

Operational support of technological equipment in power generating plants

Do you operate a power generating plant equipped with combustion equipment burning solid, gaseous or liquid fuels? Do you think about optimizing combustion modes, increasing efficiency or extending the operating area of your plant?

What do we offer?

OSC provides a wide range of services relating to the operation of technological equipment of power generating plants. The services offered can be divided into two groups:

- solution of operational problems of equipment
- optimization of equipment operation by using its present capabilities

The solution of the problem arises from the historical process data obtained from Process control and instrumentation system (PCIS), from the results of our own technological measurements and from other available documents. After processing and making a detailed analysis of all data obtained which characterize the behaviour of the equipment or a device the most suitable solution is designed and implemented.

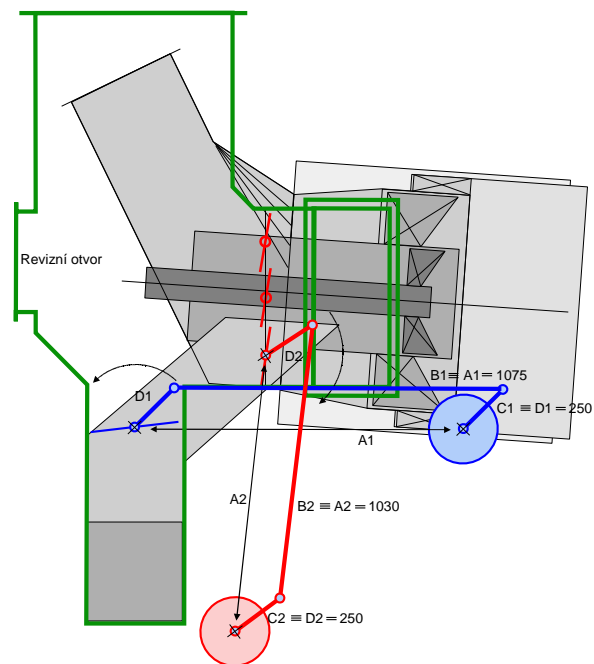
The main advantage of OSC is its ability to provide services ranging from *elementary activities* (e.g. assessment of air flap features) to *complex solutions of extensive problems* (analysis, processing solution proposals, project designs and the implementation of the necessary modifications to technological equipment, modifications of control algorithms and their implementation into the control systems).

OSC provides *one-off* actions as well as service (repeated) works.

Who are our services for?

The services we provide are designed for:

- operators of power generating plants
- suppliers of technological equipment for power generating plants



OSC can act as an independent subject for expertises, evaluations or verification measurements within the scope of contracts between customers and suppliers of technological equipment for power generating plants. The services we offer can be applied for all types of boilers (granulated coal, grate as well as fluidized bed boilers, for gas/liquid and alternative fuel combustion boilers) and for standard rotary machines (turbogenerators, fans and pumps).

Range of offered services

There is a wide range of services provided in the field of the operational support of technological devices in power generating plants, including:

- assessment and use of operating reserves of a device (important when considering extension the operating area or providing of ancillary services)

- optimization of the combustion processes (reduced production of NO_x, suppression of slag production, improved combustion dynamics)
- determination of boiler efficiency in compliance with ČSN EN 12952-15
- adaptation of combustion equipment for changed fuel base
- design and implementation of construction modifications of technological equipment units (burners, air and dust piping)
- other services such as the provision of cooperation or technical supervision when reconstructing technological equipment in the field of fuel and combustion preparation, elaboration of comparative studies for various operation devices, checks on boiler equipment in accordance with the applicable standards, providing operative technological help to resolve current problems



The above-mentioned services consist of partial activities provided for customers as independent services. These are:

- ultrasonic measurement of flow of liquid in piping
- network measurement of temperature, air flow and combustion gases
- assessment of permeability limits capacities of piping for air and combustion products
- assessment of features and characteristics of flaps, fuel feeders, fans and pumps
- assessment of thermic and mass balances of coal mills, cooling circuits and heat exchangers
- measurement of coal mill circuit dynamics
- diagnostics of operation areas of fans, pumps and turbogenerators

- calibration of operation gauges for measurement of pressure and flow of combustion gases

Equipment

OSC uses high-quality measuring instruments, which make up a complete chain of measurement consisting of a wide range of sensors and converters, measuring centre and SW equipment for processing and analysing of measured data.



References

The experience of OSC in the field of heat energy has been gained through numerous successfully completed projects in power generating plants of various types and outputs installed. OSC customers are important energy producers and suppliers, such as ČEZ, Energotrans, Elektrárny Opatovice, Ostrovská teplárenská, Cinergetika Ústí nad Labem, and others.

OSC, a.s., company covers with its activities the area of production and distribution of electricity and heat. The Company provides a wide spectrum of engineering services, repair and consultancy services, and supplies complex, key ready sets of technical means for up to date control systems, systems for data and information processing and transfer, and simulation systems; the Company also develops special electronic elements and devices.