



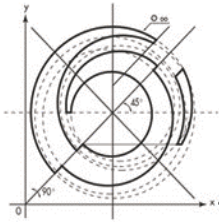
Feb 2001

CINDERS

ENK5-CT2000-00068

Mark Hazell - Project Co-ordinator

ALSTOM



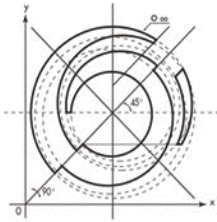
Project Overview



CMC Integration and Demonstration for Gas Turbine Engines

- Objectives

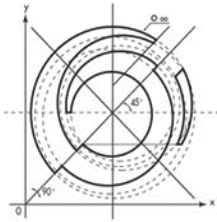
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- development and demonstration of a thermal/environmental protected ceramic matrix composite combustion chamber
-
- internal wall temperature of 1450 °C
-
- 'DESIGN TOOLBOX' guidelines on manufacture of CMC/TPS system



Partners



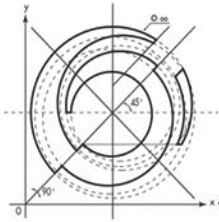
- **ALSTOM Power (UK) - Co-ordinator**
 - materials evaluation, TPS development, Lifting
- **ANSALDO (IT)**
 - materials evaluation, Lifting
- **EMPA (CH)**
 - NDE
- **Flame Spray (IT)**
 - Thermal spraying
- **Nuovo Pignone (IT)**
 - Final component testing, Design
- **ONERA (FR)**
 - Sol-Gel Development



Partners



- RIF (D)
 - NDE
- Rolls-Royce Power Engineering (UK)
 - materials evaluation, TPS development, Stress Analysis
- SNECMA (FR)
 - Materials Manufacture, Design
- Turbomeca (FR)
 - Sub-element testing, Design
- UMIST (UK)
 - Sol-Gel Development



Project Overview

