

# Harbour enlargement in Greenland

Establishment of new quay in Sisimiut



**AARSLEFF**

Per Aarsleff Grønland ApS has enlarged the harbour in Sisimiut in joint venture with Permagreen Grønland A/S. After a period of several years with an overcrowded harbour, the enlargement will ensure that large trawlers and cruisers will berth the port in West Greenland in the future.

## New quay

The harbour enlargement comprised the establishment of a 176-metre sheet pile wall which provided the harbour with two new quays of 90 metres and 30 metres. The water depth has been dredged to 12.2 metres and 10.2 metres, respectively, meaning that even large ships are able to dock close to the quay.

The quay front was constructed from steel sheet piles down to water depths of level -12.25 metres. As the Greenlandic subsoil mainly consists of rocks, we

anchored the sheet pile walls in a blasted trench in the bedrock.

Besides the establishment of the new quay front, our work consisted of blasting of 50,000 m<sup>3</sup> of bedrock behind the new part of the harbour. The broken rock was crushed and used as quay fill.

## Challenges

The enlargement of the harbour in Sisimiut was a challenge due to the climate in Greenland. Also, it was not possible to procure all the required material locally. As a consequence, we had to procure material and equipment ourselves while we as turnkey contractor to the project also designed and constructed the harbour.

We observed the time schedule, and the harbour was inaugurated on 20 June 2013.



**Data**

- 176 m of quay made of steel sheet piles
- 10,000 m<sup>2</sup> of paving
- 30,000 m<sup>3</sup> of rock fill behind quay
- 50,000 m<sup>3</sup> of rockbed blasting
- 10 bollards
- Reflection seismic mapping to determine the type of loose sediment in the sheet pile alignment and in the harbour basin in an area of 120 × 40 m.

**Client**

Oeqqata Kommunia

**Type of contract**

Turnkey contract

**Contractor**

Aarsleff-Permagreen Konsortium

**Cooperation partner**

Permagreen Grønland A/S

**Consultant**

Grontmij

**Construction period**

May 2012 to June 2013

**Contract value**

DKK 47.9 million

**Contact**

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