

Support Systems



NINGBO DPM FLUID TECHNOLOGY CO., LTD
A SEALS AND BEARINGS ENGINEERING COMPANY



Company Profile

Ningbo DPM Fluid Technology Co., Ltd is a seals and bearings engineering company located in Zhejiang Ningbo, China. We design and manufacture different kinds of Silicon Carbide and Carbon Graphite material with extraordinary properties for multiple seal and bearing applications. Besides, in order to provide our customers in the seal area with more considerable service, we also develop and supply Mechanical Seal Support System and its components.

We produce tailor-made mechanical seal support systems according to customers' drawing or samples in **ANY QUANTITY** with **SHORTEST** possible delivery time. Our skilled workers and professional engineers have the experience of manufacturing mechanical seal support system such as pressure reservoir for API682 Plan 52/53A, heat exchanger for Plan 21/23, hand refill pump for Plan 53A/53C, as well as the Cyclone separator for Plan 31. And we also supply the accessories of such systems, for example, flanges, manifolds, globe valves, check valves, high pressure fittings, coils, as well as the SiC made cyclone separator parts.

We dedicate ourselves in developing and innovating the support systems in order to offer our customers with better products and better professional services, most importantly, to keep the mechanical seal stable and safe.

Our Mechanical Seal Support System Specifications

Mechanical Seal Support System is a set of pipeline system includes valves, instruments, pressure reservoirs, heat exchangers and filters in order to improve the performance of mechanical seals and prevent failure of the mechanical seals.

Since there are a lot of hazardous, toxic, flammable application conditions in petroleum and chemical industries, support system is very important. Its function of heat exchange, pressure balance, as well as the pressure alarm and fluid level alarm, keeps the engineers and workers in the field aware of the status of the mechanical seal. And it allows them to take actions ASAP to eliminate the danger of leakage if some of the seals are in trouble. It must be installed to ensure the safety under the request of API682 in several circumstances.

Our Mechanical Seal Support Systems

Plan 52/53A 12L/20L Pressure Reservoir



Plan 52 is a complex system with a pressure reservoir and several valves and instruments. The plan has the function of cooling and leakage detection alarm. The cooling coil provides the function of cooling for the buffer fluid. And the level switches and pressure switches provide the function of leakage detection alarm. Plan 52 is one of the most common used support systems, and it is applied on Arrangement 2 dual seal. Plan 53A pipeline system is kind of similar to Plan 52, only it is used in Arrangement 3 dual seal.

Plan 21/23 Heat Exchanger



Plan 21 is a mechanical seal flushing system that uses the cooled pumping media as the flushing fluid. Plan 23 is a mechanical seal flushing system that creates a circulation for another flushing fluid in the seal flush chamber. The plan aims to prevent overheating and failure of seal face. Usually it is applied at the condition of media temperature higher than the mechanical seal limit temperature.

Plan 31 Cyclone Separator



Plan 31 is a mechanical seal flushing system that uses filtered pumping media as the flushing fluid in the case of pumping media with abrasive particles. The media with abrasive particles at pump discharge first through the cyclone separator for particle centrifugal separation. The clean media liquid is piped to flush the mechanical seal, and the left media with particles is piped back to pump suction.

Plan 53A/53C Hand Refill Pump



The Hand Refill Pump is applied in Plan 53A/53C systems in the purpose of filling the buffer liquid. Because Plan 53A/53C systems are used together with Arrangement 3 dual seals, the pressure inside the pressure reservoir is higher than the media side. Under this situation, a hand refill pump is required to refill the buffer liquid into the reservoir by manual pumping if the liquid level is too low.

Our system accessories:



Small size pressure reservoir:

There are 3 different sizes for this kind of reservoir, 4L, 6L, 9L. The designed pressure is 2.5MPa, and the design temperature is $-40^{\circ}\text{C}\sim+200^{\circ}\text{C}$. It can be applied with heat exchange coil or without the coil.



Flanges:

Our flanges are manufactured by strictly following ASME B16.5. 3/4" SW, 3/4" BLIND, 3/4" WN, these 3 specifications are commonly applied on the reservoirs.



Fittings:

Our fittings are manufactured by strictly following ASME B16.11. 3/4" SW TEE, 1/2" NPT TEE, and 3/4" SW CROSS are commonly used on the reservoirs.



Instrument Manifolds & Needle Valves:

The instrument Manifolds and high pressure needle valves are mainly used together with the instruments such as pressure gauge or pressure transmitter. They are important valve units on many different mechanical seal systems.



Globe Valves & Check Valves:

On the pressure reservoirs, the small size high pressure forged globe valves and check valves are also the important and common units.



Heat Exchange Coils:

The heat exchange coils are not only installed inside the heat exchanger of Plan 21/23 for liquid cooling purpose, but also installed inside the pressure reservoir to cool the buffer liquid to make sure the mechanical seal are cooled and lubricated.



DPM NINGBO DPM FLUID TECHNOLOGY CO. LTD



Tel: +86-574-88370866

Cell&Whatapp&Skype: +86 139 6784 8363

E-mail: petercui@dpmfluid.com sales@dpmfluid.com

Website: www.dpm-seal.com