

What is a magnetic centrifugal pump?

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What is an electromagnetic pump?

An electromagnetic pump is a pump that moves liquid in form of metal in particular, any electrically conductive liquid using electromagnetism phenomena. By law of physics of electromagnetic, a magnetic field can be defined as a set at right angles to the direction the liquid moves in, while a current is passing through it as well.

What is a moving magnet pump (MMP)?

A moving magnet pump (MMP) is a unique type of electromagnetic (EM) pump that does not suffer from the shortcomings of other induction-style EM pumps. MMPs produce a traveling magnetic field that induces electrical currents within electrically-conductive liquid metals.

What is a magnetic centrifugal pump?

Magnetic centrifugal pump type LEM: The magnetically coupled pump for up to 100 m³/h flow rate. The perfectly matched, flow-optimised impeller and volute casing geometry achieves a very efficient and quiet pumping of liquid media.

What are magnetic centrifugal pumps made of?

The hermetically sealed Magnetic centrifugal pumps are made of stainless steel 1.4435 / 316L. All series are designed and manufactured to be used for hygienic and sterile applications. The screwed and very thick-walled housing constructions promise a very high degree of robustness and, due to the magnetic coupling, a very high process reliability.

What is liquid-metal based magnetic fluid?

Liquid-metal-based magnetic fluids exhibit rich electromagnetic, thermofluidic behaviours, leading to emerging applications in soft robotics, stretchable electronics, energy management and biomedical technology.

How does a magnetic field affect a liquid?

By law of physics of electromagnetic, a magnetic field can be defined as a set at right angles to the direction the liquid moves in, while a current is passing through it as well. This event, induces an electromagnetic force for the movements of the liquid.

MP-series magnetic pump adopts glandless design with the pump body completely sealed. No leakage, corrosion of the pump body and environmental pollution will occur. It is an ideal corrosive ...

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Table 2 summarizes the suitable electro-magnetic pumps for various pressure and flow duties; the moving magnet type could prove competitive with these pumps over most of the range covered ...

With the advancement of lead-bismuth fast reactors, there has been increasing attention directed towards the design of and manufacturing ...

In this study, a novel compact dual linear Halbach array serpentine electromagnetic pump (DLHAS-EMP) for liquid metal is proposed. By optimizing the s...

Wall-free liquid channels surrounded by an immiscible magnetic liquid can be used to create liquid circuitry or to transport human blood without damaging the blood ...

The electromagnetic pumps on permanent magnets are a promising technology for liquid metal transportation using electromagnetic interaction between electrically conducting fluid and ...

We have a series of magnetic pumps which are made of various materials. We are manufacturer to achieve operating temperature of plastic pump to 250°, metal magnetic pump to 400°, with low ...

This Review covers the fabrication, properties and applications of liquid-metal-based magnetic fluids, highlighting their superiority over traditional magnetic fluids.

This paper proposes a "Halbach array electromagnetic pump for liquid metal" (HA-EMP) by applying the "Halbach ring permanent magnet array" to a direct current conductive ...

Owing to the separate design of the rotating magnets and the pump chamber, the metallic fluid in the pump would not contact the outside which well fulfills the above-mentioned ...

Magnetic Drive Pumps Overview seal is eliminated. Magnetic drive pumps are designed to isolate the pump body from the motor by driving an impeller and magnet assembly with a drive magnet attached ...

This versatile, compact pump offers outstanding leakage protection for compliance with environmental regulations or "clean floor" initiatives. An available high-purity configuration makes it ...

What is a High-Temperature Pump used for? Hayward Tyler's high-temperature pumps are specifically designed for use in the advanced nuclear energy sector. ...

Centrifugal pumps with magnetic coupling Centrifugal pumps with magnetic coupling ensure the safe pumping and circulation of aggressive, corrosive acids ...

Magnetic drive technology is fast becoming the pump choice for corrosive applications. Iwaki offers a wide



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range of magnetic drive pumps from fractional horsepower for OEM applications to large pumps ...

The electromagnetic pump (EMP) was a critical device and widely applied in Sodium-cooled Fast Reactors (SFR) to deliver liquid sodium. Annular linear induction pump (ALIP) showed ...

We are professional manufacturerspecializing in magnetic pump production with four authorized invention patents and 12 patents for utility models. Our products are applied in many industries and ...

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fi electromagnetic pumps (EMPs). Compared with conventional mechanical pumps, EMPs have the advantages of quiet operation, no moving parts, high reliability, and easy maintenance, thus ...

In this study, both the numerical simulations and experiments are carried out to investigate the flow and heat transfer performance of liquid metal (Ga 61 In 25 Sn 13 Zn 1) in a DC ...

BMV series underwater magnetic drive centrifugal pump is magnetic drive vertical suspension centrifugal pump, BMV is single-stage, ...

BWB series magnetic drive vortex pump with small flow, high head characteristics, in many complex conditions play other pump products difficult to replace the role, the pump has simple structure, small ...

The pump was used for liquid aluminum at large Reynolds number under externally imposed non-uniform magnetic field. The formulation of the MHD model had been derived from the ...

Abstract This paper proposes a "Halbach array electromagnetic pump for liquid metal" (HA-EMP) by applying the "Halbach ring permanent magnet array" to a direct current conductive ...

Electromagnetic pumps for liquid sodium loops are designed using electromagnets and flow is maintained in pipes. Electromagnetic pumps can also be designed using MHD phenomenon. Both ...

Abstract In this paper, a novel structure of electromagnetic pump to efficiently drive metal fluid was proposed, which can be called layered stack electromagnetic pump. Firstly, the ...

A simple magnetohydrodynamics model of a liquid metal pump, showing the Magnetic Fields and Laminar Flow interfaces being used with the Magnetohydrodynamics coupling.

In 1979, our company cooperated with Shanghai Chemical Research Institute to develop and produce magnetic pump products, and produced the first domestic ...

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Abstract electromagnetism An electromagnetic pump is a pump that moves liquid in form of metal in particular, electrically conductive direction the liquid phenomena. of physics of electromagnetic ...

3D numerical simulation of the liquid metal flow affected by electromagnetic field in the Annular Linear Induction Pump (ALIP) is performed using modi...

Figure 1 illustrates the law of using a c-shaped permanent magnet, a pipe P carrying molten metal as the conductor, and a direct current ...

Scientists are uncovering the hidden forces that shape liquid motion using electromagnetic fields. In this blog, we explore how thin films of liquid respond to electric currents and magnetic fields, leading to ...

Web: <https://lpsolar.co.za>

