

Jelsa Offshore Protection (JOP)

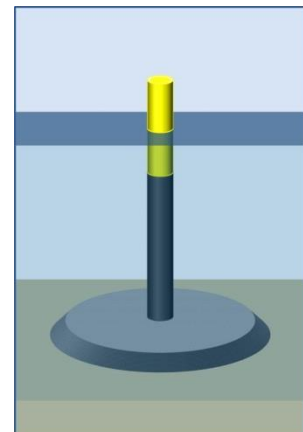
The scour protection system „Jelsa Offshore Protection“ (JOP) meets all requirements for shallow and deep waters and it is far more to be more than just a scour protection. You can choose between two alternatives of our JOP system:

■ OPTION 1: JOP SINGLE LAYER SCOUR PROTECTION (STANDARD)

The JOP Scour Protection consists of our Granodiorite Material 1 -200 mm. The system is installed in a single operation by the time specified by you.

Your advantages:

- You have a cost reduction of more than a third by the installation of single-layer scour protection
- The material is about a quarter cheaper than other material mixtures
- You can weather and interfaces independently perform the installation
- You can ram the material as well as drilling
- Your construction risk (wind and waves) is reduced considerably

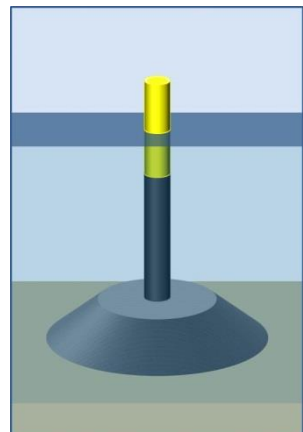


■ OPTION 2: JOP CONE SCOUR PROTECTION (MORE THAN JUST A SCOUR PROTECTION)

If you want to use a monopile design for different water depths our cone scour protection with a height of up to 7.5 m is helpful. By an appropriate cone scour protection the seabed / mud line is raised, so that larger water depths can be achieved with the same monopile design.

Your advantages:

- You can install monopiles in greater water depths
- You will have low material and installation costs than with e.g. jacket structures
- You can weather and interfaces independently perform the installation
- You can ram the material as well as drilling



Jelsa Offshore Protection (JOP)

■ PROOF OF APPLICATION:

In order to use the JOP system we have conducted various studies and model calculations at the Franzius Institute, member of University of Hannover and by the IMS Engineering Company of Hamburg (Member of the Ramboll Group).

The following results were obtained in the investigations:

- JOP 1 -200 mm shows position as well as erosion stability near the seabed up to of a flow velocity of 4 m/s
- Determined scour limit is $S/D = 0.16$
- The JOP cone scour protection has a significant influence on the stiffness of the monopile

For the JOP system an international patent is pending. The Mibau-Stema Group has the exclusive marketing rights.

Don't use an expensive scour protection system with interface problems to other installation activities which lead to unnecessarily high risks and costs. Use our JOP scour protection and you will be able to install the scour protection system independently from weather and other installation activities.

Let's work together and define an efficient system for your projects. If required, we will send you detailed information for Jelsa Offshore Protection System. During a personal meeting we can present you our "Jelsa Offshore Protection - more than just a scour protection" in detail.

■ Contact

Stefan Schnepf
Project Manager
Gewerbestraße 3
D - 21781 Cadenberge
Phone: +49 4777 9339-11
Mobile: +49 1522 29339-11
E-Mail: schnepf@mibau-stema.com