

NEWS

INEOS Intrepid leaves USA carrying first shale gas shipment to Europe

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INEOS Home, INEOS Olefins & Polymers Europe

The INEOS Intrepid, the world's largest LNG multi gas carrier, today left the Marcus Hook terminal near Philadelphia bound for Rafnes in Norway carrying 27,500m3 of US shale gas ethane.

This is the first time that US shale gas has ever been shipped to Europe and represents the culmination of a long-term investment by INEOS.

The shale gas is cooled to -90°C (-130°F) for the journey of 3,800 miles, which is expected to take nine to ten days. US shale gas will complement the reducing gas feed from the North Sea.

Jim Ratcliffe, chairman and founder of INEOS, says, "This is an important day for INEOS and Europe. We know that shale gas economics revitalised US manufacturing and for the first time Europe can access this important energy and raw material source too"

INEOS today confirmed that its ship, the INEOS Intrepid, has left the Marcus Hook terminal near Philadelphia bound for Rafnes in Norway, carrying 27.500m3 of US shale gas ethane.

This is the first time that US shale gas has ever been imported into Europe and finally gives the continent the chance to benefit from US shale gas economics which did so much to revitalise manufacturing in the USA.

The INEOS Intrepid is one of four specially designed Dragon class ships that will form part of a fleet of eight of the world's largest ethane capable carriers. The INEOS Intrepid has "SHALE GAS FOR PROGRESS" emblazoned along its 180 metre length.

Jim Ratcliffe, the chairman and founder of INEOS says, "Shale gas economics has revitalised US manufacturing. When US shale gas arrives in Europe, it has the potential to do the same for European manufacturing".

The project has included the long-term chartering of eight Dragon class ships and will create a virtual pipeline across the Atlantic; connection to the new 300 mile Mariner East pipeline from

the Marcellus shale in Western Pennsylvania to the Marcus Hook deep water terminal near Philadelphia, with new export facilities and storage tanks.

To receive the gas, INEOS has built the largest two ethane gas storage tanks in Europe at Rafnes in Norway and Grangemouth in Scotland. INEOS will use the ethane from US shale gas in its two gas crackers at Rafnes and Grangemouth, both as a fuel and as a feedstock. It is expected that shipments to Grangemouth will start later this year.

Jim Ratcliffe adds, "We are nearing the end of a hugely ambitious project that has taken us five years. I am proud of everyone involved in it and I believe that INEOS is one of very few companies in the world who could have successfully pulled this off. I can't wait for the INEOS Intrepid to finally get to Norway and complete the job".

END

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Notes to Editors.

The INEOS Dragon class ethane carriers

- These ships are the world's largest specifically built ethane multi-gas carriers (27,500 cbm)
- A World first with proven ethane fuel capability significantly improving efficiency and cost
- Twin engines offering full redundancy
- Shaft generators offering reduced power needs
- Each vessels is the length of 2 soccer pitches
- You could park 15 BMW 525's side by side across the deck
- During the course of the contract, each vessel will travel the equivalent of 5 return journeys from the earth to the moon
- If the Cargo tanks were removed from one of the Dragon Ships we could carry around 5.750 mini coopers in the void space

Main dimensions

Length over all 180,30 m - Beam 26,60 m

Depth

• Dead weight 20917,90 t

The Mariner Project

- The ethane gas being shipped to Europe originates from the Marcellus Shale in Western Pennsylvania
- The Marcellus Shale is 300 miles from the nearest port.
- The Mariner East Pipeline has been constructed by Sunoco to deliver ethane to the Marcus Hook facility near Philadelphia
- The pipeline has the capacity to transport 70,000 barrels of natural gas liquids per day
- Ethane will be loaded onto ships at the Marcus Hook Terminal in Philadelphia
- The terminal is an 800 acre site on the banks of the Delaware River
- It has been an oil and gas processing site since 1902 However, changing market conditions meant that the refinery shut down in 2012.
- The INEOS dragon ship project meant that the site could be reopened
- New dock facilities and storage tanks have been built

INEOS at Grangemouth, Scotland

- Scotland's biggest manufacturing complex
- TGE Gas Engineering constructed a 40 metre high ethane storage tank
- This is Europe's biggest ethane storage tank
- The roof was successfully raised on the 10th July
- 60,000 cubic metre capacity
- It can store 33,000 tonnes of liquid gas
- New docks, and a new pipeline network has been built to receive the gas
- Shale gas will arrive in the second half of 2016

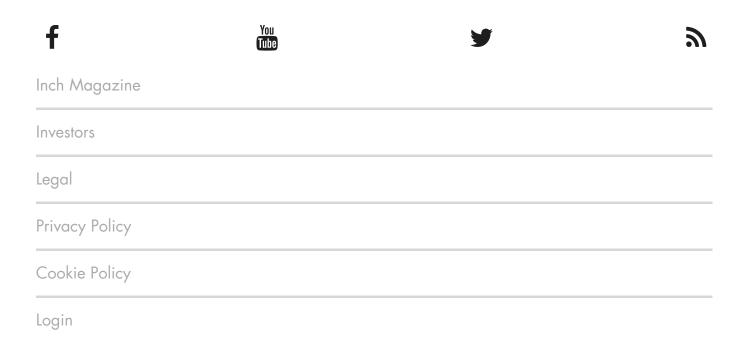
INEOS at Rafnes, Norway

- TGE Gas Engineering constructed the ethane tank
- It was completed in December 2014

- It can store 19,000 tonnes of liquefied gas
- Total storage capacity at the site is up to 30,000 tonnes
- New pipelines and processing plants were built



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