



Standing facilities

- | Turning
- | Lapping
- | Precision grinding
- | Grinding
- | Honing
- | Broaching
- | Drilling
- | Thread-cutting
- | Cutting
- | Countersinking
- | Component cleaning
- | Conservation
- | Component inspection
- | Packaging
- | Deburring and rounding of edges

In-house production

- | DULENIT counter ring seal
- | Mechanical face seals "Life Time" rings

Mechanical face seals / "Life Time" rings

Nickisch mechanical face seals are precision seals for the operation and application of shafts in aggressive media. In order to obtain a consistent assembly quality of all components, mechanical face seals are manufactured making use of a special procedure. In addition O-rings are produced according to compatible quality requirements, so that one reaches a harmony affected functionality of all different sealing components.

The batch productions of Nickisch mechanical face seals are as a matter of course constantly observed by taking frequent samples for inspection. During final inspection the functional dimensions (external diameter, bevel diameter, width, evenness, flatness) of the sliding surface of each mechanical face seal are carefully checked on special burrs.

The engineers of our technical department are in permanent contact with our customer's construction engineers. Their problems are our problems! Finding solutions for sealing problems at an early stage of a processing as well as making suggestions bearing in mind our long standing experience in this area, has always been an integral part of our application-technological consulting.

The new series of Nickisch mechanical face seals has been particularly developed for rotation applications operating in extreme environments. As a result of an optimised wear resistance and the prevention of rough and abrasive external media, the mechanical face seal proves one's worth especially in polluted surroundings.

Construction features

The mechanical face seal consists of two identical metal sealing rings, which are mounted in two separate housings. The metal sealing rings' lapped running surfaces are grouted against each other and are standardly centred with an O-ring in the housing. During the application one half of the mechanical face seal acts statically whereas the other half rotates with the housing at the mating surfaces.

The O-rings or elastomer rings operate as pre-clamping elements as well as secondary seal between housing and race. They prevent that the ferrule is turned out of place inside the housing on the static side of the mechanical face seal and make sure that the axial force is conferred upon the ferrule.

Limitation of use

Die bei unseren Laufwerktdichtungen verwendeten Sondermaterialien erfordern eine zusätzliche Schmierung mit Fett oder Öl. Als zulässige Gleitgeschwindigkeit kann bei Fettschmierung ca. 3m/sec. Und bei Ölschmierung ca. 10 m/s angegeben werden.

Da die genaue Grenze jedoch noch von anderen Faktoren, wie beispielsweise Umgebungstemperatur und Öl- bzw. Fettmenge abhängt, können diese Angaben nur als Richtwerte angesehen werden.

Material

Due to high expectations towards the mechanical face seal's wear behaviour, we manufacture a special cast with a hardness ranging from 58 to 64 HRC specifically for this application area.

The material's name is Ni-Hard. A high wear resistance is achieved by means of the carbide-martensitic structure of the material and the choice of alloying elements and their concentration. As a result of the combination of the alloying elements with the high amount of carbon a crystalline structure is created, which is the essential characteristic of this superior high wear resistance in comparison to other steels. At the same time the material possesses sufficient corrosion resistance.

O-rings

For the elastic sealing element one makes use of high-quality synthetic rubber on the basis of nitrile rubber with high resilience in broad temperature ranges. (-40° C - +200° C)

- Nomenclature: NBR: Nitrile rubber
- HNBR: Hydrogenated acrylonitrile-butadiene rubber
- FKM: Fluororubber
- VMQ: Silicon

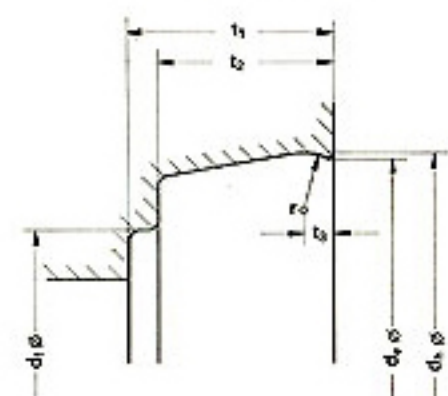
Furthermore these materials offer a chemical consistency

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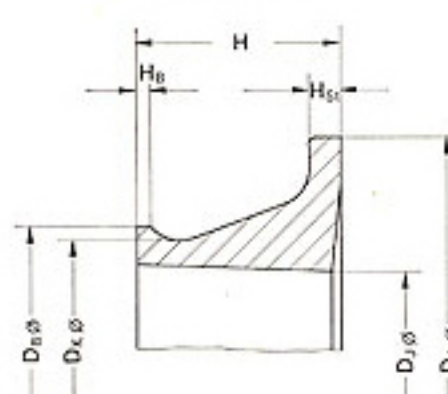
For

rotating applications running under highly cumbrous conditions e.g. rollers, scoops and excavators, hydraulic excavators, tracked vehicles, off-highway lorries, bulldozers, ploughs for tractors, reapers, hay balers, drills, axles, transmissions, driving gears, mixers, concrete mixers, stirrers, conveyor systems, asphalt plants, comminution plants, wind turbines, etc.

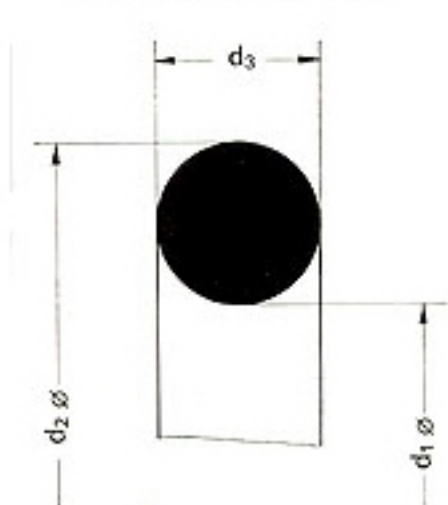
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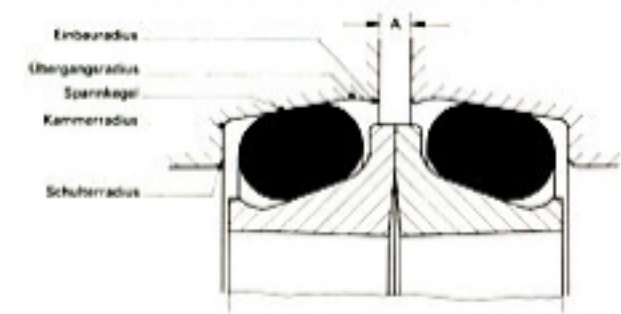
Gleitring



Runddichtring



Laufwerktdichtung im Einbauzustand



Gleitring mit Runddichtring

