

# PROJECT SHEET

**PORT DE TANGER MED 2, MOROCCO**  
PORT DEVELOPMENT BY RECLAIMING FUTURE CONTAINER STORAGE AREA BEHIND A QUAY WALL UNDER CONSTRUCTION

## INTRODUCTION

Tanger-Med is a cargo and passenger port located about 40 km east of Tangiers, Morocco, on the Straits of Gibraltar at the crossing of two major maritime routes only 15 km from the European mainland.

The port consists of the Tanger Med 1 terminal, which went into service in 2007, a ferry terminal (2009), and the Tanger Med 2 port, which has been under construction since March 2010 and is scheduled to be completed by 2015/2016. At full capacity, the port is expected to handle 8 million containers, 7 million passengers, 700,000 trucks, 2 million vehicles, and 10 million MT of oil products.

The Tanger Med 2 extension project was implemented, coordinated and managed by TMSA, a private company with public prerogatives operating under an agreement with the Moroccan State and interacting with the different ministries involved.

The Tanger Med 2 port facilities will eventually include two new container terminals with a total length of 2,800 m and an additional nominal capacity of 5 million containers. The first phase is currently nearing completion, with the breakwaters and 1,200 m of quay wall in place.

The expansion works for Tanger Med 2 are being executed by a consortium consisting of BSTM (BESIX-SOMAGEC) and TMBYS. In this consortium, BSTM is responsible for the quay and future storage areas and TMBYS is building the breakwaters. Boskalis International worked as a subcontractor for BSTM.

## FEATURES

Client	TM2SA – Tanger Mediterranean 2 Special Agency
Location	Tangiers, Morocco
Period	March 2013 – August 2013
Contractor	Consortium TMBYS-BSTM
Sub-Contractor	Boskalis International B.V. (subcontractor to BSTM -Besix-Somagec Tanger Med)



- A** Location map
- B** TSHD Gateway, March 2013, rainbowing the sand over the quay
- C** Aerial view, April 2013, with the floating and shore pipelines



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### WORK METHOD

Boskalis International B.V. signed the sub-contract for BSTM for the reclamation works for the first phase of the Tanger Med 2 terminal reclamation works on 21 September 2010.

The actual reclamation work began on 13 March 2013 after substantial completion of the quay wall.

The sand to be used for the reclamation was sourced from a borrow area situated in the proximity of the project location. The average sailing distance was just 6 miles. However, most of the sand was at depths of between -55 m CD and -63 m CD and so the technical limits of the Trailer Suction Hopper Dredger (TSHD) Gateway in terms of dredging depth were explored frequently and successfully.

The reclamation work started by rainbowing the sand over the quay wall prior to installing floating and shore pipelines to continue the work from the platform that had been created on the inside of the quay.

The total hopper volume of sand dredged for the project was 6.05 million m<sup>3</sup> in 609 trips. All the sand to reclaim the 46 hectare platform had been delivered to the project by 3 August 2013.

### CHALLENGES

The fact that the grain distribution curve of the sand had to be approved prior to discharging, in combination with short sailing times, led to the installation of a laboratory on board the TSHD Gateway. The laboratory tested the sand using a photo-optical particle analyzer, making it possible to see the test results almost in real time, saving valuable time and avoiding stand-by for the hopper dredger.

Another challenge was to obtain the environmental license required for dredging at the borrow area in time to permit the dredging works to start on schedule. The procedure, which had just undergone a complete overhaul by the Moroccan government, demanded a lot of effort from all sides.

### SAFETY PERFORMANCE

Safety performance was very satisfactory. More than 92% of the employees on site received a NINA training. The execution of the project was totally LTI-free and 144,500 man hours without any personal injury were registered.

### CONCLUSION

The client was satisfied with Boskalis' performance. The project was completed within budget and within time.



**D** Overview of the Tanger Med 2 port construction

**E** Aerial view, May 14, 2013

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