



CUSTOMER

Grupomoller

SECTOR

Repairers

SERVICE

High Voltage Coils

72+2 HiFLEX coils

A 15,000kW, 4 pole generator had suffered a turn to turn failure whilst in operation at a sugar mill. Mexico-based GrupoMoller required 72+2 6.9kV coils to be supplied for the generator rewind.

Following a competitive quoting process, Houghton International was selected based on the proven quality of their coils and the unique HiFLEX coil system, in addition to the ability to provide in-depth technical support from an experienced team of engineers.

WHY HOUGHTON INTERNATIONAL?

- HiFLEX coils are fully cured with a totally flexible insulation system for easier installation
- HiFLEX coils are fully HiPot tested and interturn tested at point of manufacture which guarantees their dielectric integrity, giving the customer full confidence in their quality.
- Offering many years' experience of premium coil manufacturing and winding expertise, technical assistance was offered for added assurance. This included winding recommendations and engineering support as required.



THE SOLUTION

At the initial order stage Houghton International received a sample coil from GrupoMoller. A sample coil is used for confirming the coil design and specification, and to identify any variation from the data sheet provided by the customer.

With extensive experience in high voltage repairs, the Houghton International team can often identify potential problems or suggest improvements to coil specifications to improve lifespan or efficiency. Upon inspection of the sample coil, the Houghton International engineering team identified that turn tape, which had been applied



previously, had not been included in the initial coil specification. As the machine had failed due to a turn to turn fault, the coil specification was adjusted to include this for added protection.

During the manufacturing of the coils, senior representatives from GrupoMoller visited Houghton International to view the manufacturing facilities and witness testing, including partial discharge, interturn, tan delta and HiPot testing to British Standard specification (BS EN 5029:1999 and IEC 60034 guidelines).

THE RESULT

HiFLEX coils have a hot-pressed resin rich cell, corona protection and stress grading tape applied, and flexible outhangs for easier installation. This makes them ideal for larger or more complex rewinds, such as this, as they do not require baking, varnishing or impregnating after the rewind.

During the testing all coils showed excellent results, including extremely low PD activity, providing assurance to GrupoMoller and their end customer of the high quality design of the coils.

The coils were vacuum sealed and packaged inside a moisture-proof crate for transport to Mexico. Additional winding materials, including bespoke winding forks, copper, mica and final tapes were supplied with the coils.

Houghton International's logistics team assisted GrupoMoller with the required customs processes and provided regular updates during transit. In addition, Houghton International provided ongoing technical support and engineering consultancy throughout the winding process. Houghton International's team were able to offer the benefit of their extensive experience in high voltage rewinds, providing additional reassurance for both GrupoMoller and the end customer.



"We have enjoyed working with Houghton International, who supplied 72+2 HiFLEX coils for use in the rewind of a 4 pole generator. The coils produced fantastic test results, and the testing facilities at Houghton International meant we could be confident in delivering a high quality rewind for our customer."

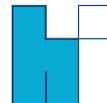
"Not only this, but our winders were also very pleased with the fit and flexibility of the coils, helping to make the winding process quicker and more efficient. Houghton International's engineering expertise was an asset during this rewind, from initial assistance on coil specification through to state of the art testing. We would not hesitate to work with them again."

Octavio Quezada, Grupomoller

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