INDIVIDUAL ON-SITE TRAINING
IN GAS TURBINE METALLURGY AND MATERIALS

Turbotect provides a wide range of consulting services and on-site training in the metallurgical aspects of gas turbine technology. The services are designed to enable power plant operators to minimize operation and maintenance costs by considering various aspects of component life cycle engineering and materials selection.

Individual on-site training sessions shaped to the needs of your staff and at your facility. Joint set up of the training program and duration, topics to be addressed and extent of coverage, all adapted to your requirements and taking into account your on-site experience.

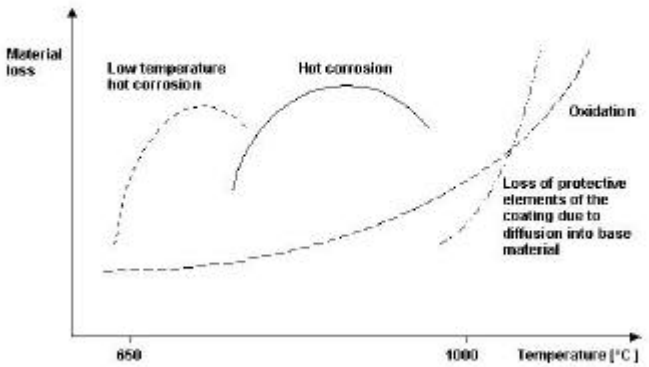
Proposed topics can include, but are not limited to the topics listed below in **materials, coatings and repair of hot section parts, technical and economical aspects, etc.**

The objective of the training provided is for your plant staff to gain a better and more detailed understanding of gas turbine materials, coatings and in state-of-the-art repair technologies.

List of proposed topics:

Base materials:

Metallurgy of Superalloys for non metallurgists
Mechanical properties of superalloys
Surface stability (High temperature corrosion, Oxidation)
Metallurgical damages after long period of service time



Set the focus of your personalized training session !

Coatings:

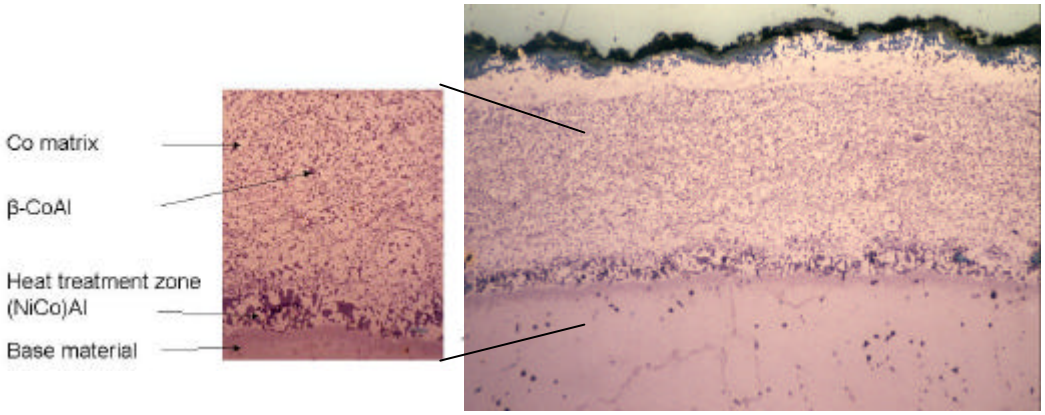
Hot corrosion resistant coatings:

Diffusion coatings, Overlay coatings
Pack, Slurry, CVD (Chemical Vapour Deposition), Thermal sprayed coatings, MCrAlY type coatings
Advantages, Applications, Technical limits, Proprietary coatings

Quality control, Economic aspects

Thermal barrier coatings (TBC)
Plasma sprayed TBC, EB-PVD TBC (Electron Beam-Physical Vapour Deposition)
Function, Properties, Life improvement, Economic aspects

Internal coatings for cooling holes



Repair
Steps for part repair:

Stripping:
Chemical stripping
Mechanical stripping

Rebuild part shape:
Welding (Automatic, Manual)
Brazing
Parent material deposition by VPS (Vacuum Plasma Spraying)
Laser cladding

Rejuvenation heat treatment:
HIP (Hot Isostatic Pressing)

Recoating

Quality control on refurbished hot section parts

Individual training sessions and support in all of the above aspects of component life cycle engineering is based on Turbotect's long history and expertise in coatings and refurbishment of hot section parts, and enables gas turbine operators to achieve improved reliability and economic benefits.

Turbotect (USA), Inc.
18811 N. Roselake Drive
Tomball, Texas 77377
U.S.A.
Phone: 1-281-255-6092
Fax: 1-281-516-0427
E-mail: Andrew.bromley@turbotect.com

www.turbotect.com

Turbotect Ltd.
PO Box 1411
CH-5401 Baden
Switzerland
Phone: +41-56-200-5020
Fax: +41-56-200-5022
E-mail: Turbotect@turbotect.com