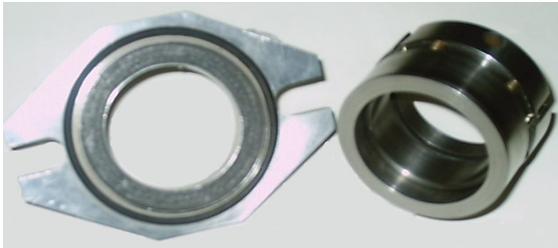




RESEARCH LABORATORY «SEALING MECHANICS AND VIBRODIAGNOSTICS»

The line of scientific activity is connected with the investigations directed to increase of vibroreliability, efficiency, environmental safety and hermetic sealing of centrifugal machines.

Scientific developments of the Laboratory, at present are used in chemical plants of Ukraine and Russia, in rocket space complex plants of Russia and in coal industry plants of Poland. Also important is continued use of the Laboratory developments on nuclear power plants, namely, face impulse and stuffing box packing seals and methods and tools for diagnostics of technical condition and prediction of resource for providing environmental safety, resource increasing and reliability of pumping equipment. The Laboratory has a university licenses of the ANSYS CFD (Ansys Inc., USA) and modeFrontier (Esteco Inc., Italy) programs, with the help of which the numerical calculations and optimization of centrifugal machines seals geometry is carried out.



Face packing seals

Can be used in chemical, petrochemical, food and other industries as well as in energetics, heating networks and utility services. They are a new generation of stuffing box seals that combine simplicity of radial packing seals with high sealing and durability of mechanical face seals. They can be

used in a wide range of pressures and sliding velocities for sealing of neutral, slightly aggressive mediums for using in general and special industrial pumps in chemical, petrochemical, food and other industries as well as in energetics, heating networks and utility services.

Main advantages

- Reduction of energy losses on friction
- Saving of stuffing box packing
- Increased service life
- Reduced time costs and funds for maintenance(no need to regulate during operation)
- Reduced leakages
- Friction pair is made from inexpensive materials, there is little sensitive to shaft run out and misalignments and does not require precision machining
- Easy replacement of stuffing box packing ring without disassembling of aggregate



Buffer face impulse seals

Can be used as seals of pump shafts of chemical industries, pump in aggressive, toxic, radioactive, explosive and flammable liquids. They represent two-stage of non-contact seals with radial arrangement of stages, there between supplied buffer medium (liquid or gas). They used as seals of pump shafts of chemical industries, pump in aggressive, toxic, radioactive, explosive and flammable liquids.

Main advantages

- Practically unlimited service life of friction pair
- High reliability
- Minimum energy losses on friction
- Minimum leakages of buffer medium
- Simplicity of design and manufacturing
- Reliability and economic efficiency