Alternative coupling ensures fail-safe operation of compressor systems

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Press release from: **CENTA Antriebe Kirschey GmbH**

CENTA's highly flexible coupling system, CENTAX-SEC, offers a torsionally soft alternative to standard all-metal couplings used in gas and oil industry businesses. These highly flexible couplings shift harmful resonances to subcritical ranges, thus ensuring fail-safe operation of the compressor system. Type-approved by renowned classification societies, the couplings are designed in consultation with the customer to meet API standards.

Companies in the oil and gas industries are looking for large compressor units with high performance and efficacy. These units are normally driven by a powerful electric engine, which is connected to the compressor unit by means of an all-metal coupling. The drawback of this design: Harmful vibrations induced by the piston compressor, caused by high torsional stiffness and weak damping characteristics of the couplings, are transmitted to the drive unit. They result in damages to the coupling and high loads for the bearing units, which might even cause a total breakdown of the complete system.

An alternative solution to standard all-metal couplings is offered by the highly flexible coupling system, CENTAX-SEC, developed by CENTA. Torsionally soft, the couplings shift harmful resonances to ranges beyond the operating speed. With only minimum impact on the system, these couplings even equalize misalignments caused by installation and operation. The principle of a modular design coupling system is based on one or more highly flexible CENTAX rubber elements made of natural rubber or silicone supplied in different ranges of shore-hardness. Combined with a membrane coupling, a link or a bolt coupling, and a wide array of flanges and hubs, the couplings achieve top flexibility in all directions, extreme adaptability with regard to design and construction as well as an extremely manageable torsional stiffness. The torques cover a range from 2.5 to 650 kNm.

Close cooperation with the customers ensures that the couplings meet API standards. CENTA couplings have been type-approved by several leading international classification societies. Det Norske Veritas DNV), Nippon Kaiji Kyokai (NKK) and Polski Rejestr Statkow (PRS) have already granted CENTA the authority to stamp their type-approved series couplings on its own in-house. In 1990, the company's quality management system was first approved according to DIN ISO 9001. Since that time, all subsequent audits have been passed successfully. Last year, CENTA was the first manufacturer worldwide to be granted approval by Germanischer Lloyd (GL) for alternative product certification of type-approved couplings. This sign of confidence confirms CENTA's commitment to strive continuously to improve quality.

The innovative CENTA couplings and drive systems have ongoing adaptations to meet the most recent technical demands and requirements. A wide range of innovations has made the company, with its near 40 years of history, one of the world's leading manufacturers of flexible couplings and drive shafts for industry, marine, and power generation applications. Further information can be obtained at www.centa.info

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