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MÜHENDİSLİK



DIVERTER
DAMPERS

DIVERTER DAMPERS



A Key Equipment for Combined Cycle Power Plants' Flexibility

The Combined Cycle Power Plants achieve different operation scenarios when equipped with by-pass systems. The owner can run the plant with gas turbines only or with a heat recovery steam generator and steam turbine depending on the electricity or process demands. Diverter damper is the critical equipment of a by-pass system. It is used for the control of gas flows from gas turbines by diverting the flow from one outlet to another. The exhaust gases containing high energy are released to the HRSG side or the by-pass side. However, it may be necessary to free both sides by partially opening to control the heat load of the HRSG and steam turbine. These provide flexibility to the operator in short terms.

»» Well Design, High Efficiency

Robust design is essential for the diverter dampers because of the high temperature and high velocity of the gas turbine exhaust gases. We pay extreme attention to design our diverters running with high sealing efficiency under very high temperatures to keep the plants efficiently running.

»» Powerful Tools

Every step of our design is analyzed by powerful engineering software by simulating the conditions and by workshop tests even for bigger sizes.





Advantages of our diverters:

- Withstand in high temperatures, turbulences, vibrations
- Reliability and availability
- High sealing efficiency
- Low seal air requirement
- Easy flow modulation by stepping blade movement
- Cost-effective solutions

STANDARD OR **TAILOR MADE**

Our diverter dampers are produced in standard sizing or tailor-made according to the availability of a layout, the current conditions of an existing plant, or just for need situations. The flexible design options offer cost-effective and results-oriented solutions, especially for renewing or refurbishment projects. We design our diverter dampers as toggle or pivot drive system with electric or hydraulic actuators. A seal air supply is provided to prevent gas leakages from the closed blade, and the full sealing performance is obtained.



Fully Satisfied Customers

We guarantee full customer satisfaction with our cost-effective solutions, compatible and reliable products. We have always been tempted to provide long-lasting permanent products, whatever the sizing.



Technical Support

Our diverter dampers require low maintenance, but we are ready to serve our customers for any technical support for mechanical devices, drive units, instruments, or control systems. Our qualified technicians serve worldwide for quick or planned maintenance activities.



We use non-locking, and self-aligning type externally mounted shaft bearings. The high-temperature resistant bronze alloy bearing segments are replaceable without removing the whole bearing unit. This bearing system requires no lubrication and a minimum amount of maintenance with small contact areas to the shaft.

Instead of packing glands, we install flexible diaphragms inside of the housing for the shaft sealing instead of packing glands. The arrangement is specially designed to accommodate the expansion and deflection of the stub shafts and to minimize flue gas leakage to the atmosphere. The sealing system elements can be replaced without having to remove any drive components. These metallic shaft seal systems are superior to the more conventional wrap of graphite-impregnated rope in

that the graphite rope does not compensate for any shaft misalignment.

"We provide diverter dampers from 2x2m to 7.5x7.5m gas path sections for every type of gas turbine".

FIRST CLASS DEVICES AND AUXILIARIES

Even if it has a successful design, high-quality auxiliary equipment and devices should be used for the regular operation of a damper system. We select the best quality hardware and auxiliaries to provide high and long-lasting performance. The seal air systems, drives, instruments, and control units are always premium brands wherever applicable.



Electric Drives

Well known, proven brands are used for electric actuators for trouble-free operations. These brands offer full spare parts availability and local technical services worldwide.



Seal Air Systems

Highly efficient seal air systems provide high pressure with low electric consumption. Seal air valves also increase the sealing performance.



Hydraulic Power Unit

First-class hydraulic parts ensure the system works very efficiently and healthy during the years. Original parts are always available.

EASY INSTALL MODULAR DESIGN

Our diverter dampers are designed according to project needs but always considering the site conditions and cost-effective solutions. The design options perfectly suit to site time schedules. Vast sections can be produced wherever the transport limits are allowed to minimize the site erection costs. Heat insulation, drive parts, seal air chambers can easily be installed on-site or at the shop.



Fast Assembly of The Casing Walls

The premanufactured casing walls are easily and quickly installed on-site. Individual site joint lines provide accurate and quick assembly.



Single Blade Installations

Even the big size blades' are installed in place in a few hours.



Shop Assembled Sections

Because of large and heavy sections, the diverter damper casing and blade parts are sent to the site in several sectors. However, these parts are assembled and tested at the shop to correct minor misalignments and prevent the time loss on site. Besides the housing assembly, the damper blade movement and sealing performance are examined in a cold situation.

"Choose our high-efficiency robust diverter dampers for high-efficiency power plants!.."



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