

Ineos Ethane Tank

Admixtures used in construction of Europe's largest ethane tank



Our reference in Grangemouth (United Kingdom): Ineos Ethane Tank

The background

Ineos developed plans to integrate shale gas storage into its petrochemical operation and to achieve this required specialist Ethane gas storage capacity.

Ineos secured permission to build Europe's largest Ethane gas storage tank at its Grangemouth site. The tank was designed to hold over 60,000 cubic metres of ethane brought from the United States to replace declining North Sea supplies.

Working with Aggregate Industries, Master Builders Solutions supplied the admixtures for the Ready-Mixed Concrete required for the BAM Nuttall led construction project.

The challenge

The contract required two continuous pours totalling 5,780m³. This required careful planning of labour, plant availability and haulage.

The second, and most critical pour, would form the outer wall of the tank which would take 13 days and nights to complete.

Project:
Ineos Ethane Tank

Location:
Grangemouth

Main contractor:
BAM Nuttall

Concrete producer:
Aggregate Industries

Market sector:
Ready-Mixed Concrete

Products used:
MasterGlenium 315C
MasterSet R100

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Our solution

Our experts from Master Builders Solutions worked with Aggregate Industries to supply admixtures for the concrete being used in the structure in order to ensure consistent strength, quality and speed of cure. This resulted in the use of MasterGlenium 315C and MasterSet R100.

MasterGlenium 315C is a unique third generation superplasticizer based on modified polycarboxylic ether which was primarily developed for the use in the concrete industry where the highest durability and performance is required.

MasterSet R 100 is an admixture for producing more uniform and predictable quality concrete and where moderate to extended retardation of set and improved performance are desired.

With precision planning, including a full team on standby in the event of a breakdown, Aggregate Industries was able to complete the first pour in two days and nights, supplying 2,304m³. The second pour (3,476m³) was a continuous slip form concrete which was pumped without any complications.

At its peak, the concrete was pumped to a height of more than 40m before being discharged into the formwork.

The customers benefit

- Speed and continuity of pour
- Delayed setting time
- Aggregate Industries utilised MasterGlenium 315C and MasterSet R100 in the construction of the tank

Project facts at a glance

- 33m high, 55m diameter concrete Ethane tanks – the largest in Europe
- Complex planning and execution to ensure both pours were successful first time.
- First pour : 2,304m³; second pour 3,476m³
- Total placement time: 15 days