



IMPEDER CORE

TODAY'S QUALITY TOMORROW'S MARKET

01 COMPANY PROFILE

企业简介

石家庄腾迪机械设备有限公司位于河北省会石家庄，是一家集设计研发、生产销售和服务于一体的高新技术企业，成立伊始，一直致力于为全球客户提供可靠的产品和服务。公司通过了ISO9001认证。腾迪的主要产品有ERW焊管生产线、带钢卷纵剪线、横切线等，产品通过了CE认证、SGS认证。

腾迪拥有一支稳固、强大的技术团队。工程师30余人，高级工程师6人。技术团队遵循公司自主创新的先进理念，优化吸收了机械制造业之精华，同时借鉴国外先进技术，设计了一系列操作简单、维护方便的生产线。为客户实现了低投资，高收益的梦想。

经过多年的发展，腾迪团队积累了丰富的谈判经验，能够及时准确地了解投资者的具体需求，并利用腾迪的综合实力来满足投资者的多样化需求。因此，腾迪赢得了用户的一致好评，并逐渐成长为全球客户的重要供应商。

腾迪实施国际化战略，在海外设立了三个办事处，服务于中东、东欧、南美等50个国家和地区的客户。产品广泛应用于石油管道、钢结构、低压流体、汽车、家具等行业。

在未来发展中，腾迪将继续以“今天的质量，明天的市场”为宗旨，打造腾迪机械知名品牌形象。让世界热爱中国造！

Shijiazhuang Tengdi Machinery Trading Co., Ltd., located in Shijiazhuang, the capital of Hebei Province, is a high-tech enterprise integrating design, research, production, sale and service and is committed to providing reliable products and service to global customers since the first of day of incorporation. Having been certified by ISO9001, TENGDI supplies ERW pipe mill, slitting line, and cut to length line, which have passed the certification of CE and SGS.

There is a stable and strong technical team, including 30 engineers and 6 senior engineers. Following the concept of independent innovation, the team has optimized and absorbed the essence of China's machinery manufacturing industry, while referring to advanced foreign technologies to design a series of production lines with simple operation and convenient maintenance, which will help our customers to realize the dream of low investment and high return.

During the past years, TENGDI team has accumulated rich experience in negotiation, and can timely and accurately understand the specific needs of investors. We can also rely on our comprehensive capabilities to meet the diversified needs of investors. As a result, TENGDI has won unanimous praise from clients, and has gradually grown into an important supplier for global customers.

Following the international strategy, TENGDI has set up three overseas offices serving customers in 50 countries and regions in Middle East, Eastern Europe and South America. The products are widely used in oil pipeline, steel structure, low-pressure fluid, automobiles and furniture.

In the future, TENGDI will adhere to the tenet that "today's quality is tomorrow's market" to cultivate the famous brand of TENGDI MACHINERY so that the world will love what is made in China.



02 ENTERPRISE QUALIFICATION

资质荣誉

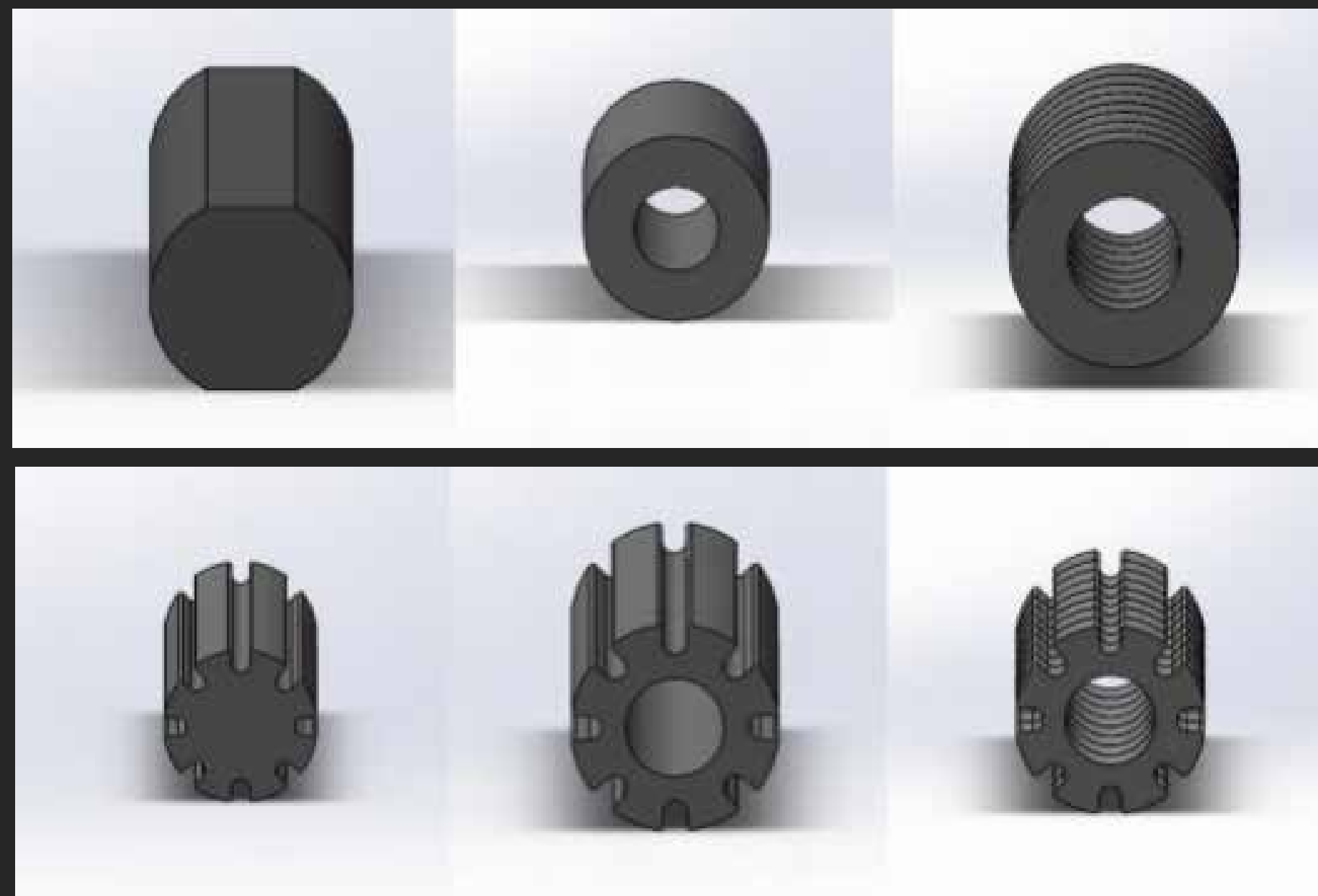
Honor comes from hard work.
 Each recognized qualification certificate is the crystallization of our hard work, and each honor is a signpost and a journey.
 We will also take each honor as a starting point, and continue to forge ahead and surpass ourselves.
 The team independently developed and obtained more than 20 patents, passed ISO9001 quality management system certification and environmental management system certification.

荣誉源于用心。
 每一份认可的资质证书都是凝聚我们奋力拼搏的结晶，每一份荣誉都是一个路标，一次历程。
 我们也将以每次荣誉为起点，不断锐意进取，超越自我。
 团队自主研发获得20多项专利，通过ISO9001质量管理体系认证，环境管理体系认证。



IMPEDER CORES EMIHM-S SERIES FOR HIGH FREQUENCY WELDING

Technical Support of Chinese Academy of Sciences
Professional production team production
Professional after-sales team service.



IMPEDER CORES APPLICATION IN HIGH FREQUENCY WELDING

When high frequency induction heating is used for metal welding, the induction electromotive force and welding power can be greatly increased by using magnetic rods. The magnetic flux in the induction coil is concentrated in the magnetic rod, and the flux between the induction coil and the welded pipe is relatively reduced, thus improving the welding efficiency. Therefore, in high frequency welding, the performance of magnetic rod greatly affects the welding efficiency, quality and stability of welded pipe, at the same time affect the energy consumption of steel pipe welding.

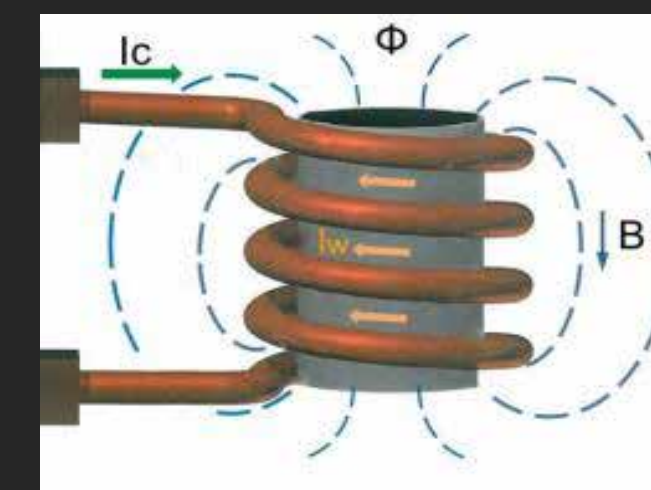


Fig. 1 Principle of electromagnetic induction

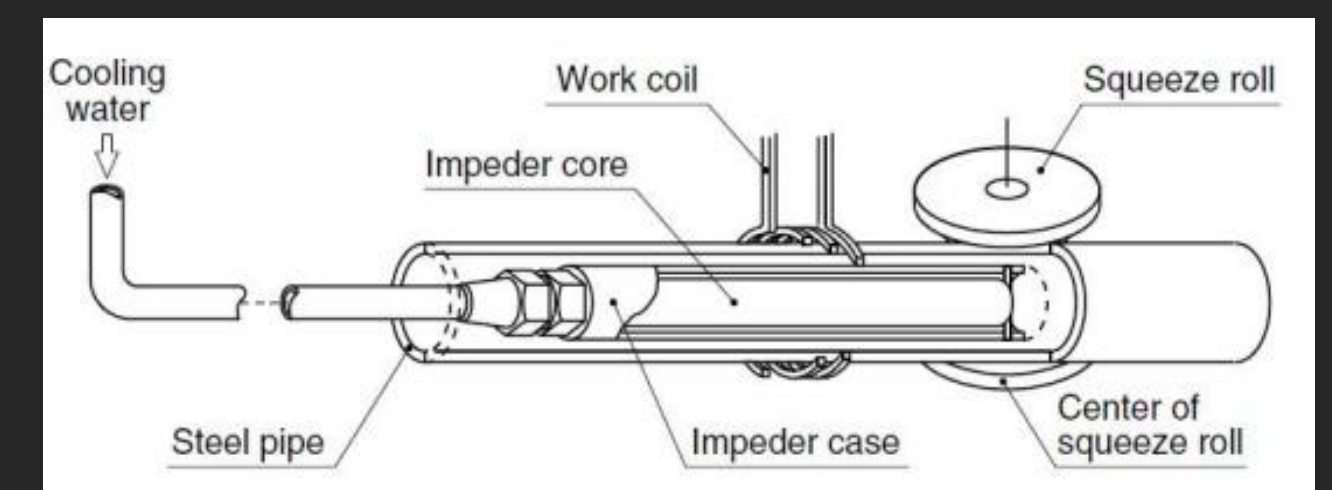


Fig.2 Schematic diagram of high frequency welding principle



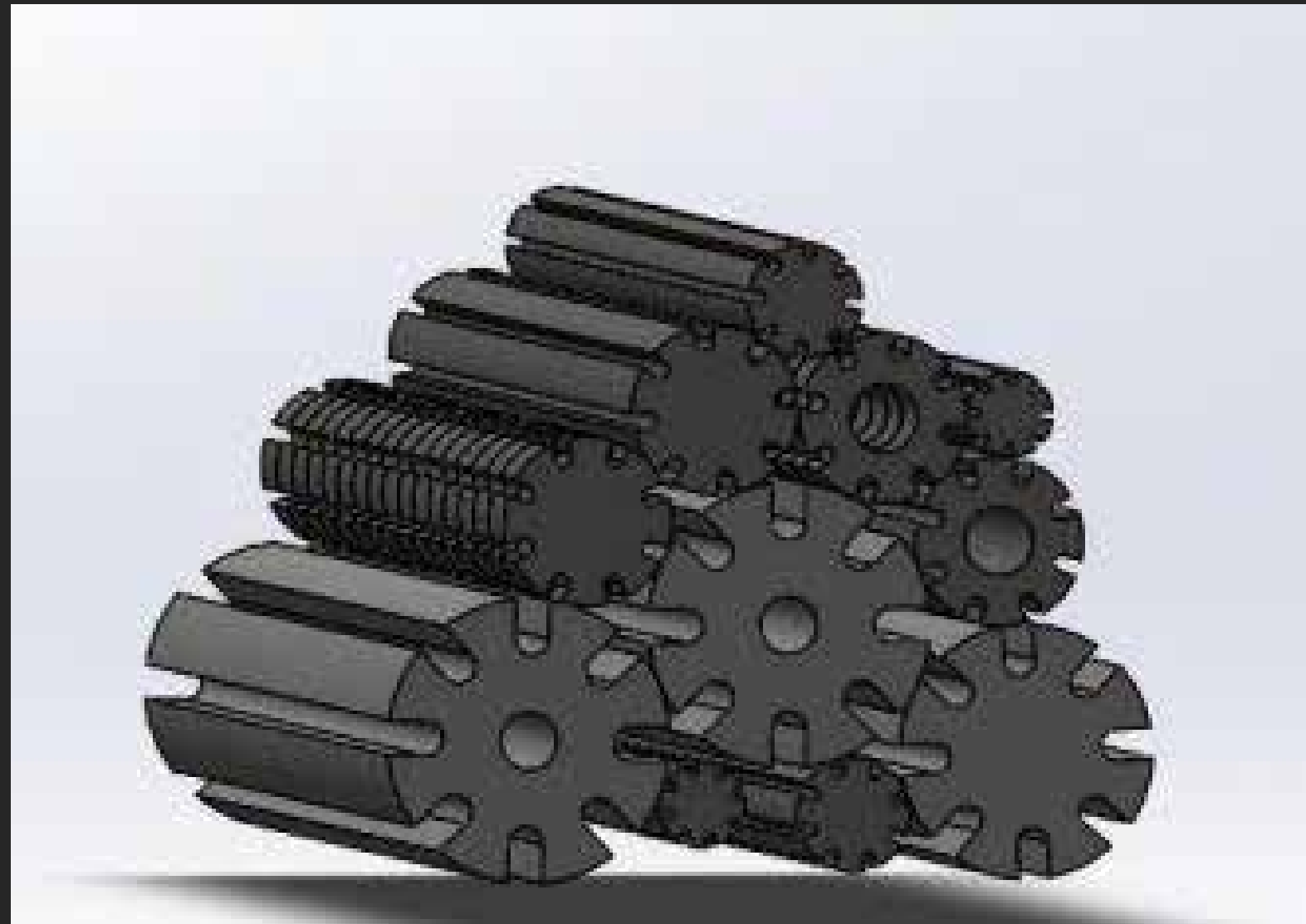


Fig.3 product diagram

In order to meet the diversified, personalized and high-end development needs of the high-frequency welded pipe industry, we has developed new soft ferrite material, and developed advanced magnetic rod forming and sintering processes. The rod has good compactness, high strength and good thermal stability, which can effectively improve welding efficiency, reduce power loss, and improve weld quality.



In addition, due to high-frequency welding, a part of the power is consumed in the magnetic rod, and cooling with a coolant is required. Otherwise, the magnetic rod is overheated, and the magnetic properties are reduced or disappeared, which reduces the welding efficiency. When the magnetic rod is exposed, the welding heat directly acts on the magnetic rod, and the foam is easily generated when the cooling liquid is cooled, which reduces the cooling efficiency of the magnetic rod. Therefore, the company has developed components and accessories such as a magnetic rod outer casing and a resistor. In this way, the magnetic rod is always covered by the cooling liquid during operation, which not only keeps the low temperature, but also avoids the generation of foam, can effectively improve the cooling effect of the magnetic rod, and improve the welding efficiency and the quality of the weld.

Basic characteristics of materials

Material properties		Value
Initial permeability(ui)(f ≦ 10k,H=1200A/m)		2400±25%
Saturation density(Ms)	flux (f=10k, H= 1200A/m, T=23C)	500 mT
	(f=10k,H= 1200A/m, T= 100C)	430 mT
Core loss(Pcv)	(f=400kHz, B=200mT, T= 100C)	≦ 4500kW/m ³
	(f=500kHz, B= 100mT, T= 100C)	≦ 1200kW/m ³
Curie temperature		≥220°C
Resistivity		8Ω/m
Material density		4.85 g/cm ³

※Measured value of the ring standard
sured value of the ring standard

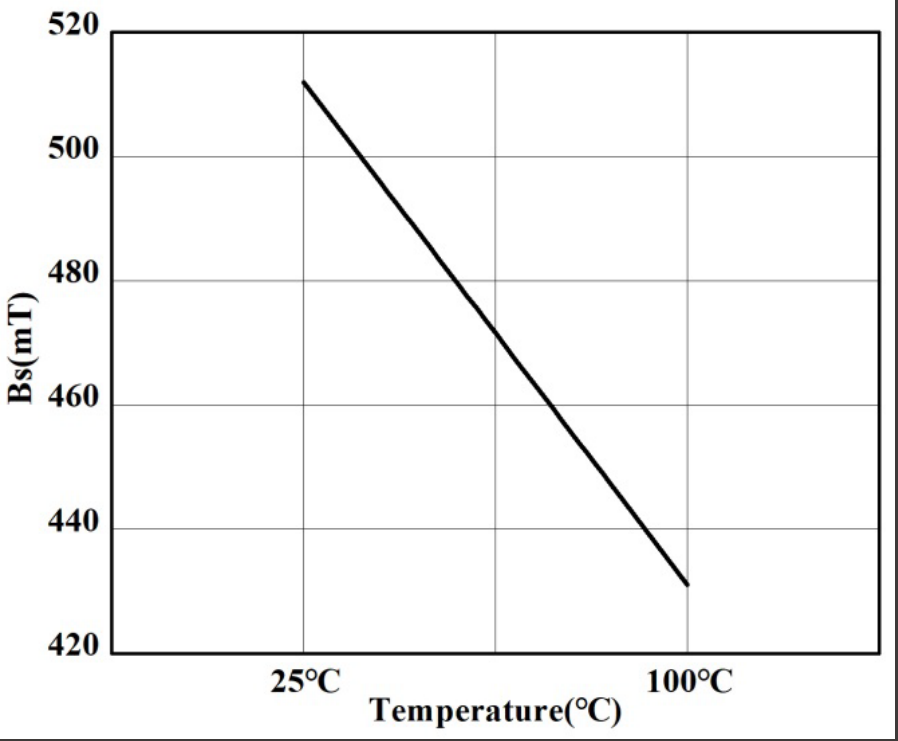
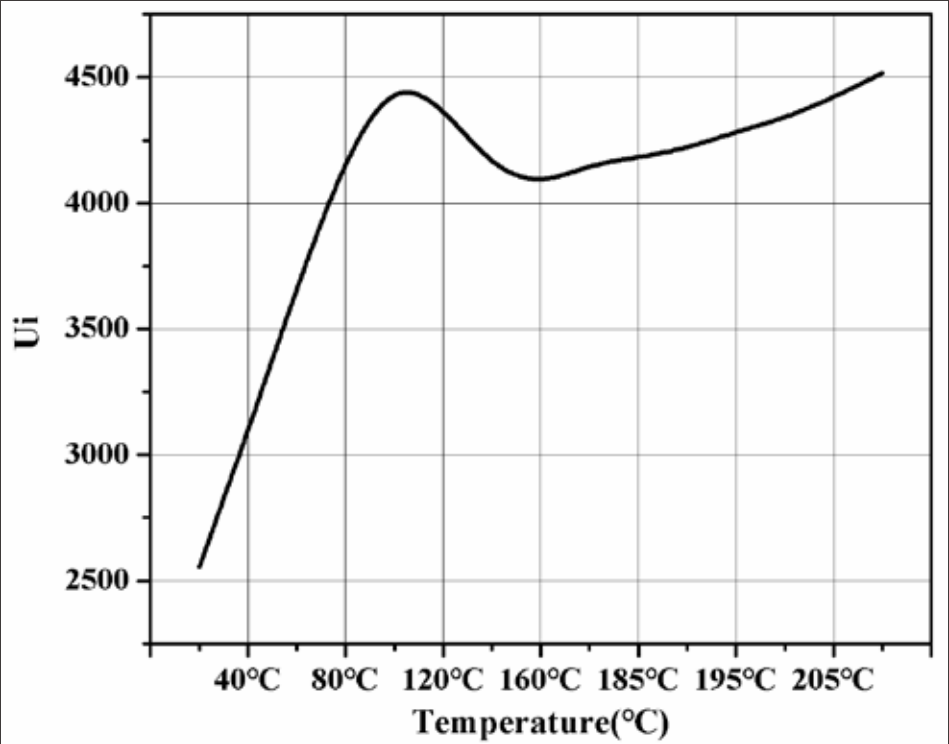
Basic characteristics of TDK product materials

Material properties		Value
Initial permeability(ui)(f ≦ 10k,H=1200A/m)		2300±25%
Saturation density(Ms)	flux (f=10k, H=1200A/m,T=23°C)	510 mT
	(f=10k,H=1200A/m,T=100°C)	
Core loss(Pcv)	(f=400kHz, B=200mT, T=100°C)	≦ 8500kW/m ³
	(f=500kHz, B=100mT, T=100°C)	≦ 3500kW/m ³
Curie temperature		≥230°C
Resistivity		8Ω/m
Material density		4.85 g/cm ³

※Measured value of the ring standard
sured value of the ring standard

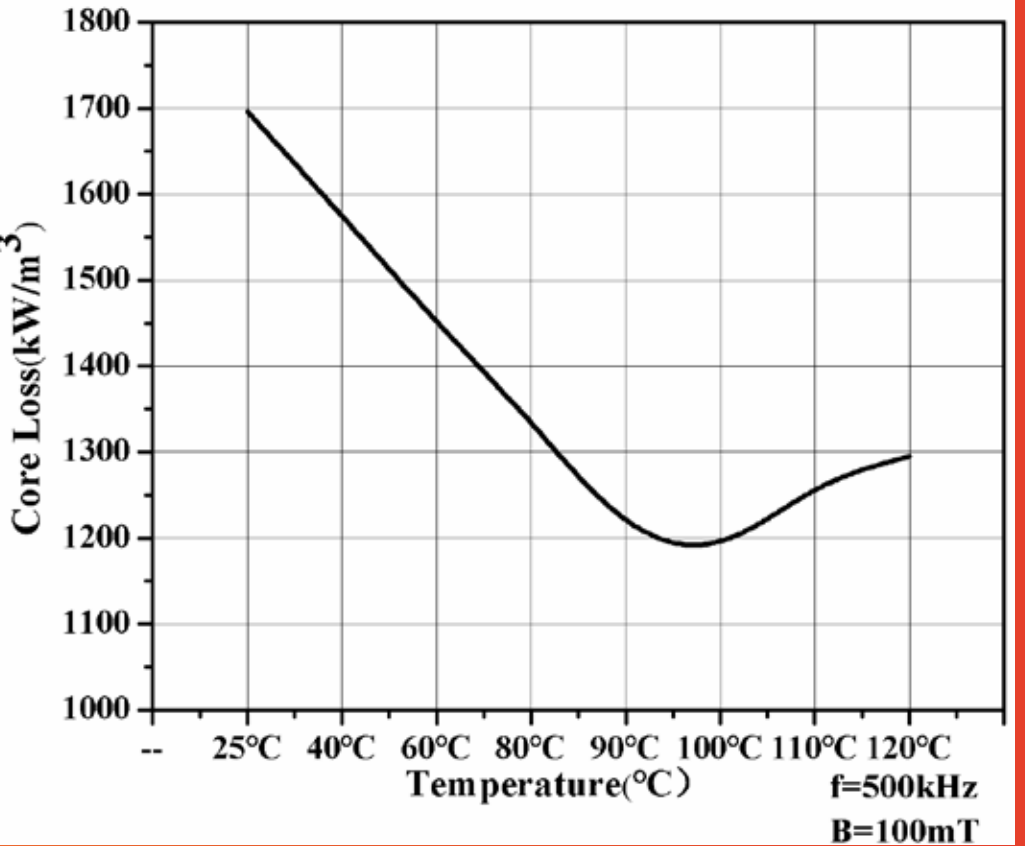
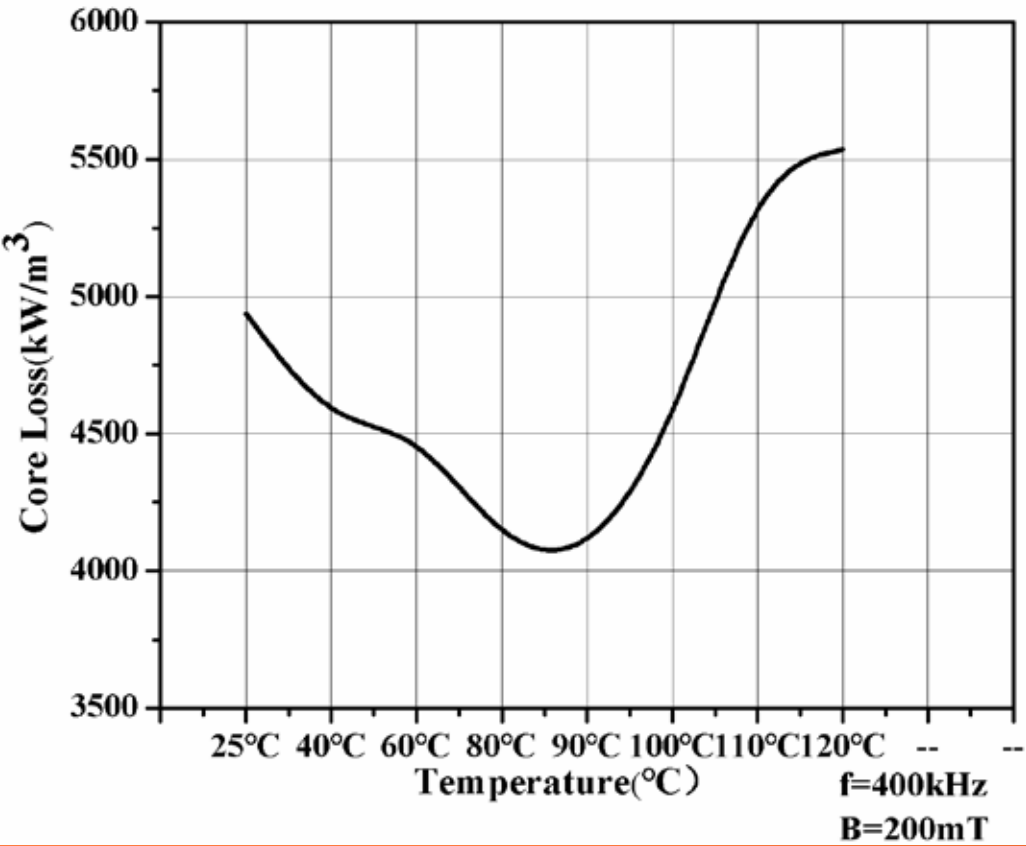
The overall performance of the material of our magnetic rod is better than that of TDK's magnetic rod, and the price is more than one-third lower than the price of TDK's magnetic rod.

Initial permeability temperature characteristics



Saturation magnetization temperature characteristic

Magnetic rod loss temperature characteristics



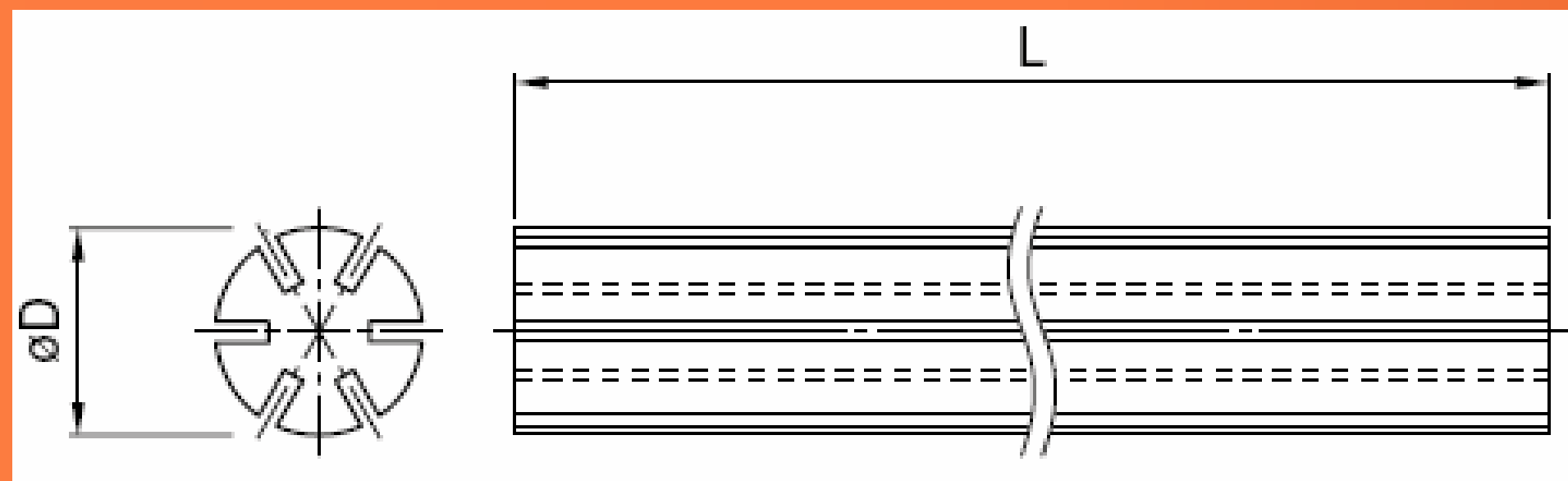
04 PRODUCTION TYPE

产品类型

IRS series

Features:

It has a radial groove shape, which can effectively cool the entire magnet bar.

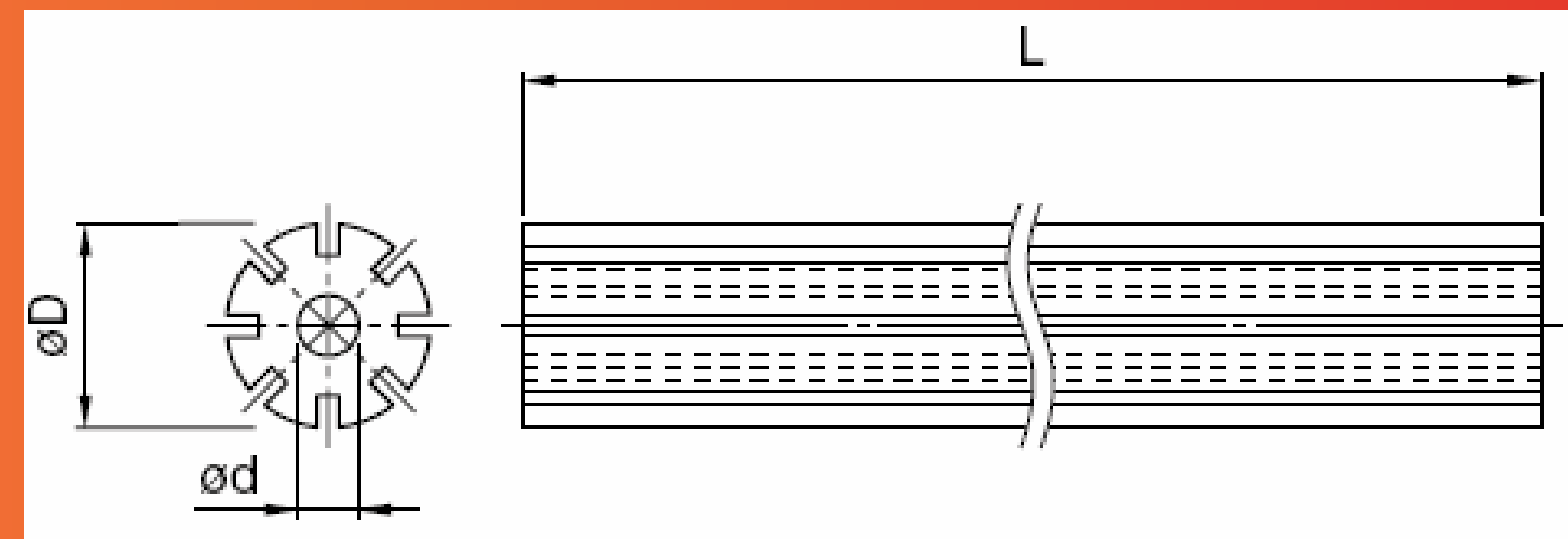


Unit: mm

IRSH series

Features:

It is a radial groove type with a central hole, and cooling water can be injected into the inner diameter part, which can effectively cool the entire magnetic core. In addition, the holder rod can be inserted into the inner diameter.



Unit: mm

CAUTION

- 01 For the size of the casing used, please refer to the inner diameter of the applicable casing. When the inner diameter of the casing is smaller than the applicable casing inner diameter, the magnetic rod sometimes cannot be inserted.
- 02 The length of the Impeder Cores for High Frequency Welding $L = (200 \pm 3.0) \text{ mm}$ or $(100 \pm 1.5) \text{ mm}$;
- 03 The above models can be customized for any products with different diameters and inner hole sizes. For Impeder Cores with a diameter greater than 30 mm, a total length of 200mm or 100mm is achieved by bonding small segments of cores end to end. The number of longitudinal bonding parts is marked for each type in the size specification table.

05 PRODUCT DISPLAY

产品展示





THANKS



TENGDI IS LOOKING FORWARD TO YOU JOINING.

