

DAIGTS

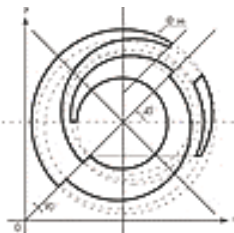
Design and Off-Design Optimisation of Highly Loaded Industrial Gas Turbine Stages.

Project Co-ordinator:

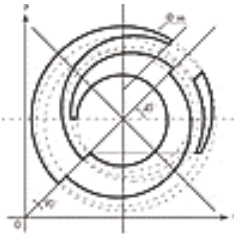
Ian Amos

Team Leader - Turbine Technology

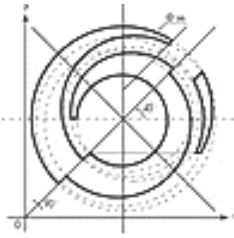
ALSTOM Power UK Ltd



- Research Programme: ‘Energy, Environment and Sustainable Development’
- Call: ENERGIE 1999/C 77/14
- Project Number: ENK5 - CT2000 - 00065
- Duration: 36 months
- Resources
 - 157.5 man months
 - 1.5 Meuro



- ALSTOM Power UK Ltd (co-ordinator)
- ALSTOM Power Sweden AB (Formerly ABB STAL)
- Nuovo Pignone, Italy
- Kungliga Tekniska Hogskolan (KTH), Sweden
- Universita Degli Studi di Firenze, Italy

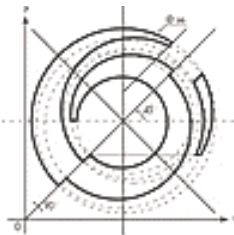


DAIGTS - Project Objective

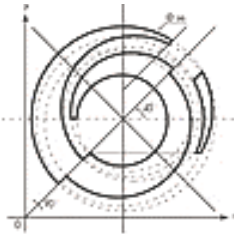


Develop predictive methodologies for aerodynamic and aero-mechanical analysis of industrial turbine stages at design point and off-design.

- To reduce losses in high load turbine stages
- To provide better prediction of performance characteristics
- To ensure reliability is maintained at higher blade loading and increased fuel flexibility.



- **WP1 - Advanced Aerodynamic Analysis of Industrial Gas Turbine Stages**
- effects of cooling/cavities/steps etc
- **WP 2 - Off Design Performance Characteristics**
- synthesis of more accurate turbine maps/ CFD analysis at high incidence levels
- **WP 3 - Predictable Aero-Mechanical Behaviour**
- understanding of unsteady behaviour.



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- Programme intends to concentrate on activities which are most relevant to Industrial Gas Turbines.
- Industrial Partners looking for early exploration of technology.