

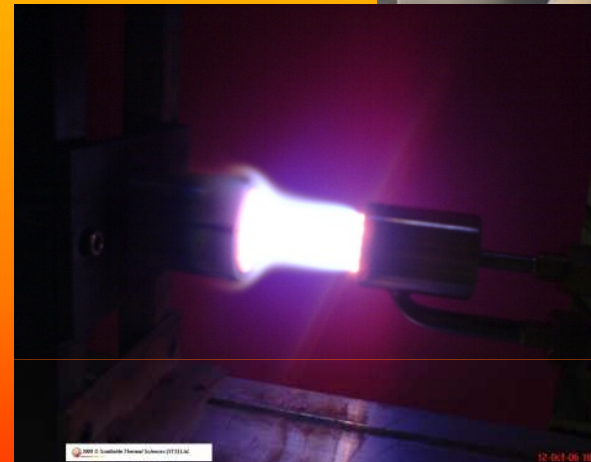


**Southside Thermal  
Sciences Limited**

## ***Novel durable high temperature coating for elongated turbine operation***

### ***Benefits***

- ***high temperature applications beyond 1200°C***
- ***standard APS processing parameters possible***
- ***promises less maintenance***
- ***off-the-shelf industrial production***
- ***protected technology ( patent pending )***



9  
8  
7  
6  
5  
4  
3  
2  
1

***high***

← ***Durability Coating***  
***(Technology Readiness Levels)***

***low***

STS's Durability Coating was trialled for 4,000 hours in a Siemens V94.3(A)1 turbine at Didcot B power station in a trial for RWE npower.

The STS coating performed as well as conventional APS TBCs in this application, but has the potential to out perform these APS TBCs at higher firing temperatures.

Through STS, RWE npower engineers are prepared to discuss the engine trials.

***The new coating consists of a multi-phase multi layer system based on a standard off-the-shelf ceramic spray powder provided by one of the established suppliers. The modified coating was tested by external highly reputable R&D organisations and the coating has shown good survivability in...***

- ... ***isothermal cycling tests***
- ... ***harsh thermal gradient cycling tests (surface temperatures beyond 1350°C)***
- ... ***OEM burner test rigs and***
- ... ***at Didcot power station, UK .***

***STS is looking for potential partners to market this novel coating technology.***

**For further information please contact:**

Dr Jörg Feist – Managing Director

+44 (0)207 594 3564

Southside Thermal Sciences (STS) Ltd.,  
c/o Imperial Incubator, Bessemer Building, Level 1&2,  
Imperial College London, London SW7 2AZ United Kingdom

**Technical and Commercial Awards 2008  
Best Paper Award. Ceramics Committee  
ASME Turbo Expo, Berlin,**



**Winner of the European Innovations Award  
Wall Street Journal Europe**

