# Management of emission reduction technologies

ZAT's traditional product is also the management of technologies to reduce emissions. We are able to control any technology using our solution based on our own SandRA control system.

## 1) DeSOx (desulphurisation)

During flue gas desulphurisation, SO2 is removed from the flue gas by various methods. The best known method is the external absorption reaction with the circulating limestone suspension in the absorber reactor - the so-called wet method

The flue gas desulphurisation unit includes all main and auxiliary equipment, including accessories necessary for the transport of flue gases from the boilers to the desulphurisation unit, for the absorption reaction, unloading, storage and preparation of the absorbent and for removal and treatment of the reaction products.

- We supply control systems for all types of desulphurisation processes, ie dry and wet methods or their combinations
- We have the know-how to manage technology that reduces SOx emissions
- We manage processes via the DCS platform with the possibility of distributed control of individual operating files
- For desulphurization control, we offer our own SandRA Z200 control system or a control system compatible with the control of the entire unit according to customer requirements
- We provide monitoring and visualization with the help of products from Czech and foreign manufacturers. The Czech manufacturers are Geovap (Reliance) and Moravské přístroje a.s. (ControlWeb), producers of software applications. The foreign manufacturers are Aveva (InTouch) and Siemens (WinCC).
- The diagnostic system is part of the SandRA Z200 process stations

## 2) DeNOx

Combustion of fossil fuels causes high NOx emissions. To comply with local emission limits, it is necessary to ensure their reduction, for example, using ammonia in technology that dispenses the correct level for a particular combustion boiler. The challenge is proper ammonia dosing, where it is important to ensure optimal NOx levels and eliminate ammonia emissions.

To manage these technologies, ZAT uses its own solution, based on the SandRA Z210 compact process stations.

## 3) DeDust (ash removing)

The ash separator is a device used to treat flue gases by dedusting. To control this technology, we offer our own SandRA Z200 control system or a control system compatible with the control of the entire unit according to customer requirements.

ZAT has the know-how to control the separators of all major suppliers.

## 4) DeHg (reduction of mercury emissions)

The measure mainly concerns coal-fired power plants, which are the main producers of mercury emissions. Their reduction is already a side effect of measures to reduce sulfur and nitrogen emissions. Technologies for a significant reduction in mercury emissions already exist, but they are not yet universal for all types of coal or for all types of power plants.


ZAT offers a solution for controlling these new technologies based on its own SandRA Z200 platform, or its compact version Z210. DeHg technology can often be connected to existing boiler control, mostly using HW and SW SandRA Z200.