



Development
Engineering
Realisation

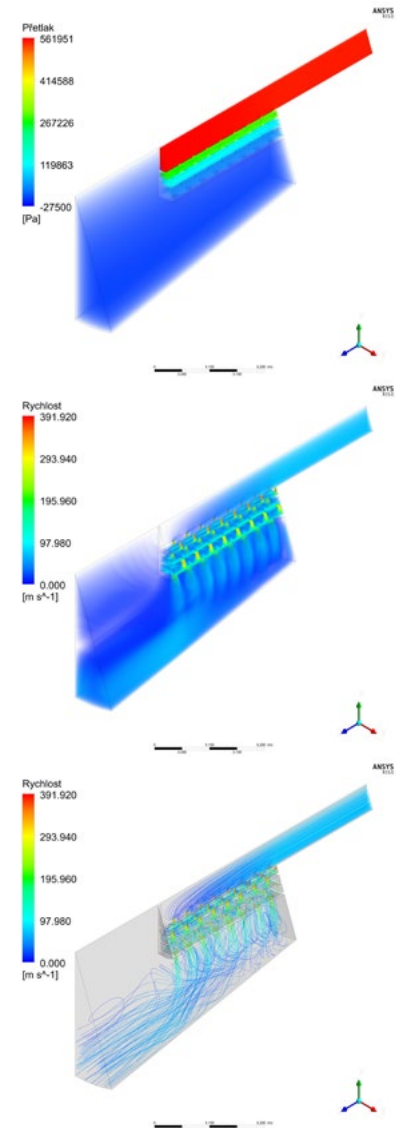
» Vent silencer – product summary



- » Vent silencers supplies for power plants, heating plants and other steam sources
- » Designed to reduce the vent steam noise coming from safety valves, start-up and other regulation valves
- » Proven multilevel expansion chamber technology
- » Noise level attenuation cca – 40 dB (base case); can be further reduced applying additional noise absorber
- » Galvanized outer surface
- » Existing (safety valve) exhaust piping assessment, design and workshop documentation for the vent silencer installation are included in the delivery contract

Selected references:

- » Ledvice power plant – design, delivery and installation of 8 vent silencers for 4 boilers, realization: March – June 2016 including control noise level measurement before and after installation. Targeted noise level reduction below 60 dB (at reference point) achieved. Parameters: $t = 235^{\circ}\text{C}$, $p = 2 \text{ MPa}$, $Q = 9,5 \text{ t/h}$
- » Tusimice II power plant: complete vent silencers design (BD, DD, WD) for 4 boilers. Parameters: $t = 585^{\circ}\text{C}$, $p = 4,5 \text{ MPa}$, $Q = 346 \text{ t/h}$



» Proudly delivering engineering services for 20 years

Our clients:

**ArcelorMittal | BONATRANS GROUP | CEZ Group | Danstoker | EVRAZ | GE Power
PBS INDUSTRY | Siemens | Stampa | Vítkovice Machinery Group | VYNCKE**

We provide our services to manufacturers, suppliers, boiler rooms owners & engineers, metallurgical operations, chemical operations and paper mills.

WE PROVIDE:

Feasibility studies, designs, technical calculations and workshop documentation for (partial list):

- › Pressure parts for steam and hot-water boilers (boiler piping, membrane walls, exchangers, steam air heaters, pressure locks for low and high pressure steam pipelines, boiler drums, etc.)
- › Combustion applications, which include low NOx pulverized coal burners (for both lignite and hard coal)
- › Waste heat boilers, HRSG boilers
- › Ducts (flue gas, air, dedusting)
- › Piping (steam, water, chemicals)
- › Steel structures (halls, piping bridges, technological equipment, etc.)
- › Foundations for standalone machines (machine-tools, milling machines, presses, etc.)
- › Foundations for production lines

WE PERFORM:

- › Technical calculations (static, expansion, strength, heat, hydraulic, aerodynamic)
- › CFD modelling (Computational Fluid Dynamics)
- › Technical support for boiler/boiler house operators
- › Combustion process optimisation for the reduction of NOx emissions in flue-gas or heat operating temperature design for application of additives (SNCR, SCR, etc.)
- › Measures to improve steam boiler efficiency
- › Studies to assess the impact of fuel quality changes on boiler operating parameters
- › Assessment of steam boiler drums (including consulting services on the appropriate technology for repairing drum surface cracks)
- › Optimisation of coal mills
- › Strong IVITAS know how in the area of combustion processes and fuel preparation
- › Fossil fuel tests for selection of the optimal combustion process (for new boilers) and optimisation of operation for existing ones. Tests are run at the purpose-built, IVITAS combustion test stand
- › Inspection and adjustment of suspension for technological elements and equipment

WE DELIVER:

- › Low Nox pulverized coal burners
- › Beater wheel mill elements (beaters)
- › Silencers
- › Heat exchangers (economizers, pre-heaters, air-heaters, etc.)
- › Pressure locks for high- and low-pressure steam pipelines

Our documentation is prepared in accordance with EN requirements | IVITAS is **ISO 9001:2009** and **ISO 27001:2014** certified

We utilize the following software: AutoCad, Inventor, PDMS, Tekla Structures, ANSYS Fluent, Scia and CaePipe