



Prof. Jacek Smołka
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Reference letter

A team from the Department of Thermal Engineering and Department of Power Electronics, Electric Drive and Robotics of Silesian University of Technology from June 2020 to August 2021 carried out research commissioned by us concerning thermal analysis of electric line reactor within the project Panta Rhei.

The aforementioned research included a coupled thermo-electromagnetic numerical analysis (CFD-EMAG techniques) allowing for the determination of the temperature field of selected devices from the current production line of our company and four prototypes of devices with novel cooling systems.

The Silesian University of Technology team also conducted thermal measurements of the prototypes manufactured by us, which confirmed the results of the above-mentioned numerical calculations. The proposed cooling system allowed, in the most beneficial variant, to decrease the maximum temperature of our devices from 115°C to 45°C. Changes in the cooling system proposed by the team from Silesian University of Technology will allow to build smaller devices or operate them at overload conditions. The changes introduced in the mentioned prototypes, which we plan to incorporate into the current production line, should result in reduction of its costs and increase the competitiveness of our products.

The team of Silesian University of Technology was distinguished by high commitment, diligence and timeliness in the implementation of all stages and tasks defined in the plan of our cooperation.

Yours sincerely

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