

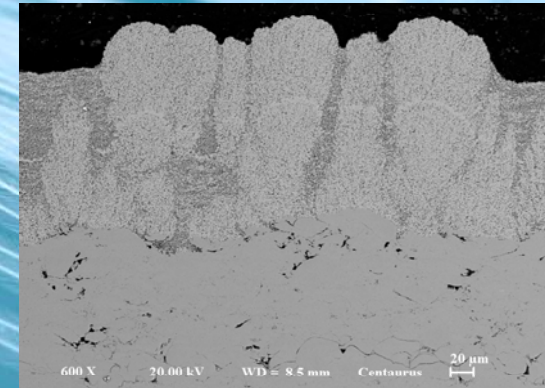
# Suspension Plasma Sprayed Thermal Barrier Coatings

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Duration: 2014-2019

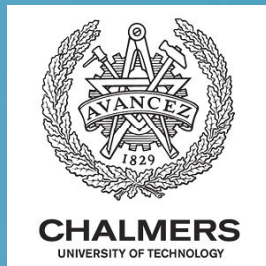
Funding: Västra Götalandsregionen

Advisor: Uta Klement



## Research Scope:

Focus of this project is to improve the performance of thermal barrier coatings, TBCs, by axial suspension plasma spraying. TBCs are used in turbines to protect the underlying components from high temperature loads and thereby enable higher combustion temperatures to enhance the engine efficiency and reduce the emissions. Improved TBCs can be achieved by optimization of the microstructure to produce TBCs that are more strain tolerant and with reduced thermal conductivity. The main goal for this project is to gain fundamental understanding in the relationships between coating microstructure, process conditions and performance of the TBCs. How will the coatings microstructure and formation mechanism be affected by the process parameters? How can the TBCs be optimized to achieve the best functional performance?



Materials and Manufacturing Technology, Chalmers, Göteborg  
Project partners: University West, Trollhättan

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