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FEATURES

Client	Kystverket, Norway
Project	Polarbase AS' harbour entrance fairway project
Location	Polarbase AS' Harbour, Hammerfest, Norway
Period	June 2015 – August 2015
Contractor	Terramare Oy

SCOPE

Terramare has carried out the deepening and widening work of the Polarbase AS Harbour entrance fairway project, included underwater drilling and blasting as well as dredging.

A Polarbase AS' service and equipment harbour in Hammerfest has been built on natural spits of land and islets.

QUANTITIES |

UNDERWATER DRILLING AND BLASTING

Blasted rock	130,000 m ³
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MAIN PLANT

Drill platform	Playmate (GRT 594)
Backhoe dredger	Attila (Hitachi EX 1900-5)
Towable barges	SCG 4 (Capacity 500 m ³) SCG 5 (Capacity 500 m ³)



INTRODUCTION

Polarbase's harbour, located in northern Norway, focuses on service and installation traffic for the Arctic gas and oil fields situated in the Barents Sea. In the contract, commissioned by Kystverket, Terramare deepened

and widened the harbour's entrance fairway. The fairway extension has enabled larger cargo vessels to use the harbour. The extension work also improved the safety of the fairway, because the area's strong tides, in which the difference between the high- and low-water levels is around three metres, presented a challenge for the previous narrow entrance fairway.

UNDERWATER DRILLING AND BLASTING

Near the coast of Norway, extending fairways almost always requires underwater drilling and blasting, because the seabed is mainly bedrock. Terramare's contract consisted of underwater drilling and blasting in the Polarbase harbour's entrance channel. In the project, a total of 130,000 m³ of blasted rock was removed. A safe and powerful liquid explosive developed by Forcit Oy and Terramare was used in the drilling and blasting. The working depth was -17.3 metres at best. The dredging volumes totalled around 200,000 m³. The dredged blasted rock was sorted and graded for the shore structures of the expanding harbour.

PLANT TRANSPORTATION

Terramare arrived in Hammerfest with its vessels at the beginning of June 2015. The vessels were transported to the site by towing. The journey covered around 3,300 km and took 20 days. The towed vessels comprised the Playmate drill platform, the Attila backhoe dredger and the 500 m³ barges SCG 4 and SCG 5.

POLARBASE AS' HARBOUR, NORWAY EXTENSION OF THE ENTRANCE CHANNEL, UNDERWATER DRILLING AND BLASTING



- B** The extension of Polarbase AS' harbour entrance fairway allows access to larger vessels.
- C** Liquid explosive developed by Forcit Ltd and Terramare is used in underwater drilling and blasting.
- D** Pictured are the backhoe dredger Attila and the drill platform Playmate.
- E** Pictured is the drilling tower of the Playmate drill platform.