

## Application Profile





## **Dredging System**

## Application

Highlights

## • Unique hybrid shaft coupling design

- Highly flexible ring element absorbs torsional impacts
- Torque range: 480 to 14,800 Nm (354 to 10,915 ft.lbs.)
- Lightweight and easy to install
- Extensive torsional vibration analysis (TVA) was completed

A major manufacturer of dredging systems needed a reliable coupling solution with a small footprint for use on a new dredging vessel platform. The system features a 1200 HP diesel engine that drives a complex, custom-designed, eight-pad gearbox with primary output to a two-speed clutch that drives the system's main pump, as well as hydraulic pump pads to operate a crane and auxiliaries.

After a thorough application review, the Stromag engineering team designed a hybrid Periflex CR (PCR) shaft coupling to meet the challenging dredging rig application requirements. The modified PCR coupling utilized a rubber element from a similar Stromag model PCS coupling and a bolt-on adaptor hub with a splined bore. Extensive torsional vibration analysis (TVA) work was completed on this complex multi-stream system of 9 driven components as the coupling was sized to fit within the tight space constraints of the customer's gearbox bell housing. The coupling's flexible ring effectively absorbs torsional impacts.