

# Solutions from REINHAUSEN for reliable and efficient power generation



## Meeting high productivity requirements

No matter whether you are running a coal, oil, gas or nuclear power station, extending your plant's service life usually means investing in modern equipment. This is usually the only way of adapting the efficiency and therefore the productivity of existing power stations to current requirements. The REINHAUSEN Group has an extensive range of products and tailored services for power transformers to help you optimize your power generation no matter where you are in the world.

The reliability and speed of the REINHAUSEN Group's global service network allow power station inspections and servicing work to be undertaken very quickly. Our sites around the globe ensure that we are well versed in your specific requirements. Years of experience and extensive expertise in the power generation sector make us your reliable partner for the safe and smooth operation of your transmission networks. You can of course contact us 24 hours a day, seven days a week.

### Tap-changers for long maintenance intervals

Our on-load tap-changers and off-circuit tap-changers are designed to suit the needs of your power station and transformer output to offer unbeatable reliability and efficiency.

Long tap-changer maintenance intervals, resulting for example from the use of vacuum tap-changes from the VACUTAP® range, help to minimize downtimes and increase the amount of energy generated. For example, the VACUTAP® VR is perfectly suited to applications in power transformers, while the VACUTAP® VV has been tried and tested in internal power station supplies.

If you want a conventional oil tap-changer, we would recommend the unique OILTAP® G if you need to regulate very high power levels. Depending on the transformer's technical data, a combination of three OILTAP® R- tap-changers is one alternative. The maintenance intervals of these conventional on-load tap-changers can be extended by combining them with on-load tap-changer monitoring or the oil filter unit OF100.



VACUTAP® VR

### Increasing availability through use of intelligent monitoring

Alongside our reliable on-load tap-changers, we provide innovative electronic products. TAPGUARD®, the only monitoring system of its kind anywhere in the world, doesn't just help to minimize costly damage to the on-load tap-changer and downtimes, it also allows you to plan and perform maintenance work depending on the equipment's condition. TAPGUARD® is the only monitoring system to feature integrated torque monitoring which can detect mechanical problems on the tap-changer in real time. Ultimately this transparency translates into shorter downtimes and lower operating costs.



TAPGUARD® 260

## Accessories for boosting operational reliability

When it comes to accessories for the transformers in your power station, you can count on the wealth of experience and extensive know-how of our subsidiary Messko. Messko products are perfectly matched to your special requirements and the conditions prevailing in your power station. They are also well equipped to deal with external influences such as dust, dirt, heat etc.

The intelligent fan control unit MTeC® EPT202 helps to better monitor the service life of your hard working power station transformers. This innovative device offers a wide range of functions: monitoring of oil and winding temperatures, fan control, data storage, connection to control technology and the calculation of service life.

Ever increasing demands are being placed on transformer equipment. Operating times are getting longer and longer, reliable protective devices are indispensable – the MPreC® pressure relief device for transformers in proven Messko quality is an ideal solution. As a reliable protective device, it increases the operational reliability of your generator transformer.

The flow controller MFloC® and its standard Messko 5-year guarantee also boosts your operational reliability. It will immediately detect a pump failure in the oil or water cooling circuit of a power transformer every time.

## Optimum insulation

If you are looking for composite hollow insulators for high-voltage equipment in your power station, e.g. transformer feedthroughs, voltage transformers etc., leading technology products from Reinhausen Power Composites are the perfect solution. Composite hollow insulators under the ReCoTec® brand are significantly lighter than porcelain insulators, are not affected by damage or earthquakes and retain their hydrophobic properties and therefore their outstanding ability to insulate even when very dirty.



ReCoTec®



MFloC®

MPreC®

## Mobile high-voltage test systems deliver great reliability

Key components, such as transformers, generators, circuit breakers and cables have to display good reliability at all times. Our subsidiary HIGHVOLT provides mobile high-voltage test systems for analyzing the condition of equipment and allowing you to test AC voltage, pulse voltage and DC voltage on site.

## Improved voltage quality reduces grid losses

Using powerful converters for pumps or starting up gas turbines results in harmonics which reduce the quality of the power supply. The Power Quality Management division will gladly assist you in planning and installing compensation and filter circuit systems which reduce harmonic effects on the system to a level compatible with the grid and help to stabilize power supply systems. Grid studies and measurement analyses on voltage quality are undertaken to develop optimum solutions to your needs. The range of services available includes assembly, assembly monitoring and worldwide commissioning of PQM systems as well as maintenance by our expert team.

Filter circuit systems, which are sometimes designed over several levels, and active filters for matching transformers have proven themselves in conventional power stations as filters for harmonics. Static filter circuit systems are more frequently used than outdoor systems.



Fault arc channel

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