

In cooperation with the Institute of Surface Technology:

New method for qualification of sealants for TS coatings

In a joint research project (ZIM project), the Institute of Surface Technology (IOT) and Diamant Metallplastic GmbH - the German specialist for metal polymers - have developed a new method for the qualification of sealants for thermally sprayed coatings.

The groundbreaking innovation is part of a ZIM project funded by the Federal Ministry for Economic Affairs and Energy of both development partners. The ZIM (Central Innovation Program for SMEs) is a nationwide, technology- and industry-open support program for medium-sized companies and with these cooperating business-oriented research institutions.

In the future, with the new measuring method, a practice-oriented method for evaluating the sealing quality of thermally sprayed coatings as well as proving the penetration depth of sealers will be available for the first time.

The measurement method applicable to both metallic and ceramic TS coatings provides reliable information on the gas permeability of the sealed sprayed coatings - an important criterion when it comes to extending the service life and avoiding premature infiltration of the coating. An essential advantage for more quality and reliability as well as efficiency in thermal coatings.

For the first time, the new process demonstrates the impermeability of sealed TS layers and, unlike all previous methods for qualifying seals on TS coatings - such as scanning electron microscopy with EDX analysis - provides the user with a practice-relevant result. Due to the high flexibility of the novel measuring method, it can also be precisely tailored to individual TS application cases and procedures.

The end of the joint research project of the IOT with Diamant Metallplastic - and thus the creation of the conditions for market readiness of the project contents - is scheduled for autumn 2017.

Diamant Metallplastic GmbH, headquartered in Mönchengladbach in the Rhineland, develops, formulates and produces metal polymers as well as polymer-based coatings and wear protection. Customers include the metalworking industry, mechanical engineering, the automotive sector, casting technology, thermal spatter, steel and bridge construction and the maritime industry. Founded in 1886 and still a family business, Diamant Metallplastic GmbH has a global sales network with over 40 agents in major industrial centers around the world.