

**Boskalis:** a leading global dredging and offshore contractor and maritime services provider. Founded in 1910, this Dutch company offers a unique combination of experts, vessels and activities. One of its new vessels is the world's largest backhoe dredger Magnor.

# Magnor means «The Fighter»

**P**ANOLIN can report on superlatives in every issue of Feedback. This edition is no exception and even contains a number of them. PANOLIN is used not only by the world's largest tidal power plant in Korea, but also by the world's largest backhoe dredger, a giant named Magnor that works with PANOLIN HLP SYNTH. And it needs no fewer than 60,000 liters of it. With a length of 72 meters, a breadth of 20.5 meters and 40-meter-long spuds, the new dredger is a gigantic workhorse. A standard 20-foot shipping container has a volume of around 33 m<sup>3</sup>. The same volume fits effortlessly into Magnor's bucket. Powered by a total output of 5,576 horsepower, Magnor's dredging bucket can lift no less than 67 tonnes of dredged material. Magnor is used for dredging hard riverbeds as well as surfaces and trenches, explains Bas Veenstra of Boskalis. The use of so-called backhoe dredgers for environmental reasons is on the rise as they minimize turbidity. Royal Boskalis Westminster, or Boskalis for short, is a leading global services provider operating in the dredging, maritime infrastructure and maritime services sectors. In addition to its traditional dredging activities, the company offers a broad range of maritime services for the offshore sector as well as towage and marine salvage-related services. The company's versatile fleet consists of more than 900 vessels and floating equipment. Many of them are proprietary developments.

The design of the Magnor is based on the Boskalis Baldur backhoe dredger. This backhoe dredger can be towed to any location in the world faster than a conventional backhoe dredger thanks to its tapered bow. The special design and the innovations developed by Boskalis for

this dredger, including the winch section, make the Magnor fast, powerful, efficient, clean and quiet. The Magnor's pontoon has a «BK 12700 DD Greenline» dredger based on a Caterpillar 6090, currently the largest mining machine in the world. The name Greenline underscores the fact that the dredger is characterized by a relatively low fuel consumption and reduced pollutant emissions and noise levels. A team of Boskalis employees headed by engineer Bas Veenstra modified and installed the dredger on the Magnor.

«We put our entire knowledge and experience in the fields of hydraulic, mechanical and electrical systems to the task,» says Veenstra. «The water cooling system for the engine and hydraulics is a highly effective innovation.» It results not only in a significant improvement to fuel consumption and emissions, but also to a reduction in noise levels. «That is a huge advantage, as ever more customers face strict requirements with regard to noise levels and environmental protection when executing their projects. That is why PANOLIN is involved as its products are not only biodegradable, but they also meet our own strict performance requirements for our projects,» explains Veenstra. In contrast to other backhoe dredgers, the Magnor has accommodation for eight people. «This makes it possible to operate the Magnor even in the most remote places,» says Veenstra. «Many Boskalis backhoe dredgers like the Baldur and the Wodan have names from Nordic mythology,» he continues. Magnor means «The Fighter». «We achieve good results with regard to speed, fuel consumption and emission reduction.» Its impressive level of performance has justified the name Magnor on many occasions, explains Veenstra.