

COST 526 - 'Automatic Process Optimization in Materials Technology' – (APOMAT)
Final Report – 31 July 2005
Summary sheet

Project Code	CH2
Title	Numerical Calculation of the Process Parameters, which Optimise the Gas Turbine Blade Coating Process by Thermal Spraying, for given Spray Paths
Project Leader	H. Lang (takes over from F. Lavers)
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Main collaborators involved	Dr. M. Balliel, C. Pedretti, G. Guidati, P. Ryan

Funding Situation (for the whole project)

Amount of money received specifically for COST: 143.1 kCHF received from Swiss BBW, 159 kCHF committed by BBW 2002-06-17 with official project start 2002-07-01.
 Other resources partially used for the project - kEuros

International Collaboration (mention group and type of work done in collaboration during the whole project)

Participation in work group meetings and Swiss group meeting, comprising oral project presentations, technical discussions and poster exhibition.

Industry participation (mention name of companies and work done in collaboration during the whole project)

ALSTOM (Switzerland) Ltd = PL

Meetings, visits, exchange of scientists, short term scientific missions (mention main events during the whole project)

WG Meeting
 COST526 Swiss group meeting
 WG Meeting
 WG Meeting
 WG Meeting

Location, date

St.-Dié des Vosges/F, 21./22.5.2002
 Windisch/CH, 11.9.2002
 Budapest/H, 28./29.11.2002
 Brussels/B, 26./27.5.2003
 Morschach/CH, 30./31.5.2005

Main Outcome of the project (mention only the major points)

The performance of ALSTOM's coating process simulator has been experimentally investigated and a numerical optimisation loop yielded an improved set of simulation tool parameters. Coating strategy and parametrisation have been developed although not yet finalised. The offline simulation tool for the coating process is used for manual spray path generation. In parallel, the usability of the offline simulation tool was reworked to simplify the definition of a spray path for a given gas turbine blade/vane reducing the number of input variables and enabling an improved manual operation as well as a more efficient numerical optimisation.

Publications, related to this project

Published

-

Submitted for publication

-

In preparation

-

Will you continue the actual cooperation with your partners after the end of the action?

- Not applicable

Yes

No

Would you participate in a possible "spin-off" action continuing the present one?

- Depending on terms of participation

Yes

No

Will you continue your present work/collaboration with another European action?

Yes

No