Press Release

2.5 million foot pound coupling breaks records for Coupling Corporation of America

Our latest developments in coupling technology have pushed the envelope of the UltraFLEX™ design to new heights. Coupling Corporation of America was recently contracted to design and build a flexible shaft coupling capable of transmitting 2.5 million ft-lbs (3.38 million N·m) of torque. Power was delivered from a 37.4 in (950mm) diameter keyless shaft and needed to be connected to a mating flange. The application also required misalignment capabilities of 0.5° (0.008 rad) angular and ± 0.4in (10.2mm) axial travel.

UltraFLEX 20000 final inspection before shipping.

To meet these specifications Coupling Corporation engineers created a new innovative design building on the company’s 44 years of experience. The Anderson Clamp Hub™ (see picture lower left) a keyless hub device, allowed the customer to mechanically clamp to the 37.4in (950mm) diameter shaft. A snap fit allowed the hub to be lowered quickly and easily onto the shaft. Even on this extremely large shaft sure the hub did not require heat, hydraulic expansion, or custom installation tooling. Final clamping of the hub was achieved by tightening the loading screws with the use of standard industrial wrenches.

The misalignment capabilities of the coupling were handled by a new UltraFLEX CT2000 series center section. The flex elements were designed to be bi-directional and maintenance free. In total over 2,000 struts shared the load of transmitting the full torque.

The driven end of the coupling included an overload protection feature allowing the coupling to disengage at a desired torque. A shear pin matrix allows the end user to adjust the shear torque depending on the needs of the situation. This feature protects both the driving and driven components in the event of component failure in the system with an accuracy of 5% of the set torque value.

Sincerely,
Your Friends at Coupling Corporation of America

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