

**BERTSCH**energy

Power plants  
Process equipment



TRADITION  
QUALITY  
KNOW-HOW  
SINCE 1925

Competence in energy

Customised – Flexible – Comprehensive



**BERTSCH**

TRADITION, QUALITY, KNOW-HOW. SINCE 1925

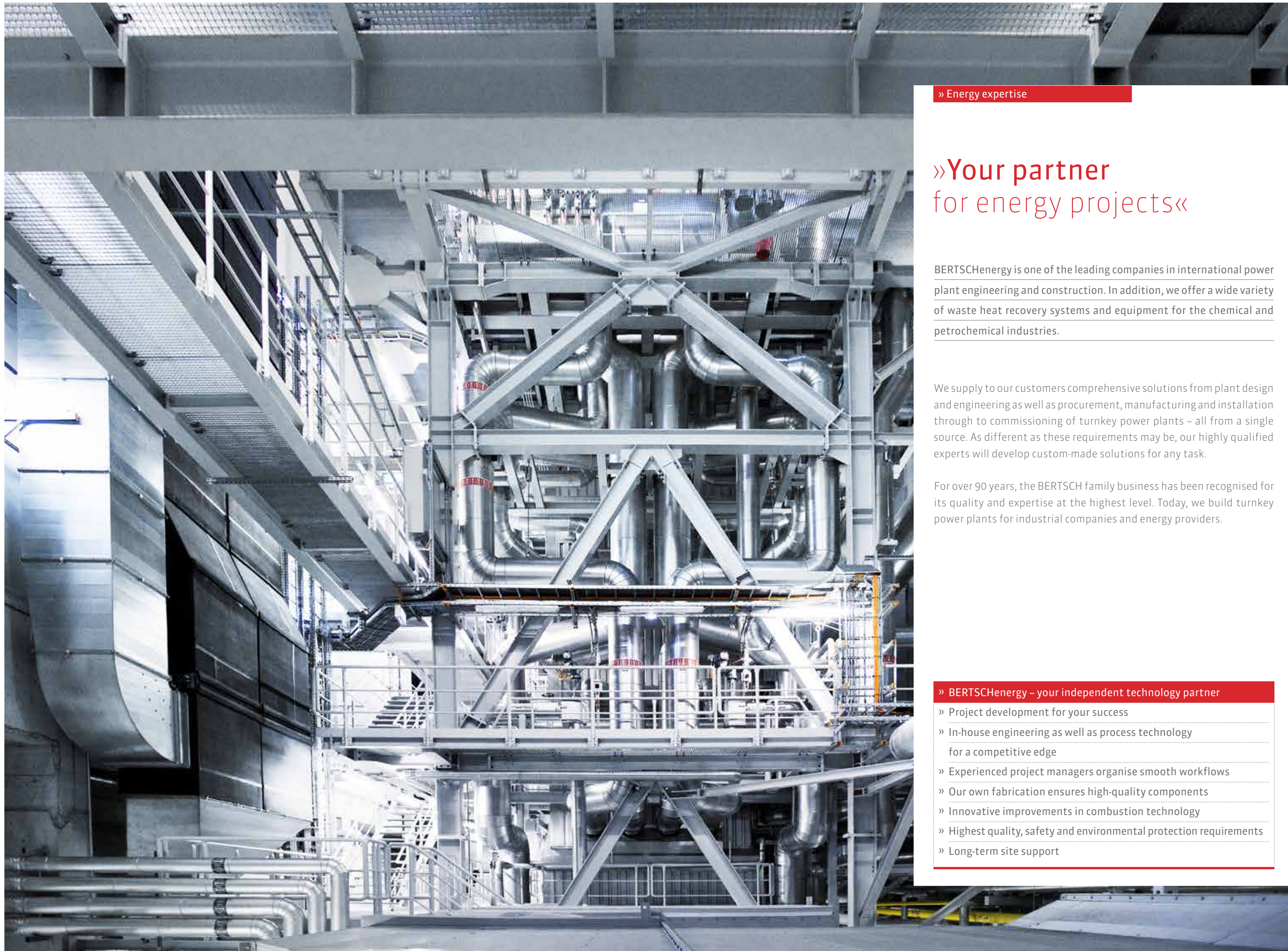




## »Our services«

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» Energy expertise

## »Your partner for energy projects«

BERTSCHenergy is one of the leading companies in international power plant engineering and construction. In addition, we offer a wide variety of waste heat recovery systems and equipment for the chemical and petrochemical industries.

We supply to our customers comprehensive solutions from plant design and engineering as well as procurement, manufacturing and installation through to commissioning of turnkey power plants – all from a single source. As different as these requirements may be, our highly qualified experts will develop custom-made solutions for any task.

For over 90 years, the BERTSCH family business has been recognised for its quality and expertise at the highest level. Today, we build turnkey power plants for industrial companies and energy providers.

### » BERTSCHenergy – your independent technology partner

- » Project development for your success
- » In-house engineering as well as process technology for a competitive edge
- » Experienced project managers organise smooth workflows
- » Our own fabrication ensures high-quality components
- » Innovative improvements in combustion technology
- » Highest quality, safety and environmental protection requirements
- » Long-term site support



# »Project development«

The customer's success with our project – the only thing that counts. Therefore, from the preliminary stage of a project, it is critical and important to support the customer in optimising his technical and economic demands. When it comes to the functionality of the power plant, we are able to provide the highest quality in engineering and manufacturing as well as in project management.

BERTSCHenergy provides comprehensive services, ranging from analysis of the energy project through to the conceptual design of an entire power plant. Depending on the requirements, this includes:



## » Project financing

A key success factor in the international plant engineering and construction business with regard to capital-intensive goods is the professional management of financial risks as well as the structuring and arrangement of appropriate financing solutions. BERTSCHenergy supports its customers worldwide with "FINANCIAL ENGINEERING" services, including the following services:

- » Financing using export credit agencies (ECAs)
- » Financing using the multi-sourcing concept
- » Support in the creation of required financial documentation



**PROJECT DEVELOPMENT**  
BERTSCHenergy keeps the success of the customer's project in mind.



# »Plant design and engineering«

Engineering is a tool that we use to implement the visions and concepts of our customers. It reflects our expertise and is an essential link of a value chain that extends from the initial concept to the installation of the entire plant.

The combination of our own engineering and manufacturing expertise offers our customer significant benefits in terms of price, schedule and quality.

## » Plant design, process engineering

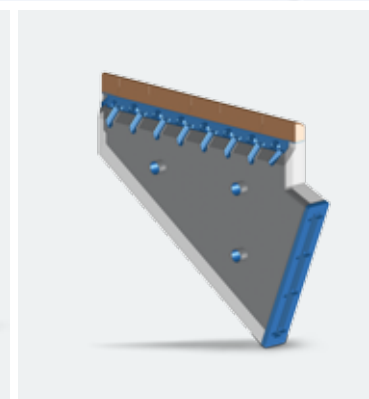
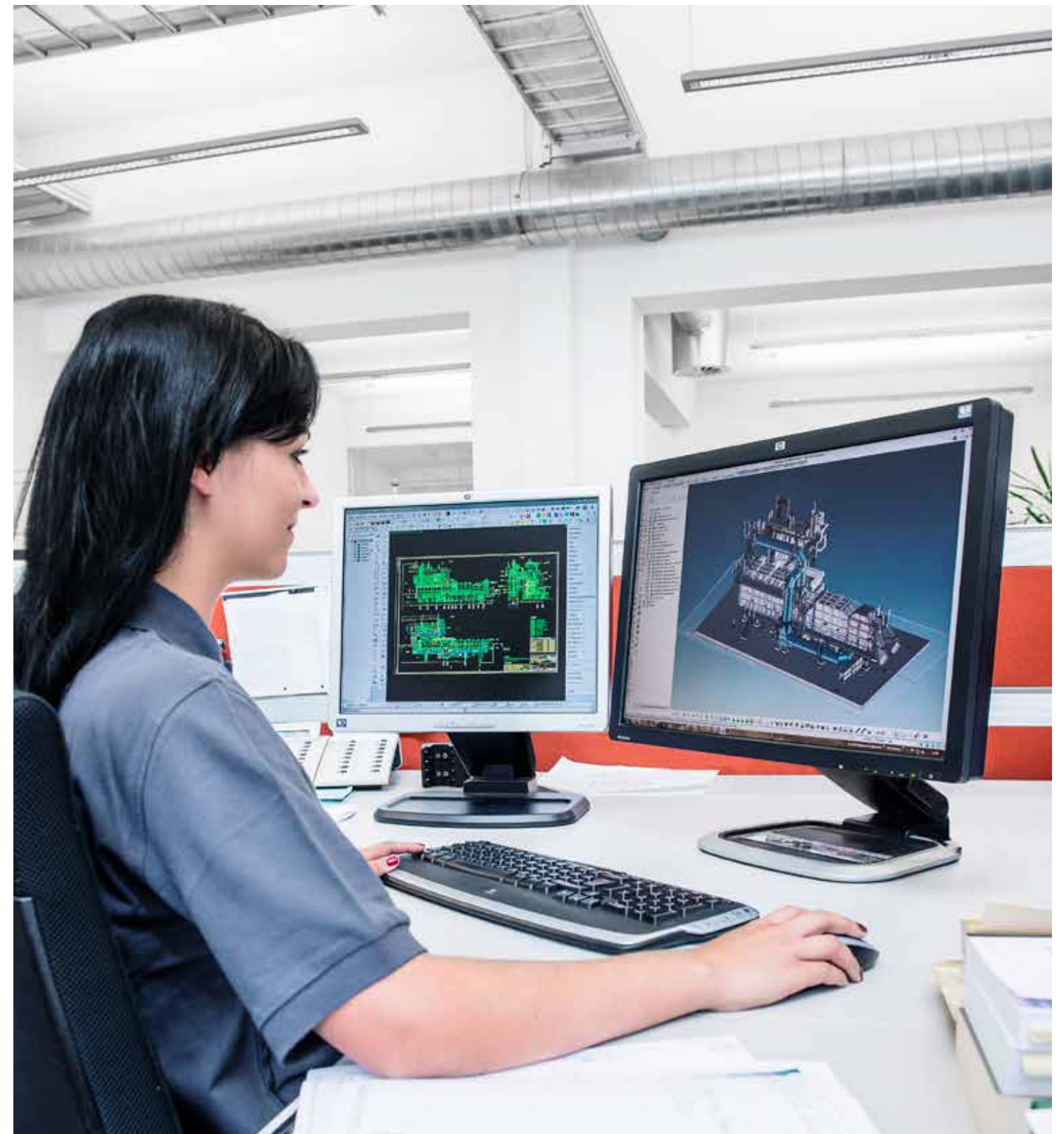
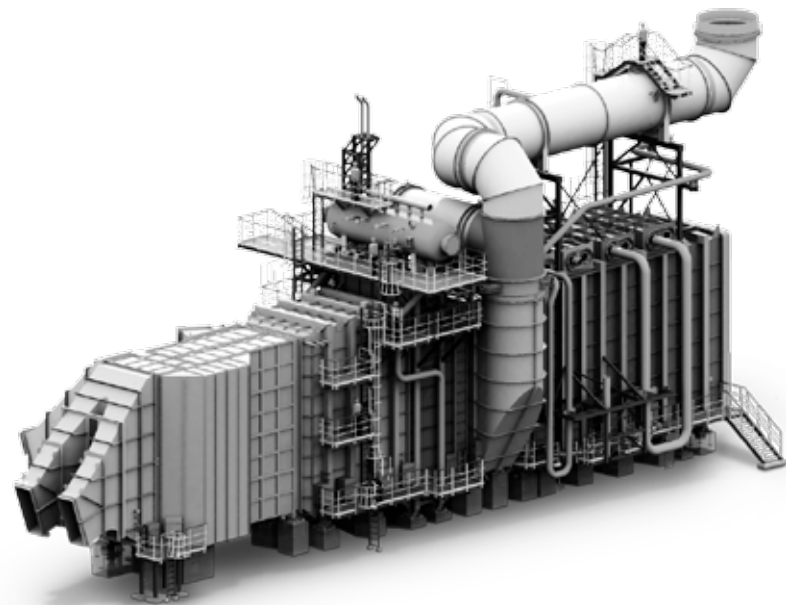
One of our key competencies is the consideration of the entire power and steam generation process and its integration into the process environment, helping to identify the ideal solution for our customers. This is always done by taking the economic conditions into account.

## » Thermal engineering, fluid mechanics

The basis for accurate determination of heat exchanger surfaces are thermal design and the calculation of pressure losses. Specially developed tools are used to optimise the design of process heat recovering systems, process gas coolers, steam/hot-water accumulators, as well as entire boiler plants.

## » Design and construction

The most modern 3D programmes allow us to present our customers a detailed model of the entire system at an early stage. With the help of recognised calculation programs, all components are dimensioned based on the prescribed design codes and customer specifications.



### PLANT DESIGN AND ENGINEERING

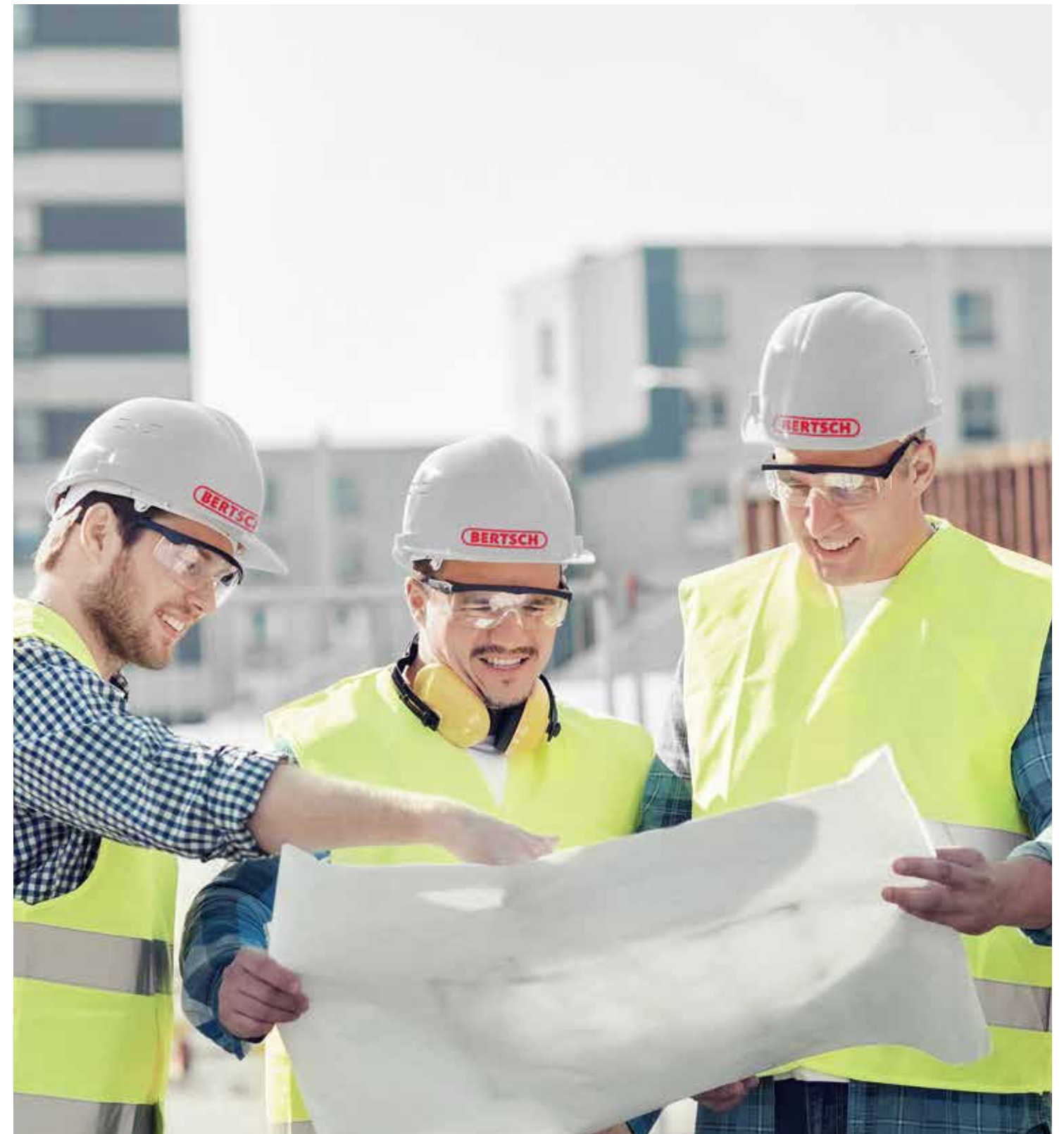
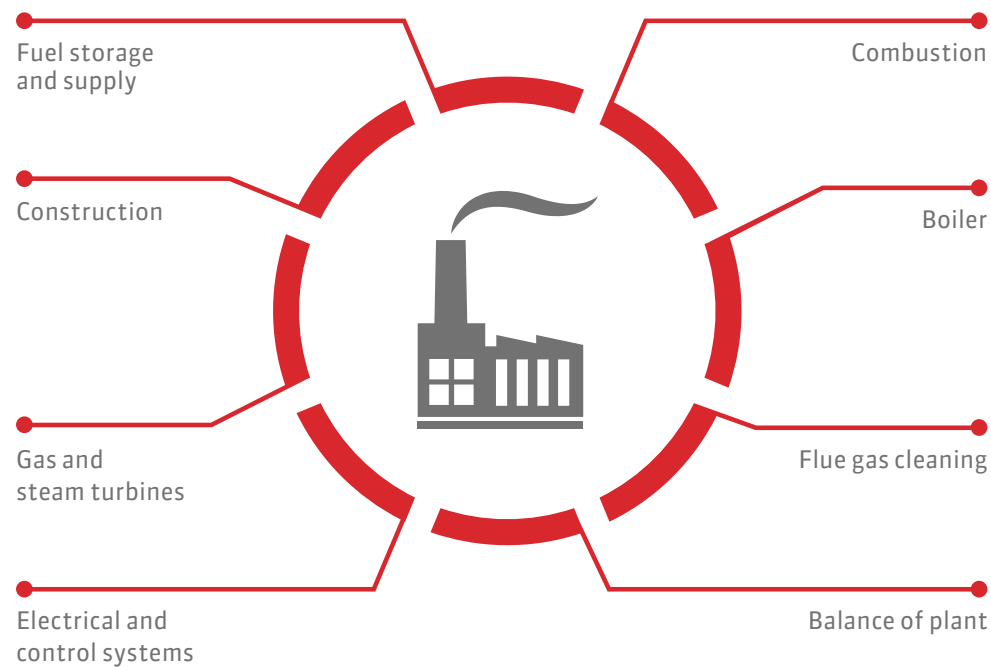
BERTSCHenergy offers customised solutions based on its high level of expertise in process engineering and proprietary technology.



# »Project management for power plants construction«

The responsibility of BERTSCHenergy as a general contractor covers all areas associated with the successful construction of a power plant. The product range spans from system components to turnkey power plants.

As a full-service provider with core competence for the own-brand boiler, BERTSCHenergy offers its customers tailor-made solutions. Modern power plants are complex structures and the sum of the interaction of a variety of functional modules, which correspond to a predetermined plan down to the smallest detail. This reflects the customer's project requirements. Successfully implementing these customer requirements using our decades of expertise and project-related engineering is what we see as our obligation. During implementation, our experienced project managers are the interface between the customer and the BERTSCHenergy project team. They are supported in their work by a comprehensive internal network that constantly informs all parties with regard to the engineering and manufacturing progress.



## PROJECT MANAGEMENT FOR POWER PLANTS

The BERTSCHenergy project managers are your contact persons for complex systems.



# »Fabrication«

As manufacturers, BERTSCHenergy is a highly specialised welding company. Our core competencies are in the production of thickwalled components made of sophisticated materials – preferably in high-pressure and high-temperature applications. The main products of our fabrication are steam drums, process gas coolers, boilers and heat recovery modules, reactors, absorbers and process columns.

The interplay between flexible production in multi-shift operation and significant experience in design and thermal engineering make us a reliable partner for maximum performance.

The production of high-quality components is our top priority. We employ several experienced welding engineers and specialists for process control throughout the entire production. For non-destructive examinations we have qualified personnel using VT, MT, PT, RT and UT methods.

## » Modern machinery and equipment

- » bending machines for steel plates up to 120 mm thickness
- » Plasma cutting system for steel plates and heads
- » Inbore welding machines
- » Header nipple welding machines
- » Orbital welding devices for tube welding
- » Nozzle welding machines
- » Electroslag plate-welding machines
- » Temperature-controlled preheating devices
- » Heat treatment furnaces

## » Design code and approvals for pressure parts (extract)

- » Pressure Equipment Directive 2014/68/EU
- » EN 13445, AD 2000, EN 12952, EN 12953, ISO 3834-2, EN 1090-2
- » ASME I und ASME VIII Div. 1, U-stamp, S-stamp
- » Manufacturer approval for China
- » Approval for CIS

## » Processing a wide range of materials

- » Low carbon steel
- » Heat-resistant CrMo steels
- » Fine-grain steels
- » Nickel alloy high temperature steels
- » Austenitic corrosion-resistant and heat-resistant steels
- » Austenitic-ferritic steels
- » Austenitic or nickel claddings
- » Ferritic-martensitic steels (P91)

## » Training

At BERTSCHenergy, we place particularly high value on training internal junior employees in various areas. Our own training workshop provides young employees with the opportunity to acquire basic knowledge away from the production process. Especially in the field of welding technology, this represents an indispensable basis for process reliability. Our apprentices and young skilled workers are successful both nationally and internationally in professional competitions.



**FABRICATION**  
BERTSCHenergy ensures quality and welding processes through its high level of production automation.

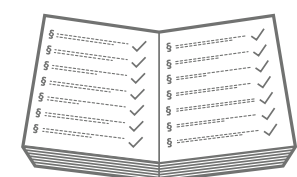


# »Electrical, measurement, instrumentation and control technology«

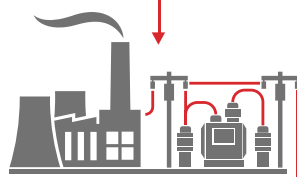
From classic single-function control to integrated and unified overall system control – power plant technology is constantly being developed by our BERTSCHenergy experts.

## » Network access for the provision of energy

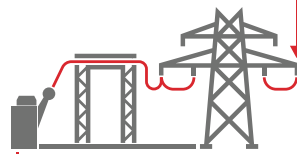
The increasing trend of decentralised energy supply creates a new challenge in terms of grid stability and power transmission at the high voltage networks. Restrictive regulations and common rules, which were previously governed by national grid codes, are becoming subject to internationally unified versions of network access at an increasing speed. BERTSCHenergy has met these challenges both proactively and intensively, and has ensured all power plant components meet the new required directives. Working closely with manufacturers of generators and turbines, all necessary steps are initiated prior to the start of the project in order to ensure all network access parameters are fully met.



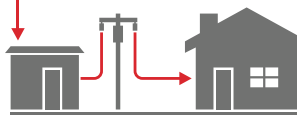
**Guidelines**  
FOR THE MAINS  
PARALLEL OPERATION



**Power station**  
HIGH-VOLTAGE  
AND MEDIUM VOLTAGE



**Substation**  
MEDIUM VOLTAGE



**400 – 230 volts**  
LOW-VOLTAGE  
SUBSTATION

## » Monitoring

Modern BERTSCHenergy plant control rooms summarise the complete process control technology for power plant operation as well as the network control technology for power distribution.

## » Reliability

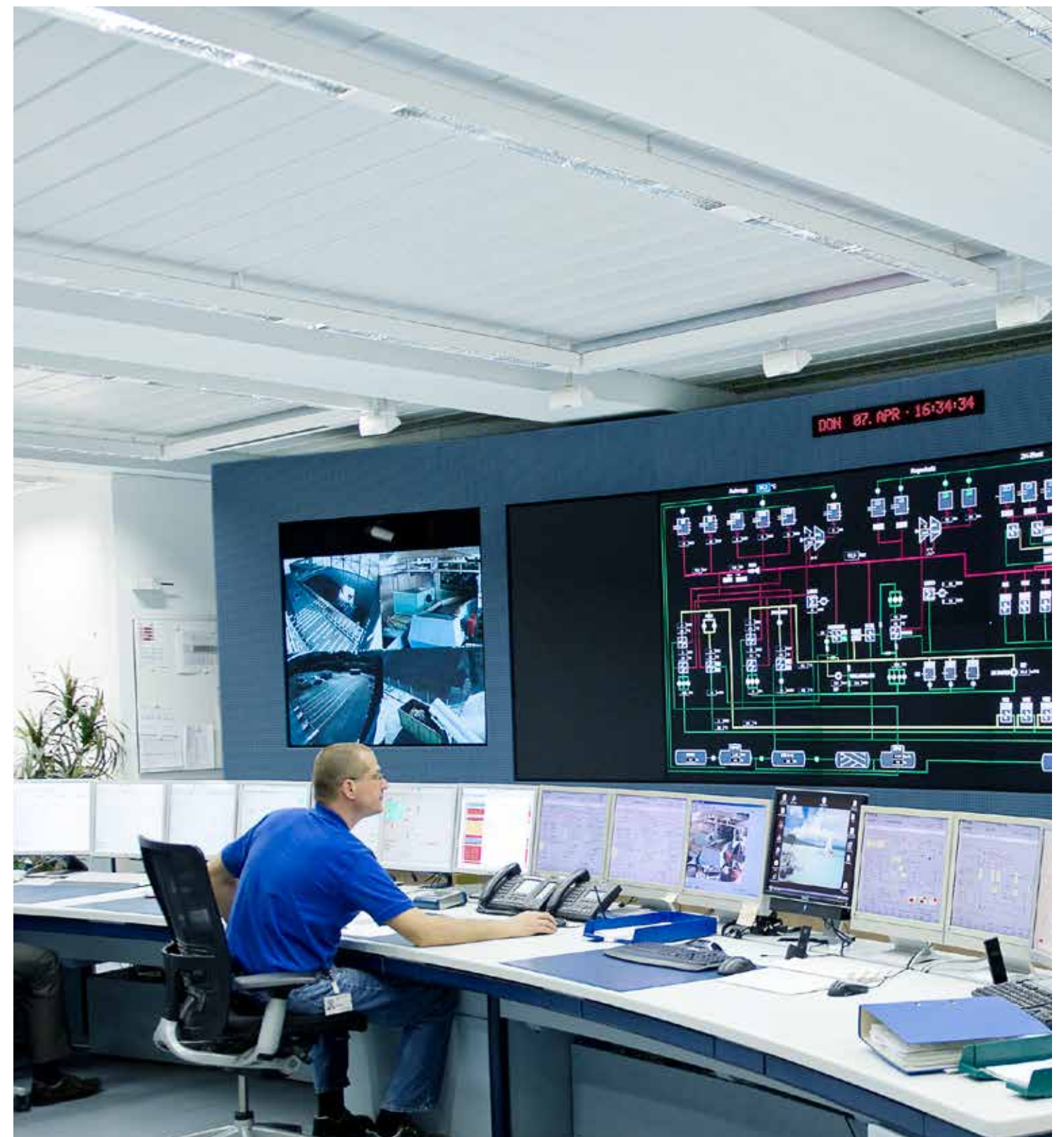
By using advanced and latest simulation applications BERTSCHenergy plants can be dynamically simulated, optimised and designed in early stages of development.

## » Experience that counts

Additionally to all necessary measurement, control and regulation issues for boiler design, we assume all electrical engineering tasks – from planning and realisation of the entire low voltage installation, including advanced network control and process control technology, right through to mid- and high-voltage connections to the public grid.

## » Power plant efficiency and network compatibility

In addition to reliably providing process steam, all other opportunities to increase energy efficiency are in focus. Sophisticated mechanical solutions, such as energy recovery in the boiler and in the peripheral units, are efficient complemented by technical control. Using advanced generator solutions in connection with the public network are our answer to decentralised energy production requirements. The key is the efficient balance between demand and production. We render a substantial contribution to revenue optimisation by providing precise power plant designs.



## ELECTRICAL, MEASUREMENT, INSTRUMENTATION AND CONTROL TECHNOLOGY

BERTSCHenergy ensures proper functionality of your power plant and supports you in matters of network access.



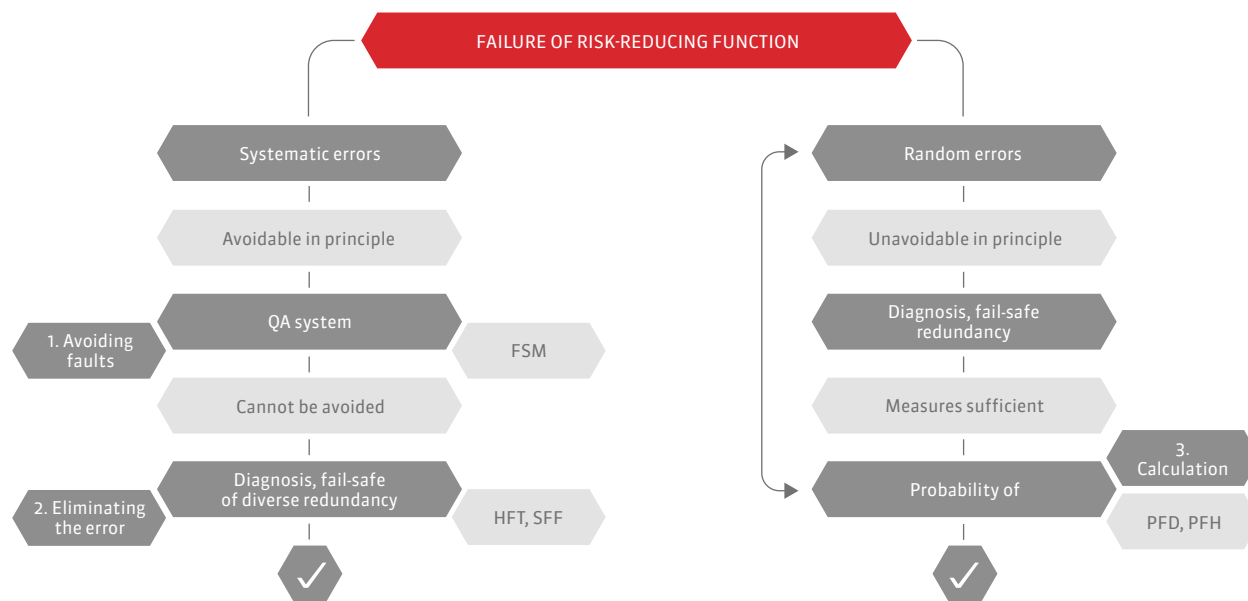
# »Quality, safety and environment«

In order to comply with all terms of health, safety and environmental aspects, BERTSCHenergy carries out all processes according to the requirements of certified management systems EN ISO 9001, EN ISO 14001, BS OHSAS 18001 and SCC\*\*. Customer requirements, our high ethical standards and consistent environmental policies form the basis for our quality, environmental and occupational health and safety objectives.

## » Fault safety management for plant safety

We are always aware of our responsibility to build safe power plants and power plant components and take all possible risk into consideration. That is why we have implemented a comprehensive Functional Safety Management (FSM) on basis of the standard EN 61508 and related sector

standards such as EN 50156-1, EN 61511 and EN ISO 13849. This not only provides formal proof of functional safety for the reduction of random sources of errors, but it also ensures to preventing systematic sources of errors.



## » Risk minimisation through SIL

Fully implemented Functional Safety Management considering the entire safety life cycle sets standards delivers an almost unsurpassable level of plant safety. All risk-minimising tasks concerning safety and environmental protection aspects of the Safety Integration Level (SIL) over all layers of protection are implemented accordingly in close cooperation with independent certification part-

ners. In terms of a low-risk strategy, our many years of experience with the requirements of the Health and Safety Executive (HSE) are implemented within the existing safety structure. All these measures contribute significantly to the safe operation of BERTSCHenergy system components and power plants.



**QUALITY, SAFETY AND ENVIRONMENT**  
BERTSCHenergy acts responsibly towards its employees, the public and our environment





## » Power plants

## » Innovative technologies for energy supply«

The power plant landscape and energy supply is undeniably changing. Securing a stable energy supply for industry and for regional energy suppliers is becoming increasingly important.

We at BERTSCHenergy have recognised these developments in the energy market early on and have already implemented solutions. Production waste such as rejects, sludge from paper mills, waste wood and bark in the wood processing industry make high quality fuels to generate steam and electricity. For natural gas, various process gases or oil, we are designing and building highly economical combined-cycle power plants as well as direct-fired boiler plants, which adapted flexibly to the needs of our customers.

The BERTSCHenergy delivery spectrum ranges from individual power plant components through to complete power plant solutions, in which we support our customers intensively from the initial planning stage through to the handover.

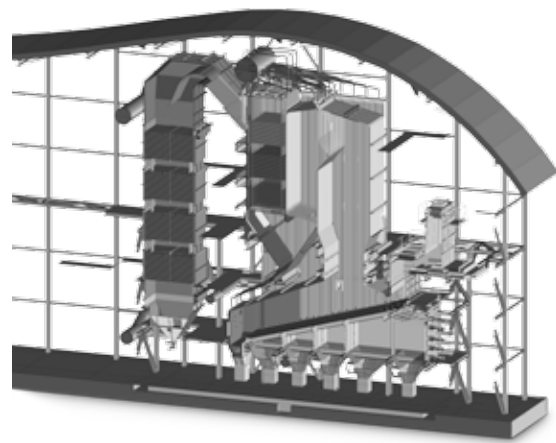
## » BERTSCHenergy delivery spectrum

- » Civil engineering and construction management
- » Fuel processing, storage, supply and ash disposal
- » Combustion technology
- » Boiler plant
- » Boiler house incl. building-services
- » Water treatment and feed water system
- » Gas and steam turbines
- » Power and process control systems incl. integration of gas and steam turbine control systems
- » Electrical switchboards, grid connection
- » Flue gas cleaning system



# »Solid-fuel-fired power plants«

BERTSCHenergy offers customised solutions for a wide range of solid fuels. The choice of combustion technology depends on the fuel used and design parameters such as emission limits, load change rates, and the required availability. We apply moving grates and travelling grates as well as bubbling fluidised beds for this purpose.

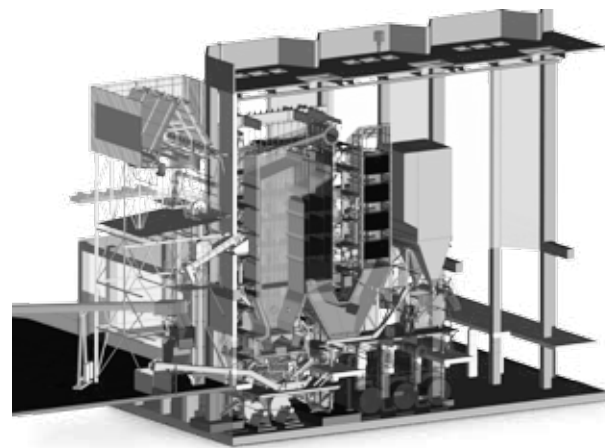


## » Grate furnace

BERTSCHenergy supplies air- and water-cooled reciprocating grates which are integrated into the water tube boiler. The combustion process is optimised by air staging and the injection of recirculated flue gas.

### BERTSCHenergy grate furnace for fuel particle sizes up to 700 mm

- » Untreated biomass (waste wood, wood chips, landscape cultivation material, bark, sawdust)
- » Wood from short rotation plantations



## » Bubbling fluidised bed

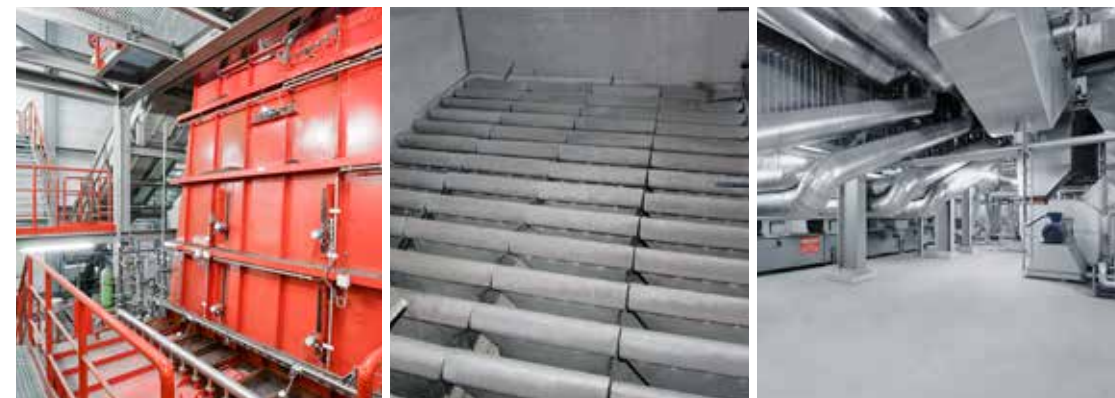
Fluidised bed boilers represent a technological advancement on grate boilers. The decisive advantages are in the greater flexibility in fuel parameters (e.g. heating value band) and lower emissions. The boiler integrated fluidised bed is equipped with an open nozzle grate to remove coarse particles such as stones and ceramics. The fluidisation of the sand bed is carried out by a mixture of combustion air and recirculated flue gas.

### BERTSCHenergy fluidised bed for fuel particle sizes up to 250 mm

- » Biogenic residues (wood, waste wood, sawdust, chicken manure and other agricultural waste)
- » Waste fuels (rejects, sludge, RDF)



POWER PLANTS



**SOLID-FUEL-FIRED POWER PLANTS**  
BERTSCHenergy delivers customised solutions for a wide fuel spectrum.



# »Solid-fuel-fired power plants«

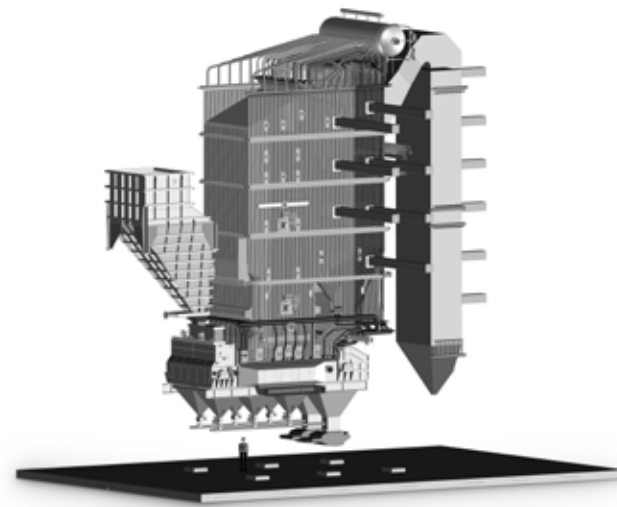
For the purpose of the highest efficiency, BERTSCHenergy exclusively pursues customer-oriented solutions. Therefore BERTSCHenergy power plants apply furnace and boiler technologies accurately adjusted to the available fuels and the customer's requirements. Also, with regard to coal fuel, which continues to be one of the most important energy sources, BERTSCHenergy provides high-quality concepts.

## » Travelling grate

The combination of traditional coal fuel with the modern and advanced combustion technology meets current emissions standards and achieves a high level of boiler efficiency. We supply air-cooled travelling grates, which are fed using funnels or distribution units.

### BERTSCHenergy travelling grate for primary fuels

- » Hard coal
- » Lignite



## » Boiler technology

- » Natural circulation boiler as a membrane wall construction with post-combustion chamber and downstream radiation and convection passes
- » Economiser as a free-standing metal sheet construction
- » Superheated steam temperature control with spray coolers or drum cooler
- » Boiler cleaning systems such as soot blowers, water cannons, shower cleaning
- » Optional use of a flue gas condensation unit for maximised heat recovery from the flue gas

## » Emission control

A tailor-made flue gas cleaning method, adapted to the respective specified emission limit values, is applied. It consists of the following components or combinations thereof:

- » SNCR system for reducing nitrogen oxide emissions
- » Electrostatic precipitator (ESP) with or without pre-separator
- » Fabric filter with optional dry sorption unit for the reduction of HCl and SO<sub>2</sub> emissions as well as binding heavy metals, etc.

## » BERTSCHenergy solid-fuel-fired power plants – parameters

- » Heat output – approx. 20 to 100 MWth
- » Steam quantity – approx. 20 to 130 t/h per unit
- » Steam pressure – approx. 40 to 130 bar
- » Steam temperature – up to 540°C



### SOLID-FUEL-FIRED POWER PLANTS

BERTSCHenergy boiler technology with advanced emission control systems are resource-saving and environmentally sound.



# »Gas- and oil-fired power plants«

BERTSCHenergy offers all possible combinations with gas and steam turbines to generate electricity and steam. When it comes to the use of fossil fuels, maximum energy yield is what matters. Maximum availability, operational flexibility and dynamism of our power plants are at the core of our customers' economic success.

## » Power plants expertise

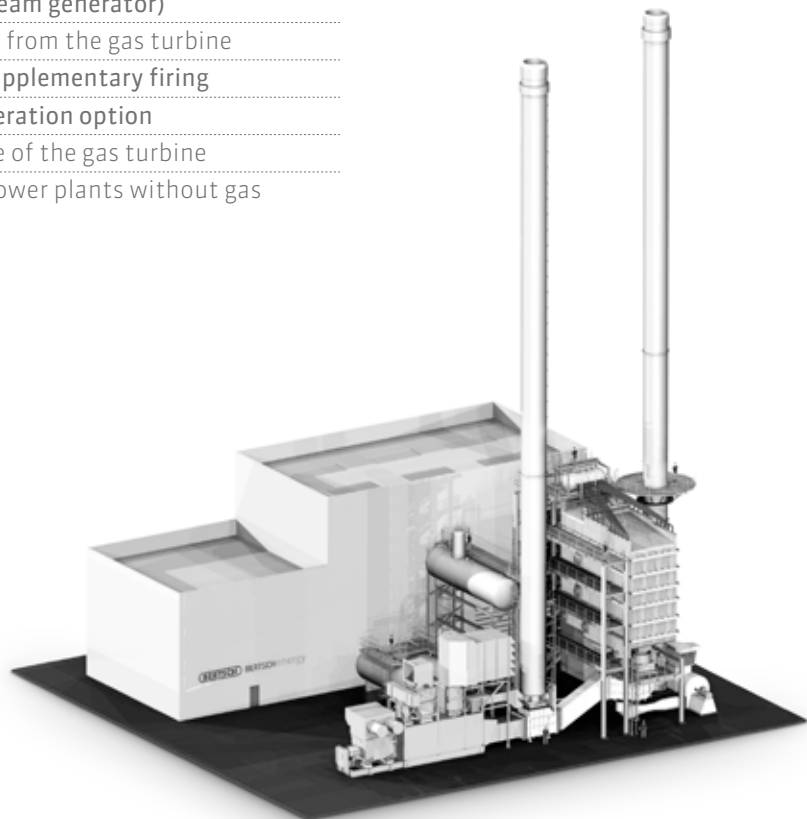
As the general contractor, BERTSCHenergy provides every conceivable form of assistance in the construction of power plants. Our expertise covers the supply of all individual components as well as turnkey power plants - from gas turbines to boilers right through to steam turbines and all ancillary components.

## » Plant variants

Depending on the required ratio of electricity and steam and in accordance with the requirements of operational flexibility, we combine gas turbine, steam turbine and firing components with each other.

BERTSCHenergy's tried-and-tested steam generators always represent the central link in our designs. Designs can be created as:

- » HRSG (heat recovery steam generator) for waste heat recovery from the gas turbine
- » HRSG equipped with supplementary firing
- » HRSG with fresh-air operation option non-operation or failure of the gas turbine
- » Direct fired boiler for power plants without gas turbine



## » Optional equipment

- » Gas turbine bypass for gas turbine solo operation or dynamic switching between gas turbine and fresh-air operation
- » Connection of multiple gas turbines to a single boiler
- » Firing with a range of fuels such as special gases and heating oil
- » Exhaust gas treatment by SNCR or SCR



**GAS- AND OIL-FIRED POWER PLANTS**  
 Modern BERTSCHenergy power plants respond flexibly and quickly to all demands.



# »Gas- and oil-fired power plants«

Consideration of the individual customer's needs is central to the philosophy of BERTSCHenergy. We are ready to face all challenges in terms of limited construction areas and limited processing time. Integrations within existing constructions are also one of our strengths, as are greenfield projects.

## » Boiler type – design

Our customers receive prefabricated and pressure-tested heating surface modules in the highest manufacturing quality with minimal installation effort.

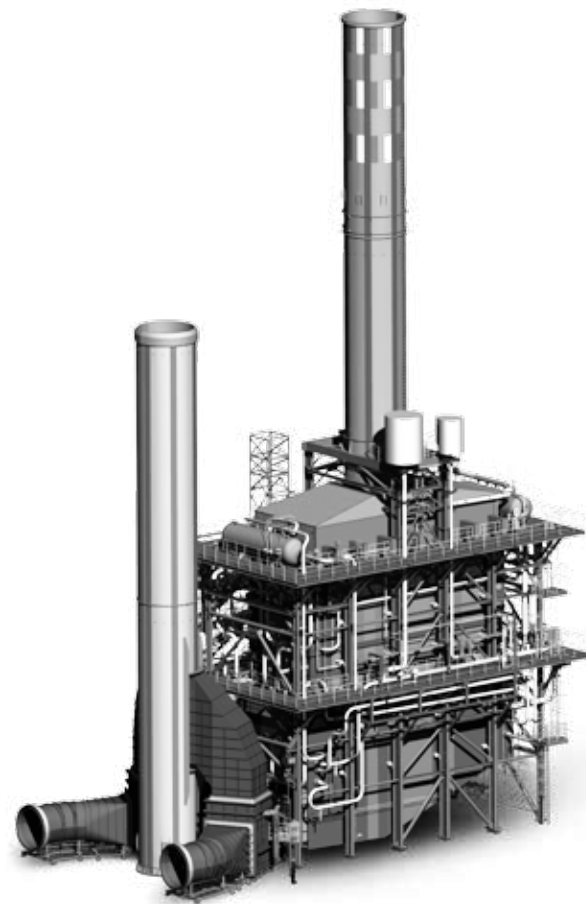
If greater operational flexibility with powerful supplementary firing or fresh air operation during gas turbine downtime is required, then boiler concepts with cooled combustion chambers (membrane walls) are used.

## » Boiler firing

The boiler plants can be fired using liquid and gaseous fuels, such as natural gas, waste gases, special gases, heating oil or liquid residues.

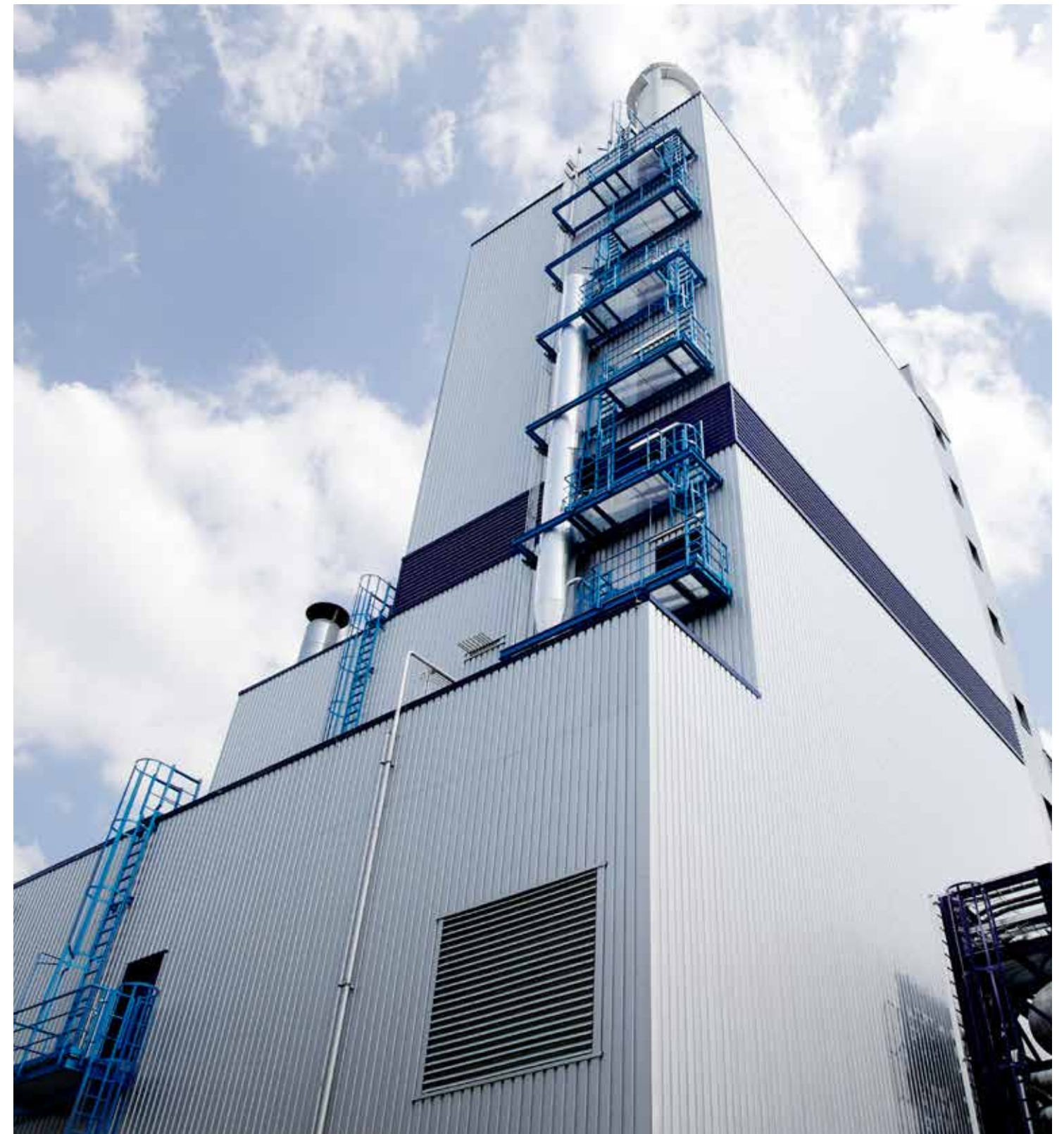
## » Boiler technology

- » Natural circulation boiler, single and multi-pressure systems, reheating
- » Vertical or horizontal version
- » Superheated steam temperature control with injection coolers or with surface coolers in the drum
- » Area or duct burner in a ceramic-lined combustion chamber



## » BERTSCHenergy gas- and oil-fired power plants – parameters

- » Heat output – up to 200 MWth
- » Power output of gas turbines – up to 100 MWeI
- » Steam quantity – 50–270 t/h
- » Steam parameters – up to 560°C, up to 150 bar



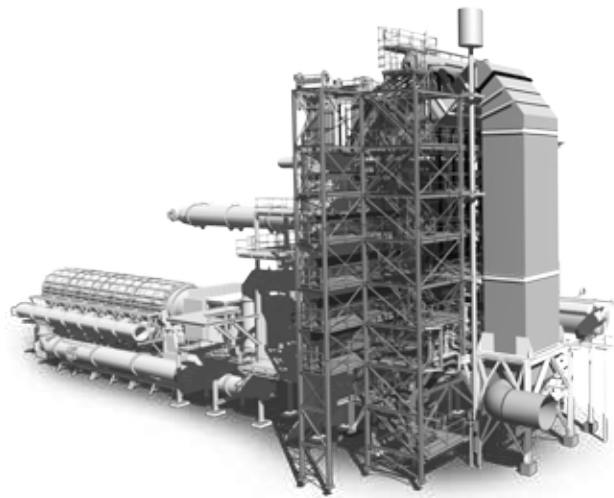
**GAS- AND OIL-FIRED POWER PLANTS**  
 BERTSCHenergy designs tailor made solutions using different constructions adapted to the respective space.





# »Industrial heat recovery«

The waste heat from industrial processes offers significant savings potential in primary energy costs. Tailored BERTSCHenergy heat recovery boiler plants ensure optimum heat recovery and reduces the overall energy consumption. Depending on requirements, the recovered heat can be converted into electrical energy using a turbine, or used for the reduction of primary energy utilisation in other processes.



## » Principle

A heat recovery boiler allows the transfer of heat from a flue gas to a carrier medium such as superheated steam, hot water, or others. In order to ensure high availability and long service life of the equipment, we have optimised the boiler design for the various flue gas properties, such as temperature, dust content, composition and corrosive components. In case the hot gas streams are significantly loaded with dust particles, we provide different heating surface cleaning systems such as soot blowers, shot cleaning systems, rapping devices or explosion generators. If necessary, a secondary combustion chamber with separate air injection is integrated into the boiler.

## » Possible applications

We develop and supply technologies for optimised thermal utilisation of waste heat recovered from various industrial processes.

- » Cement industry
- » Steel industry
- » Glass Industry
- » Roasting furnaces
- » Wood products industry
- » Thermal disposal processes
- » Sewage sludge incineration

## » BERTSCHenergy industrial heat recovery – parameters

- » Exhaust gas quantity – up to 350.000 Nm<sup>3</sup>/h
- » Dust content – up to 300 g/Nm<sup>3</sup> with or without post-combustion chamber
- » Steam quantity – up to 150 t/h
- » Steam parameters – up to 120 bar, 540°C



**INDUSTRIAL HEAT RECOVERY**  
BERTSCHenergy heat recovery systems reduce energy costs and conserve resources.





» Process equipment

## » Know-how for petrochemical challenges«

Custom-made and perfectly designed complete heat recovery systems with the highest standards in engineering and manufacturing are the foundation of successful partnerships with many customers in the chemical and petrochemical industries.

We rely on the latest design and calculation methods and our own manufacturing workshops with their highest standards of welding quality. This enables us to fulfil all requirements of our customers and the international standards.

### » BERTSCHenergy quality characteristics

- » Short delivery times for time-critical projects
- » Custom-made constructions
- » Heat-engineering and structural analysis
- » Permanent quality assurance
- » Highly specialised manufacturing for pressure parts made of special materials with big wall thicknesses



# »Process heat recovery systems«

BERTSCHenergy provides customers from all over the world with high-quality process heat recovery system. Our systems use the energy in the production processes of hydrogen, carbon monoxide, methanol, ammonia, urea and sulphuric acid to generate hot steam and to heat process gas and combustion air. We have decades of experience in delivering thermo-technical and structural calculations, construction details and the complete prefabrication of heat recovery systems units modular.

## » Typical designs

- » Horizontal or vertical arrangement
- » Superheated steam temperature control with quench coolers or drum coolers
- » Plate for tube type air preheaters
- » Refractory lining (concrete, ceramic fibre)
- » Natural circulation



## » BERTSCHenergy process heat recovery systems – parameters

- » System sizes - flue gas flow for each heat recovery system – 20,000–500,000 Nm<sup>3</sup>/h
- » Operating pressures – depending on the application, 10–150 bar
- » Operating temperatures – superheated steam, gas mixtures, air, etc. up to 650°C
- » Operating temperatures – flue gas up to 1,300°C



**PROCESS HEAT RECOVERY SYSTEMS**  
 BERTSCHenergy offers appropriate solutions worldwide thanks to modular designs and clever logistics.



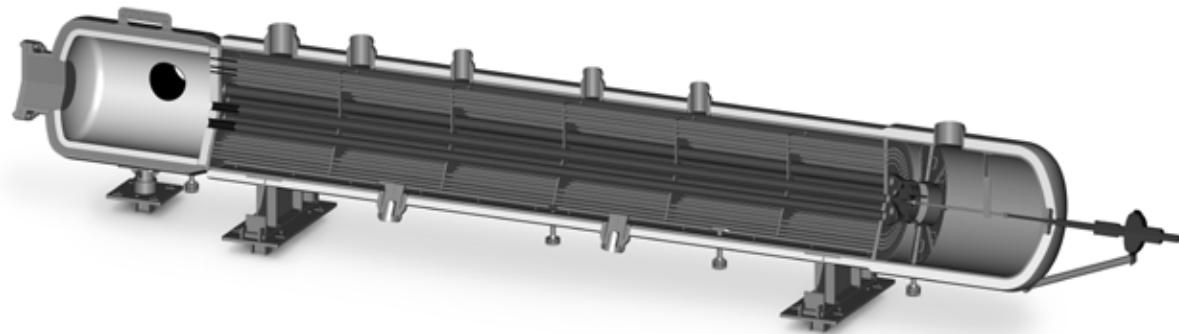
## »Process gas coolers«

Aside from the thermal design including main and bypass heat surfaces our main focus is on the tube sheet construction and the tube to tubesheet welding. Finite elements calculated and precisely manufactured flexible tubesheets are connected with the tube by modern inbore welding procedure. This results in important benefits for our customers during operation of the equipment: lower tensions in material, homogen temperature distribution and perfect cooling of the welding seams

In the production of hydrogen, carbon monoxide, methanol, ammonia, urea and other important chemicals the processes are always dependent on the precise cooling of the pressurised process gases. The recovered heat is used to generate steam. Due to the reducing gas atmosphere the choice of the right material and the professional manufacturing are mandatory for a long lifetime of the equipment.

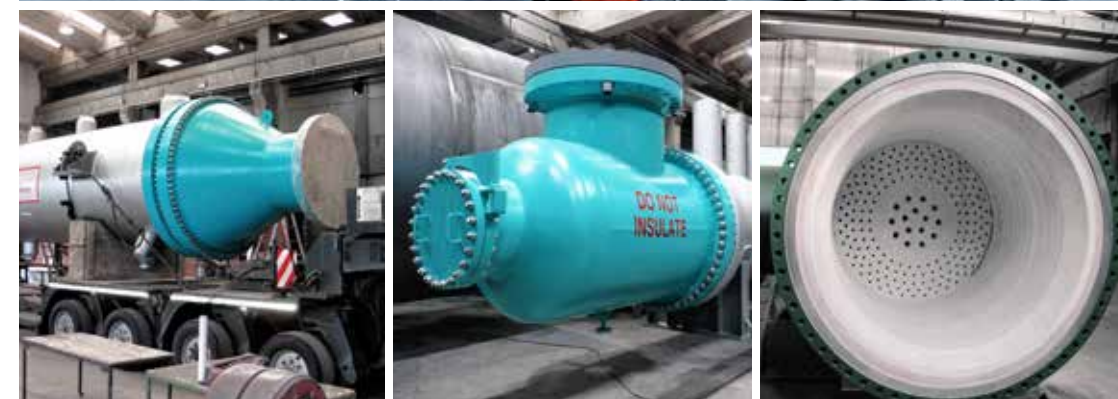
### » Typical designs

- » Fire tube boiler systems, natural circulation, with internal steam chamber or separate steam drum
- » Refractory lining with monolithic bricks or self-flowing material
- » Metallic or ceramic ferrules
- » Internal bypass heating surfaces with gas flow control system



### » BERTSCHenergy process gas coolers for reformer gases – parameters

- » Process gas flows up to 500,000 Nm<sup>3</sup>/h
- » Process gas temperatures up to 1,100°C
- » Control accuracy of gas temperatures +/- 3°C
- » Operating pressures up to 150 bar (water/steam) or 360 bar (gas)
- » Heat Flux up to 580 kW/m<sup>2</sup>



**PROCESS GAS COOLERS**  
BERTSCHenergy combines optimal engineering and perfect welding technology for highest performance.



# »Pressure vessels, reactors and columns«

Decades of experience, profound stant in-depth in pressure vessels as well as modern production technologies in our BERTSCHenergy fabrication enable us to meet all customer requirements at the highest technical level. Our pressure vessels, process columns and special equipment are used in the chemical and petrochemical industries worldwide.

Pressure vessels, reactors and process columns are required for the production of industrial or chemical substances according to defined procedures. Expansions and modernisations of process plants place increasingly higher demands on the equipment. Compliance with various customer requirements has been our foundation for successful deliveries and reliable plant operation.

Continuous improvements in calculation and design programs and a variety of certified welding methods are used daily by our specialists in order to produce quality products for diverse applications.

Continuous improvement in the interaction between engineering, procurement, logistics and production both justifies and ensures a successful location in Central Europe.

## » BERTSCHenergy quality products

- » Absorbers
- » Adsorbers
- » Jacketed vessels
- » Steam accumulators
- » Steam drums
- » Extractors
- » Feeder vessels
- » Falling film evaporators
- » Fluidised bed reactors
- » Converters
- » Reboilers
- » Regenerators
- » Reactors
- » Separators
- » Process columns
- » Condensers
- » High-pressure heat exchangers
- » Cladded vessels and heat exchangers
- » Penstocks



PROCESS EQUIPMENT

## » BERTSCHenergy pressure vessels, reactors and columns – approvals and certificates

- » Pressure Equipment Directive 2014/68/EU with EN 13445 or AD 2000
- » ASME I and ASME VIII Div. 1, U stamp, S stamp
- » Manufacturer approval for China
- » Approvals for CIS



**PRESSURE VESSELS, REACTORS AND COLUMNS**  
BERTSCHenergy has been asserting itself for decades in this highly demanding customer segment.





» Service

## » Perfect services for optimum power plant operation«

We look after our customers' facilities throughout their entire life cycle. Because of the regular inspection and maintenance, the risk of unexpected operation failure is reduced, and availability and efficiency are increased.

Besides normal maintenance and operational support, BERTSCHenergy services provides you with the required expertise in reconstruction and modernisation of facilities or the adaptation of changing operating conditions.

In the field of steam generators and complete water-steam systems, it is the combination of planning and management experience that characterises our service experts. Regardless of the type of system, whether it is a BERTSCHenergy plant or a foreign investment, we offer comprehensive services based on the latest technology and under constant consideration of current regulations and standards.

» BERTSCHenergy – your service partner

- » Highly qualified staff
- » Service for internal and external systems
- » Complete technical scope of services
- » Expert advice
- » Long-term customer relationships



# »Services«

We offer our customers comprehensive aftersales services in the areas of production and plant and systems engineering. The range of services goes far beyond normal repairs. Our goal is to achieve long-term and constructive cooperation with a satisfied customer. Experienced service experts operate worldwide, because professional service increases the efficiency and availability of complex systems.

## » Conversions and modernisation

We assess the operating performance of facilities, plan possible improvements and implement them. In order to maintain competitiveness, we adapt our systems to changed conditions.

## » Maintenance and repair

We perform normal maintenance and revision work on the spot, but also repair work and preventive maintenance. Services refer to the complete technical scope of the boiler from the respective systems to instrumentation and electrical and control systems.

## » Spare and wear parts management

We supply original equipment parts and inform our customers about new developments and possible improvements.

## » On-site operating support

We perform inspection and downtime works by supporting customers through plant re-commissioning and in evaluating the plant status.

## » Consulting and training

We offer our customers application-oriented training and expert advice for all operational and investment areas.



**SERVICES**  
The BERTSCHenergy experts bring their expertise to your plant.





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# BERTSCH

TRADITION, QUALITY, KNOW-HOW. SINCE 1925