



HYDRO CARBON REFERENCES



Manufacturer:
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Limpet TM is a trademark of Thermica Ltd



First time hydrogen used within a grid connected gas fired power plant in UK.



PERIOD : 2021-2022



PRODUCT : SLV EXT (External) & PINS with HTA glue



CONTRACTOR : Centrica plc & HTA Ltd



FIELD OF EXPERTISE :
Structural fireproofing of steel and concrete substrates at energy production sites.



ABOUT THIS PROJECT

Description

Centrica plc is one of the leading Energy Service Providers of international energy services and solutions, with HQ in Windsor in UK. Centrica builds, operates and maintains energy assets to help companies to stay resilient, cut costs, decarbonise, and integrate energy solutions. They partner with large industrial businesses and the public sector to integrate large-scale solar PV, hydrogen-ready Combined Heat and Power and Heat Pump technology.

PFP Assignment:

Make the production sites fireproof to prevent the heating of structural members, and the spread of fire.

PFP Challenge:

To offer contractors, engineers, staff, fire fighters – often in extreme wheather conditions or at though locations (at sea, in a desert, ..) peace of mind that the steel construction can maintain structural integrity in the event of a fire.



Centrica and HiiROC to inject hydrogen at Brigg gas-fired power station in UK first project.
First time hydrogen used within a grid connected gas fired power plant in UK.



The East Yorkshire hydrogen hub by Centrica and Equinor.



PERIOD : 2018



PRODUCT : SLV EXT (External)



CONTRACTOR : Centrica Storage Ltd
(CSL)



FIELD OF EXPERTISE : PFP in
HydroCarbon



ABOUT THIS PROJECT

Assignment:

Partial renovation, upgrading and application to renewed structures at the on shore Northsea Gas Terminal at Easington in collaboration with Stork. Application to Hydrocarbon standards, using certified glued meshing techniques

Challenge:

Application in a restrained time frame at a partially operational production site.

The Easington Gas Terminal (detailed description)



The Easington Gas Terminal is one of 6 main gas terminals in the UK, and is situated on the North Sea coast at Easington, East Riding of Yorkshire and Dimlington. The whole site consists of 4 plants: two run by Perenco, one by Centrica and one by Gassco. The terminal at Easington has a long and successful history of receiving and processing gas from third parties, and this reinforces CSL's position as a strategic gas processing hub for many years to come.



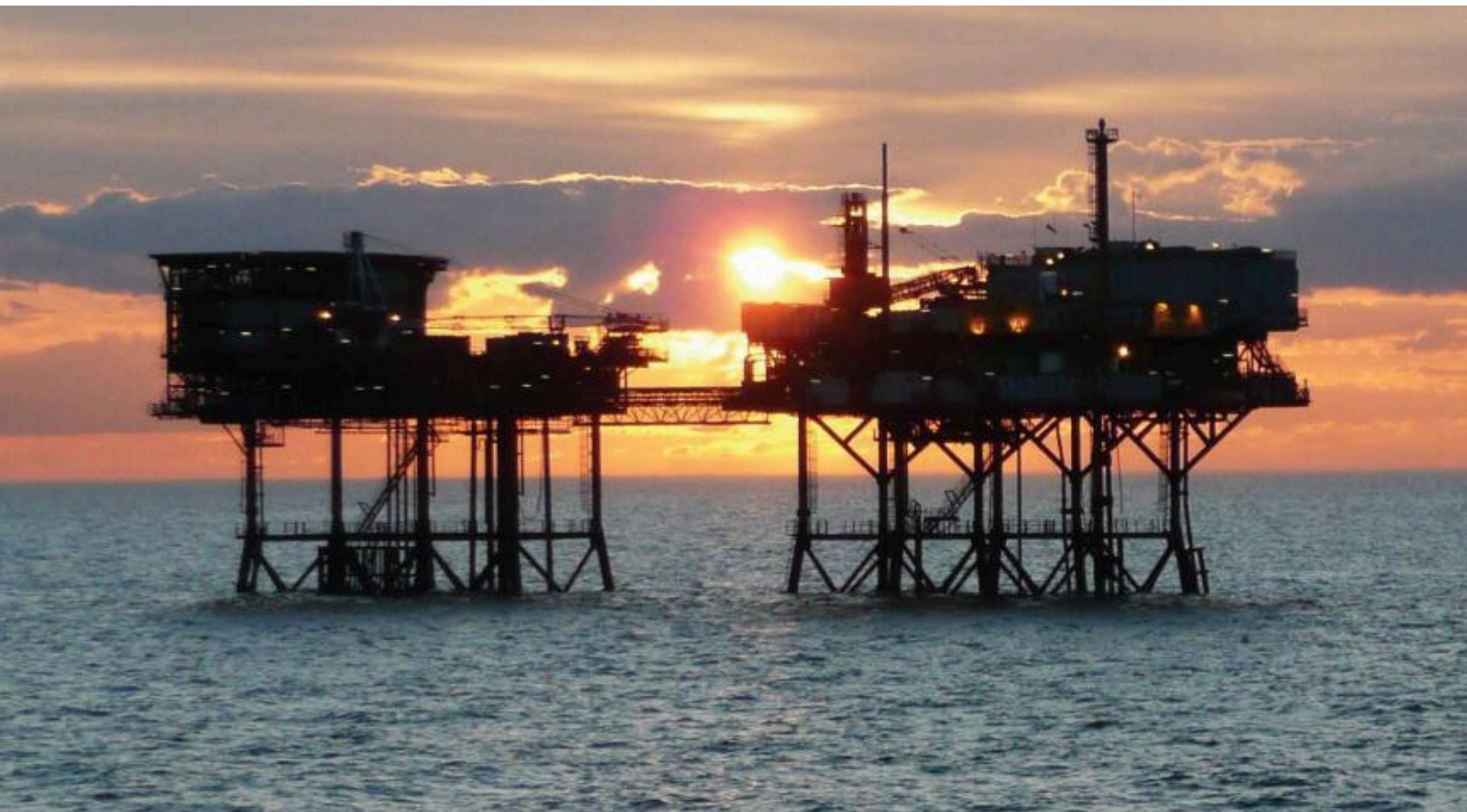
History

- In 1967 the BP Easington Terminal was opened. This was the first time that North Sea Gas had been brought ashore in the UK from the West Sole field.
- Since 2006, gas has been brought into the UK direct from the Norwegian Sleipner gas field via the Langeled subsea pipeline.
- Since 2012, the sites are run by Perenco. Gas can be transferred to and from the Centrica Storage plant at Easington dependent on grid demand. The control of the Perenco sites and conditioning of the gas take place at the Dimlington site. The function of the Perenco Easington site is the connection to the National Transmission System. Gas flows from the Easington terminal 90-mile (140 km) pipeline to Totley near Sheffield. The gas of the Perenco Easington site is collected from the Hyde, Hoton, Newsham and West Sole natural gas fields.
- In 2018 Centrica Storage Limited (CSL) has been awarded a contract to process gas from the Tolmount field in the Southern North Sea. The Tolmount gas field produces enough gas to supply around 2.5 million homes. The contract will extend the life of CSL's gas terminal at Easington until at least 2030. Modifications will be made to the terminal so that it can receive and process the gas from the Tolmount field, which will arrive through a new gas pipeline. Of course, PFP on steel and concrete will be applied. CSL will start to process the gas in winter 2020, when the field is scheduled to come on stream. The field is scheduled to produce gas for 10 to 15 years.



The offshore platforms supplying the « Easington Gas Terminal»

- The Rough gas field lies 20 miles to the East Yorkshire Coast. It was discovered in 1968, and since 1985 has been the UK's most important gas storage facility.
- Two platforms control the flow of gas in and out of the field which is two miles below the sea bed. The platforms stand apart in 90 feet of water.
- Each platform is a labyrinth of pumps, pipes and compressors. About 100 people normally work on the facility, keeping it operational around the clock.
- Thirty wells allow vast quantities of gas to be pumped out on cold days when demand is high, with gas pumped in the wells during milder days when demand is low.
- The gas is stored under pressures of up to 230bar. That forces it to the surface when needed.
- The gas undergoes several separation processes on the platform before being funnelled into this single 36-inch pipeline. The gas then travels through this pipeline on its journey back to shore.
- The subsea pipeline comes on shore at the Easington Gas Terminal, 20 miles from Hull. The maximum flow rate through the pipe is 54 million cubic metres per day, enough to provide 10% of the UK's gas needs.
- Separate pipelines from Norway and from BP's North Sea operations also come ashore at Easington. On cold days up to 30% of the gas used in the UK passes through Easington.





PERIOD : 2012



PRODUCT : SLV EXT (External)



CONTRACTOR : Metel



FIELD OF EXPERTISE : PFP in
HydroCarbon



ABOUT THIS PROJECT

Assignment:

Application of PFP to a new, very heavy duty structure in Hydrocarbon conditions.

Challenge:

Partial on site, partial off-site application, with transport of prefabricated beams and mounting these in the final structure after spraying and curing.

Izmit Refinery (detailed description)

1. Storage Capacity 3.0 Million m3

The Refinery's total product sales amounted to 14.9 million tons, of which 12.9 million tons were domestic sales.

2. Processing Capacity 11.3 Million Tons

Producing to Euro V standards, İzmit Refinery located in a consumption center, accounting for 33% of Turkey's consumption of petroleum products.

3. Nelson Complexity 14.5

The Residuum Upgrading Facility, in İzmit Refinery was mechanically completed at the end of 2014. The unit convert 4.2 million tons of black products into approximately 3.5 million tons of high-value, environment friendly white products which meet EU standards, mostly diesel, gasoline and LPG. After the Fuel Oil Conversion Facility was commissioned, İzmit Refinery reached one of the highest conversion rates in the world, with a Nelson Complexity value of 14.5.



LOTOS Refinery

Gdansk-Poland



©NSEnergy

Over 1,100 tonnes of SLV External were delivered there.



PRODUCT : SLV EXT (External)



©ShellSingapore



PERIOD : 2008



PRODUCT : SLV EXT (External)



©AsahiKaseiCorporation



PERIOD : 2006



PRODUCT : SLV EXT (External)



©Yahoofinance



PERIOD : 1998



PRODUCT : SLV EXT (External)



©Sembcorp



PERIOD : 1995



PRODUCT : SLV EXT (External)

