SYSTHERMS

Furnaces for CVD processes

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Siemens AG, Energy Sector

Nowadays, gas turbines are used as standard in a wide range of applications:
In addition to mobile applications such as aircraft engines, in ships (or also in motor vehicles), they are now also indispensable in stationary versions in the power station sector. To achieve a high degree of efficiency, these turbines are operated at temperatures which make a coating of the turbine blades necessary. In order to repair these blades, the coating must first be removed and reapplied when the repair has been carried out.

SYSTHERMS supplies furnace systems both for CVD coating and for removal of these layers (stripping).


MTU Aero Engines

Together we are strong:
You make the process and we make the machine.

Process control is customer-specific, both for coating and for stripping.
The process parameters are your know-how, which we do not wish to dispute.

SYSTHERMS ideally adapts the furnace system to your process requirements. All we require from you is information on the gases, temperatures, heating and cooling rates which you use. Other factors which determine the design are the sizes and quantities of the parts to be treated.
With this information we can design the system so exactly that you achieve the maximum benefit.

Please contact us. We will be glad to advise you.

Safety first:
We embrace the philosophy of the aviation industry.

The process media used are often hazardous to health. These hazardous substances must be handled with great care. Hazards for humans and the environment must be avoided as far as possible. Our principle is always: safety first.
SYSTHERMS systems are designed in such a way that faults can be avoided as far as possible through careful selection of components and redundancies.
If nevertheless a fault should occur, our sensor system is so sensitively configured that it is possible to detect at an early stage where something is going wrong.
The SYSTHERMS safety software immediately places the system in a safe state so that hazards to humans and the environment can be excluded. Our first priority is protection of the environment, then of the system and thirdly of the load.
Faults may be a malfunction or failure of system components but also failures of the media supply such as the gas supply or also power failures. Precautions have been taken for all these cases. When the system has been shut down, the service concept helps to eliminate the cause of the fault as quickly as possible.

Our service technicians are highly trained and quick to help.

Retort after the CVD process

Heating hood for CVD furnace

Technical specifications:

Gases used so far	Ar, H_2, HCl, HF, N_2
Wet scrubbers used so far	NaOH, KOH, dry separator
Standard dimensions	Ø 750 x 650 mm, Ø 900 x 900 mm, Ø 1100 x 1100 mm
Load weight	up to 1500 kg
Temperatures	max. 1100° C
Temperature uniformity	up to ± 5 K
Vacuum/pressure control	inside/outside of the retort
Different construction types	• Hood on spindle-lifting gear unit • Hood on underslung crane • Platform system

SYSTHERMS

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