



Deployment of a smart buoyage system in the port of Mohammedia



Port of Mohammedia, Morocco



General information



The port of Mohammedia is one of the main oil ports located on the Atlantic coast of Morocco, in the southern bay of the city of Mohammedia, a location that naturally protects it from the waves.

This port, built in 1913, is currently part of the port infrastructure modernisation project led by the **ANP** (Agence Nationale des Ports du Maroc) as part of the Smart Port concept. This initiative aims to promote innovation and digitalisation of all port activities in the Moroccan port network. This is why the **North Atlantic Regional Authority and the Mohammedia Port Authority** have set up a new smart maritime signalling system designed by MSM in the Mohammedia port area.

This new system is composed of **20 maritime signalisation equipment, including 13 buoys and 7 marine lanterns onshore, monitored and controlled remotely by the Global Netcom software developed by MSM**, an application which ensures the control and the management of this maritime signalling system in real time.

The port of Mohammedia has now a complete aids to navigation network whose main objective is to reinforce the safety of ship navigation in the harbour, as well as in the access channels and docks of the port.



Mohammedia (Morocco)

Innovation is breaking into Moroccan ports through the most advanced technologies, the design and operational optimisation of their infrastructures and their maritime signalling network.



Mohammedia (Morocco)

According to the ANP, the modernisation project of the port of Mohammedia involves:

"Energy efficiency, use of renewable energy, remote monitoring and control of the AtoN through AIS (Automatic Identification System), use of high-quality materials and reduction of maintenance costs."

Goals and challenges

MSM's objective was to modernise the existing buoyage system in the port of Mohammedia, consisting of buoys and towers, and to implement an AIS management system for the remote monitoring and control of all the equipment forming part of this aids to navigation network, according to criteria of innovation, sustainability and optimisation of resources.

Our team has therefore worked on this project following these indicators:

- Energy efficiency.
- Use of renewable energy.
- Remote monitoring and control of the AtoN by AIS.
- Use of high-quality materials.
- Reduction of maintenance costs.



Buoyage system equipment:

- Polyethylene buoys RBM25-HV
- Stainless-steel towers: MTI60, MTI90, MTI100, MTI110
- Self-contained lanterns: MCL250AIS-3, MCL100, MCL180
- Marine lanterns: MBL160, MBL400, MBL400LD
- Range lights: MRL43
- Netcom Remote Monitoring System

Why MSM?

The ANP chose MSM to carry out this project because of its solid international experience in the design and development of buoyage systems, the reliability of its equipment and the use of the most advanced technologies to guarantee the safety of navigation.

MSM has made the port of Mohammedia a pioneering project that will become a reference for other ports in Morocco.



The installation was carried out in two phases:

1. Installation of the buoys.
2. Installation of the towers.

The biggest challenge was the renovation of the existing towers, where our technicians managed to find the most efficient solution to adapt our equipment by manufacturing special supports.

Mohammedia (Morocco)

"The overall feedback from the ANP and other port stakeholders has been very positive. Our beacons provide better visibility and safety when entering the port. As for our Netcom system, it allows the Harbour Master's Office operators to monitor in real time the entire aids to navigation network in the port".



The result



The port of Mohammedia is a novelty in the Moroccan port network, distinguished using state-of-the-art technology in the design and operation of its maritime signalling infrastructure.

Thanks to this intervention, Mohammedia now has a state-of-the-art port that complies with all IMO international standards and IALA recommendations, thus improving its competitiveness and, above all, creating a safer environment for navigation.



Mediterráneo Señales Marítimas, S.L.

+34 96 276 10 22

msm@mesemar.com

www.mesemar.com



Mohammedia (Morocco)