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Also API compliant and balanced

RINGSPANN will be focusing on the design of disc couplings at Hannover Messe

RINGSPANN's product offensive in the field of shaft couplings, which has been ongoing for two years, has led to the inclusion of numerous new coupling types in the supplier's portfolio. Among designers and developers in industrial drive technology, the group of disc couplings is particularly currently enjoying an increase in demand. The company is taking this as an opportunity to define the correct selection and design of these non-switchable, torsionally stiff shaft couplings as a key issue at this year's Hannover Messe.

Bad Homburg, February 2020. – With a range of 22 shaft coupling series covering nominal torques from 2.0 to 1,299,500 Nm and almost all technically relevant types, RINGSPANN currently offers a highly attractive selection of solutions for compensating axial, radial and angular misalignments in industrial drive technology. The company thus provides designers and engineers of plant manufacturers with a great deal of freedom for the realisation of rigid, torsionally stiff or elastic connections between shafts, gears, motors and machines. With the disc couplings in the RINGSPANN portfolio currently enjoying increasing popularity, the company has decided to focus on the correct selection and exact design of this type of shaft coupling as part of its presentation at Hannover Messe 2020 (Hall 5, Stand D32/1). "In our discussions with customers, we discover time and time again that there are a number of uncertainties regarding the optimum application of disc couplings. Based on our decades of project experience and our design competence, we can provide users with important decision criteria and clarify many unresolved questions" says Martin Schneewis, the responsible product manager for shaft couplings at RINGSPANN.

Torsionally stiff and wear-free

The disc couplings of the three series RDL ... DSx in the RINGSPANN product range are torsionally stiff and wear-free shaft couplings. They require no lubrication, convince thanks to their low dead weight and are suitable for uniform and alternating torque loads, as well as for rough operation with bumpy and jerky loads. Their construction is designed for backlash free torque transmission. RINGSPANN offers these shaft couplings in three versions: With a single disc pack (RDL ... DSO), with a double disc pack (RDL ... DSZ) and with a double disc pack (RDL ... DSA) in the special design according to the specifications of the API 610 standard (ISO 13709). The API 610 and the associated API 671 (EN ISO 10441) standard of the American Petroleum Institute result in numerous technical changes for the

demanding application of disc couplings in the international oil, petrochemical and natural gas industry compared to the standard design. “For all manufacturers and suppliers of plants and units used for the extraction, production, refining and further processing of crude oil, gas and chemicals, the use of API-compliant shaft couplings is therefore indispensable and competitively relevant”, emphasizes product manager Martin Schneweis.

Service factor highly relevant

In addition to the industry-specific criterion of API conformity, there are a number of technical and constructional aspects for the selection and design of disc couplings with overarching significance for all areas of application. Because irrespective of whether such a shaft coupling is to be used in a pump drive, in a blower system, in a packaging plant, in a printing machine or in test bench technology: Correctly determining the nominal torques and the operating speeds is just as fundamentally important as considering the shaft diameter or the shaft misalignment. “Another key decision is selecting the appropriate service factor. With the service factor, torque peaks which may occur during the practical operation of the clutch but which cannot be calculated precisely in advance are taken into account when selecting disc couplings. Selecting a suitable service factor therefore has a key influence on the reliability and price of a disc coupling”, explains Martin Schneweis.

Going beyond the standard

Beyond the technical and physical aspects, there are always some aspects of product quality and finishing to consider when selecting the suitable shaft coupling. For example, RINGSPANN disc couplings – unlike many others on the market – have a surface phosphate coating as standard, which gives them a high level of corrosion protection. In addition, the couplings are balanced to grade G6.3 in accordance with DIN 1940 as standard. This means they support smooth, vibration-free shaft concentricity. “Often enough, it is precisely this quality factor that goes unnoticed when selecting disc couplings, which subsequently leads to concentricity problems and excessive noise emissions in the application – and often to premature coupling failure or even damage to other units of the drive system”, stresses RINGSPANN manager Martin Schneweis.

The current RINGSPANN portfolio of shaft couplings includes a wide range of flange, flexible and cone clamping couplings, as well as gear couplings, grid couplings, pin and bush couplings, jaw couplings and of course disc couplings. In addition to other aspects of coupling design, RINGSPANN will be presenting an overview of its expanded coupling range at this year’s Hannover Messe in Hall 5, Stand D32/1 with numerous exhibits. If you would like to get an overview of the current RINGSPANN range of shaft couplings before the trade fair, however, you can download the current product catalogue at www.ringspann.de.ms

Note for editorial staff: Text and images available at www.pr-box.de!

Captions (6 pictures)

Figure 1: One of the main topics at the RINGSPANN stand at this year's Hannover Messe (Hall 5, Stand D32/1) will be the selection and design of disc couplings. The picture shows three variants with a single disc pack (top left), with a double disc pack (middle), and with a double disc pack in the API 610 design (below).

Figure 2: RINGSPANN product manager Martin Schneewis: "For manufacturers and suppliers of plants and units used for the extraction, production and processing of crude oil, gas and chemicals, the use of API-compliant shaft couplings is indispensable and competitively relevant."

Figure 3: Use of RINGSPANN disc couplings (top left, black) in a large process engineering plant. Here in combination with a housing freewheel (yellow) – also from RINGSPANN.

Figure 4_en: A look at the inner workings: The design of a RINGSPANN API 610 series RDL...DSA disc coupling with a double disc pack.

Figure 5_en: A complete overview of the new RINGSPANN portfolio of shaft couplings can be found in the current product catalogue. It is available for free download from the company website (www.ringspann.de).

Figure 6: The current RINGSPANN portfolio of shaft couplings includes a wide range of flange, flexible and cone clamping couplings, as well as gear, grid, pin and bush, jaw and disc couplings. The company will be presenting a selection at this year's Hannover Messe in Hall 5, Stand D32/1.

All images: RINGSPANN

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