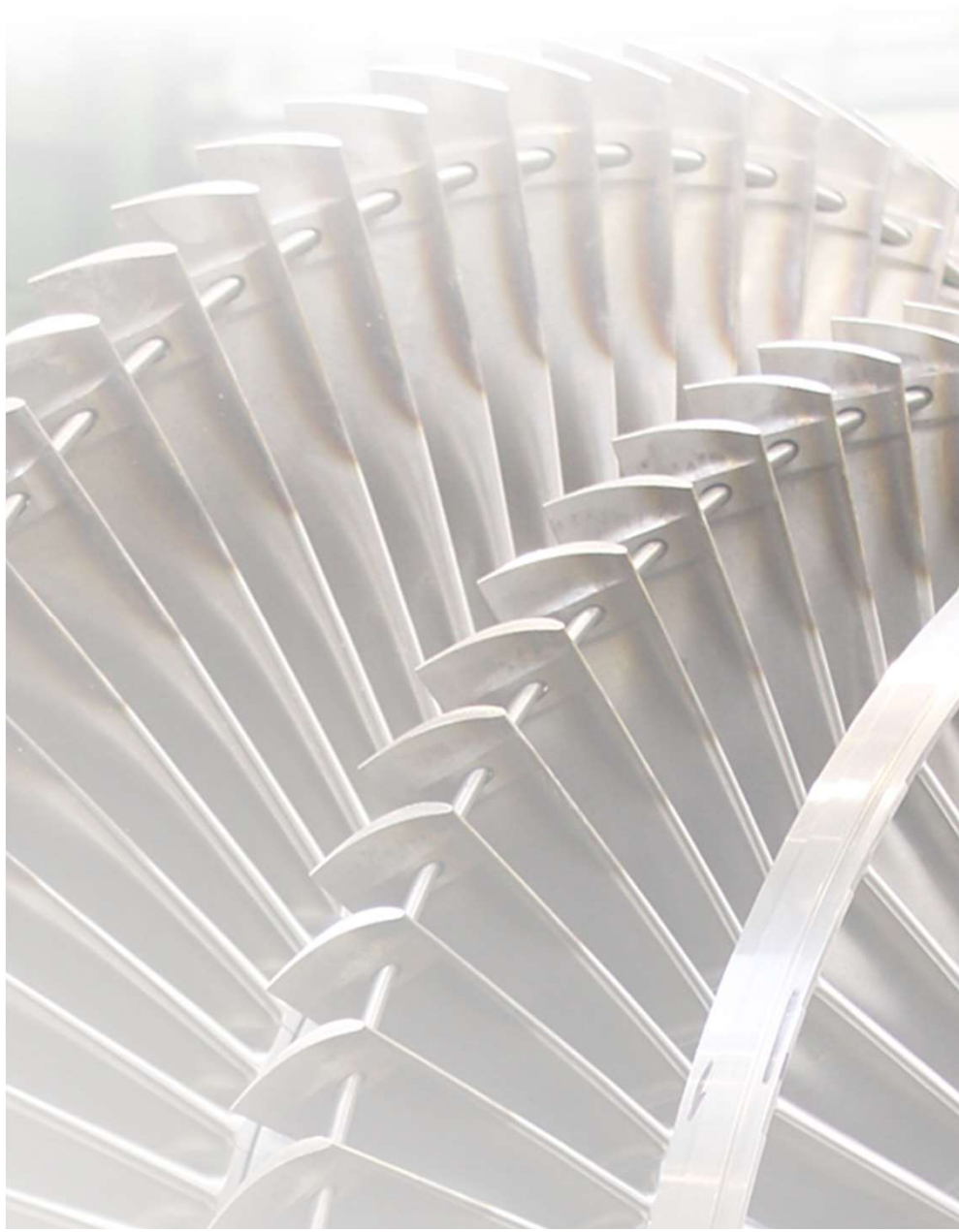

ShaanGu
EKOL
®

Group profile

Czech company, founded in 1991

Since 1997, the company has been manufacturing turbines of its own design.

We have manufactured and commissioned approximately 100 turbines worldwide.



Group profile

First EPC project NILE SUGAR, Egypt in 2008.

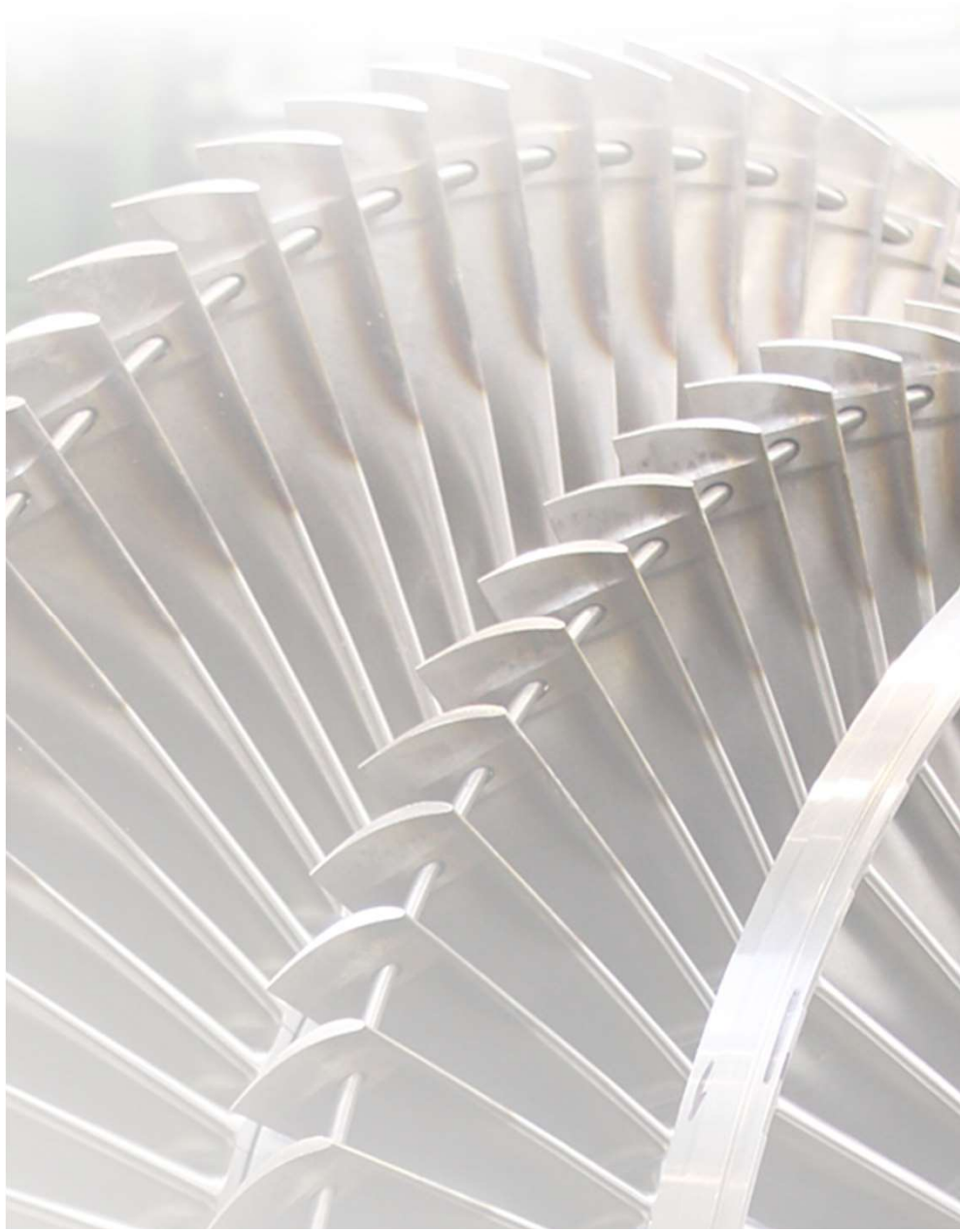
Was established Boiler division in 2009

So far, 66 boilers have been manufactured and commissioning.

2019 We became part of the ShaanGu Group

In 2021, the company celebrated 30 years in the market.

The company's annual turnover last year was € 42 373.



Group profile

The company currently employs approximately 300 employees.
These include a highly qualified professional team:

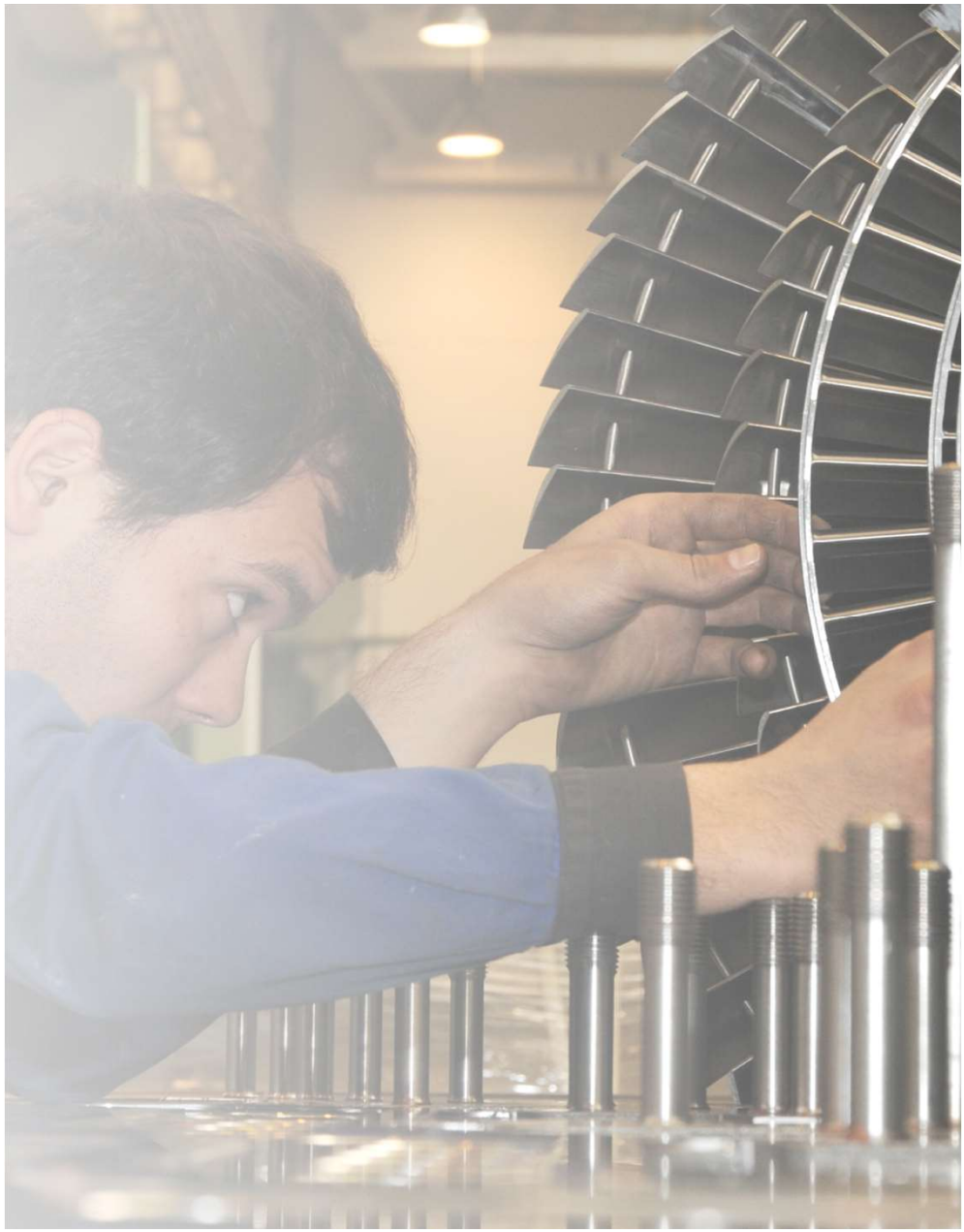
Research & Development Division

Engineering Division

Execution Division

Sales Divisoion

and many of our other experts



Our other skills

Expert studies and turbine optimization to maximize the efficiency of the power plant.

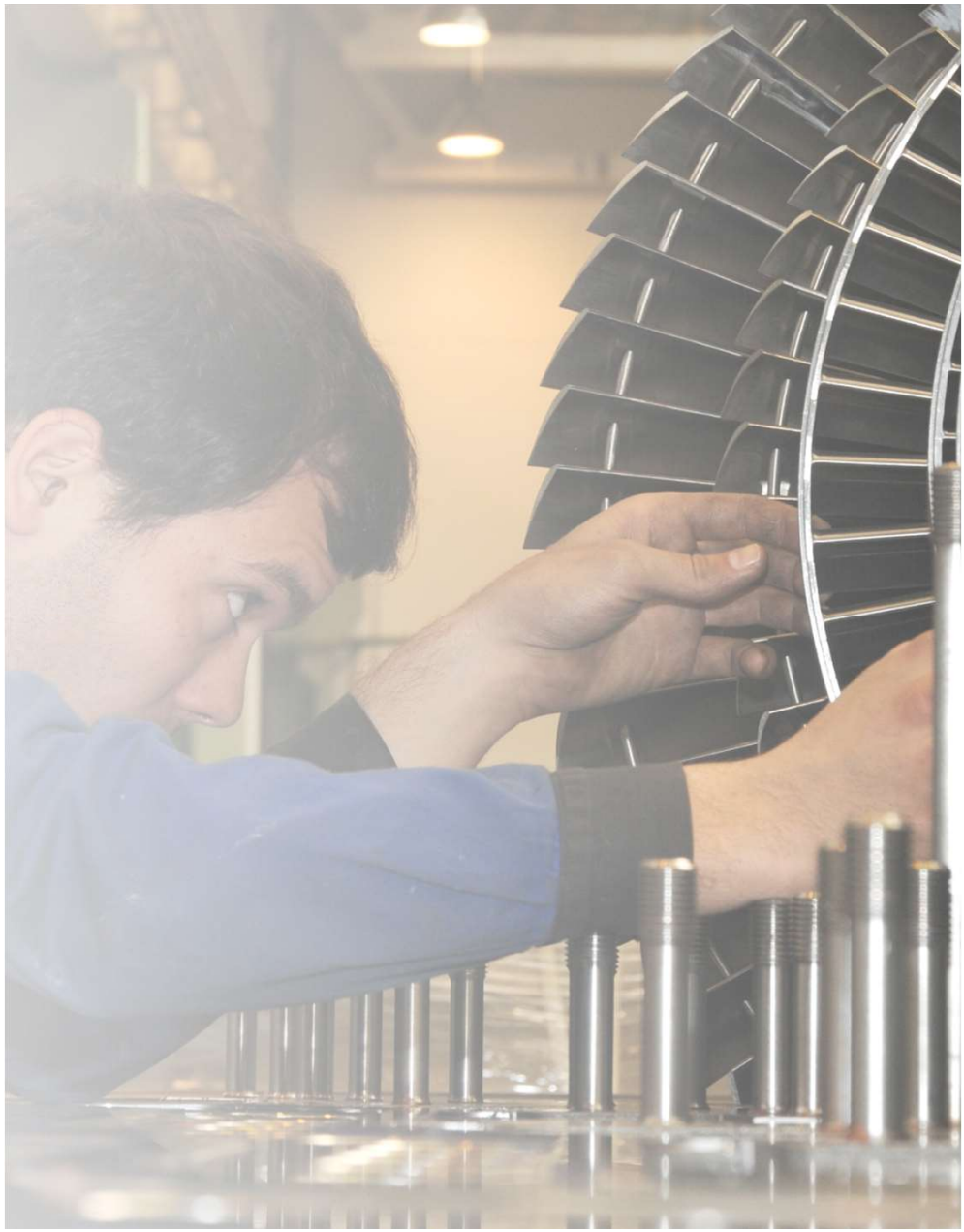
Long-term experience in experimental wind tunnel measurements also in operating turbines.

Advanced analytical and numerical (FEM, CFD) analysis.

We have a grant program TREND (017013)

Preparation and implementation

of experimental tests in a wind tunnel



Certificate ISO

Quality management System (QMS)

in accordance with ČSN EN ISO 9001:2016

Environmental Management System (EMS)

in accordance with ČSN EN ISO14001:2016

Occupational Health & Safety System (SMS)

in accordance with ČSN OHSAS 45001:2018

Main Office

Headquarters of the company

Ekol, spol. s r.o.

The company's main activity remains to manufacture condensing and back-pressure steam turbines with a performance up to 70 MW according to EKOL design

Our Divisions

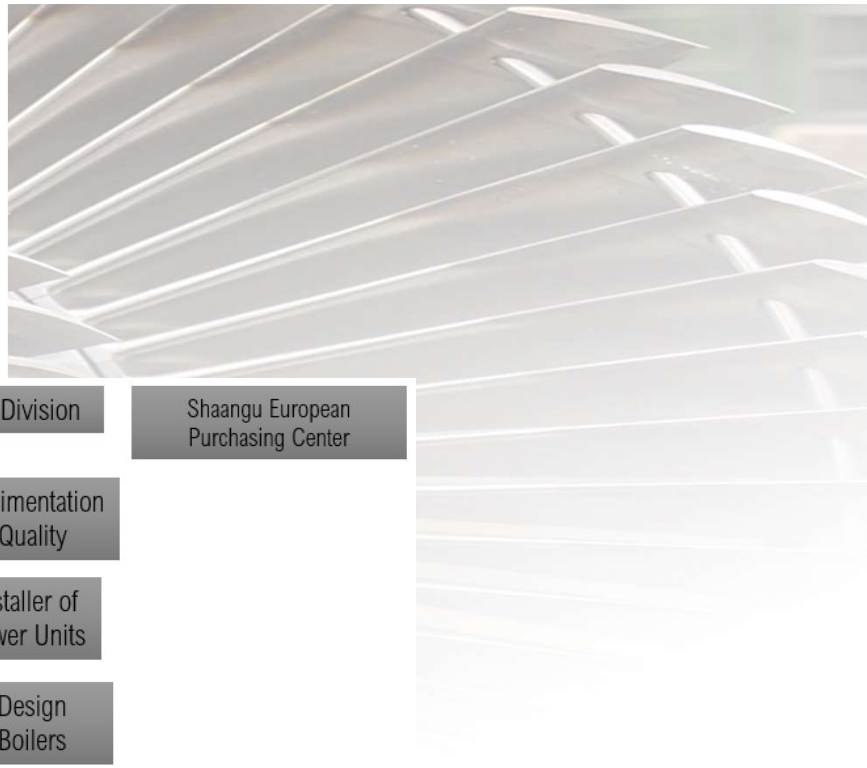
Turbine Division
Ekol energo

EKOL energo, s.r.o., our subsidiary, provides turbine manufacturing, assembly, service of steam turbines and EPC projects.

Boiler Division
Ekol Kolín

subsidiary company. It ensures construction, assembly, production, commissioning and delivery of turnkey boilers.

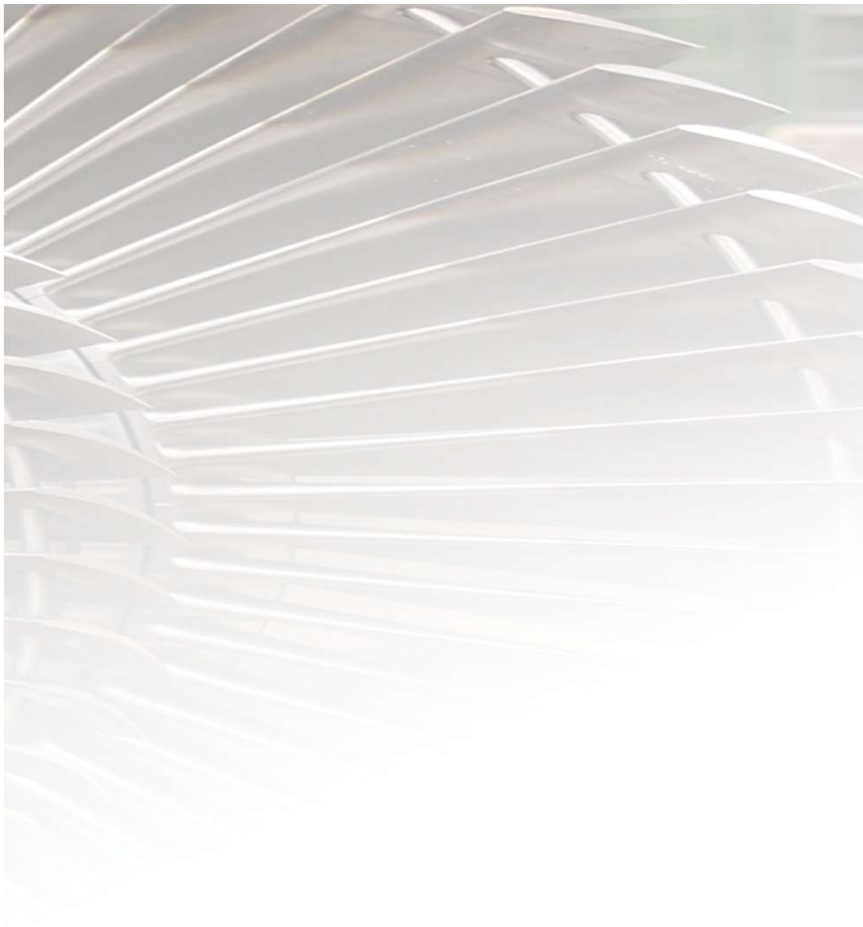
Organization Chart



Ekol spol, s.r.o.

- Sales Division
  - Steam Turbine Sales Managers
  - Technical Support for Sales Managers
- Financial Division
  - Investice Dotace Controling
- Execution Dovision
  - Project Management
- Comprehensive Managament
  - Lawyer Services
  - Salaries
  - Strategy & Market, Management
  - Quality + EHS + EP
- Technical Division
  - Projects and Techn. Calculation
  - Automation Equipment
  - Design Steam Turbines
  - Research and Development
- Boiler Division
  - Docimentation Quality
  - Installer of Power Units
  - Design Boilers
  - Project Boiler
  - Sales Boiler Management
- Shaangu European Purchasing Center

Applications



- Incinerator Industrial
- Power Generation
- Nuclear Power Plant
- Coal chemical industry
- Production Plant
- Petroleum Industry

The main focus

Steam Turbines

MRO Services

Boilers

EPC Projects

Where we supply

Efficient Energy

Our main strategy is to improve overall energy efficiency and thereby transform the existing energy sector.

We aim to achieve this by pursuing mutual development with all customers and partners by introducing the concept of „mutual creatinon, mutual sharing, mutual benefit" into each stage of projects (including design, financing, construction and operation).

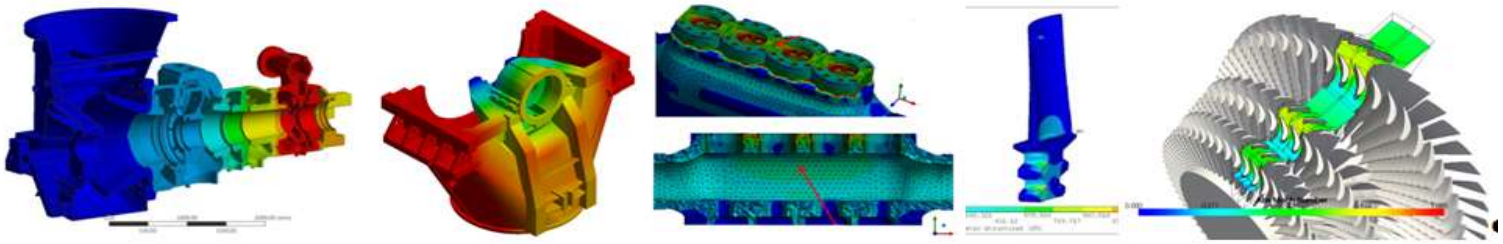
To create intelligent green energy for human civilization

R&D of EKOL, experimental measurement

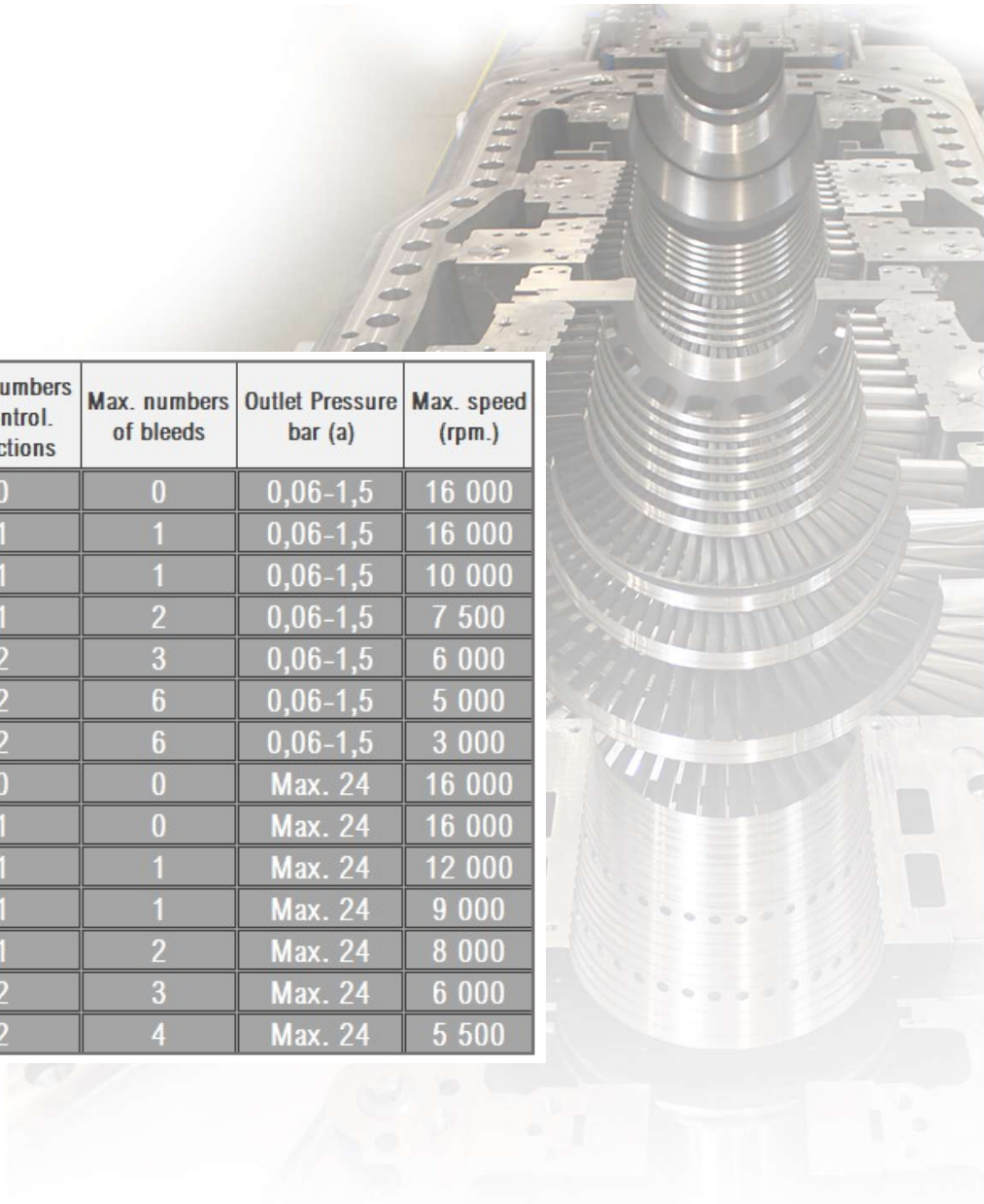
- New types of last blades

- Modular system of stator parts, governor valves, bearings, etc. of steam turbines, especially for mechanical drives with a power range of up to 70MW and with overlap and usability in the field of realization of modular system and unification elements for steam turbines designed to drive generators

- Implementation of new version of the semi-automated unification system software.

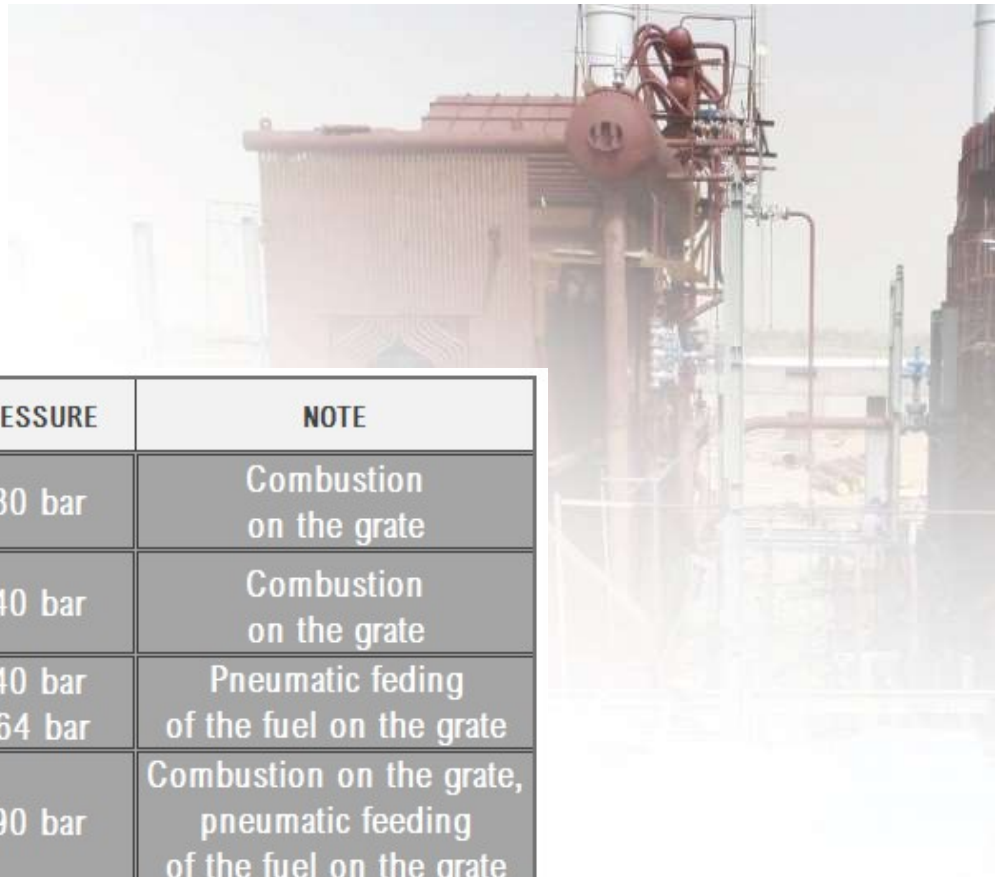


Parameters of steam turbines



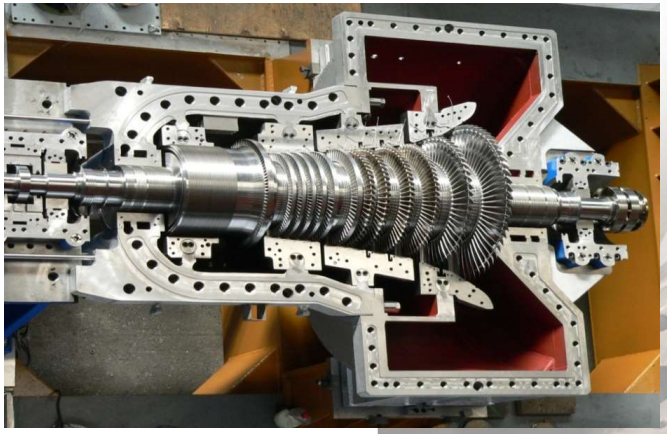
Type	Size – marking	Max. Inlet Steam Parameters		Max. Power (MW)	Numbers of casing	Max. numbers of control. Extractions	Max. numbers of bleeds	Outlet Pressure bar (a)	Max. speed (rpm.)
CONDENSING	EST 10 C	45 bar;	450 °C	1,5	1	0	0	0,06-1,5	16 000
	EST 20 C	45 bar;	450 °C	3,5	1	1	1	0,06-1,5	16 000
	EST 30 C	68 bar;	485 °C	12	1	1	1	0,06-1,5	10 000
	EST 40 C	90 bar;	535 °C	25	1	1	2	0,06-1,5	7 500
	EST 50 C	110 bar;	535 °C	40	1	2	3	0,06-1,5	6 000
	EST 60 C	135 bar;	540 °C	66	1	2	6	0,06-1,5	5 000
	EST 70 C	135 bar;	540 °C	70	2	2	6	0,06-1,5	3 000
BACK PRESSURE	EST 10 B	45 bar;	450 °C	1,5	1	0	0	Max. 24	16 000
	EST 20 B	45 bar;	450 °C	3,5	1	1	0	Max. 24	16 000
	EST 30 B	68 bar;	485 °C	12	1	1	1	Max. 24	12 000
	EST 40 B	90 bar;	535 °C	25	1	1	1	Max. 24	9 000
	EST 50 B	110 bar;	535 °C	40	1	1	2	Max. 24	8 000
	EST 60 B	135 bar;	540 °C	66	1	2	3	Max. 24	6 000
	EST 70 B	135 bar;	540 °C	70	2	2	4	Max. 24	5 500

Boiler parameters



FUEL	STEAM FLOW	STEAM TEMPERATURE	STEAM PRESSURE	NOTE
WOOD CHIPS	8 - 50 t/h	Max. 485 °C	12 - 80 bar	Combustion on the grate
STRAW	8 - 50 t/h	Max. 400 °C	12 - 40 bar	Combustion on the grate
BAGASSE	30 - 100 t/h	380 °C Max. 450 °C	12 - 40 bar Max. 64 bar	Pneumatic feding of the fuel on the grate
COAL	8 - 100 t/h	Max. 540 °C	12 - 90 bar	Combustion on the grate, pneumatic feeding of the fuel on the grate
NATURAL GAS	8 - 200 t/h	Max. 540 °C	12 - 120 bar	
HEAVY/ LIGHT FUEL OIL	8 - 200 t/h	Max. 540 °C	12 - 120 bar	
HRSG	8 - 200 t/h	Max. 540 °C	12 - 90 bar	May be heat a bit more
SPECIAL BOILERS	According Basic Design	According Basic Design	According Basic Design	Fuel according to customer demand

Turbines

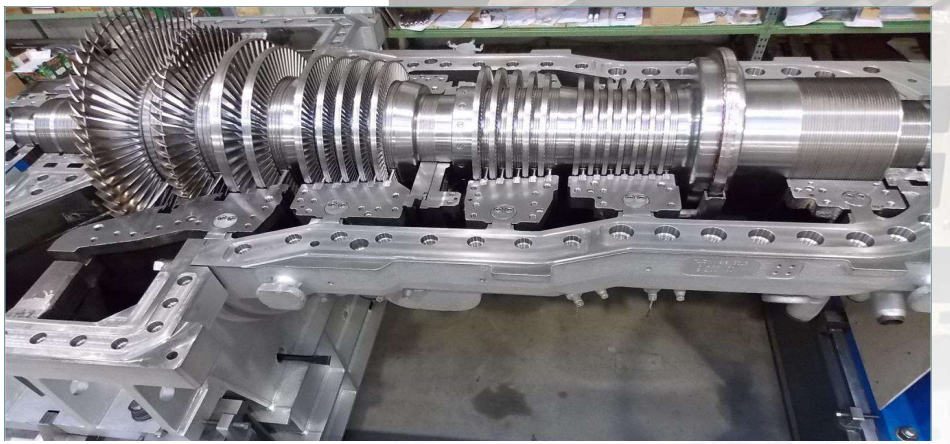


Steam turbine: EKOL 5,4 MWe

Steam turbine: EKOL 25 MWe

Turbines

Steam turbine: EKOL 28 MWe



Steam turbine: EKOL 7,5MW

Boilers

Fuel : pressed sunflower seed
Boiler : 6 pcsEKOL 67bar@485°
ECR 33 , MCR 35 t/h

Fuel : Wood chips
Boiler : EKOL 6,5bar@485°, MCR 28,5 t/h

Boilers

Fuel : natural gas + light fuel oil
Boiler : EKOL HWB 2 x 116 MW

Fuel : biomass pelets
Boiler : EKOL 4,5bar@460°, MCR 26 t/h

EPC project

Fuel : wood chips
Boiler : EKOL 64bar@480°C,
MCR 32 t/h
Steam turbine: EKOL 7,5 MWe

Fuel : wood chips and straw
& corn pellets approx.120 000 t/year
Boiler : EKOL 45bar@425°C,ECR 26 ,
MCR 29 t/h (20,5 MWt)
Steam turbine: EKOL 6 MWe

EPC project

Fuel : wood chips
Boiler : EKOL 73bar@485°
ECR 33 , MCR 35 t/h
Steam turbine: EKOL 6,3 MWe

Fuel : wood chips
Boiler : EKOL 62bar@483°C,
ECR 23 , MCR 28,5 t/h
Steam turbine: EKOL 5,88 MWe

ShaanGu EKOL ®

Legal Address: Křenová 65 ,
602 00 Brno,
Czech Republic

Tel: +420 543 531 710
Fax: +420 543 242 912
Internet: www.ekolbrno.cz
Email: ekolsro@ekolbrno.cz