#### DURESCA® Busbar system



TIRESCA® Busbar system



GASLINK® SF<sub>6</sub> insulatet busbar system



DURESCA® Wall bushings



DURESCA® Transformer bushings



# **MOSER GLASER**

Current and voltage - our passion

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## Member of PFIFFNER Group

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## Represented by:

#### Continuous improvement of proven technology

Moser Glaser, pioneer in the RIP insulation has always been focused on the development of the dry type insulation.

After more than 60 years of applying RIP insulation on our products, time was coming to reach the next level of insulating material.

Moser Glaser launched an extensive research and development program in the early 2000's to determine how to improve the materials and performance using the long experience in the company.

The main performance and life expectancy restraint in RIP condenser bushings was found to be the paper itself. Paper is an organic material with inconsistent material parameters, namely the moisture content. Too much moisture will cause high loss values, degrade the insulation system of the bushing, and possibly cause a premature failure. In order to compensate this, modern RIP bushings utilize drying systems during the manufacturing process. For shipment and storage, plastic bags with a dessicate bag or oil containers are used to protect the bushing.

Finding an alternative material to paper was not an easy task, though, due to the fact that paper provides good insulation characteristics and has been used in bushing and transformer manufacturing processes for many years with continual optimization.

Several experimentations were needed to find optimal successor.

Moser Glaser undertook this task by performing tests on many materials in order to find a successor to the paper. After research, Moser Glaser found a special polyester structural material which is an excellent alternative to paper. Moser Glaser performed a sequence of tests to qualify this solution:





Routine and type tests according to IEC 60137-2008. Specifications for the type tests were beyond the requirements of the standard.

In addition several special tests have been developed to challenge this solution.

- Adhesion test of direct moulded silicone on the RIS insulation
- Special humidity test
- Dynamic cantilever load tests
- Temperature cycle test
- Accelerated ageing test under high voltage

The new Resin Impregnated Synthetic RIS is now developed and part of Moser Glaser products portfolio.