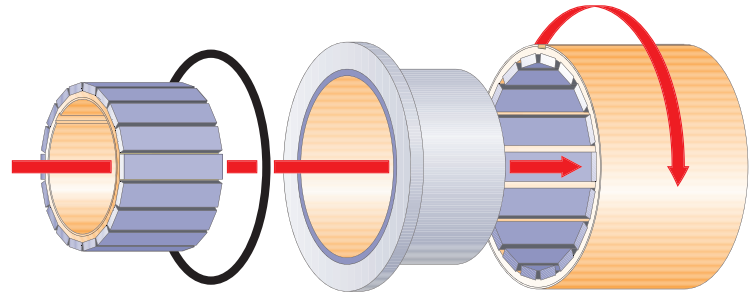


永磁系统
环保里程碑
磁力技术

PERMANENT MAGNETIC SYSTEMS
MILESTONES FOR ENVIRONMENTAL
MAGNETIC TECHNOLOGY



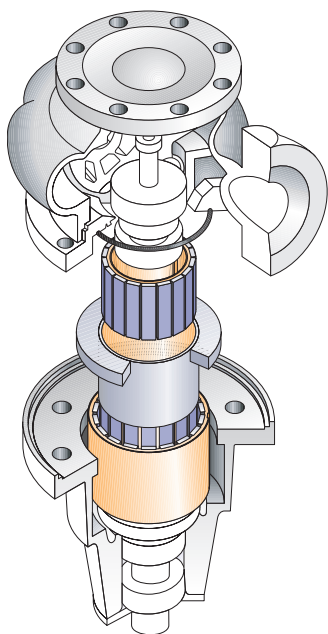
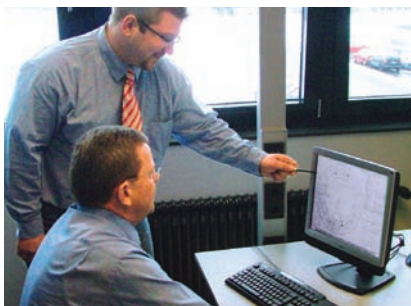
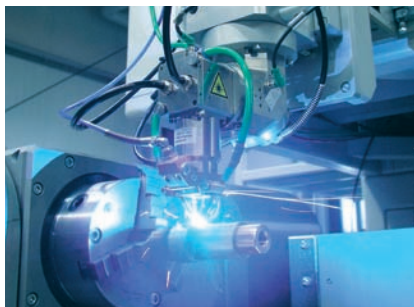


示意图
磁联用于泵上,
原理展示分解图

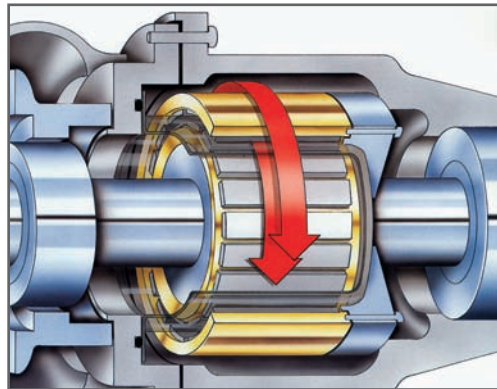
Figure:
Functional
implementation of
the magnetic coupling
in a pump casing

- 如今,出于环境保护的原因,在流程技术上零泄漏输送是必须的。高毒性或有侵害性介质要求泵和搅拌器等具有无气体泄漏密封地密闭驱动。
- DST 永磁联轴器最佳的遵从越来越高的环境安全保护意识。能无磨损穿越密封罩安全传送大扭矩。如果超出最大扭矩,扭矩的传送将被中断,因此能一直保证有过载保护。
- DST采用具有杰出磁容量的稀土永磁体确保永磁联轴器的紧凑结构及优异性能。
- 差别于动态密封, DST永磁联轴器最有意义的性能上的优势是零磨损。DST为其顾客在全球日益增长的化工、医药、塑料工业应用中提供了竞争优势。

- Today leakage-free transmission is essential in process technology owing to environmental protection reasons. Highly toxic or aggressive media require hermetically sealed drives for pumps, agitators etc.
- DST permanent magnetic couplings optimally comply with the increasing environmental safety protection awareness. High torques can be safely transmitted wear-free through the vessel walls. If the maximum torque is exceeded, the torque transmission will be interrupted so that overload protection is always guaranteed.
- The well proven compact and high-performance magnetic couplings from DST apply rare earth magnets with excellent magnetic capacities.
- A significant performance advantage of the DST magnetic coupling is the freedom from wear in contrast to dynamic seals. This offers DST customers a competitive advantage in a growing worldwide market with applications in the chemical, pharmaceutical and plastics industries.

标准结构范围
DST永磁联轴器

Standard construction range
DST permanent magnetic coupling



型号 TYPE	功率 POWER	图号 DRAWING NO.
DST 27/1	1 Nm	D055M0017
DST 27/2	2 Nm	D055M0018
DST 45/4	4 Nm	D055M0013
DST 45/6	6 Nm	D055M0062
DST 45/8	8 Nm	D055M0015
DST 60/7	7 Nm	D055M0075
DST 60/10	10 Nm	D055M0136
DST 60/14	14 Nm	D055M0076
DST 60/22	22 Nm	D055M0077
DST 75/10	10 Nm	D055M0022
DST 75/20	20 Nm	D055M0028
DST 75/30	30 Nm	D055M0036
DST 75/40	40 Nm	D055M0044
DST 75/60	60 Nm	D055M0061
DST 110/22	22 Nm	D055M0024
DST 110/50	50 Nm	D055M0031
DST 110/80	80 Nm	D055M0039
DST 110/100	100 Nm	D055M0083
DST 135/85	85 Nm	D055M0026
DST 135/100	100 Nm	D055M0063
DST 135/135	135 Nm	D055M0033
DST 135/180	180 Nm	D055M0041
DST 135/220	220 Nm	D055M0010
DST 165/140	140 Nm	D055M0027
DST 165/200	200 Nm	D055M0034
DST 165/275	275 Nm	D055M0042
DST 165/365	365 Nm	D055M0047
DST 165/450	450 Nm	D055M0071
DST 200/550	550 Nm	D055M0112
DST 200/700	700 Nm	D055M0113
DST 200/850	850 Nm	D055M0114
DST 200/1000	1000 Nm	D055M0115

应用范围

- DST系列标准结构范围涵盖离心泵，径向/轴向柱塞泵，液环泵以及不同扭矩要求的搅拌器。
- 可提供个别的中间体解决方案。
- 顾客特殊要求的解决方案见第4页。

PERFORMANCE SPECTRUM

- The broad spectrum of the DST standard construction range covers centrifugal pumps, rotating piston pumps, liquid ring pumps as well as agitators with differing torque ratings.
- Individual intermediate solutions are also available.
- Customer specific special solutions on page 4.

DST永磁联轴器结构

- 外转子
- 密封罩 (从71/10开始外壳是耐盐酸镍基合金)
- 内转子完全封装在AISI 316Ti 不锈钢里
- 永磁材料 Sm₂Co₁₇*

CONSTRUCTION OF DST PERMANENT MAGNETIC COUPLING

- Outer ring
- Canister (the shell is in Hastelloy from size 75/10)
- Inner rotor completely encapsulated in AISI 316 Ti stainless steel
- Magnet material Sm₂Co₁₇*

* 其他材料可依要求提供

* other materials available upon request

个别解决方案

- 对于顾客实用的或特殊要求的联轴器系统会做针对性的评估, 以更好的服务于顾客。
- 其后DST公司将通过CAD系统生成出最佳的成本/效率设计。

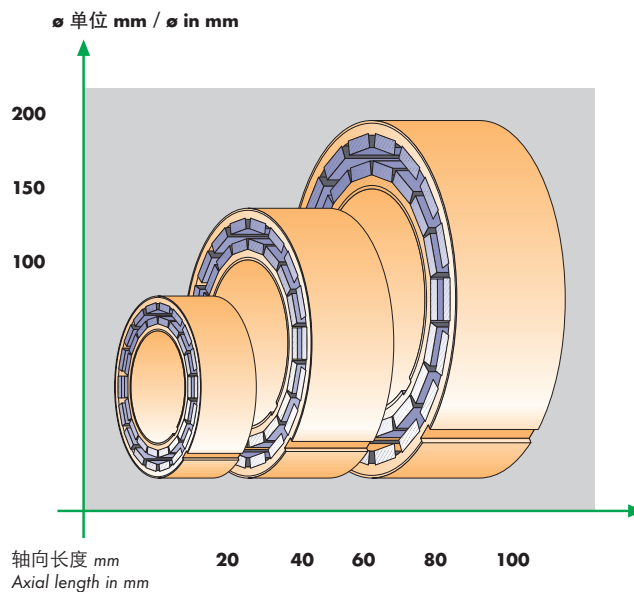


泵或搅拌用永磁联轴器驱动功率自1-2000Nm

Magnetic coupling for pumps and agitator drives power 1 - 2000 Nm

INDIVIDUAL SOLUTIONS

- In direct cooperation with our customers the requirements for practical and specific coupling systems are individually evaluated.
- Thereafter the optimum cost/performance design is produced by DST using CAD systems.



DST永磁联轴器的最佳系统适应性

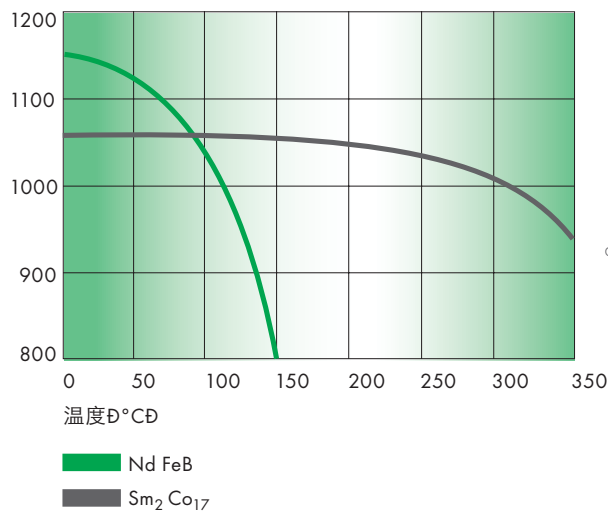
Optimum system adaptability of DST-magnetic couplings

SM2CO17 比NDFEB的优势

- 非常高能的产品
- 高矫顽性 (不易退磁)
- 在高温达到350°C时依然具有稳定性
- 耐腐蚀性强

ADVANTAGES Sm₂Co₁₇ VS. NdFeB

- Very high energy product
- High coercivity (resistance to demagnetization)
- Stable at high temperatures up to 350° C
- Very corrosion resistant



Sm₂Co₁₇ 和 NdFeB 在室温及150°C下的退磁曲线。Sm₂Co₁₇永磁体适用于工作在350°C

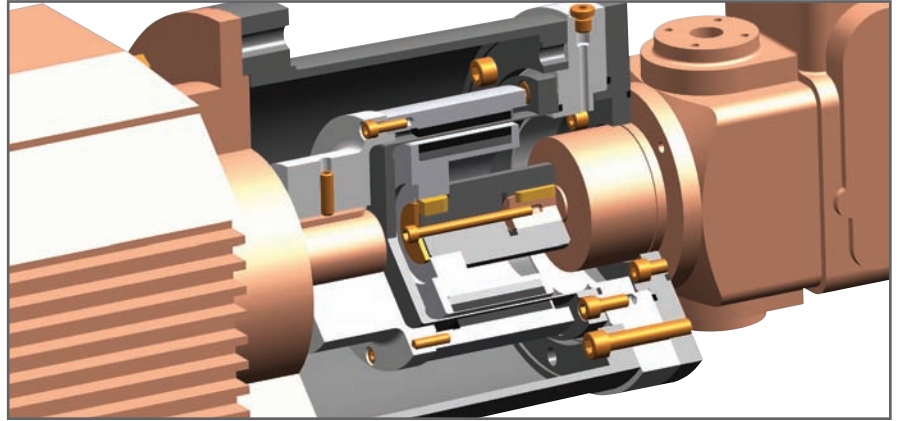
Demagnetization curve of Sm₂Co₁₇ and Nd Fe B at room temperature and at 150° C. Sm₂Co₁₇ - magnets are suitable for temperatures up to appr. 350° C.

应用领域

- 可根据多种应用领域做成不同的转换形式，如：PU设备，液压应用等。
- DST传动组件适用于连接主要的泵及驱动马达
- 我们将评估应用特征生产实用的转换器，最佳的发挥出“无气体泄漏密封”，“无磨损”的优势。

APPLICATION AREAS

- Conversion kits can be retro-fitted in many areas, for example:
PU machines
Hydraulic applications
- DST conversion kits allow a combination with all major makes of pumps and drive motors.
- We will evaluate specific applications to produce a functional combination in order to utilise the advantages of “hermetically sealed” and “wear-free” in an optimum way.



应用实例
ABB电机配DST 永磁联轴器及液压
泵传动组件

Application example
Conversion kit for hydraulic pump
with DST permanent magnetic
coupling and ABB drive motor

轴承

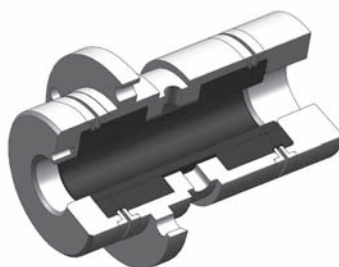
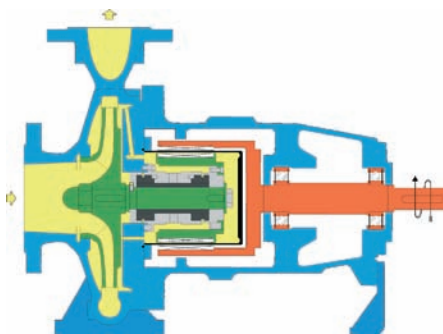
碳化硅-陶瓷滑动轴承

- 完整的碳化硅-陶瓷滑动轴承有轴向和径向类型，应用在装有 DST 标准永磁联轴器的离心泵上更有优势。

SILICIUM CARBIDE - CERAMIC PLAIN BEARINGS

- Complete SSIC - Ceramic plain bearings are available as axial and radial types, predominantly for use in centrifugal pumps, combined with the DST standard permanent magnetic coupling.

BEARINGS



碳化硅轴承用于离心泵

SSIC Ceramic bearing in a
centrifugal pump

滑动轴承适用于各种不
同的液体及温度范围

Plain bearings for
diverse media and
temperature ranges

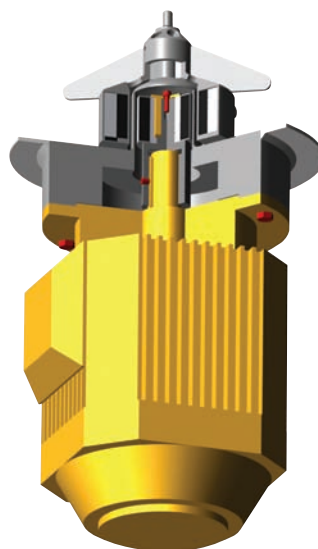


塑料泵用永磁联轴器

Magnetic coupling for a plastics pump

- 内转子与液体接触的部位涂覆有PP (聚丙烯)、PFA (聚四氟乙烯)、PVDF (聚偏氟乙烯), 适合安装于有危险介质的化工工业。

- The wetted areas of the inner rotor are coated with PP, PFA or PVDF for installations in critical media for the chemical industry.



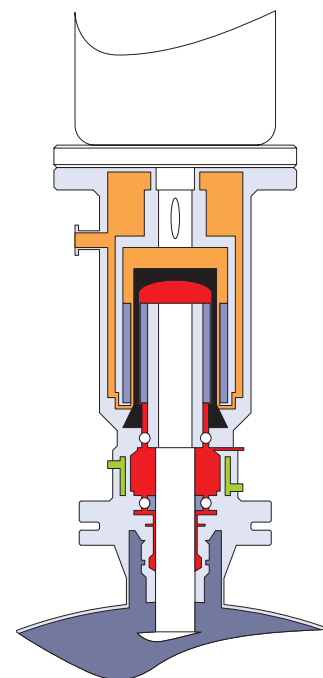
Untenliegender Antrieb - somit hermetisch dicht!
底部安装驱动-严格密封!

制药和食品工业用搅拌器驱动

Agitator drive for the pharmaceutical and food industry

- 采用底部安装搅拌器驱动, 搅拌器采用无气体泄漏密封, 确保产品不受任何污染。

- Using a bottom mounted agitator drive, the agitator is hermetically sealed, thus preventing any contamination of the product.



Obenliegender Antrieb - somit gasdicht!
顶部安装驱动-极好气密性!

化学工业用搅拌器驱动

Agitator drive for the chemical industry

- 顶部安装搅拌器驱动, 防止任何有毒气体逸出或搅拌过程中污染物进入。

- The overhead drive prevents the escape of any hazardous gases or the ingress of contamination during agitation.

应用

- DST永磁联轴器采用无接触扭矩传递, 适用于以下领域:
- 化工工业
- 制药工业
- 食品工业
- 技术
- 工业炉
- 压缩机
- 测量
- 配料
- 液压

APPLICATIONS

- DST permanent magnetic couplings from DST using contact-free torque transmission are installed in the following areas:
- Chemical industry
- Pharmaceutical industry
- Food industry
- Biotechnology
- Industrial ovens
- Compressors
- Metering
- Batching
- Hydraulics



Foto: fotolia

材料特性

材料

- 永磁联轴器接触介质的零件可以选择如下的材料:
- 1.4571 / AISI 316 Ti
- 耐盐酸镍基合金
- 钛
- 1.4435 / AISI 316 L
- 1.4539 / AISI 904
- 1.4301 / AISI 304
- 1.4462
- 塑料

SPECIAL MATERIALS

MATERIALS

- The permanent magnetic coupling components in contact with the medium are selected from the following materials:
- 1.4571 / AISI 316 Ti
- Hastelloy
- Titanium
- 1.4435 / AISI 316 L
- 1.4539 / AISI 904
- 1.4301 / AISI 304
- 1.4462
- Plastic



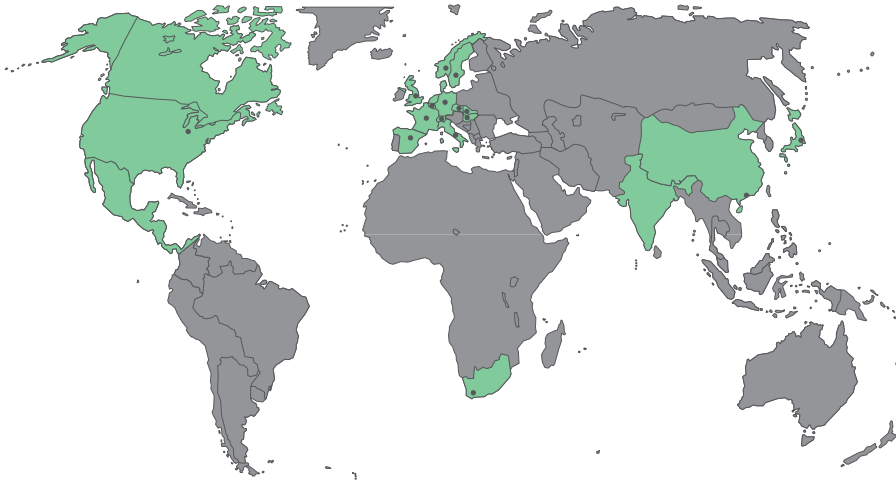
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