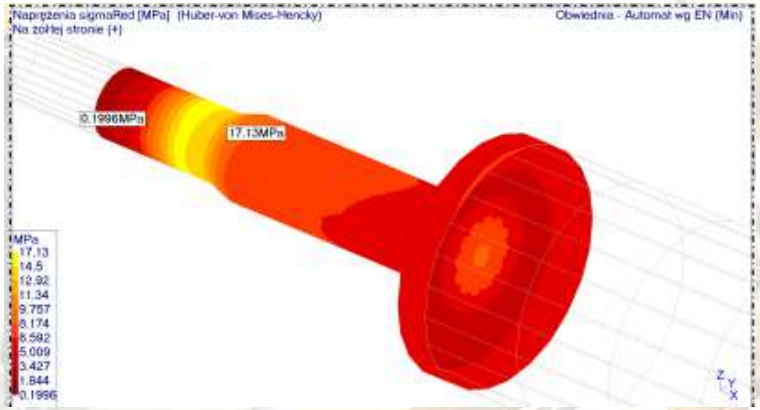
- **Comprehensive design (power energy sector):**

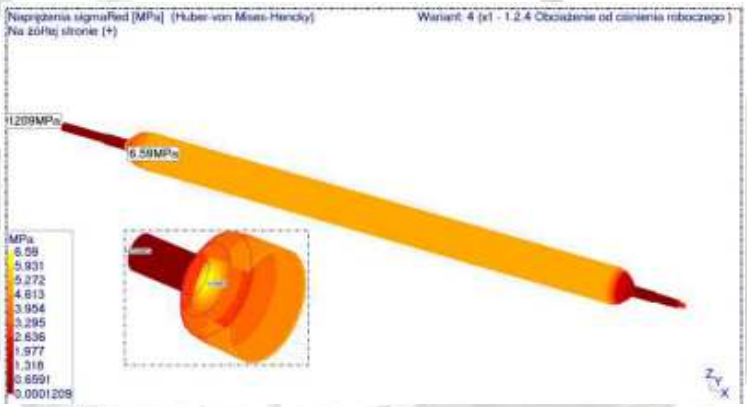
  - auxiliary equipment for boilers and environmental protection installations,
  - non-pressure and low-pressure tanks,
  - flue gas and air ducts with the supporting steel structure,
  - steel supporting structure,
  - air and flue gas ducts with accessories (flaps, gate valves, dampers),
  - service platforms,
  - load-bearing structures - including mass and strength optimization,
  - transport and temporary use beams,
  - elements of the denitrification system,
  - elements of the deslagging and ash removal system - i.g. deslaggers, conveyors, electrostatic precipitator housings,
  - large-size metal expansion joints mounted on exhaust and air ducts,
  - installation of ash blowing with steam and water blowers (water cannons) for boiler and for rotary heat exchangers,
  - designing thermal and soundproofing insulations,
  - pipelines of low and medium pressure installations - with strength calculations, selection of suspensions.

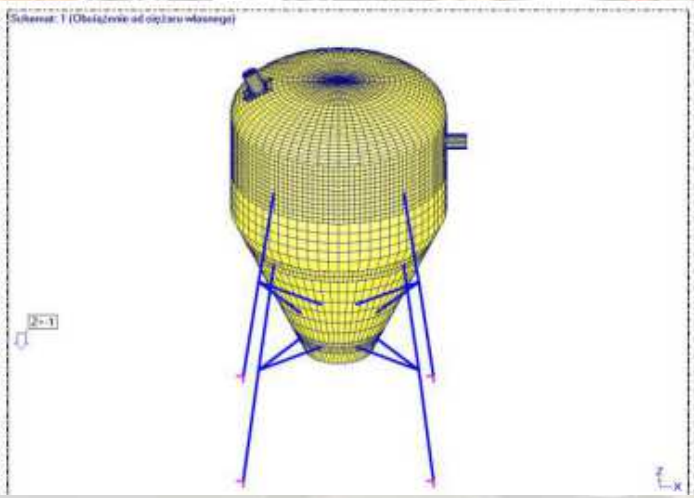
- **Mechanical devices designing:**

  - design of mechanical devices,
  - belt-, screw-, scraper-, bucket- conveyors
  - coal, limestone, sand and ash feeders,
  - slag removers,
  - cell dispensers,
  - flaps, dampers,
  - gate valves,
  - biomass transport,
  - selection of drives,
  - modernization of drives
  - the use of inverters, replacement of motors with new energy-saving new generation,
  - selection of valve and other fittings,

- **FEM modeling**



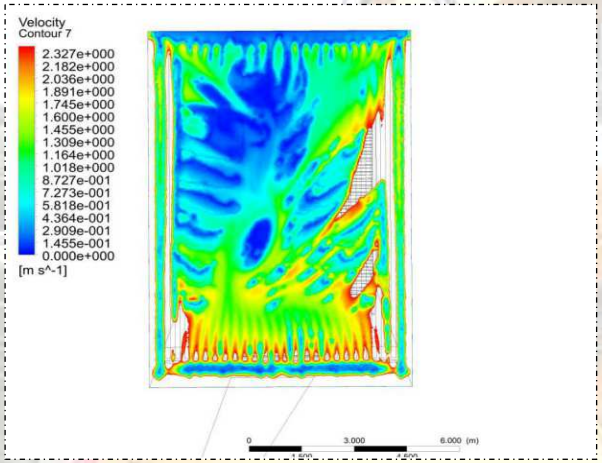


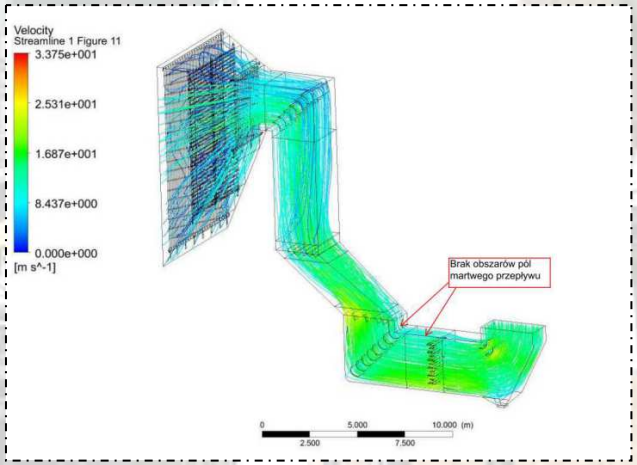


Sample screenshots from the FEM calculation program - modeling results.
We have our own software that allows us to perform models and strength analyzes of loading beams and shell structures.

➢ **Flow modeling - CFD analysis**

- analysis of flow problems in the configuration of existing installations with actions aimed at improving the structure,
- selection of stream directors,
- optimization of the structure of ducts, pipes, flow direction blades,
- flow analysis of flow machines and devices,





Sample from the flow analysis of flue gases - inflow to the electrostatic precipitator.