Italy*



*Load out of the first complete topsides lift system beam, May 2014
Cimolai, Monfalcone, Italy*



*Installation of the fifth topsides lift system beam, February 2015
Pioneering Spirit, Maasvlakte 2, the Netherlands*



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



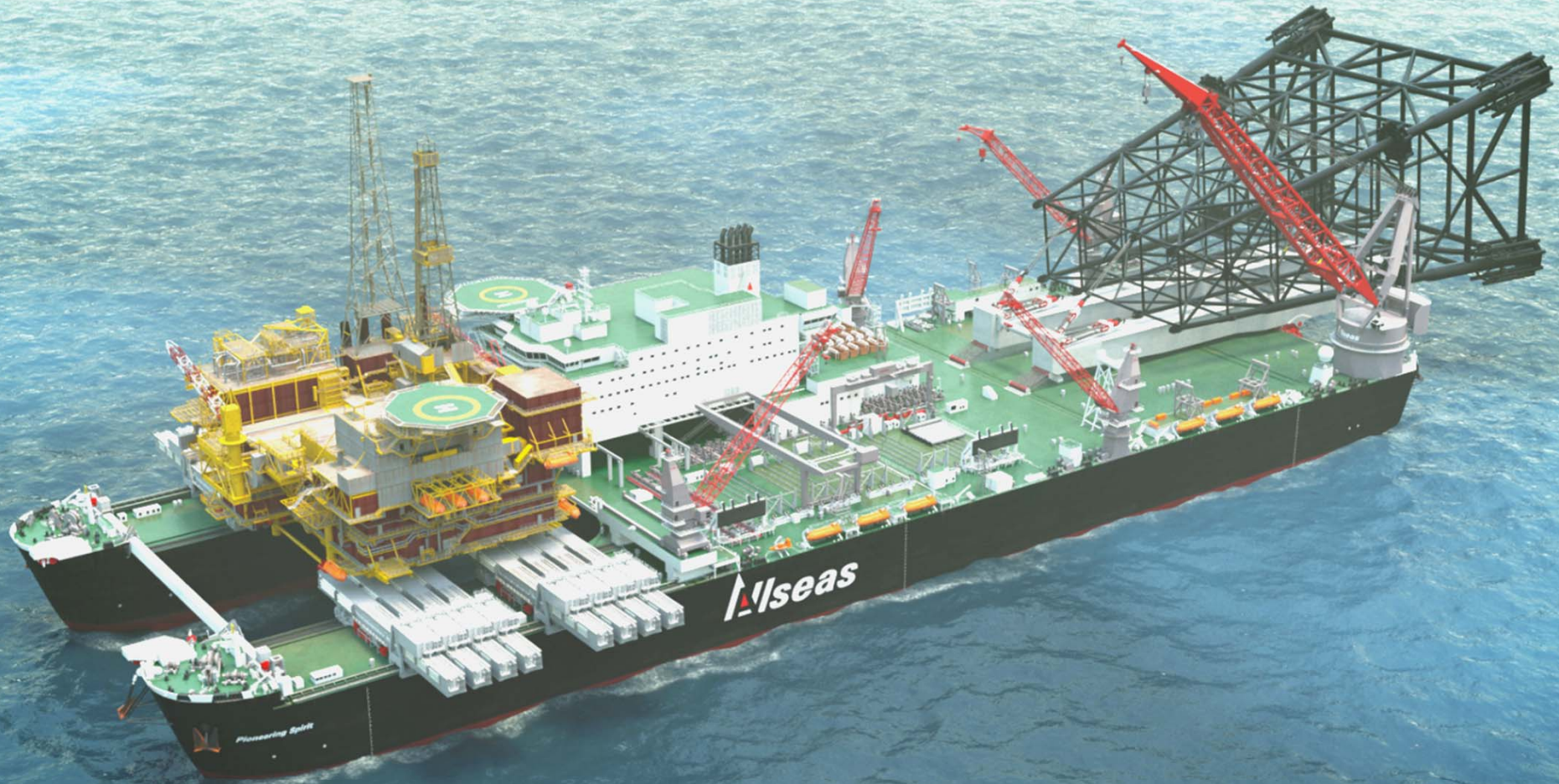
*Inauguration of Pioneering Spirit, 27 February 2015
Alexiahaven, Maasvlakte 2, the Netherlands*

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*Inauguration of Pioneering Spirit, 27 February 2015
Alexiahaven, Maasvlakte 2, the Netherlands*

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Pioneering Spirit with the 5000 t crane and the jacket lift system

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Jacket lift system (JLS) – raise and tilt jacket

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Skid jacket onto Pioneering Spirit and seafasten; sail to dismantling yard



Installation and removal of test platform topsides of 5500 t in the Southern North Sea

August 2016



*Load out of the test lift platform, June 2016
BOW terminal, Vlissingen, the Netherlands*

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Transfer test platform to *Pioneering Spirit*,
August 2016, Alexia haven, *the Netherlands*



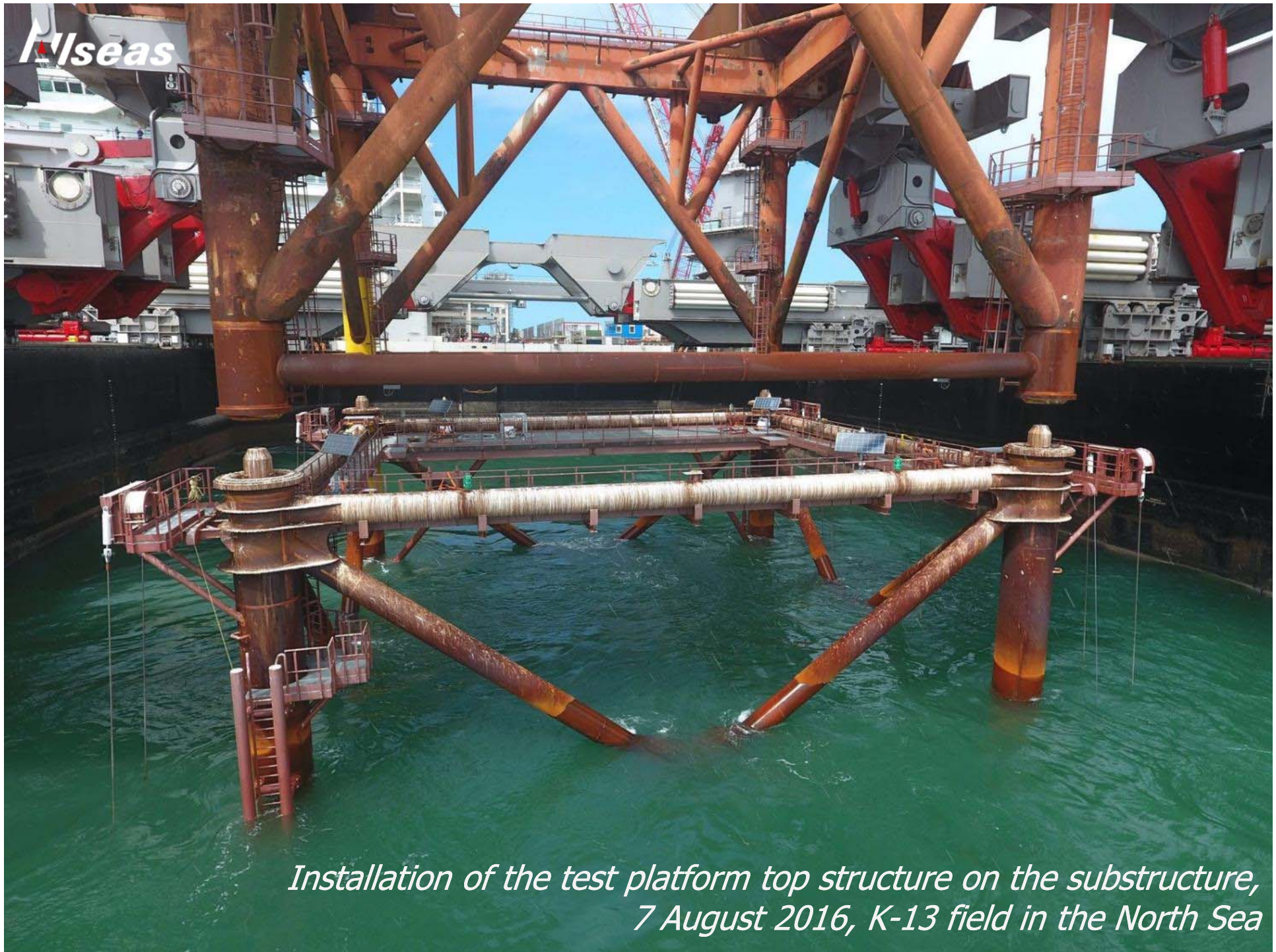
*Arrival at the offshore trials location, 6 August 2016
K-13 field in the North Sea*



*Preparing the test platform substructure for installation of the top structure,
6 August 2016, K-13 field in the North Sea*



*Installation of the test platform top structure on the substructure,
7 August 2016, K-13 field in the North Sea*



*Installation of the test platform top structure on the substructure,
7 August 2016, K-13 field in the North Sea*

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*Test platform top structure successfully installed on the substructure,
7 August 2016, K-13 field in the North Sea*



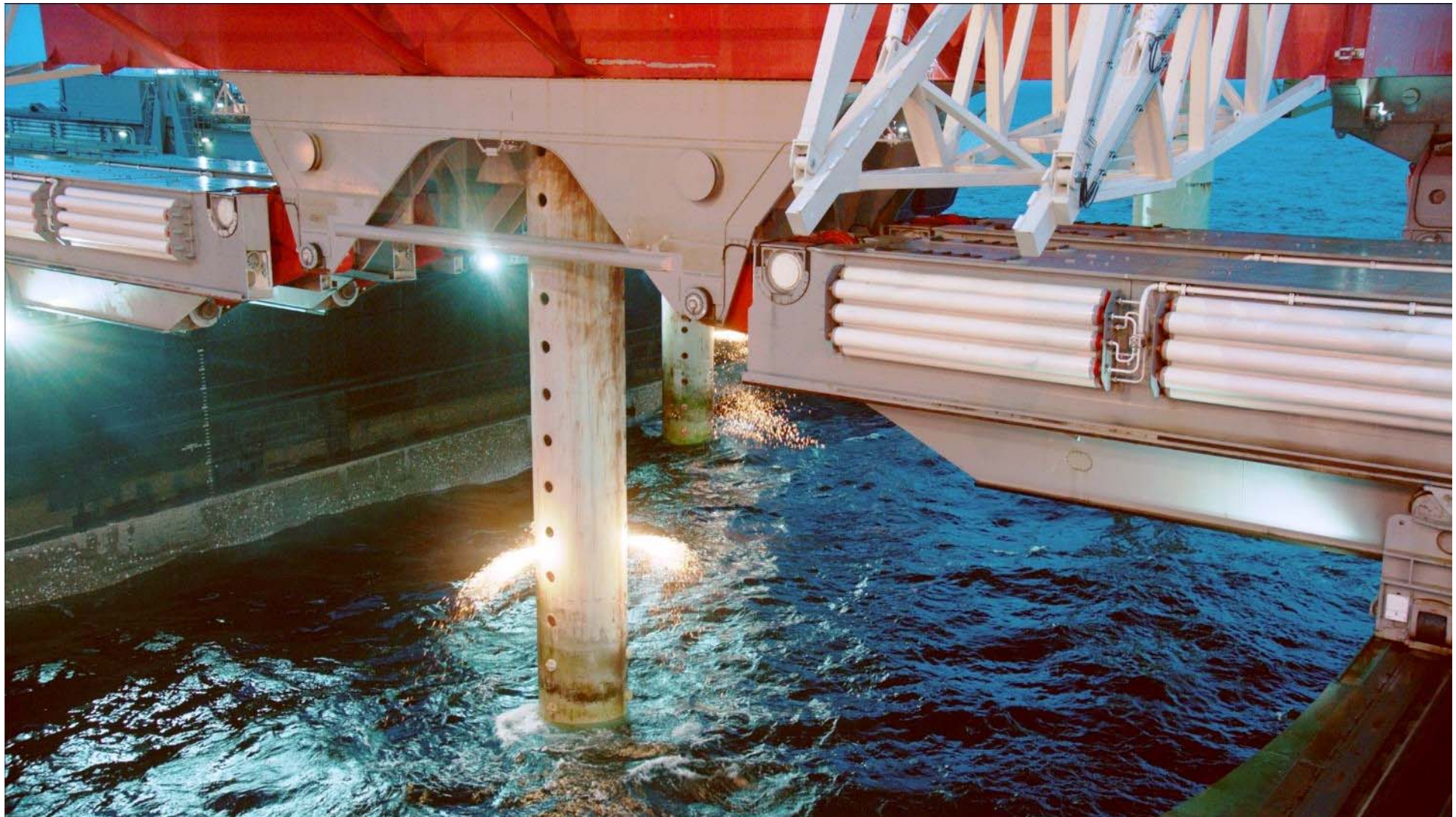
**Removal of the 13,500 t
Yme platform
North Sea, August 2016**



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



*Pioneering Spirit connected to Yme platform, 22 August 2016
Yme field, Norwegian sector of the North Sea*



*Cutting the three platform legs, 22 August 2016
Yme field, Norwegian sector of the North Sea*



*Pioneering Spirit moving out of the 500 m zone, 22 August 2016
Yme field, Norwegian sector of the North Sea*



*Unhappy former residents, 22 August 2016
Yme field, Norwegian sector of the North Sea*

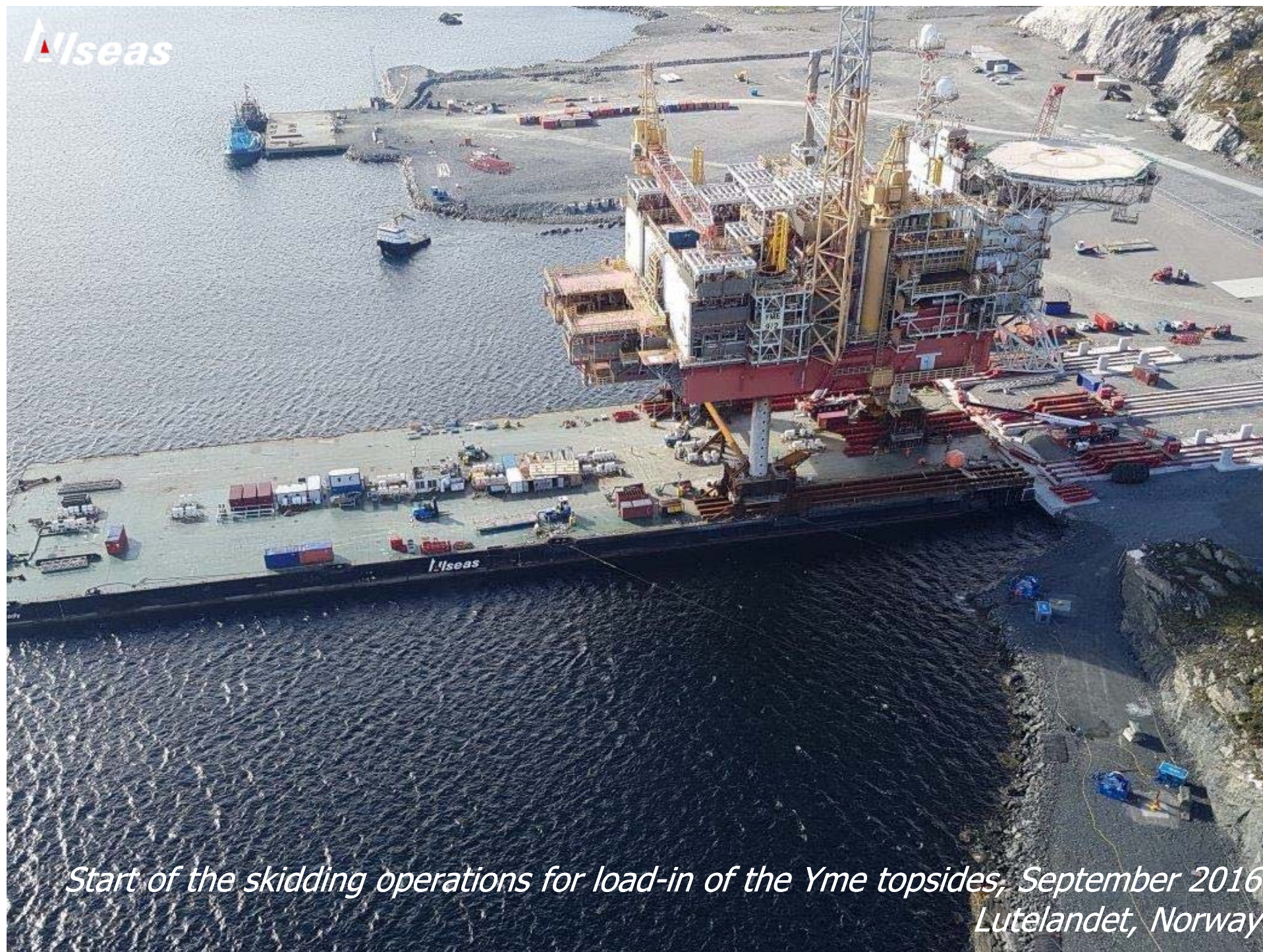


*En route to the dismantling yard in Lutelandet, 23 August 2016
Norwegian sector of the North Sea*



*Mooring Iron Lady in the slot for transfer of Yme topsides, September 2016
Lutelandet, Norway*

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*Start of the skidding operations for load-in of the Yme topsides, September 2016
Lutelandet, Norway*



**Offshore trials of the
topsides lift system
North Sea, November 2016**



*Preparing for the second series of offshore trials, November 2016
K-13 field in the North Sea*

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**Removal of the 24,000 t
Shell Brent Delta platform
North Sea, April 2017**

Shell Brent field removal

Client	:	Shell
Field	:	Brent
Types of platforms:		Drilling/Production (Brent Alpha, Bravo, Charlie and Delta)
Location	:	Block 211/29 North Sea
Water depth	:	140 m
Dry weight	:	16,000 – 31,000 t
Removal period	:	2017-2023



Installation of the first TurkStream pipeline in the Black Sea

900 km of 32" O.D. pipe with 40 mm wall thickness

from June 2017 onwards

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Pioneering Spirit in pipelay mode



*Installation of the stinger, March 2017
Pioneer Spirit, Maasvlakte 2, the Netherlands*

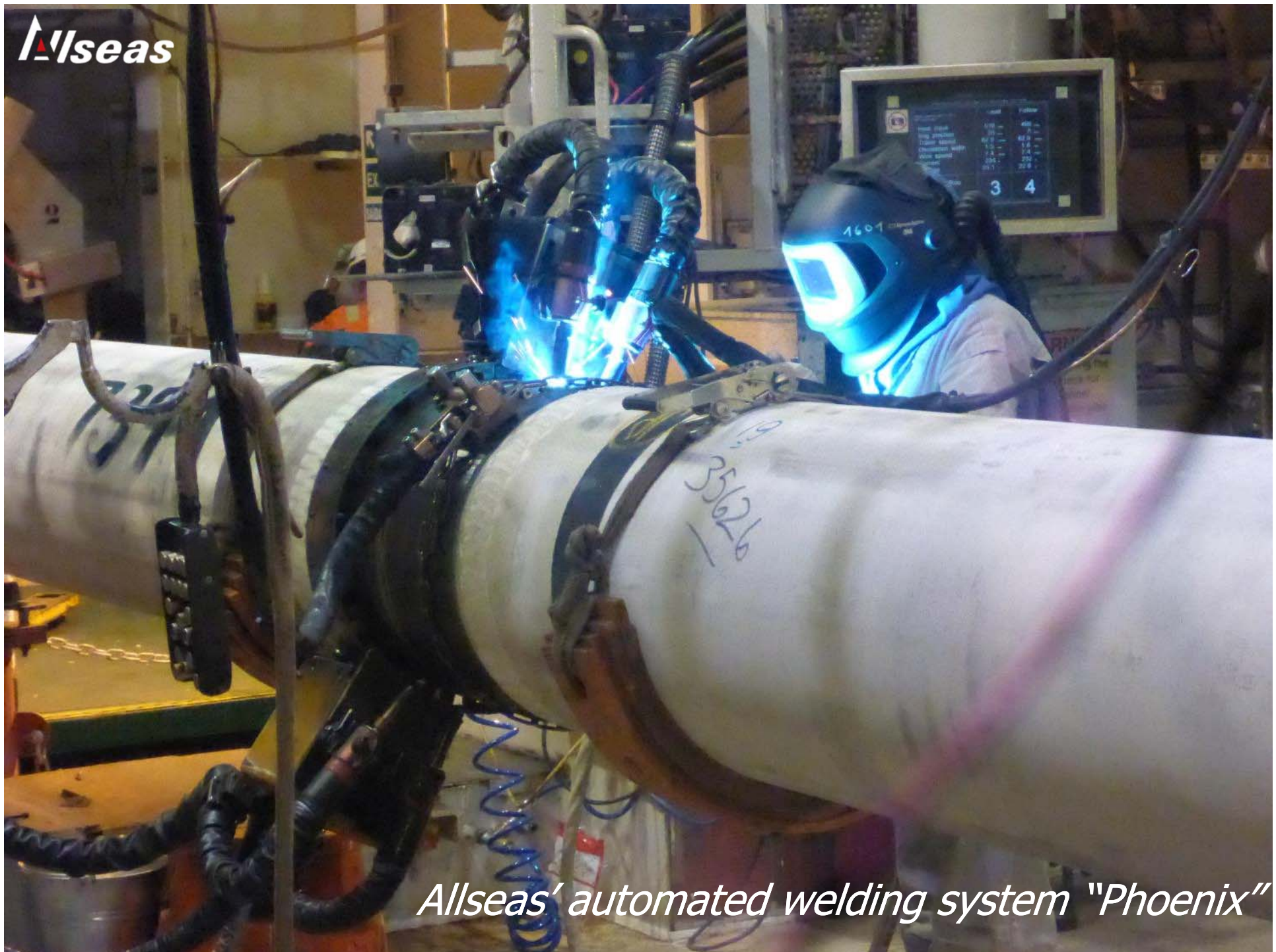
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*Pioneering Spirit passing the Strait of Gibraltar en route to the Black Sea,
May 2017*

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Pioneering Spirit crossing the Bosphorus, May 2017





*Triple torch welding in firing line, March 2017
Pioneering Spirit, Maasvlakte 2, the Netherlands*



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Tensioner



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Pipe on stinger



Installation of the TurkStream pipeline in the Black Sea, July 2017



Installation of the TurkStream pipeline in the Black Sea, July 2017



Film of the Shell Brent Delta platform removal