

BSFH 520 Braking System

OIL RIG DRAWWORKS

PROBLEM

A Texas-based global leader in the manufacturing and development of oil drilling equipment, needed an API 7K certified braking solution for a new drawworks design with the capability of operating in temperatures as cold as -20°C (-4°F). The brakes were required to function in emergency stopping, standard parking, and controlled load transfer modes. The AC drawworks featured a 30.75 in. (781.05 mm) diameter drum, spooling a 1.25 in. (31.75 mm) diameter wire rope with a maximum hook load of 634,000 lb. (287,577 kg.) on 10 lines.

SOLUTION

After reviewing several competitive options, the OEM determined that the solution from Svendborg Brakes was the optimum choice. To meet the application specifications, Svendborg supplied a complete braking system consisting of two BSFH 520 SR2-20°C spring-applied, hydraulically released caliper disc brakes operated by a custom single-channel, ATEX-certified hydraulic power unit.

Each caliper provides a clamping force of 44,962 lb. (200,000 N). Coupled to a 68 in. (1,727 mm) disc, the complete braking system provides up to 193,872 ft.lb. (262,856 Nm) of static brake torque holding capacity. BSFH 520 SR2-20°C brakes, with an operating range between -20°C to +55°C (-4°F to 131°F), are built to perform in challenging drilling environments.

The drawworks offers unique control features. In order for the braking system to interface with the drawworks control system, Svendborg worked with the OEM engineers to incorporate an add-on proportional valve with a special driver card in the HPU to allow full control of the brakes from 0 to 100% of maximum braking capacity.

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HIGHLIGHTS

- BSFH 520 SR2-20°C dual-spring brakes
- 193,872 ft.lbs. (262,856 Nm) static brake torque holding capacity
- Operating range between -20°C to +55°C (-4°F to 131°F)
- API 7K certified
- Custom ATEX-certified hydraulic power unit with add-on proportional valve



SVENDBORG BRAKES™