**The improvement and application of valve sealing structure**

In the process of using, strength and seal failure of the valves are relatively easy to occur, these will inevitably lead to not only the waste of energy resources, but also prone to safety problems. The improvement of valve structure seal is the key work to improve the valve service quality.

1 Influence factors and application points of valve sealing structure

　　1.1 Analysis of influencing factors of valve sealing structure

The sealing degree of the valve needs to be determined by combining its type and nature. The sealing degree of the valve is related directly to factors such as valve materials and equipment tooling and process. Any link with quality problems will inevitably affect the application quality of the valve. Combined with the scientific design standard, sealing structure to design into a cone or a sphere, but peace face seal structure comparison, this seal structure will has many adverse effects, prone to scratches on sealing surface, and cause the difficulty of the maintenance process there are many, this also is easier to increase the production cost, etc., market sales also can produce very big effect

The valve sealing surface is designed to be a cone or a round ball, which will be affected by adverse factors. The plane sealing design is adopted to change the valve stem and valve cover sealing surface from the original cone shape to the plane contact style. This way is less limited, the precision of the device and equipment can be guaranteed, and the processing is relatively easy. The length of time the valve is in direct proportion to the number of valve switches, and maintenance is relatively easy

　　1.2 Key points for application of valve seal structure

In the application of the valve sealing structure, we should pay attention to strengthen the attention from several aspects, can't let the valve in the condition of small opening, the start of the valve needle is relatively slow. Therefore, when the opening is small, the throttling interval is relatively small, but also can appropriately expand the screw pitch of the locking mechanism, increase the opening speed and lift of the valve needle, the working opening will be further increased, can effectively extend the valve service cycle

Practical application of the valve seal structure, the use of medium temperature for valve cycle is easier to impact, high medium temperature is easier to shorten valve life, in the process of concrete use, shall not apply as far as possible the valve working under high temperature and medium, pressure relief valve to increase cooling device, it can effectively extend valve life cycle. Impurities should be avoided, which may affect the service life of the needle valve [3]. In addition, regular cleaning and filtration of high pressure media are required, adding liquid needs to be filtered by filter, using more times to appropriately shorten the cycle of use, do a good job of cleaning oil tank, etc., only from these aspects have been fully paid attention to, in order to ensure the application quality of valve sealing structure

　　2 Improvement measures and effect of valve sealing structure

　　2.1 Improvement measures of valve sealing structure

The improvement of the valve sealing structure can improve the performance of the valve sealing structure. The commonly used method of grinding, which is more applicable to the valve sealing surface damage degree is small, abrasive stone and sandpaper add appropriate abrasive agent can be grinding operation. It can also be applied through deep repair, which is mainly processed by turning. The application of this method requires high time, time and energy, and the hardness and quality of the material will change after deep processing, as well as some changes in the structure and organization

In the improvement operation of valve sealing structure, the scientific application of method should be fully paid attention to. The valve sealing surface is hard material structure, which is not easy to repair, all threaded small bolts can be welded to the center of the end face of the disc through a PTFE plate, the gasket can also be customized to the spool by supporting a gasket of the same size as the disc seal. The gasket and nut pressing device can be adjusted to ensure the joint use of gasket and corresponding valve

In addition, it is also important to improve the sealing structure of butterfly valve. The current butterfly valve sealing structure butterfly plate is under pressure, the sealing effect is relatively good, the media reverse pressure on butterfly plate in the process, the sealing effect is affected by the corresponding, especially the large diameter valve is more obvious. In the process of improving the sealing structure of the valve, it is necessary to pay more attention to the design of the structure to ensure the good effect of the bi-directional metal sealing butterfly valve. The lower valve shaft and valve body fixation need tight transition coordination, to minimize the clearance of coordination, timely change the butterfly plate stress support point, so as to effectively reduce the butterfly plate compression deformation. Moreover, through the double eccentric spherical structure and the elastic thin-walled metal ring structure, to achieve the displacement compensation and elastic compensation, the valve at the open state, to be completely separated from the wear will not cause the use of stainless acid-resistant steel, to avoid rust. When the valve is closed, the butterfly plate is under positive pressure, which will make the inner diameter of the elastic metal sealing ring displacement become larger, and the specific pressure value will rise, but it can guarantee the minimum specific pressure value of sealing, and improve the reverse sealing effect

　　2.2 Improvement of valve sealing structure

It can be seen from the improvement effect of the valve sealing structure that, after the practical application, it has a relatively good application effect, will not affect the flow velocity of the valve port medium, has a good sealing effect, the damage of the valve sealing surface can not be repaired problem has been effectively solved. Valve leakage, through the replacement of worn sealing pad to solve the practical problem, is a good cost savings. Soft gasket and hard seat sealing surface will form a sealing joint surface, through the improvement of the rigid hard seal before becoming a soft hard joint seal, so that can effectively increase the sealing area. The valve seat sealing surface appears small damage, adjust the valve screw opening degree pressure soft gasket can be compensated, through the application of the improved valve sealing structure, maintenance is more convenient, the cost is also relatively low.

For the improvement of butterfly valve sealing structure, also has a good effect, to ensure the quality of structural design, extend the service life of the bi-directional metal seal butterfly valve, can also reduce the use of unit valve replacement frequency, so as to effectively reduce the overall cost, reduce the working intensity, improve the overall efficiency

In order to ensure the effect of valve sealing structure, it is necessary to improve the protective measures. This needs to ensure that the length of welding bolts on the valve disc cannot be too long, or it will cause the phenomenon of overhead sealing surface, sealing effect will be affected instead. To select the appropriate adjustment pad, the thickness should be slightly lower than or equal to the step height of the valve disc sealing surface, so that the sealing pad and valve disc sealing surface can be tightly fit in the same plane. It is necessary to fully consider the use conditions of the fluid medium to avoid medium corrosion and high temperature deformation and other factors affecting the use effect of the valve sealing structure. The sealing surface of the valve seat appear damage degree is more serious, the valve seat to scrap processing, spool through improvement and with the specification of the valve seat for matching application. The adjustment valve should be marked so that it can be effectively avoided. It should be opened and closed violently without affecting the service life of the gasket. The application of the improved method can greatly improve the use effect of the valve sealing structure. It is suitable for the globe valve with simple streamline structure. The fluid structure requires different types of valves not to be used.

　3 Peroration

In conclusion, the improved application of valve sealing structure can improve the service quality of valve. The application of the valve to do the corresponding protection work, this is also an important way to extend the service life of the valve. Through the above research on the improvement of valve seal structure and related application, more understanding can be gained theoretically on the improvement of valve seal structure, so as to provide corresponding reference for the actual improvement work. The smooth implementation of the improvement work can ensure the safety of the valve, it is important to do the corresponding improvement work from the perspective of safety