



HIGHLIGHTS

- KKC 336H Kopper Kool Clutches with 112,500 ft.lb. torque rating
- 1,680 kW continuous slip power handling capacity
- Copper disc design for high heat dissipation
- Long-lasting friction material
- LKBH 217 Spring Set Brakes with 74,460 in.lb. torque rating

Application Success Story



Kopper Kool Clutches & LKB Brakes Anchor Handling Vessel Winches

PROBLEM

Reliable, heavy-duty clutches were needed for use on a large load winch drive system aboard an anchor handling tug supply (AHTS) vessel. The AHTS is specifically designed for towing and anchoring semi-submersible oil and gas exploration drilling platforms. In deep water exploration fields, drilling platforms are tethered to the seabed more than a mile beneath the surface.

The vessel features a large diameter drum, 600 ton capacity winch and two smaller diameter drums, 500 ton capacity winches which all accommodate heavy-duty cable up to 3 in. diameter. The ship has an open stern allowing for easier cable access and the decking of anchors.

SOLUTION

Wichita Clutch supplied 43.5 in. diameter model 336H Kopper Kool Clutches (KKC) to meet the challenging marine winch application requirements. The KKC units provide enhanced operational safety due to their ability to slip under torque overload during snag conditions. In rough seas, the clutch slips to provide wave compensation while reducing overload/strain on the winch drive system. This slip power handling capacity is achieved by use of continuous water cooling flow beneath the copper alloy wear plates that come into direct contact with the friction material.

Kopper Kool Clutches offer the additional benefit of increased payout speeds by allowing a slip differential across the clutch while maintaining fine payout tension control. This is especially important when carefully lowering equipment or anchors to the seabed in high wave conditions. The clutches can provide emergency payout by releasing all tension if a problem occurs, such as when a cable gets severely misaligned to the side of the vessel while performing towing operations.

The winch drive system also incorporates multiple Wichita LKB spring-set brakes, which function as static holding brakes. The brakes are mounted opposite of six motors on 3 gearboxes.

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