



# VÍTKOVICE ENERGETICKÉ STROJÍRENSTVÍ

WITKOWITZ GROUP COMPANY



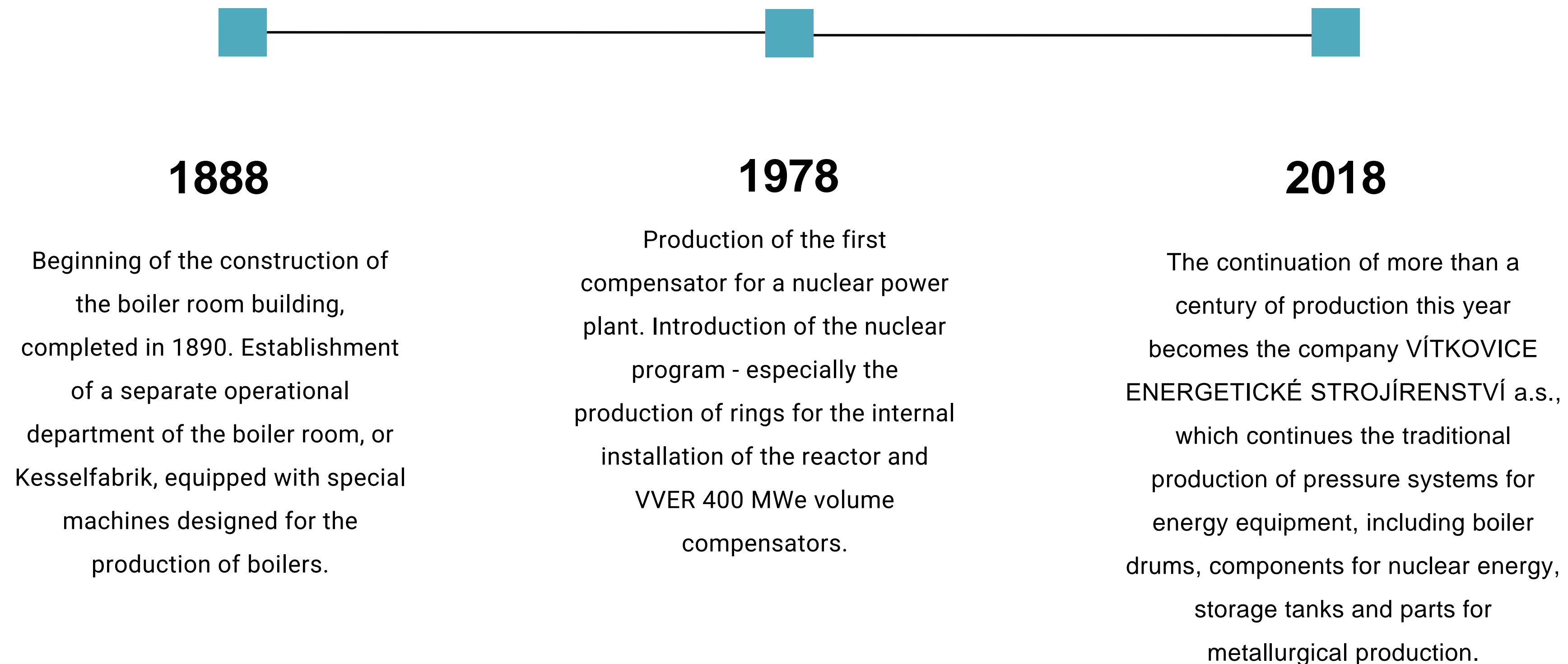
## Introduction

The company VÍTKOVICE ENERGETICKÉ STROJÍRENSTVÍ a.s., continues a long tradition in the production of pressure and non-pressure parts of power plants, parts for the chemical and petrochemical industry, parts for the steel industry and more.

In addition to the production of complete parts, the company offers various forms of cooperation, especially in the form of bending of plates, bending of pipes, welding, heat treatment, machining.

# HISTORY

Historical milestones of the company VÍTKOVICE ENERGETICKÉ STROJÍRENSTVÍ a.s.



# PORTFOLIO

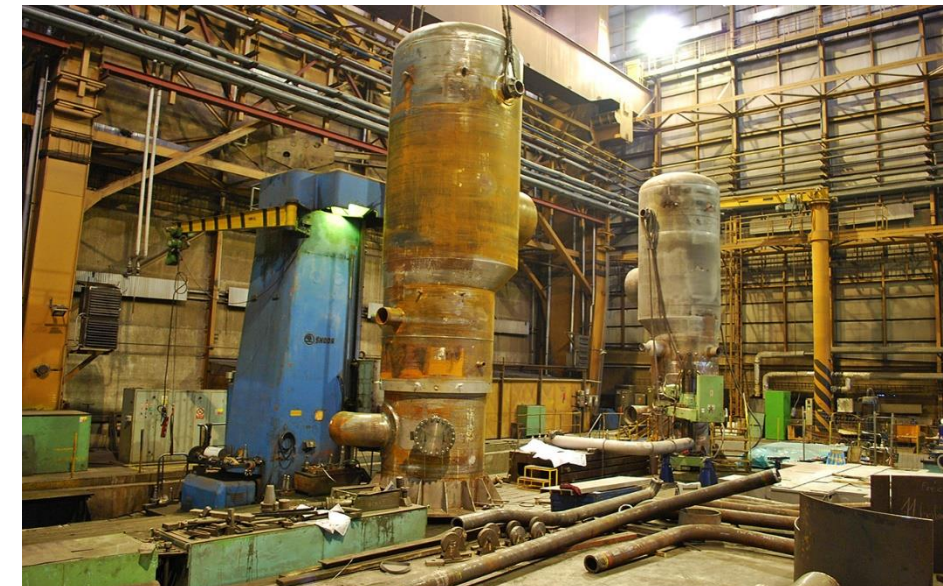
Production of pressure and non-pressure parts of power plants (conventional and nuclear), components for the chemical, petrochemical and steel industries. Services in the field of bending, sheet metal bending, pipe bending, welding, machining of large forgings and production of heavy steel structures and bridges.

## Stogare tanks



We offer manufacturing of storage tanks for storage of liquefied gasses and their gaseous phases, chemicals and liquids. Volume of manufactured tanks is up to 125 000 m<sup>3</sup>.

## Power industry, nuclear power



The company holds certificates for the production of pressure equipment and piping systems according to PED 2014/68 / EU, EN 13445, EN 13480, EN 12952, EN 12953, AD 2000 HP0 / W0, EN765-4, ASME „S“, ASME „U“, ASME „U2“.

## Chemical, Petrochemical Industry



In the chemical industry, we offer the production of exchangers, absorbers, reactors, tanks, columns and more.

# PORTFOLIO

Production of pressure and non-pressure parts of power plants (conventional and nuclear), components for the chemical, petrochemical and steel industries. Services in the field of bending, sheet metal bending, pipe bending, welding, machining of large forgings and production of heavy steel structures and bridges.

## Tube bending shop



Cold and hot bending of pipes and profiles. We also produce pressure and non-pressure parts and units. We offer automatic and manual welding, machining, heat treatment, blasting, metallization, surface treatment.

## Industrial products



Our company is engaged in manufacturing of parts for other industrial sectors, above all, it is manufacturing of equipment for steelworks, such as blast furnace shells, hot blast stove shells, material hoppers, casting ladles, arc furnaces, etc.

## Heavy steel structures and bridges



We offer complete production of steel structures and bridges. We cover the production process of steel structures from the beginning to the end with our own capacities. We laser cut metal sheets, prepare weld edges, bend material ourselves. We weld both manually and automatically under flux.

## STORAGE TANKS

# Spherical, cylindrical tanks

Since 1990, a total of 95 tanks have been produced. The volume of manufactured tanks ranges from 300 m<sup>3</sup> to 125,000 m<sup>3</sup>.

## Division of storage tanks:

- Pressure storage tanks
- Spherical pressure tanks
- Cylindrical storage tanks
- Cylindrical mounded tanks
- Non-pressure storage tanks
- Large-volume storage tanks with a volume of up to 125,000 m<sup>3</sup>



# SELECTED REFERENCES

**Large-capacity oil tank farm**



**Buyer:** MERO-Nelahozeves - Kralupy, Czech Republic

**Cylindrical storage tanks for oil, soybean oil**



**Buyer:** Chemoprojekt Praha, Czech Republic

**User:** Liehovary, Leopoldov, Slovakia

## PARTS OF THERMAL POWER STATIONS

## High pressure pipes and chambers

Since 2000, pipes and headers have been manufactured for more than 20 projects.

Supplies for projects for Elbistan (Turkey), Venezuela, Jiant Lin (China), Skoghall (Sweden), Itata (Chile), Runcorn (UK), Termoli (Italy), Santa Fe (Chile), Grande RB (Canada), Tušimice (Czech Republic), Kymi (Finland), Mondi Syktyvkar (Russia), Pärnu (Estonia), Fature (France), Mellach (Austria), Örebro (Sweden), Kiröskoski (Finland), Ledvice (Czech Republic), Prunéřov (Czech Republic), Biokotel Žarnovica (Slovak Republic), Domoradice (Czech Republic), Kutná Hora (Czech Republic), Rovinari (Romania), Walsum (Germany), Yunus Emre (Turkey), Värtaverket (Sweden), Riikinvoima (Finland), Zofiowka (Poland).





PARTS OF THERMAL POWER STATIONS

## Power industry

Our company holds certificates for the production of pressure equipment and piping systems according to PED 2014/68 / EU, EN 13445, EN 13480, EN 12952, EN 12953, AD 2000 HP0 / W0, EN764-5, ASME „S“, ASME „U“, ASME „U2“.

## Nuclear power

In the field of nuclear energy, we offer the production of pressure parts, heat exchangers, steam generators, etc.



# SELECTED REFERENCES

## Parts for nuclear PP



**Buyer:** ČEZ a.s.

**User:** Dukovany, Czech republic



**Buyer:** WITKOWITZ Atomica a.s.

**User:** ČVUT Praha, Czech republic

# BOILER DRUMS

Selected references of boiler drums in 2020

Year	Project, country	Pcs	Dimensions (mm)	Notified body, standard	Design pressure	Material quality
2020	ZAGREB Croatia	2	O.D. 1349x65- 7200	Customer, TÜV NORD Czech EN 12952 PED 2014/68/EU Module G	102,89 bar	P355GH
2020	ZAGREB Croatia	2	O.D. 1212x22- 7200	Customer, TÜV NORD Czech EN 12952 PED 2014/68/EU Module G	25 bar	P355GH
2020	BEMMEL Poland	1	O.D. 1500x40- 3800	Customer, TÜV Austria EN 12952 PED 2014/68/EU Module G	64 bar	P355GH
2020	NIFA C / D Germany	2	O.D. 1300x20- 4000	Customer, TÜV NORD Czech EN 13445 PED 2014/68/EU Module G	32 bar	P355GH
2020	NA/AN ANWIL Poland	1	O.D. 1900x48- 7500	Customer, TÜV NORD Czech EN 12952 PED 2014/68/EU Module G	60 bar	P355GH

# BOILER DRUMS

Selected references of boiler drums in 2021

Year	Project, country	Pcs	Dimensions (mm)	Notified body, standard	Design pressure	Material quality
2021	NSL3 – CFB FinLAND	1	I.D.1600x72- 11000mm	Customer, TÜV NORD Czech EN 12952 PED 2014/68/EU Module G	138 bar	15NiCuMoNb5-6-4
2021	DENIZLI Polsko	1	O.D.1350x34- 5500 mm	Customer, TÜV NORD Czech EN 12952 PED 2014/68/EU Module G	118 bar	15NiCuMoNb5-6-4
2021	Dillinger Hüttenwerke AG – GWW2 / BRO3 Německo	1	OØ1800 x 22 - 8016 mm.D. 1500x40-3800	Customer, TÜV NORD Czech EN 12952 PED 2014/68/EU Module G	31 bar	16Mo3

# BOILER DRUMS

Selected references of boiler drums in 2022

Year	Project, country	Pcs	Dimensions (mm)	Notified body, standard	Design pressure	Material quality
2022	H1004AEA1 PREROVBFB, Czech republic	1	I.D.1600 x 39-8300 mm	Customer, TÜV NORD Czech EN 12952, PED 2014/68/EU Module G	123 bar	P460NH
2022	H0010ARA1 KEMI BTT Recovery Boiler Finland	1	I.D. 2200x104x25 300 mm	Customer, TÜV NORD Czech EN 12952, PED 2014/68/EU Module G	135 bar	15NiCuMoNb5-6-4
2022	Kluczewo Poland	1	Ø 1500 x 60 x 5900 mm	Customer, UDT EN 12952 PED 2014/68/EU Module G	70 bar	P355GH
2022	K2673, BSN Le Havre France	1	O.D.2200x90x6 80 0 mm	Customer, TÜV NORD Czech EN 12952, PED 2014/68/EU Module G	137 bar	15NiCuMoNb5-6-4

# BOILER DRUMS

Selected references of boiler drums in 2023

Year	Project, country	Pcs	Dimensions (mm)	Notified body, standard	Design pressure	Material quality
2023	CHRONOSPAN CHP3 Luxembourg	1	I.D.1600x81 - 10000 mm	Customer, TÜV NORD Czech EN 12952 PED 2014/68/EU Module G	155 bar	15NiCuMoNb5-6-4
2023	NICE-CHAUDIERE, France	3	O.D.1600x35 - 6070 mm	Customer, TÜV NORD Czech EN 12952 PED 2014/68/EU Module G	42 bar	P355GH
2023	SE OULU O750 PB Finland	1	I.D.1828 x75- 10600 mm	Customer, TÜV NORD Czech EN 12952 PED 2014/68/EU Module G	125 bar	15NiCuMoNb5-6-4
2023	DSS ROUEN BFB France	1	I.D.1600 x73-9200 mm	Customer, TÜV NORD Czech EN 12952 PED 2014/68/EU Module G	103 bar	P460GH

# SELECTED REFERENCES

## Boiler drums



**Buyer:** První Brněnská Strojírna a.s., Czech Republic

**User:** UNIPER, Germany



**Buyer:** Valmet Technologies Oy, Finland

**User:** Naistenlahti, Finland

# SELECTED REFERENCES

## Boiler drums



**Buyer:** Valmet Oy  
**User:** Kemi, Finland



**Buyer:** LEROUX & LOTZ TECHNOLOGIES  
**User:** BioSynergy, France



# HEATING SURFACES

Year	Project, country	Name	Production standard, material	Weight (kg)
2019	Esbjerg, Denmark	Superheater 2	EN 12952+ PED 2014/68/EU 16Mo3	28 424
		Superheater 3		27 086
2019	2031 HOOTON BIO POWER Denmark	Flue Gas Cooler Air preheater	EN 12952+ PED 2014/68/EU, EN 1090 16Mo3, P235GH	115 470 165 798
2019	Czestochowa Nowa 10130 Poland	Economizer ECO1a, ECO 1b, ECO 2, Ducts of ECO	EN 12952+ PED 2014/68/EU P235GH	26 084
2019	Czestochowa Nowa 10131 Poland	Economizer ECO1a, ECO 1b, ECO 2, Ducts of ECO	EN 12952+ PED 2014/68/EU P235GH	26 084
2020	Högdalen, Sweden	Economizer ECO3	TÜV SUD EN 12952 PED 2014/68/EU Modul G P265GH	28 580

# HEATING SURFACES

Year	Project, country	Name	Production standard, material	Weight (kg)
2020	Balcke Dürr Oslo Kommune-Exchange- ECO3 Norway	ECONOMISER type 1	AD 2000+ PED 2014/68/EU Module G/ P355NH;P235GH	21 164
2020	Balcke Dürr Oslo Kommune-Exchange- ECO3 Norway	ECONOMISER type 2	AD 2000+ PED 2014/68/EU Module G/ P355NH;P235GH	10 582
2020	13067-Ghent Belgium	Economizéry ECO1÷ECO4	EN 12952+ PED 2014/68/EU Module G; EN 1090/ P265GH; 16Mo3	120 750
2020	13067-Ghent Belgium	Superheater SH1.1 Superheater SH1.2	EN 12952+ PED 2014/68/EU Module G; EN1090/ 16Mo3	62 670
2022	Mondi Swiecie S.A Poland	Superheater 1	EN 12952+ PED 2014/68/EU Module G; 16Mo3; 13CrMo 4-5	93 146

EQUIPMENT FOR THE CHEMICAL INDUSTRY

# Chemical and petrochemical Industry

## Product types:

- Pressure and non-pressure tanks
- Heat exchangers
- Reactors
- Absorbers
- Columns

## Other products for the chemical and petrochemical industries:

- Pressure vessels
- Condensators
- Separators
- Material hoppers
- Filters etc.



# SELECTED REFERENCES

Equipment for the chemical industry

## Reactor R4001



Weight 368 t

Production standard EN 13445 + PED 97/23 / EC

Material P355NL1, P460

Dimensions 45.5 m x 4.8 / 7.62 m (L x Ø)

Delivery in 6 parts

## Reactor R4301



Weight 161 t

Production standard EN 13445 + PED 97/23 / EC

Material P355NL1

Dimensions 40 m x 4 / 6.3 m (L x Ø)

## Cleaning container PPB



Weight 60.7 t

Production standard EN 13445 + PED 97/23 / EC

Material P275NL1, P355NL1

Dimensions 35 m x 4 / 5.5 m (L x Ø)

PIPE BENDING SHOP

## Pipe bending shop

- Pipe systems acc.to ČSN 13 2604, for piping acc.to ČSN 13 1020 and ČSN 13 1030
- Pipe heating systems for steam boilers (previous standards ON 07 0627 and ON 07 0629), acc.to drawing documentation and customer requirements
- Standards acc.to DIN - AD W0 / TRD 100, ISO 9001, ASME

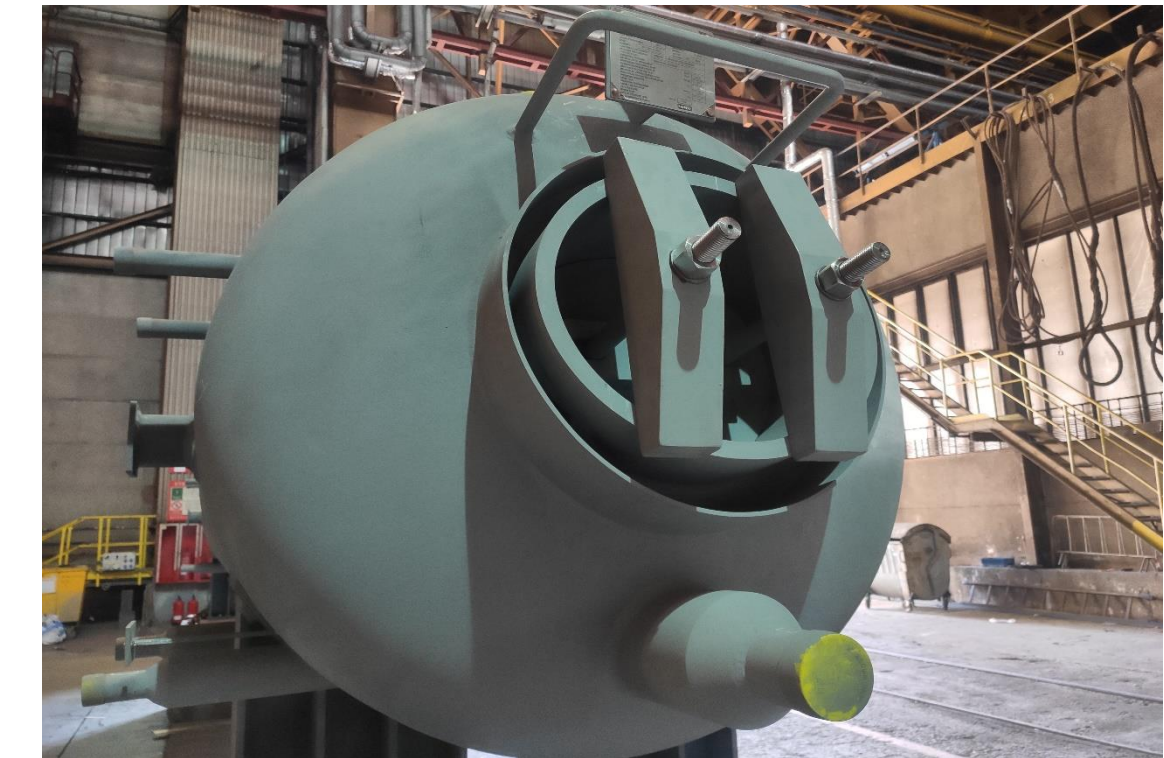
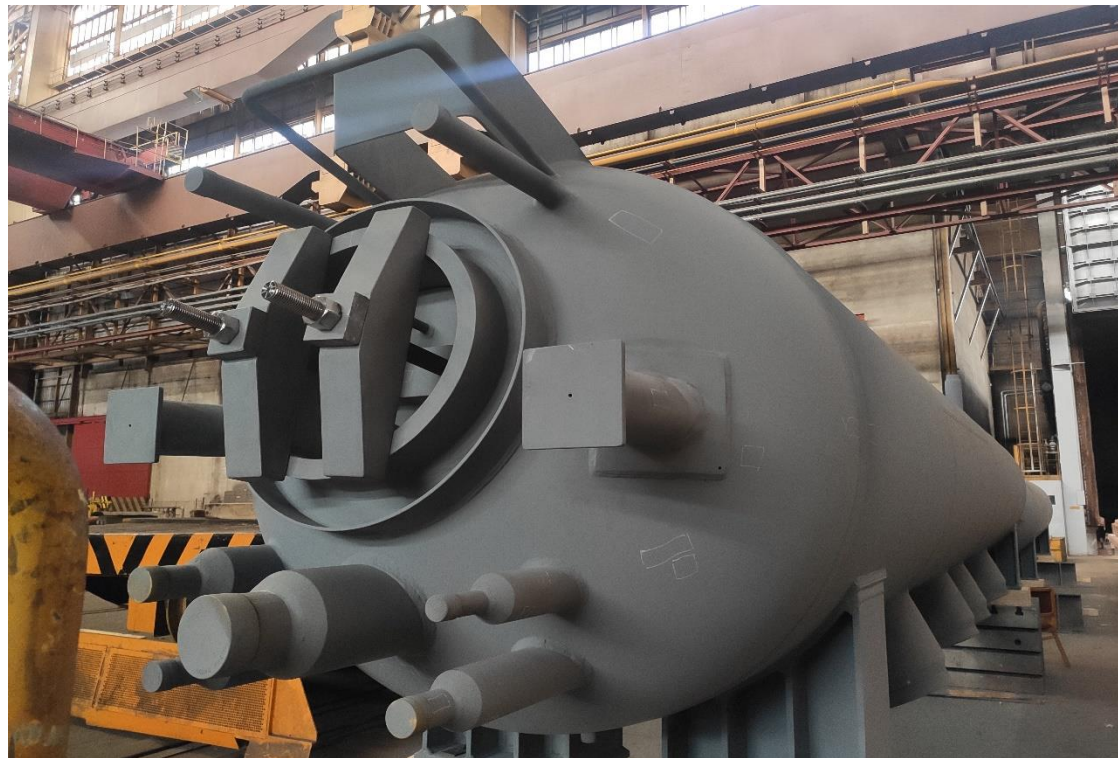


# SELECTED REFERENCES

**Place:** Zagreb, Croatia

**Year:** 2020

Production of 2 low-pressure and 2 high-pressure boiler drums. These are mirrored boiler drums for HRSG (Heat Recovers Steam Generator) for the new, highly efficient combined cogeneration unit EL-TO CCPP, with an electrical output of 150 MWe and a thermal output of 114 MWt, which will be a pillar of a reliable electricity and heat supply.



# SELECTED REFERENCES

**Place:** Norway - Oslo Kommune

**Year:** 2020

**Customer:** Balcke-Dürr GmbH

Power plant boiler economizer replacement project. The entire delivery is in the range of 2x ECO type 2 module and 4x ECO type 1 module with the appropriate pressure piping according to the documentation.



## Heavy steel structures and bridges

- The workplace for the production of heavy steel structures has 80 x 15 m and is equipped with two cranes with a capacity of 50 tons. This means that we can produce a part weighing up to 100 tons. The monthly production capacity is 200 tons.
- In our milling and planing machines we can prepare both weld bevels and friction joint surfaces of steel structures. If necessary, the weldment can be annealed to release internal stress.
- We provide the necessary inspections and tests of edges, surfaces and welds with our own efforts and with the help of an external accredited laboratory.
- Of course, there is also blasting and corrosion protection. Everything is under one roof without the product leaving the roofed parts of our production.





# SELECTED REFERENCES

**Place:** Frýdek Místek, Czech Republic

**Year:** 2021

Production of 10 pcs of welded I-profiles with average length 20 m, height 4 m and weight of 29 tons.

Delivered total of 291 tons between April and August 2021.



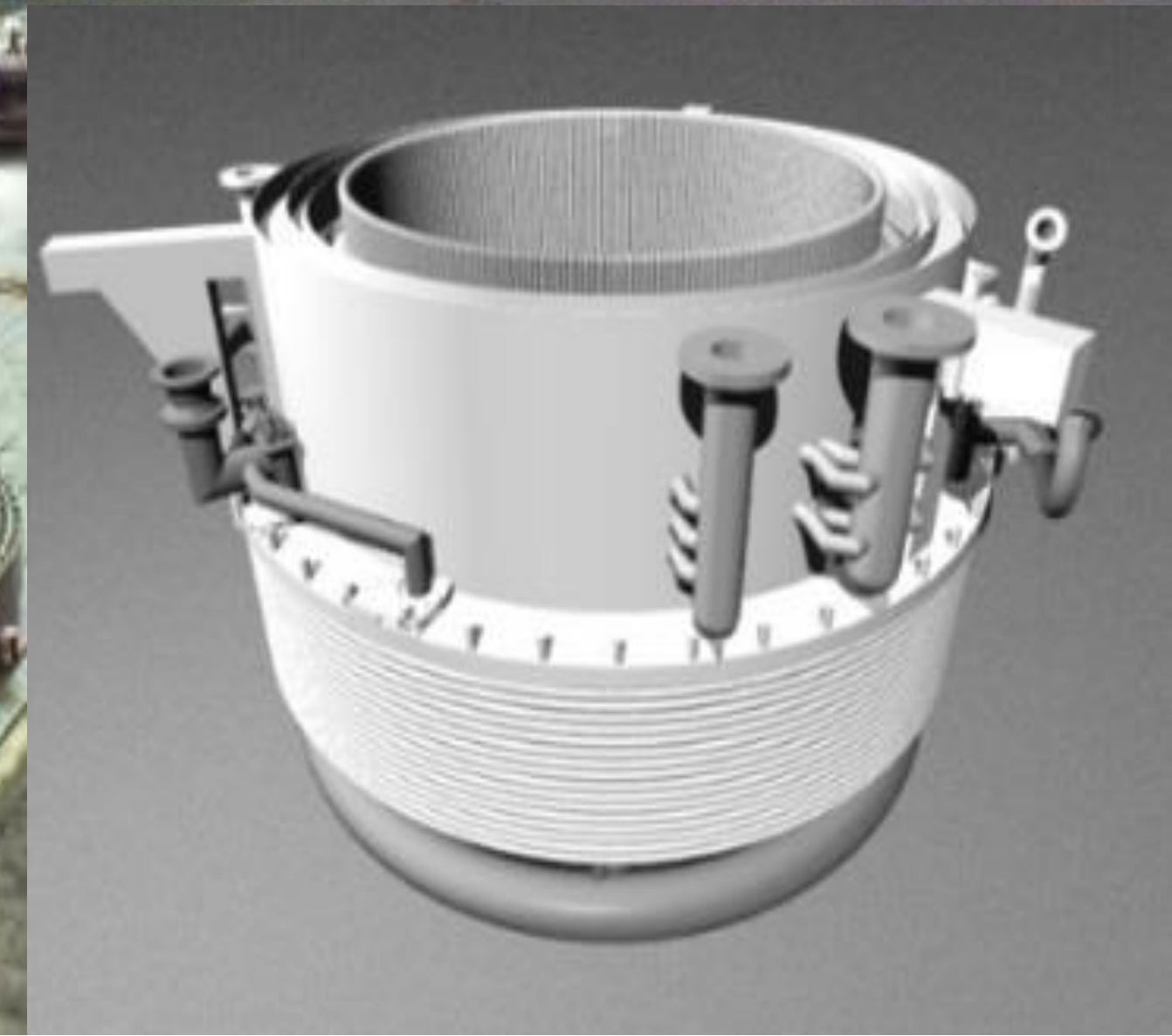
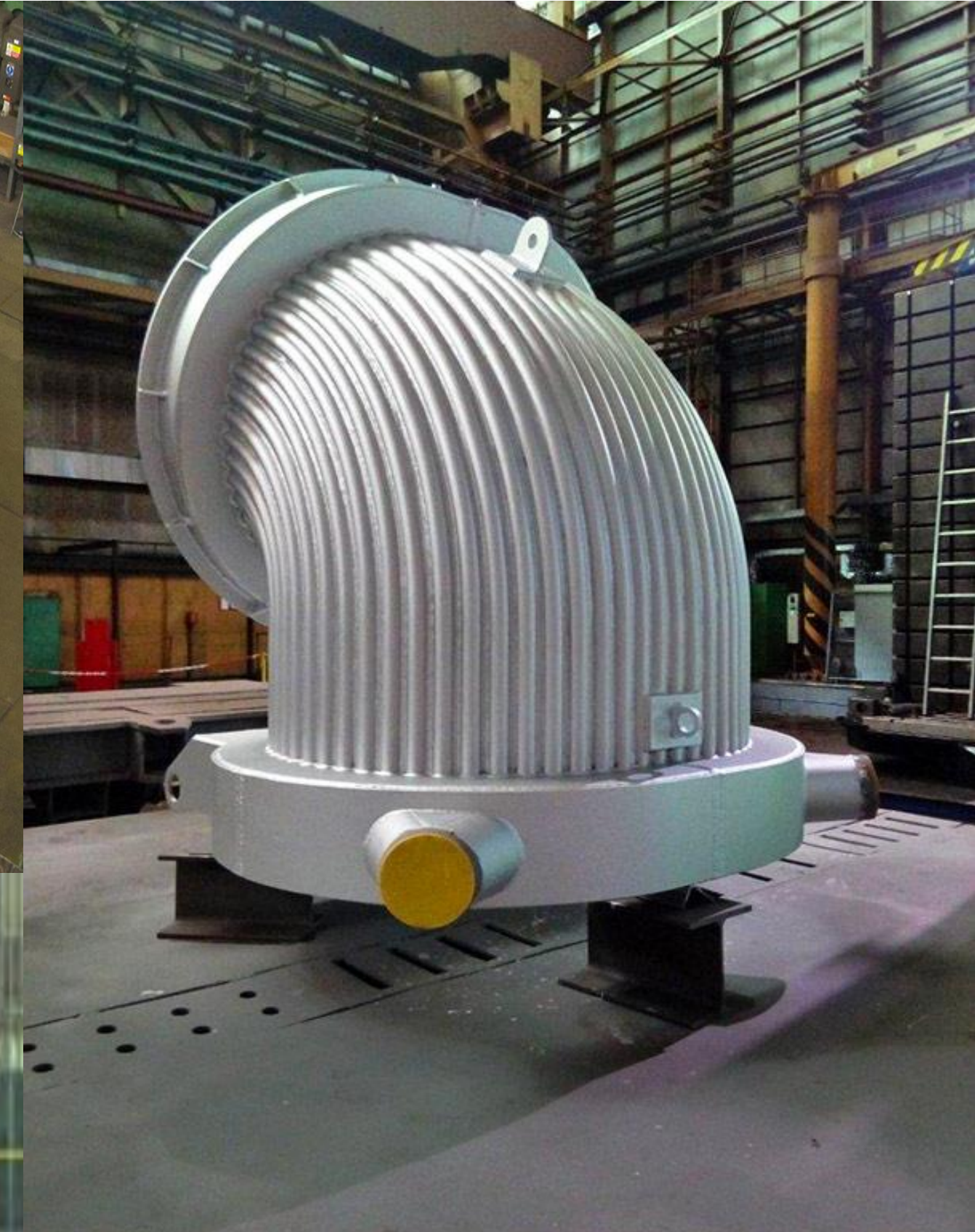
OTHER PRODUCT FOR INDUSTRY

## Blast furnace shells, tanks, other parts

The company is engaged in the production of parts for other industries, especially equipment for steel mills.

### Supplied product:

- Blast furnace shells
- Hot blast stove shells
- Material hoppers
- Converter vessels and trunnion rings
- Exhausts
- Casting ladles and superstructures
- Parts of electric arc furnaces
- Gas cleaning parts



# POWER ENGINEERING IN THE WORLD

**Europe** 

**Asia**  
China, Russia, Malaysia, Indonesia

**Central and South America**

Mexico, Nicaragua, Venezuela,  
Peru, Chile, Argentina

**Middle East**  
Syria, Saudi Arabia, United Arab  
Emirates



# CERTIFICATION

VÍTKOVICE ENERGETICKÉ STROJÍRENSTVÍ a.s., aims to supply all products in the highest quality, in accordance with technological procedures and customer requirements.

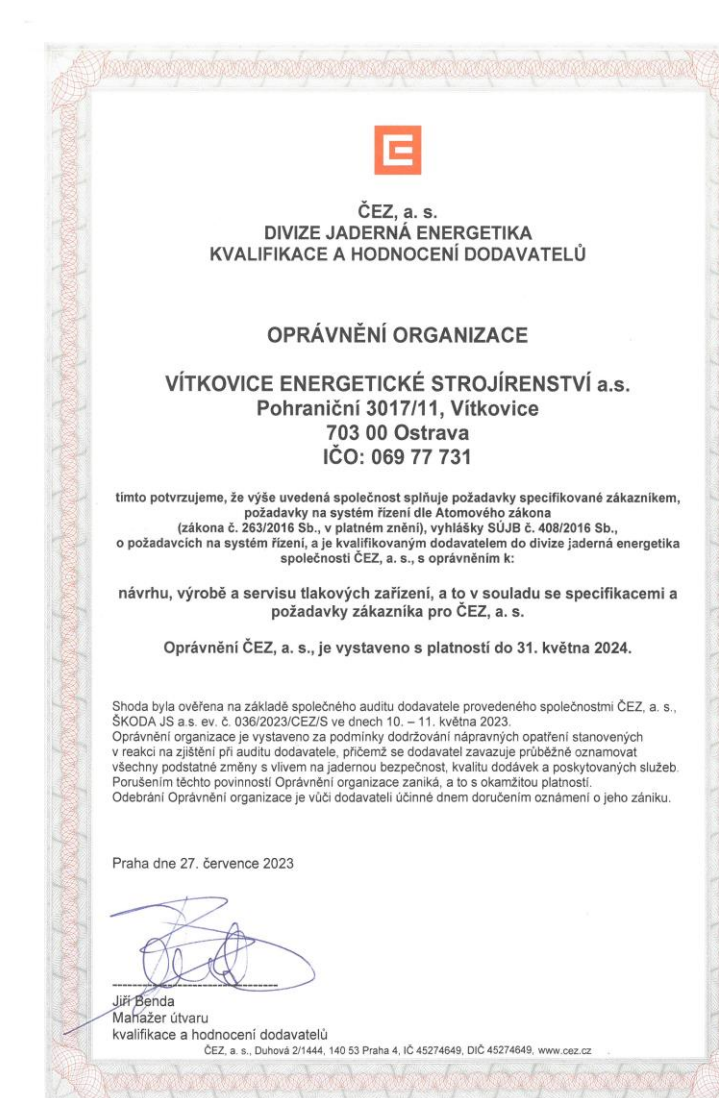
## Is the owner of several certificates:

- **EN ISO 9001: 2015** - Design, manufacture, installation and servicing of equipment for energy, nuclear energy, ecology, petrochemistry and metallurgy, pipelines, turbine parts, pressure vessels.
- **EN ISO 14001: 2015** - Design, manufacture, installation and servicing of equipment for energy, nuclear energy, ecology, petrochemistry and metallurgy, pipelines, turbine parts, pressure vessels.
- **ISO 45001: 2018** - Design, manufacture, installation and servicing of equipment for energy, nuclear energy, ecology, petrochemistry and metallurgy, pipelines, turbine parts, pressure vessels.
- **ČSN EN ISO 3834-2** - Welding in the production of steam boilers, pressure vessels, pipes and their parts according to EN 12952, EN 12953, EN 13445, EN 13480, AD 2000 HP0, related equipment in power engineering and steel structures in design classes EXC 1 to 3 according to EN 1090-2.



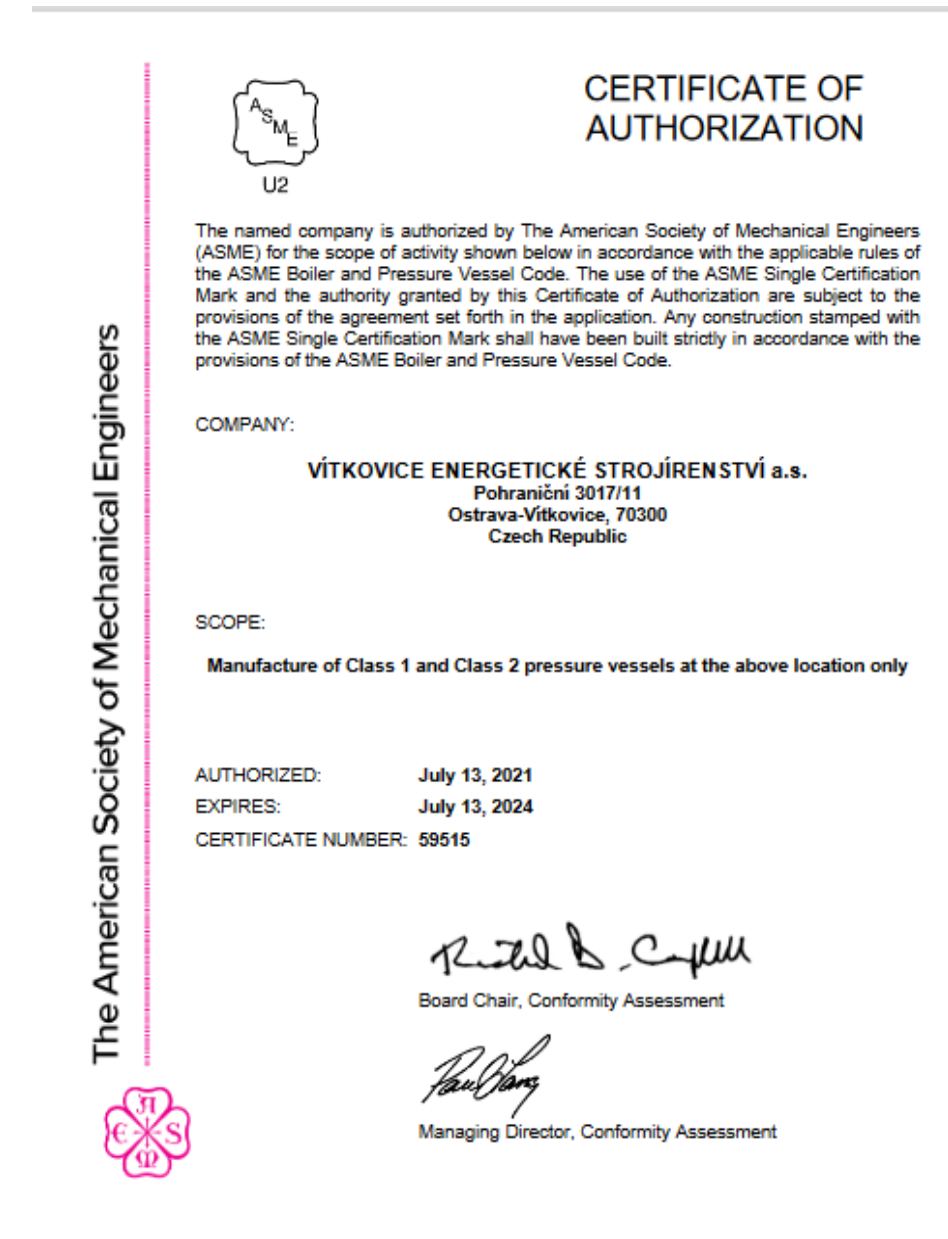
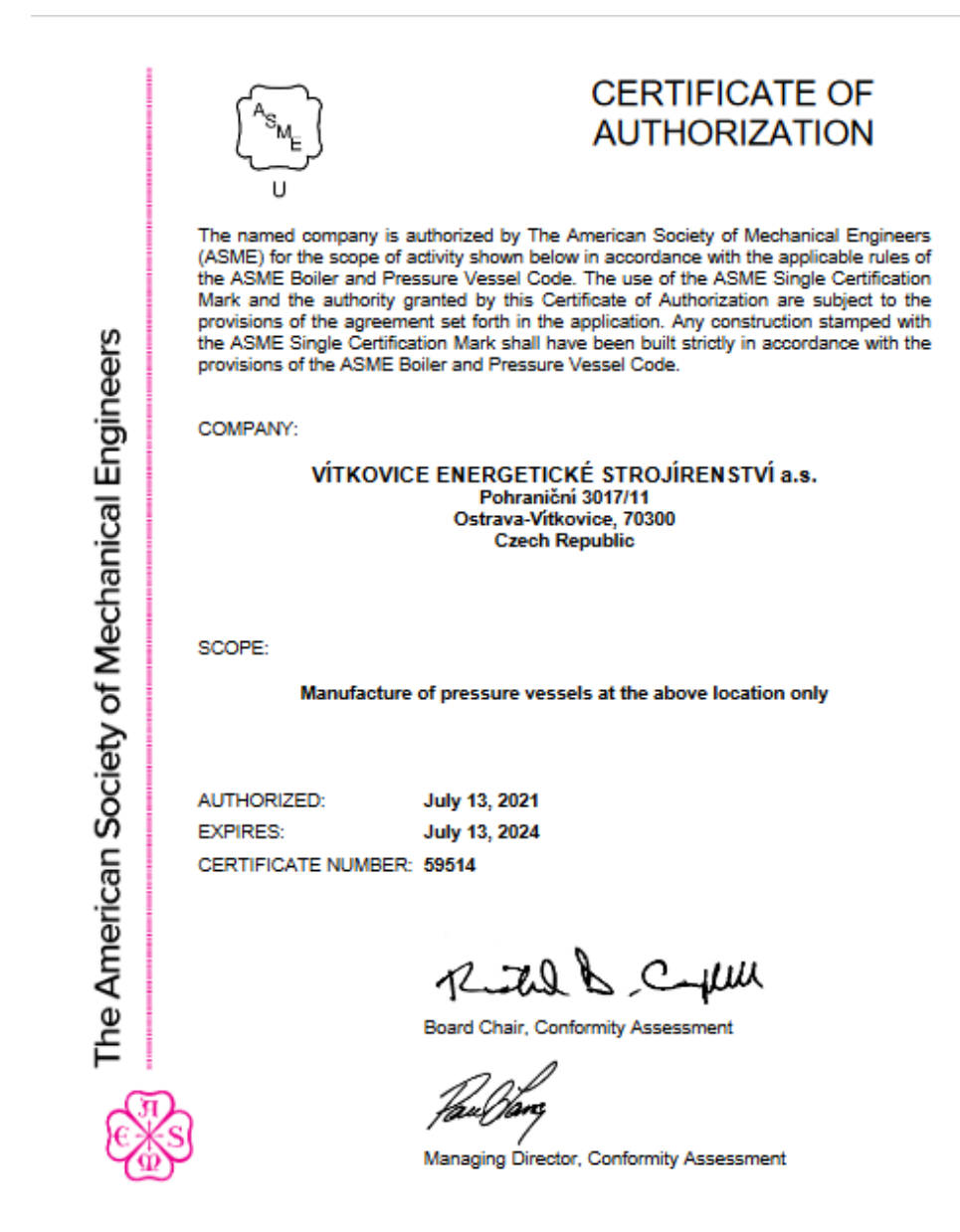
# CERTIFICATION

- **AD 2000 – Merkblatt W0** - Confirmation that the manufacturer has implemented and uses a quality assurance system according to Directive 2014/68 / EU, Annex I, section 4.3 with regard to the listed materials within the scope of authorization. Hot and cold bent pipes.
- **PED 2014/68/EU** - Confirmation that the manufacturer has demonstrated experience in verifying individual products in accordance with Directive 2014/68 / EU and meets comprehensive quality requirements. Technical regulations: DIN EN 12952 / DIN EN 12953 / DIN EN 13445 / DIN EN 13480.
- **AD 2000 – Merkblatt HP0** - Verification and recognition of the manufacturer of pressure vessels, steam boilers and pipes according to the rules of AD 2000 - Merkblatt HP0.
- **ČSN EN 1090-1+A1:2012 EXC3** - Certificate of conformity of production control for steel building components, parts, assemblies and structures of design class up to EXC3 according to EN 1090-1 + A1, Annex ZA.1-ZA.5. Implementation of structure design up to class EXC2
- **Certificatete of a qualified Supplier ČEZ a.s.**



# CERTIFICATION

- Certificate of a qualified supplier **ŠKODA JS**
- ASME „S“ (59513) – Manufacturing and erection of power boilers.
- ASME „U“ (59514) – Manufacturing of pressure vessels acc.to ASME section VIII, division 1.
- ASME „U2“ (59515) - Manufacturing of pressure vessels acc.to ASME section VIII, division 2.
- Certificate of a qualified supplier **ENERGOATOM**



# POWER ENGINEERING IN NUMBERS

**350** **Pieces for pressure and non-pressure parts of power plants**  
Boiler drums, pressure parts of boilers, boiler piping, air heaters, steam headers

**260** **Parts for nuclear energy**  
Volume compensators, special secondary circuit heat exchangers (low-pressure and high-pressure heaters), nuclear waste containers

**200** **Parts of water, gas and steam turbines**  
Water, steam and gas turbine housings, runner casing, pressure penstocks and distribution branches

**160** **Equipment for the chemical industry**  
Heat exchangers, reactors, absorbers, condensators, separators, material hoppers, filters

**95** **Different types of tanks**  
Pressure storage tanks, spherical pressure tanks, non-pressure storage tanks, large-volume storage tanks, spherical storage tanks



# VÍTKOVICKÉ ENERGETICKÉ STROJÍRENSTVÍ a. s.

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