

Plant performance training courses

KEMA Academy



Many industrial plants operate almost continuously. Whether it's a power plant, a petrochemical plant or a smaller industrial unit, what matters is that the operating process continues uninterrupted. Unscheduled outages literally bring this process to a halt. After a restart it may take days before the process is running properly again. And then there is the repair cost to consider. Moreover, the cost of keeping the plant operating smoothly will increase over the years.

As a plant manager, you know better than anyone that the continuity of your power production unit depends on optimizing its performance and maximizing its reliability. You have to deliver when the market demand is there. However, the complexity of the individual components and of the plant as a whole makes it very difficult to establish high performance in combination with high reliability.

So, to provide you with the insight you need, KEMA has developed a range of plant related training courses aligned with your day-to-day operational needs.

For a current overview of our training program and to register, please visit www.kema.com/academy.



In-company & customized training courses

At the client's request KEMA can also provide in-company and customized training courses. The course can then, for example, deal with actual cases from your business operations, or future scenarios sketched out by you. We are flexible in this.

Overview of plant performance training courses

Course	Description	Subjects	Result	Target Group
Gas turbine technology four-day training course English, Dutch or German language	This training course covers the general operational and maintenance characteristics of gas turbines. Complete design and operating concepts are considered, together with basic operating and maintenance problems. The course combines theory and practical training.	<ul style="list-style-type: none"> • General operating and maintenance characteristics of gas turbines • Design and operating concepts • Operating and maintenance problems • Condition monitoring and diagnostics • New materials • Reconditioning and life expectancy management • Smaller CHP units • Compressor cleaning and air filtration • Performance monitoring • Emission determination and reduction techniques 	<ul style="list-style-type: none"> • Update regarding the latest international standards • Knowledge of basic design and operating principles • Improved understanding of the theory behind the practice • Knowledge of the latest designs and research results • Monitoring and influencing emissions 	Process operators and maintenance personnel in the gas and oil industry, process industry, power plants and transport and distribution companies.
Materials, failures & life cycle management three-day training course Dutch language	This training course covers the general operational and maintenance characteristics of installations; kinds of failure, requirements for material, influences of process conditions, prevention, etc.	<ul style="list-style-type: none"> • Degradation mechanisms / lifecycle • Boiler materials / material standards • High temperature corrosion & fouling • Practical examples of damage • Welding • Coatings & corrosion protection • Fitness for purpose • Non-Destructive testing 	<ul style="list-style-type: none"> • Knowledge of the latest international standards • Knowledge of the most recent developments in materials • Understanding of the basic principles behind degradation mechanisms and translation into practice • Insight into ways of improving installation reliability 	Maintenance engineers, reliability engineers, plant managers, process technologists and inspectors.
Process- and cooling water chemistry one- and two-day training courses English or Dutch language	For reliable operations, optimum conditioning of the water steam circuit and good fouling control in the cooling water circuit are crucial for preventing corrosion and fouling. This series of courses consists of a general course and a number of specialist modules relating to make-up water, process water and cooling water.	<ul style="list-style-type: none"> • Process water treatment • Conditioning and monitoring of the water steam circuit • Macro and micro fouling • Make-up water preparation with ion exchange units • Make-up water preparation with membrane technology • Conditioning of and preventing corrosion 	<ul style="list-style-type: none"> • Knowledge of how to maintain the integrity of the water-steam and cooling water systems • Guidelines for the conditioning of the water-steam cycle • Corrosion prevention and (bio)fouling control • Understanding of the theory behind the practice • Knowledge of the latest international developments 	Employees and managers in the processing and energy generation industries (operators, managers, chemists, analysts, etc.)
Pulverized coal fired power plants English or Dutch language	The complete process of a pulverized fuel fired power station is treated, with regard to fuel, combustion, flue gas cleaning and by-products. It starts with coal properties and coal sampling and covers combustion as well as the different options for flue gas treatment. Finally, the various options for utilizing residual coal combustion products are discussed.	<ul style="list-style-type: none"> • Coal properties, sampling & grinding • Combustion installations • Boiler material technologies • Low NOx combustion • Corrosion • Slagging and fouling • Co-firing of biomass • Flue gas treatment • Properties and application of fly-ash, bottom ash and gypsum • Legislation and permitting (National and EU) 	<ul style="list-style-type: none"> • Knowledge of basic design and operating principles • Understanding of fuel characteristics and their effects on plant operation • Knowledge of options for co-firing of biomass • Understanding options for ash utilization, effects of fuel composition, plant operation and ash quality • Overview of the interdependency of the different operational requirements 	Operators and staff responsible for individual constituent processes in a pulverized coal-fired power plant, as well as for the plant as a whole.

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