

What makes a good oil pump?

These pumps, capable of supplying oil even when the engine is switched off, are characterized by high voltage, high oil-pressure, high flow rate (100 V, 1 Mpa, 10 L/min) and 25% higher efficiency--ranking in the top tier of the industry--than equivalent products made by our competitors.

Are electric oil pumps compatible with conventional oil pumps?

Hybrid vehicles, electric vehicles and idling stop systems--these and other recent advances in fuel economy all share the same problem: incompatibility with conventional mechanical oil pumps. The solution comes in the shape of electric oil pumps. In 2013, Nidec Tosok launched their first electric oil pumps for hybrid vehicles.

What are the emerging trends in electric oil pumps?

Another emerging trend is the expansion of the applications of electric oil pumps to include clutch disengagement, cooling and lubrication etc. Electric oil pumps are also seeing increased use in large hybrid vehicles resulting in a rise in demand for larger pump models.

What is an energy-saving oil drilling rig?

Therefore, an energy-saving oil drilling rig is presented. The equipped power of this rig is only one third of a conventional drilling rig, and this rig can recover and reuse the potential energy which is released by the drill stem when lowered. This rig owns remarkable energy-saving effect.

What makes Nidec Tosok HV oil pumps different?

In addition to using high-efficiency brushless DC motors, Nidec Tosok's HV oil pumps are also equipped with inverters using original control software that makes sensor-less high-speed start-up possible. The pumps themselves are internal gear pumps with an improved bearing construction designed to minimize torque loss.

How are energy storage accumulators arranged?

One chamber is arranged to the energy storage accumulator for energy saving. Other chambers are flexibly connected to the pump ports for variable transmission ratios. Areas of multiple chambers are designed to permit a symmetric single-rod cylinder. Three modes are switched by solenoid valves to expand force-velocity capabilities.

Find out about two light fuel oil pumps we supplied for the transfer of light fuel oil, also known as diesel oil. It was to be pumped from main storage tanks to day tanks at the client's sizeable power generation facility abroad. ...

Motor and Pump Application Support; Field Service and Troubleshooting; ... Suitable Storage Areas: Motors should be stored indoors in a clean, dry area with minimal ambient vibration. ... capillary action may ...

Pumped hydropower storage (PHS), also known as pumped-storage hydropower (PSH) and pumped

hydropower energy storage (PHES), is a source-driven plant to store electricity, mainly with the aim of ...

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For the energy-saving oil drilling rig, in the auxiliary time the motor 1 supplies energy to the accumulator through the variable pump-motor 15, and in the pure lifting time, the ...

The AEMT advises that before putting an oil-lubricated motor into storage, it is a good idea to first drain the oil, flush it through and replace it with fresh oil. In operational motors, the oil helps ensure that any debris or particles ...

Oil refining is an energy-intensive process that needs a large amount of direct or indirect heat [1]. Particularly, about 32-35% of the entire global energy is consumed in the industrial sectors [2]. Burning fossil fuels to generate process steam for industrial uses results in the release of GHGs, which contribute to global warming [3]. The worldwide search for ...

pumped storage Three-Stage Pump (Voith) Reversible pump-turbine (Andritz) 6 Pumped Storage Technology TERNARY PUMP TURBINE UNITS Ternary pump turbine units comprise three main parts; a motor-generator, a turbine (often a Pelton turbine), and a single stage or multi-stage pump. The latter two are connected to the motor-generator on the same ...

the potential to bring oil-free benefits in heat pumps. - Making heat pumps more efficient Oil-Free Air-Water Heat Pump: Energy Use, Cost & CO₂ Emissions 0% 20% 40% 60% 80% 100% Energy Cost Primary Energy Use (Gas) & CO₂ Emissions 100% 80% 60% vs. Alternative Compressor Technologies 0% 20% 40% 60% 80% 100% Constant Speed Screw ...

Mathematical Model for Characteristics of Oil Pump Driven by Electric Motor 1. Introduction Electric motor-driven oil pumps have already been developed and commercialized for use with automotive hydraulic power steering systems for cases in which there is no space around the engine to install the conventional engine-driven oil pump and/or in ...

Oil pump energy storage motor Energy is stored by pumping water from a surface pond under pressure into the pore spaces of underground rocks at depths of between 300 and 600 ...

The group currently has more than 18,000 employees, total assets of 4.9 billion USD in 2019, and annual sales of 5.6 billion USD. The group has 20 first-level subsidiaries with production bases all over the world and a state-level ...

Energy storage can be used to fill gaps when energy production systems of a variable or cyclical nature such as renewable energy sources are offline. This thesis research ...

With our extensive portfolio of proven technologies, GE Renewable Energy is able to provide a solution adapted to our customers' specific needs in a variety of environments. With its broad portfolio ranging from 30 MW to 400 MW per unit with heads up to 1,000+ meters, GE Renewable Energy has a pump turbine to suit each site configuration.

There are many energy saving methods for pumping units, but each method has its limitations. Combined with the development of new energy utilization technology, this paper puts forward ...

Heating oil transfer pumps are commonly used in residential and commercial heating systems to ensure a consistent and reliable supply of heating oil. These pumps are essential for maintaining the warmth of buildings in colder climates. Pneumatic Oil Transfer Pump. Pneumatic oil transfer pumps utilize compressed air to transfer oil, offering a ...

The literature written in Chinese mainly and in English with a small amount is reviewed to obtain the overall status of flywheel energy storage technologies in China. The theoretical exploration of flywheel energy storage ...

Nidec Tosok's silent internal gear pumps--equipped with high-efficiency brushless DC motors and inverters using original software that makes sensor-less high-speed start-up ...

In this paper, the principle and method on energy saving fuzzy control for shift-beam oil pump motors are put forward. Based on studying the energy saving mecha

6.2.3 AC and DC motor-driven auxiliary oil pumps. The AC and DC auxiliary oil pumps which supply oil to bearings under start-up and normal shutdown, or under emergency shutdown respectively, are centrifugal pumps with a submerged suction. They are also suspended from the tank top and their arrangement is very similar to Fig 2.56, but with an AC or DC motor ...

The oil pump was tested to circulate pre-heated refined sunflower oil in Thermal Energy Storage (TES) tank comprising of an oil only and rock pebble-oil system and cooking...

A decentralized variable electric motor and fixed pump (VMFP) system with a four-chamber cylinder is proposed for mobile machinery, such that the energy efficiency can be improved by hydro-pneumatic energy storage, and problems of closed-circuit pump-controlled systems including asymmetrical flow and speed limitation are addressed.

YYB Series Oil Pump Motors; YG Series Induction Motors for Roller Table; ... Series AC motor for Storage Battery; XQ(D) Series DC Traction Motors; YYVF2 series new energy car power-assisted steering motor;

YQC series new energy ...

The beam pumping units applied in oilfield for more than 150 years, because it had the advantages of simple structure, reliable and durable. At present, it is still one of the most important artificial lift methods in the world. ...

ENERGY STORAGE SYSTEMS - Vol. I - Pumped Water Energy Storage - Yalçin A. Gogus and Cahit Eralp ... Frequently a single reversible pump-turbine unit acts as a motor-pump unit ... Gas turbine sets, oil fired sets, imported power and, peak plants. Curve 5 shows total production of power plants. Area indicates the energy storage ...

In early fuel oil system designs, boilers were the primary user of the fuel. The fuel oil was a primary energy source used consistently throughout the year. With the advent of natural gas, ... systems this is not typical and a transfer pump is needed to pump oil out of the storage tank(s) and deliver to the boiler mounted pumps at a very low ...

"There is provided an apparatus that includes an electronic control unit, a mechanical pump, and a motor having a first side and a second side, the motor including: a stator, a rotor including a ...

Hydraulic Pump Power. The ideal hydraulic power to drive a pump depends on. the mass flow rate the; liquid density; the differential height - either it is the static lift from one height to an other or the total head loss component of ...

The flywheel energy storage system (FESS) [1] is a complex electromechanical device for storing and transferring mechanical energy to/from a flywheel (FW) rotor by an integrated motor/generator ... pump and motor units, electric oil pumps for motor vehicles can cover a wide range of applications both inside transmissions as well as in their ...

A decentralized variable electric motor and fixed pump (VMFP) system with a four-chamber cylinder is proposed for mobile machinery, such that the energy efficiency can be improved by hydro-pneumatic energy storage, and problems of closed-circuit pump-controlled ...

motor with the motive seal to set an injector that moves relatively towards the stator winding [10]. The target is to eliminate the coil erosion and the adverse effects of the oil-air mixture on the performance of the oil pump after the spray of cooling fluid. ...

Once the motor has been removed from storage, then the oil should be drained and replaced. Grease-lubricated bearings. If the electric motor contains grease-lubricated bearings, the grease fitting will need to be cleaned. ...

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