STROMAG™
A REGAL REXNORD BRAND

Application Success Story

Electromagnetic 3CA2-DH Brakes

Straus-Type Bascule Bridge

HIGHLIGHTS

- Electromagnetic disc brakes with hydraulic release device
- Economical design
- Braking torque: 2,900 Nm (2,138 lb.ft.)
- Model AC32 electrical power units also supplied

PROBLEM

The Noordkasteel bridge is one of many bridges in Belgium's busy Antwerp port area. Built in 1980, the bridge consists of a side-by-side pair of Straus-type bascule spans that carry both rail and vehicular traffic. The twin 56 meter long bascule spans are positioned in the center of the 170 meter long bridge.

After nearly 40 years in service, the Antwerp Port Authority determined that the bridge's mechanicals, including its braking systems, had reached the end of their useful life and needed to be replaced with newer technology.

SOLUTION

Economical Stromag 3CA2 brakes were selected over competitive models to meet the challenging braking requirements. The brakes are spring-applied and electromagnetically released in normal operation. Their hydraulic device allows an easy releasing for service operation in case of power failure.

A set of the brakes were installed on both sides of the two bascule span gearboxes to provide emergency stopping and holding functionality. Each caliper has a braking torque of 2,900 Nm (2,138 lb.ft.) operating on a 705 mm (27.7 in.) diameter disc. The brakes featured an opening proving switch and brake pads with wear indicators.

Compact Stromag Model AC32 electrical power units were also supplied for optimum braking performance. The units are simple to adjust and use. 6 LEDS provide quick fault diagnosis.

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