



Product

LKB Hydraulically-Released Brakes

Application

North America's Largest Barge Dredge

Highlights

- Spring-set, hydraulically-released brakes
- Non-asbestos lining materials with large pad areas for maximum heat dissipation
- High-strength alloy steel drive studs
- Actuation springs sized for maximum life
- Hardened nickel plated hub splines
- Epoxy paint for salt water marine protection
- Wide range of torque capacities and release pressures achievable

A leading U.S. dredging company required a variety of reliable heavy-duty, hydraulically-released brakes for use on a massive new harbor dredger. The 1,500-ton dredger is equipped with a crane and two huge clamshell buckets that dig from two directions. The brakes provide parking and emergency stop functionality on the crane's main winch and vertical slew drives as well as on three spud winches.

Industrial Clutch worked closely with the customer's engineering team to design various LKB spring-set, hydraulically-released brakes for each specific application on the vessel. A custom 17" brake, featuring an integrated heater, was designed for the crane's main winch. The heater is used in cold environments where condensation can form inside the brake housing which can cause rusting on the brake's internal iron plates and metal linings.

Custom-engineered, 11" hydraulically-released LKB units with 5,850 in.lb. torque capacity, were provided for use on the crane's four rotation/slew drives. Additional 11" brakes with 9,800 in.lb. torque capacity are utilized on the three spud winches that drive down to the harbor bed to stabilize and hold the vessel in position during dredging operations.

Rugged LKB brakes feature high-energy metallic linings with large pad areas ensuring excellent heat dissipation, uniform stopping distances and long lining life. Units also feature high-strength alloy steel drive studs, actuation springs sized for maximum life, and long-life piston seals. Long spline lengths on the brake discs maximize load-carrying capacity and life. Epoxy painted housings and hardened nickel plated hub splines provide long life and corrosion protection in salt water marine environments.

US (Application Assistance)

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Asia Pacific

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