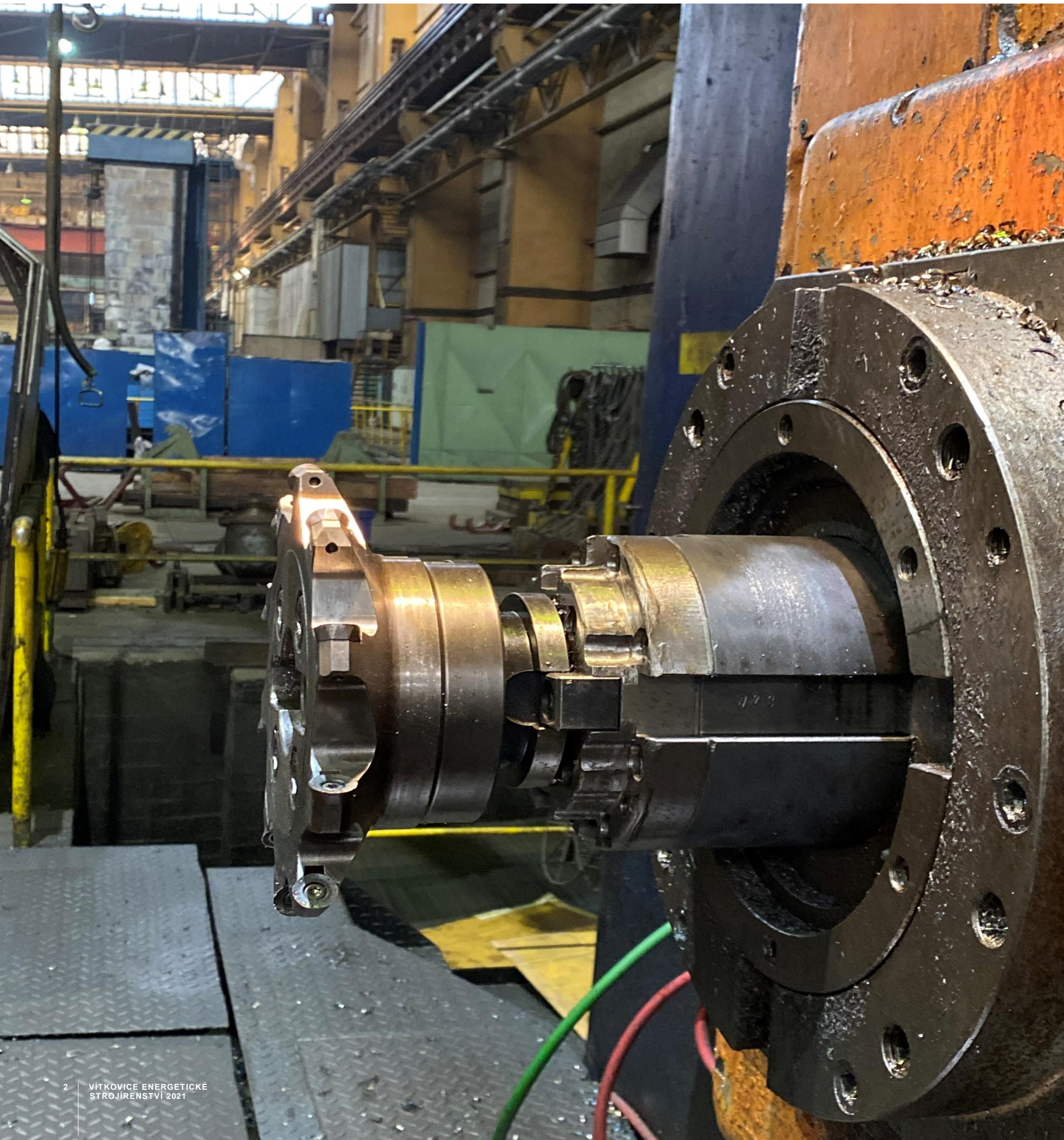


A large, dark, cylindrical industrial storage tank is the central focus of the image. It has several pipes and valves attached to its side. The tank is situated in a large industrial facility with a complex network of pipes, walkways, and structural steel visible in the background. The lighting is somewhat dim, giving the scene a gritty, industrial feel.

# **Storage Tanks Nuclear Power Plants Chemical & Petrochemical Industry**





# Building on a long tradition

VÍTKOVICE ENERGETICKÉ STROJÍRENSTVÍ a.s. was founded in spring of 2018 and builds on a long-term tradition in production of pressure and non-pressure parts of power plants, parts for chemical and petrochemical industry, parts for steel industry and others.

In addition to the production of complete parts, we can also offer different ways of cooperation, such as plate rolling and bending, bending of pipes, welding, post weld heat treatment and machining.

## 1888

Construction of the building „Kotlárna“ was started, and it was completed in 1890. An independent department of „Kotlárna“ has been established the same year (Kesselfabrik), which was equipped with specific machines intended for production of boilers.

## 1978

Production of the first compensator for nuclear power plant. The nuclear programme was established – especially production of internal rings of reactor and volume compensator VVER 400 MWe.

## 2018

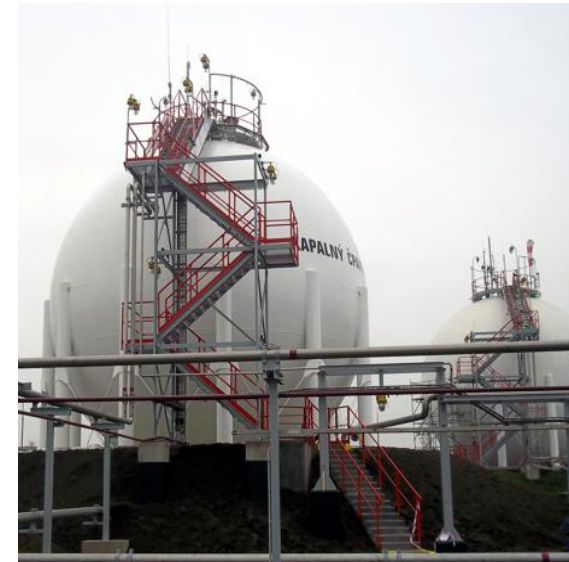
100 - years of production continues, with a focus on production of pressure systems for power plants including boiler drums, components for nuclear power plants, storage tanks and parts for metallurgical industry.



# Storage Tanks

We offer a production of storage tanks for storing liquified gases and their gaseous phases, chemicals and liquids. A total of 95 tanks have been manufactured since 1990.

The tank volumes range between 300 m<sup>3</sup> up to 125 000 m<sup>3</sup>. We can produce pressure storage tanks, spherical storage tanks, cylindrical storage tanks, cylindrical mounded storage tanks, non-pressure storage tanks and high capacity storage tanks.



## Pressure and non-pressure storage tanks

We offer design of pressure and non-pressure vessels and systems mainly for power industry. Each delivery of pressure vessels is done according to our own design or design provided by our customers. These vessels consist of cylindrical shell, heads and nozzles. We can offer these vessels from carbon steel material or stainless steel, we also have experience with double walled pressure vessels.

## Spherical storage tanks

We offer storage tanks with fixed roof or floating roof. The shell of the tank is delivered in segments to site (on pallets), the remaining components in transportable parts. We also offer production of protecting well and steel structures for the tanks, such as ladders and platforms. We can offer these tanks from carbon steel material or stainless steel. Spherical storage tanks are used for storing of petrol, hydrogen, LPG, ammonia and propane-butane.

## High capacity storage tanks

We offer production with or without plate protecting well, with single or double-walled bottom, with self supporting fixed roof, with floating single board or double board roof. Since 1990 our company has manufactured 42 pcs of high capacity storage tanks. Delivered were to companies such as SLOVNAFT, a.s., Wassertechnik Salzburg, CTR Kralupy. These tanks are used for storing of crude oil, mazut, water and other liquids.

## Cylindrical storage tanks

These type of tanks are used for storing liquified gases and their gaseous phases, chemicals or liquids (ammonia, oil, LPG, sodium hydroxide). Since 1990 our company has manufactured more than 26 pcs of these types of storage tanks. Delivered of cylindrical storage tanks were within Czech Republic and Slovakia.



# Power industry & Nuclear Power

VÍTKOVICE ENERGETICKÉ STROJÍRENSTVÍ a.s. is the holder of certificates for production of pressure parts and piping systems acc. to PED 2014/68/EU, EN 13445, EN 13480, EN 12952, EN 12953, AD 2000 HP0/W0, EN765-4.

In nuclear power sector we offer production of pressure parts, heat exchangers, steam generators, high pressure and low pressure heaters for secondary circuit, replacement tube bundles of low pressure heaters, pressure vessels (volume condensators, drainage coolers) and spare parts for nuclear power plants.

Production of parts in power industry includes boiler drums, internal and external piping, steam headers, water, steam and gas turbine casings, inlet and outlet parts of water turbines, pressure penstocks and distribution branches, spare parts and components for power plants, heating surfaces (such as superheaters, economisers, flue gas coolers, air preheaters and other parts).

1. Rotating column 2. Boiler drum  
3. Cooling water piping 4. Low pressure heater 1200



VÍTKOVICE ENERGETICKÉ STROJÍRENSTVÍ a.s. has many years of experience in power and nuclear power industry. For production of boiler drums, we are not limited by length of the shell including the heads. We have experience with production of boiler drum in length of 25 meters long. We offer production of internals, post weld heat treatment and supervision of Notified body. We can also supply to our customers spare parts, such as manhole covers and connecting material (including manhole gaskets).

In the past we have successfully manufactured High pressure heaters (HPH) and Low pressure heaters (LPH) for Russian nuclear power market, including machining and drilling of tube sheets.

We regularly supply pressure and non-pressure parts of boilers, economisers, superheaters, air preheaters and injectors to our main customers, which are used in many power plants throughout Europe.



# Tube bending shop

We bend tubes, pipes and profiles by both cold and hot bending process. We produce also pressure and non-pressure parts and whole units. We offer automated and manual welding, machining, post bend heat treatment, sand blasting, metallic painting and surface treatment. Pipe systems acc.to ČSN 13 2604, for piping acc.to ČSN 13 1020 and ČSN 13 1030. Tube coil systems of steam boilers (former industrial sector standards acc.to ON 07 0627 and ON 07 0629), according to drawing documentation and requirements of the customer. We also have certificates acc.to DIN - AD W0 / TRD 100, ISO 9001, ASME.



1. Bending with induction heating 2. Tube bends  
3. Tube bends 4. Cold pipe bending



### Welding:

#### Automated:

- methods 141, 142 (Polysoude)
- Operator qualification acc. to EN ISO 14732, PED 2014/68/EU, AD2000-HP3

#### Manual:

- methods 141, 111, 135
- welder's qualifications acc. to EN ISO 9606-1, PED 2014/68/EU, AD2000-HP3
- Machinery: equipment ESAB, EWM, Fronius, Alfa, etc.

### Cold bending – machinery:

- XOT 50, XOT 110, XOTH 114 A
- Perfekt WE 60, NC Perfekt W 40
- H273
- Bending machine XZP 50/7
- Bending machine CNC 76 TB

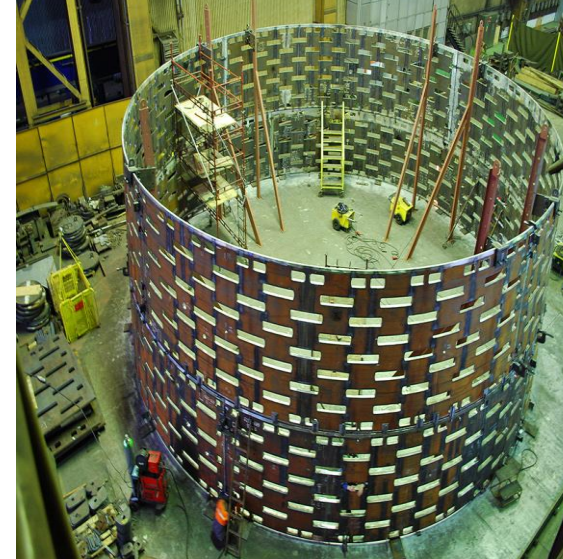
### Hot bending – machinery:

- EOS 630 – Induction bending machine



# Other products for the industry

VÍTKOVICE ENERGETICKÉ STROJÍRENSTVÍ a.s. offers production parts for other industrial sectors, especially parts for steel industry.



## Blast Furnace Shells

Our biggest success was production of blast furnace shell for the Russian company PAO Severstal. The shell has been delivered to site in reinforced segments including surface protection. VÍTKOVICE ENERGETICKÉ STROJÍRENSTVÍ a.s. is capable to deliver all segments of the blast furnace such as the bottom, base ring, segments of the shell itself, tuyeres, coolers and openings (including machining), nozzles, flanges and top cone.

## Material hoppers

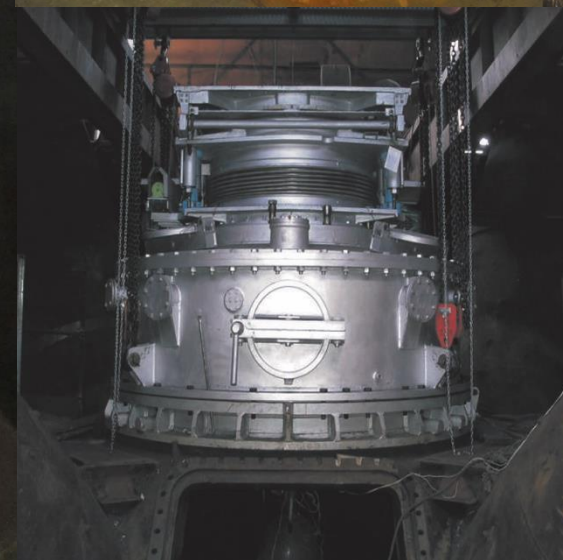
Hoppers are delivered at site in transportable segments. We can also weld anchors, which are often required by our customers. Material hoppers are used for storage of liquids, powders and other materials, which are mainly used in agriculture, building industry, chemical and petrochemical industry, food industry, power sector, environmental industry etc.

## Ladles

We have experiences with deliveries of whole ladles with weights of 90 tonnes, 175 tonnes, 200 tonnes and 250 tonnes. We can also assure partial deliveries of parts such as ladle shell with spigot, ladle lid, tilting system, gas mixing system, foldable stand for ladle, reinforcing ring, ladle suspension system etc.

## Parts of electric arc furnaces

We deliver mainly parts for vertical industrial furnaces used in oil refineries and chemical industries, its advantages are simple installation, maintenance and small area. We also supply parts for industrial shaft furnaces and parts for special industrial furnaces.





## We have been operating since 1828

Wherever people need clean water, control energy, bridge valleys or use the wealth of the earth, we are there. We help create, build and manufacture. In 70 countries on all continents, we represent unique knowledge, technology and committed professionals that you have been able to rely on for more than 190 years. #wearewitkowitz



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