

DEAS

INSIDE



Process Technology | Engineering Services | Turnkey Industrial Plant Construction



WE ARE IDEAS INSIDE

*„Our responsibility is to successfully continue our tradition
and to shape the future in a sustainable way.“*

Management, EPC Engineering & Technologies GmbH

EPC Engineering & Technologies GmbH is an international technology and service provider for process technologies, engineering services and plant construction.

Our focus is on the licensing of technologies, functional turnkey plant construction as well as engineering services for individual process steps. In addition to our process know-how, we are providing our clients different opportunities for plant revamp, plant modernisation, process development, process technology upscaling and all engineering steps up to the plant construction & commissioning. In Germany, EPC Engineering & Technologies GmbH is also providing the full EPC (Engineering, Procurement, Construction) scope.

Its business activities focus on the polymer and fibre industries, the polymer recycling, the chemical and pharmaceutical industries, biotechnologies and also energy generation and decarbonisation sectors.

OUR TECHNOLOGIES

It is the combination of experience, and research & development, that creates new technologies and a range of innovations in engineering and industrial plant construction.

From process development, planning and implementation, to modernising and revamping of existing plants, the EPC Group constructs plants globally, that are economically and environmentally state-of-the-art.

“Ideas Inside” is our motto for successfully implementing requirements of clients’ from a diverse range of technology sectors into modern industrial plants.

Our capital is the knowledge and creativity of our employees, as well as their ability to establish links between individual technologies.

This has been demonstrated by the successful completion of over 1,000 projects in over 40 countries.



POLYMERS & FIBERS

Alongside our award-winning polycarbonate process, we also offer expertise in plant design for polystyrene, polyester, polyacrylonitrile, viscose and carbon fibers, as well as certain niche products.

Through our in-house developments, we find intelligent solutions for a wide variety of polymer modifications and spun-dyed products.



CHEMISTRY & MORE

Based on the chemical and physical processes underlying your laboratory plant or pilot plant, we design your future plant and ensure a successful plant start-up with you.



PHARMA & FINE CHEMICALS

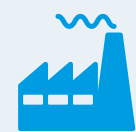
We are familiar with the properties of the different substances handled and the corresponding design of the plants necessary, for both product and personal safety.

Our current product portfolio has grown out of diverse applications and decades of experience.



CONSTRUCTION & INFRASTRUCTURE

In order to offer a comprehensive engineering package for our plants, we carry out construction and infrastructure planning for the client's envisaged plant site.



INDUSTRIAL PLANTS

We have executed comprehensive production and industrial plants including ancillary plants and infrastructures in many different sectors. This includes approval planning in accordance with the Federal Immission Control Act, as well as guidance with final official approval.



BIOTECHNOLOGIES

Starchy and oil-rich renewable raw materials form the foundation of our biotechnology division, where with innovative processes, new raw materials for the chemical, agriculture and pharmaceutical industries can be produced.



ENERGY GENERATION

Effective use of renewable raw materials, residual material streams from the manufacturing industry, and natural energy sources as raw materials in our plants to fulfil the current resource-conserving requirements demanded in plant construction and to create new innovative products.

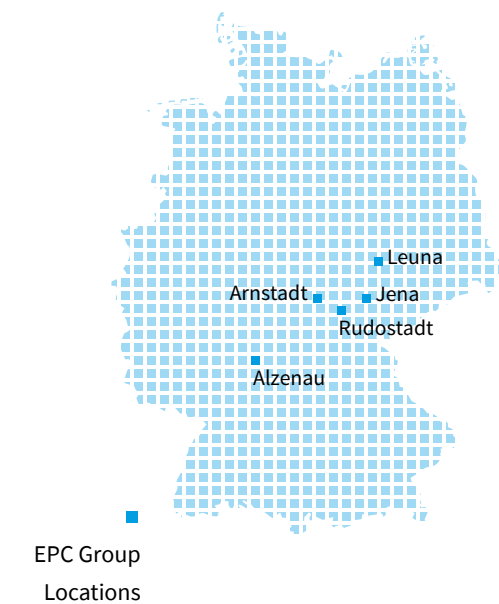


DECARBONIZATION

Syngas and feedstock productions are part of our decarbonization strategy which we offer to clients. This involves recovering CO2 from gaseous or liquid media. In addition, other regenerative carbon sources in our technologies can be used as well to achieve decarbonization.

COMPANY- STRUCTURE

EPC Engineering & Technologies GmbH is part of the EPC Group, with over 180 employees. The companies EPC Engineering & Technologies GmbH und HI Bauprojekt GmbH belong to the EPC Group.



The passion that the EPC Group has for mechanical engineering and plant construction has been passed down through many generations of the Henkel family, owners of EPC Engineering & Technologies GmbH. Records show that as far back as 1894, machineries from the Henkel family business won awards at numerous trade fairs. 100 years later, the foundation stone of EPC Engineering & Technologies GmbH was laid. We are now celebrating our 30-year anniversary. Thank you to all of our clients and employees.



- Polymers & fibers
- Chemical plants
- Pharma and fine chemicals
- Industrial plants
- Biotechnologies
- Energy generation
- Decarbonization
- Infrastructure planning
- Engineering Services

Locations

Arnstadt (*Headquarters*)
Rudolstadt (*Founding location*)
Leuna
Alzenau



- Construction engineering
- Infrastructure
- Civil engineering
- Authority engineering

Locations

Jena (*Headquarters*)
Rudolstadt



ARNSTADT

Arnstadt has a roughly 140-year tradition in plant construction and in 2017 became the headquarters location of EPC Engineering & Technologies GmbH. The engineering department of the former VEB Chemieanlagenbau Erfurt-Rudisleben was incorporated into EPC in the early 2000s. The construction and planning of large-scale industrial plants was and remains the mainstay of the branch.



RUDOLSTADT

Peter Henkel founded EPC out of the former planning and investment department of the VEB Chemiefaserwerk Schwarza Wilhelm Pieck, which has a tradition of research, development and engineering dating back to the 1930s. The decades of experience in engineering and implementation of production technologies for the production of rayon, polyamide, textiles, fibers and other products, provided an outstanding foundation.



LEUNA

The Leuna branch of EPC Engineering & Technologies GmbH originated from the former development department of the Leuna Werke. Since 1916, the Leuna Werke had been a leading player in the specialist fields of fine chemicals, pharmaceuticals, and catalysts, as well as refining. To this day, process optimization, process development, and speciality chemicals remain the focus of this branch.



ALZENAU

The Alzenau branch emerged in the early 2000s as a result of a spin-off from Lurgi Zimmer AG. This branch's engineering tradition traces its origins back to the 1960s. To this day, plastics technologies remain the focus of this branch.

TRADITION SINCE 1873

Our 150-year engineering tradition is a testament to our continuous development and innovation.



ERFURT

The A.O Henkel company is awarded the silver medal at the Thuringian Trade and Industry Exhibition in Erfurt

1894



COBURG

The A.O Henkel company is awarded the gold medal at the Agricultural Exhibition in Coburg

1925



SCHWARZATAL

A.O Henkel continues as a business enterprise and trading company for agricultural machinery under the management of Karl Henkel, the grandson of the founder of the A.O. Henkel machinery factory

1940



RUDOLSTADT-SCHWARZA

EPC Technology GmbH is founded in Rudolstadt

1995

1873

SCHWARZATAL

The A.O Henkel company is founded by August Oskar Henkel in Cursdorf, Thuringia, for the production of agricultural machinery



1899

SCHWARZATAL

Relocation of production of the A.O. Henkel machinery factory to Schwarzmühle, Thuringia



1922

SAALFELD

The A.O Henkel company is awarded a certificate of honor for outstanding agricultural machinery and equipment.



1933

SCHWARZATAL

A.O Henkel continues as a business enterprise and trading company for agricultural machinery under the management of Albin Henkel, the son of the founder of the A.O. Henkel machinery factory.



1994

RUDOLSTADT-SCHWARZA

The engineering company EPC Engineering Consulting GmbH commences business activities at the Rudolstadt-Schwarza industrial site under the management of Peter Henkel, the great-grandson of the founder of the A.O. Henkel machinery factory.



2000

JENA

HI Bauprojekt GmbH is founded in Jena

LEUNA

EPC Technology GmbH establishes a new branch office in Leuna and takes on board employees from the former research department of Leuna Werke.

2009

RUDOLSTADT-SCHWARZA

The founder of EPC Group, Peter Henkel, and his successors Nadine, Jens, Ulf and Tim Henkel, the managing directors, host the 15th anniversary celebrations of EPC.



2021

ARNSTADT

Management is transferred to Karol Kerrane (Managing Director) and Franz-Josef Willems (Managing Director), assisted by Michael Streng (Technology Director).



ALZENAU

EPC Engineering Consulting GmbH establishes a new branch office in Alzenau, near Frankfurt am Main, together with specialists for polymerization technologies.

ARNSTADT

EPC Engineering Consulting GmbH establishes a new branch office in Arnstadt and takes on board employees from the former CHEMA Anlagenbau GmbH (Babcock AG).

2002

ARNSTADT

EPC Engineering & Technologies GmbH is founded, upon the merger of all EPC companies. The new head office of EPC Engineering & Technologies GmbH is located in Arnstadt.

2017



TODAY WORLDWIDE

International engineering and plant construction company.

TODAY

PLANT CONSTRUCTION & ENGINEERING SERVICES

For the successful delivery of a plant, it is important to have a partner that you can trust. For the entire lifecycle of the plant. And beyond.

FROM A SINGLE SOURCE

The EPC Group offers everything from a single source. Every phase of your project is supported by an experienced team from our company. From the first steps – the development of your project – to the handover of your turnkey plant. Even after the project is completed, we remain at your side and work with you to ensure that your industrial plant remains economically and environmentally advanced, and socially responsible.

CENTRES OF COMPETENCE

To survive in the global market, you need to be flexible so to react quickly to new demands. For this, Engineering & Technologies GmbH can rely on its centres of competence with experienced engineers and employees. We combine expertise from different specialized fields. This guarantees excellent support at every stage of your project. We are your engineering partner.

WE OFFER

- ✓ Investment planning
- ✓ Engineering for plants and construction
- ✓ Authority engineering and support
- ✓ Procurement
- ✓ Delivery of equipment
- ✓ Construction
- ✓ Installation
- ✓ Commissioning
- ✓ Training

OUR SERVICES

- ⚙️ Process development
- ⚙️ Equipment specification
- ⚙️ Layout engineering
- ⚙️ Piping engineering
- ⚙️ Instrumentation & control engineering
- ⚙️ Building design
- ⚙️ Structural engineering
- ⚙️ Infrastructure planning
- ⚙️ Building services and ventilation engineering



TURNKEY PLANT CONSTRUCTION

Process technologies / Engineering packages / Equipment supply / Structural and finishing works / Supervision of construction & installation / Commissioning

As a turnkey provider in Germany, and a functional turnkey provider abroad, we offer our clients production plants completely from a single source. It is therefore our responsibility to keep investment and operating costs as low as possible, without compromising on operational safety.



PROCESS SCALE-UP

Your process parameters / Our technological process expertise / Optimization of equipment / Troubleshooting of processes

We scale up your laboratory, demonstration or pilot plant to the next level, up to an industrial plant. We can engineer a wide range of processes thanks to our extensive experience and broad technological know-how.



TECHNOLOGY LICENSING

Our own technologies / Externally acquired licenses / Marketing your licenses

Benefit from our patented and proven technologies in the fields of polymers and fibers, chemical plants, recycling, biotechnologies and many more. As a further benefit, you can rely on our large network to offer licensing of your technology into the market, thus generating a new source of income for you.



REVAMPING & MODERNIZING

Modernization of old plants / Replacing individual pieces of equipment / revamping of process segments

Revamping or debottlenecking are the right answer to restoring your plant competitiveness, switching to new and more energy-efficient technologies, and thereby satisfying market demands and achieving flexibility as well as improving your plant's green footprint.

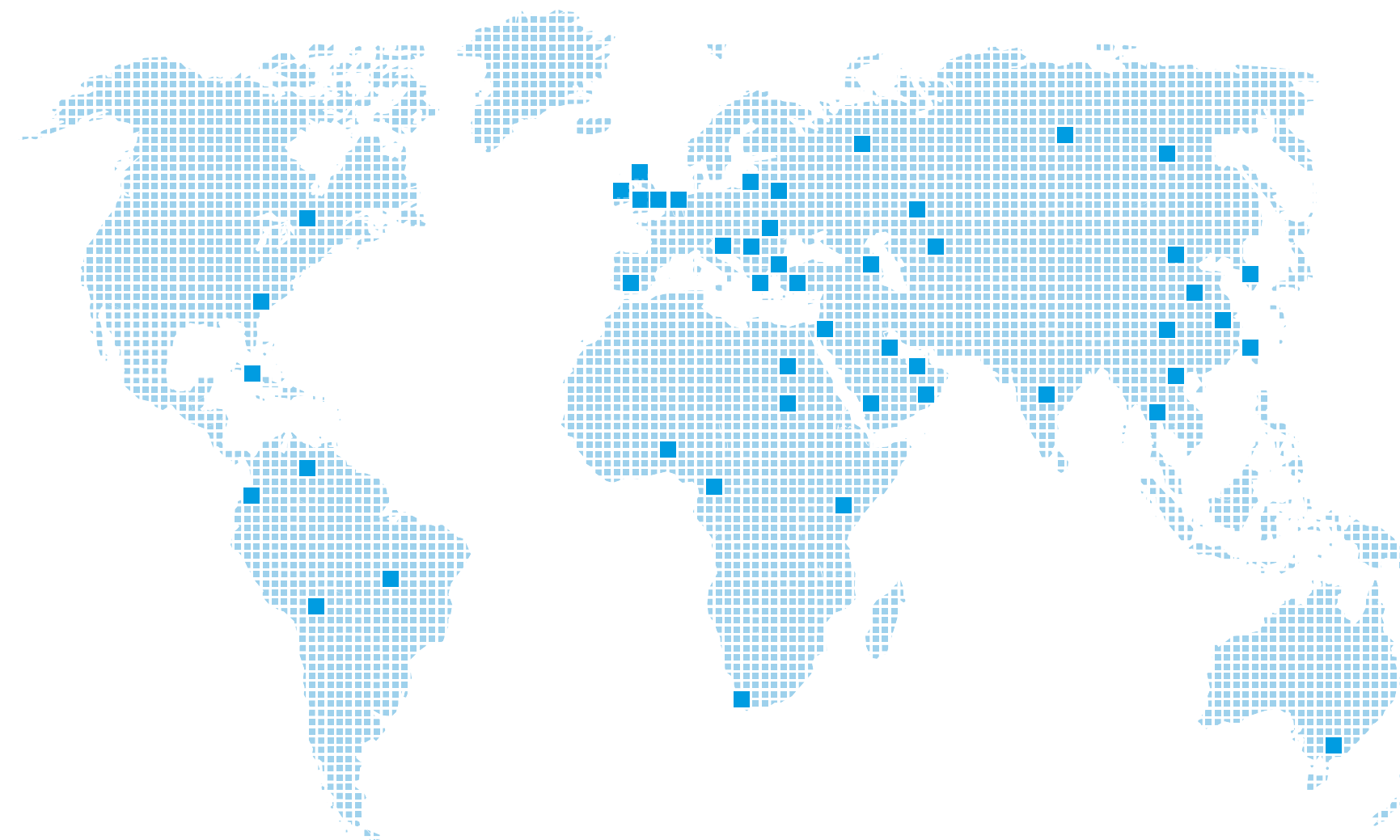
REFERENCES

Our engineers have successfully delivered over 1,000 projects. Our technologies have been implemented in over 40 countries to successfully realize turnkey projects for the construction of complete plants and for sections of plants.



WE PLAY GLOBAL

Australia / Azerbaijan / Bahrain / Belarus / Bolivia / Brazil / Cameroon / Canada / China / Colombia / Croatia / Cuba / India / Ireland / Jordan / Kazakhstan / Kenya / Lithuania / Netherlands / Nigeria / Oman / Romania / Russia / Saudi Arabia / Serbia / South Africa / South Korea / Spain / Taiwan / Thailand / U.A.E. / UK / USA / Uzbekistan / Venezuela / Vietnam and many more





POLYMERS & FIBERS

A success story in many
polymer fields.

We have the expertise with a diverse range of polymers, copolymers, and compounds, and together with our clients' innovative ideas, we will find the perfect technology for every desired polymer application.

Thanks to our engineers' decades of experience, we are able to offer a comprehensive range of services to ensure the optimal handling of raw materials and polymers, operation of the individual subprocesses, all the way to the finished product (including granulates, fibers and textiles).

As the global leader in the phosgene-free polycarbonate industry, we have demonstrated our innovational strength. Our clients' wishes are our priority. For example, with our spinning concepts we can achieve individual PET or PBT filament yarns, and POY or FDY speciality yarns (NC, HC or micro filaments) with highly differing color nuances or degrees of matting. Based on clients requirements, compounding or additive mixing will be incorporated into the process chain accordingly.

RANGE OF SERVICES

- ✓ Polymerization plants
- ✓ Extraction plants
- ✓ Post-condensation plants
- ✓ Compounding plants
- ✓ Recycling plants
- ✓ Spinning plants (eg. HM, HMLS)
- ✓ Carbonization plants
- ✓ Texturing and weaving plants
- ✓ Product handling, packaging & storage systems

PLANTS FOR THE PRODUCTION OF

- ⚙ Polycarbonate
- ⚙ Polyester PET, rPET, PBT, PET-G
- ⚙ PAN-Precursor
- ⚙ PAN | Carbon fibers
- ⚙ Lyocell fibers
- ⚙ Polyamide PA 6, PA 6.6
- ⚙ Polyvinyl chloride
- ⚙ Biopolymeren
- ⚙ Masterbatch
- ⚙ Polymer recycling

EPC TECHNOLOGIES FOR POLYMERS AND FIBERS



EPC phosgene-free PC Process

Patented process for the production of phosgene-free polycarbonate



EPC PCvantage

Process for an economic and efficient expansion and optimization of PC-plants



EPC Polyester Process

Efficient process for the production of polyester products



EPC inside PET[®] & inside PC

Operating software enabling fully automatic plant operation and quality control



EPC PETvantage[®]

Process for an economic and efficient expansion and optimization of PET-plants



EPC PAtraction

Efficient and cost-effective extraction process for polyamide 6



EPC VariYARN[®]

Modular color spinning system for POY and FDY



EPC VariCYCLE[®]

PET recycling technology (rPET) and EPS recycling



EPC VariPLANT[®]

Flexible plant concept for the production of polymers



EPC Polymer Recycling

Technology for polycarbonate and different polyester types



100 KT/A POLYCARBONATE
POLYCONDENSATION PLANT

- 📍 Ningbo / China
- 💶 Investment sum ~ 60 million €
- 📈 100,000 t / a (300 t / d) of PC granulates
- 🔧 EPC's VariPLANT® plant concept with patented melt transesterification process

EPC SERVICES

- ✓ Functional Turnkey
- ✓ Engineering package: Concept, basic and detail engineering
- ✓ Key equipment delivery
- ✓ Quality control of client´s supply
- ✓ Supervision of installation and commissioning
- ✓ Recipe development and product optimization



520 KT/A POLYCARBONATE
POLYCONDENSATION PLANT

- 📍 Dayushan Island / China
- 💶 Investment sum confidential
- 📈 2 x 260,000 t / a (1,560 t / d) of PC granulates
- 🔧 EPC's VariPLANT® plant concept with patented melt transesterification process

EPC SERVICES

- ✓ Functional Turnkey
- ✓ Engineering package: Concept, basic and detail engineering
- ✓ Key equipment delivery
- ✓ Quality control of client´s supply
- ✓ Supervision of installation and commissioning
- ✓ Recipe development



260 KT/A POLYCARBONATE
POLYCONDENSATION PLANT

- 📍 Hainan / China
- 💶 Investment sum confidential
- 📈 260,000 t / a (780 t / d) of PC granulates
- 🔧 EPC's VariPLANT® plant concept with patented melt transesterification process

EPC SERVICES

- ✓ Functional Turnkey
- ✓ Engineering package: Concept, basic and detail engineering
- ✓ Key equipment delivery
- ✓ Quality control of client´s supply
- ✓ Supervision of installation and commissioning
- ✓ Recipe development



PRODUCTION PLANT FOR
POLYESTER TIRE CORD

- 📍 Volzhsky / Russia
- 💶 Investment sum ~ 47 million €
- 📈 45,000 t / a of PET after post-condensation
- 🔧 EPC's polyester process including EPC's inside PET® for the production of tire cord

EPC SERVICES

- ✓ Functional Turnkey
- ✓ Delivery of equipment & installation materials
- ✓ Quality control of client´s equipment supply and buildings
- ✓ Supervision of installation and commissioning



REVAMPING OF 4 EXISTING
POLYCONDENSATION PLANTS

- 📍 Yanbu / Saudi Arabien
- 💶 Investment sum ~ 45 million €
- 📈 1,000 t / d of PET Chips
- 🔧 Conversion of the existing plant from textile-grade to bottle-grade PET chips production and capacity increase

EPC SERVICES

- ✓ Functional Turnkey
- ✓ Delivery of equipment & installation materials
- ✓ Quality control of client´s equipment supply and buildings
- ✓ Supervision of installation and commissioning



EPS RECYCLING

- 📍 The Netherlands
- 💶 Investment sum confidential
- 📈 3,000 t / a of EPS
- 🔧 Plant for recycling of EPS including solvent recovery and integrated design for the optional future expansion to 8,000 t / a EPS

EPC SERVICES

- ✓ Engineering package: Concept, basic and detail engineering
- ✓ Quality control of client´s equipment supply and buildings
- ✓ Supervision of installation and commissioning
- ✓ Recipe development and product optimization



CHEMISTRY & MORE

From a chemical formula to
a custom-made chemical plant.

It all starts with the chemical formula. Our experts will guide you from formulation, right through to a complete plant. The requirements of our clients, the authorities, and environmental considerations, form the bedrock of innovative chemical plants.

EPC Engineering & Technologies GmbH designs the appropriate equipment and constructs the plants, including all necessary ancillary plants, buildings and connections to existing systems. We employ the latest technology to simulate the processes and determine the material and energy balances.

Our engineers ensure all safety and environmental protection requirements are fully adhered to.

RANGE OF SERVICES

- ✓ Synthesis plants
- ✓ Hydrogenation plants
- ✓ Distillation and evaporation plants
- ✓ Crystallization plants
- ✓ Drying plants
- ✓ Product handling, packaging & storage systems
- ✓ Ancillary plants

PLANTS FOR THE PRODUCTION OF

- ⚙ Basic chemicals
- ⚙ Speciality waxes
- ⚙ Dyes
- ⚙ Liquid crystals
- ⚙ Pastes, e.g. for lithium-ion batteries
- ⚙ Speciality chemicals, e.g. NaCN & HCN
- ⚙ Methanol derivatives

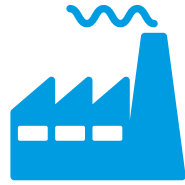


SODIUM CYANIDE (NaCN) PRODUCTION PLANT

- 📍 Dzerzhinsk / Russland
- € Investment sum ~ 80 million €
- ↗ 66,000 t / a NaCN
- ⚙ Production plant for NaCN briquettes, including all ancillary plants

EPC SERVICES

- ✓ Engineering package: Basic & detail engineering
- ✓ Delivery of equipment & installation materials
- ✓ Quality control of client's equipment supply and buildings
- ✓ Supervision of installation and commissioning
- ✓ Product optimization



INDUSTRIAL PLANTS

Advanced and sustainable industrial plants

Constructing turnkey industrial plants requires complex engineering and execution. It involves designing comprehensive chemical and physical processes, feasibility analysis, complying to strict safety regulations and legal requirements, and developing and improving innovative process technologies.

Modernizing existing plants as well as implementing heat recovery within processes and converting existing plants to use new process technologies are also increasingly important topics, which EPC Engineering & Technologies GmbH takes on together with our clients. Our employees will help you find a cost-effective, optimized technological solution, so that you can meet market demands and requirements.

RANGE OF SERVICES

- ✓ Concrete factories
- ✓ Glass factories
- ✓ Recycling plants
- ✓ Heat recovery / Utilization of waste heat
- ✓ Complete revamping of factories and plants
- ✓ Energy concept development
- ✓ Process energy optimization
- ✓ Energy optimization of building services

PLANTS FOR THE PRODUCTION OF

- ⚙ Steam
- ⚙ Cooling water / cold water
- ⚙ Waste recycling / recovery of raw materials
- ⚙ Converting existing plants to use new process technologies

RECYCLING PLANT FOR PLASTIC-METAL COMPOSITES

- 📍 Merseburg / Germany
- € Investment sum confidential
- ↗ 52,000 t / a (7t / h) of recycled materials
- ⚙ Plant for recycling of plastic-metal composites, with integrated design for future handling of various other composites

EPC SERVICES

- ✓ Engineering package: Concept, basic and detail engineering
- ✓ Support for procuring equipment and materials
- ✓ Supervision of installation and commissioning





BIOMASS COMBINED HEAT AND POWER PLANT (BM-CHP)

- 📍 Wachsenburg administrative office/ Germany
- 💶 Investment sum confidential
- 📈 13 MW / h thermal output
- ⚙️ Plant for generating heat and electricity as a replacement for an oil-fired boiler plant. Waste wood from the production is used as the raw material

EPC SERVICES

- ✓ Engineering package: Construction planning service phases 01-07
- ✓ Support for equipment and materials procurement
- ✓ Construction supervision service phase 08
- ✓ Advisory role in plant & process engineering



THERMAL ENERGY RECOVERY FROM INDUSTRIAL WASTE

- 📍 Rudolstadt / Germany
- 💶 Investment sum ~ 38 million €
- 📈 32.5 MW / h rated thermal input
- ⚙️ Plant for heat and steam generation from residual materials from paper production

EPC SERVICES

- ✓ Engineering package: Pre-basic & authority engineering
- ✓ Technology selection
- ✓ Construction supervision
- ✓ Project management for the duration of the engineering, construction and commissioning



PRODUCTION PLANT FOR CONCRETE AND HOUSE BUILDING ELEMENTS

- 📍 Dagestan / Russia
- 💶 Investment sum ~ 10 million €
- 📈 60,000 precast concrete elements per year
- ⚙️ Factory for manufacturing precast construction elements for houses and apartments. Total area of 150,000 m² per year, ~ 60,000, precast concrete elements per year

EPC SERVICES

- ✓ Engineering package: Basic & detail engineering
- ✓ Technology selection
- ✓ Delivery of equipment
- ✓ Supervision of installation and commissioning



DESIGN AND CONSTRUCTION OF A STEAM BOILER PLANT

- 📍 Völpke / Germany
- 💶 Investment sum ~ 1.2 million €
- 📈 4 t / h, 8 bar(g)
- ⚙️ Modernization of a steam boiler plant, including the buildings and a pipe bridge for connecting to the existing production plants

EPC SERVICES

- ✓ General contractor
- ✓ Engineering of process and buildings
- ✓ Delivery of equipment, pipelines and electric sk
- ✓ Installation and commissioning



PRODUCTION PLANT FOR NATURAL FERTILIZER FROM LIGNITE

- 📍 Dortmund / Germany
- 💶 Investment sum ~ 5 million €
- 📈 1,000 t / a of soil enhancer
- ⚙️ Engineering and construction of a 1,000 t / a pilot plant based on lignite

EPC SERVICES

- ✓ Engineering package: Pre-basic, basic, and detail engineering, authority engineering
- ✓ Delivery of equipment
- ✓ Installation and commissioning supervision



INFRASTRUCTURE PLANNING FOR THE "ADOLF JASS" PAPER FACTORY

- 📍 Rudolstadt / Germany
- 💶 Investment sum ~ 30 million €
- 📈 400,000 t / a of corrugated medium and testliner
- ⚙️ Infrastructure planning, including transport system, drainage, power supply, wastewater treatment plant, thermal power plant and an integrated design for an optional second line

EPC SERVICES

- ✓ Infrastructure planning
- ✓ Project supervision
- ✓ Planning & supervision of environmental protection, and occupational health & safety



PHARMA & FINE CHEMICALS

Highest demands for
constant product quality

„Our deep understanding of pharmaceutical synthesis is evident in our process design and plant layout.“

Dr. Manfred Richter / Former branch manager in Leuna
– now enjoying a well-earned retirement

MAXIMUM EFFECTIVENESS BEST COMPATIBILITY

These are the two key elements by which the products of our clients in the fine chemistry and the pharmaceutical industry will be judged. Therefore, it is important to be able to react to results of research and development at any time. We understand the specifics and the regulations of this industry sector. With specific knowledge and vast experience, we are the right partner for our clients. From the design of the plant to the simulation of critical processes, all the way to commissioning, we provide a complete range of services.

RANGE OF SERVICES

- ✓ GMP-compliant and FDA-conforming plant layout
- ✓ Qualification and validation
- ✓ Synthesis plants
- ✓ Hydrogenation plants
- ✓ Distillation and evaporation plants
- ✓ Crystallization plants
- ✓ Drying plants
- ✓ Product handling, packing and storage systems

DESIGN PARAMETERS

We design and implement industrial plants to operate within a wide parameter range of -100 °C to 600 °C, and up to 100 bar(g), using materials from stainless steel and steel/enamel to Hastelloy, with explosion-proof design (e. g. IIC T4), for hazardous substances, for example including CMR classification, with all required safety systems based on multiple scenarios of possible incidents and their prevention.



PLANT FOR THE REACTIVATION OF SPENT CATALYSTS

- 📍 Bitterfeld / Germany
- € Investment sum ~ 12 million €
- ↗ 3,000 t / a of spent catalysts
- ⚙ Plant for the reactivation of catalysts, via sulfidation & H₂S synthesis

EPC SERVICES

- ✓ Engineering package:
Basic & detail engineering
- ✓ Procurement of all equipment
- ✓ Construction supervision
- ✓ Commissioning



CLETOPROPAMINE HCL & PHARMACEUTICAL ACTIVE INGREDIENT SYSTEM

- 📍 Künsebeck / Germany
- € Investment sum confidential
- ↗ confidential
- ⚙ Production of Cletopropamine HCL, conversion of HCL, batch production of pharmaceutical active ingredients

EPC SERVICES

- ✓ Engineering package: Basic & detail engineering



ENGINEERING SERVICES FOR A LUBRICANT PLANT

- 📍 Rosenberg / Germany
- € Investment sum confidential
- ↗ flexible capacity depending on lubricant
- ⚙ Complete engineering service with integrated process optimization

EPC SERVICES

- ✓ Consultation for concept phase
- ✓ Engineering package: Basic & detail engineering, authority engineering
- ✓ Project management for engineering, construction and commissioning



PLANT FOR STRONG EXOTHERMIC GAS/LIQUID REACTIONS

- 📍 Aachen / Germany
- € Investment sum confidential
- ↗ flexible capacity depending on active ingredient to be produced
- ⚙ Plant for the production of various intermediates in pharmaceutical products

EPC SERVICES

- ✓ Process design
- ✓ Engineering package: Basic & detail engineering, authority engineering
- ✓ Commissioning



MULTI-PRODUCT PLANT

- 📍 Aachen / Germany
- € Investment sum confidential
- ↗ flexible capacity depending on active ingredient to be produced
- ⚙ Plant for the production of special chemicals and pharmaceutical intermediates, multiple parallel production systems

EPC SERVICES

- ✓ Process design for individual process steps which are interconnected
- ✓ Engineering package: Basic & authority engineering, programming, process control system
- ✓ Construction and installation supervision



BIOTECH- NOLOGY

Plants for the food and
animal feed industry

Industrial biotechnologies are indispensable for the food and animal feed industry and constitute an essential part of modern and environmental production processes. Our holistic solutions cover the areas of oil mills, protein extraction, gentle fruit processing plants and further processing, through to bio-materials for industry and trade.

Our grain refining plants enable the production of high-quality products such as modified flour, starch, syrup and fermentation products such as lysine and citric acid for the chemical and pharmaceutical industries. The by-products generated are used as high-quality animal feed.

RANGE OF SERVICES

- ✓ Grain processing plants for the production of lysine, citric acid, fodder, starch and gluten
- ✓ Oil mills with cold press, hot press or extraction processes
- ✓ Turnkey breweries, incl. brewing and bottling systems
- ✓ Spirits and liqueur production plants
- ✓ Plants for fruit processing
- ✓ Plants for the production of soft drinks and mineral water
- ✓ Plants for the production of high-quality proteins, e.g. from lupine



MIXED FEED PRODUCTION PLANT

- 📍 Eisleben / Germany
- 💶 Investment sum ~ 14 million €€
- 📈 66,000 t / a of animal feed
- 🏗️ Construction of a production plant for mixed feed from fatty acids and minerals

EPC SERVICES

- ✓ General planner
- ✓ Engineering package: Basic, detail & authority engineering
- ✓ Construction supervision
- ✓ Commissioning



BIODIESEL PLANT

- 📍 Ebeleben & Neubrandenburg / Germany
- 💶 Investment sum ~ 66 million €
- 📈 140,000 t / a of Biodiesel
- 🏗️ Construction of two production plants for biodiesel and pharmaceutical glycerine from rapeseed

EPC SERVICES

- ✓ General contractor
- ✓ Engineering package: Basic, detail & authority engineering
- ✓ Delivery of all equipment and materials, including installation
- ✓ Construction and installation supervision
- ✓ Commissioning



PLANT FOR THE PRODUCTION OF GLUTEN, GLUCOSE AND FRUCTOSE SYRUP, AND ANIMAL FEED

- 📍 Bashkortostan / Russia
- 💶 Investment sum ~ 110 million €
- 📈 200,000 t / a of wheat input
- 🏗️ Construction of a wheat processing plant

EPC SERVICES

- ✓ Engineering package: Pre-basic engineering
- ✓ Consulting role in further engineering and construction phases in Russia



ENERGY GENERATION

Regenerative energies and associated storage technologies are the future

In recent years, demand for resource conserving and future-oriented technology has risen dramatically. New ways to generate and store energy are constantly entering the market and being developed.

We also began working in this field very early on, whether in biogas, solar silicon manufacturing or nowadays in the production of raw materials for the battery industry. Our expertise brings energy production and storage into the next generation.

RANGE OF SERVICES

- ✓ Trichlorosilane purification and monosilane production
- ✓ Silicon processing plants
- ✓ Lithium processing plants
- ✓ Graphene processing plants
- ✓ Turbine plants for electricity generation
- ✓ Combined heat and power plants
- ✓ Electricity storage plants
- ✓ Thermal storage plants



LITHIUM HYDROXIDE REFINING PLANT FOR BATTERIES

- 📍 Bitterfeld-Wolfen / Germany
- € Investment sum confidential
- ↗ ~ 22,000 t / a output
- 🔧 EPC's project and process expertise for LiOH Technology, including the following:
 - Automated handling of raw material big packs transportation
 - Crushing and grinding process for processing raw materials
 - LiOH purification process to battery-quality with 99.5% filter technologies (physical processes) using cartridge filters
 - 3-stage process technology. 1 - Ion exchanger, 2- Raw crystallization, 3- Fine crystallization
 - Design of the complete control system
 - Drying process via a fluidized bed dryer
 - Final product handling & packaging into big packs & storage

EPC SERVICES

- ✓ Turnkey plant design
- ✓ Engineering package: Basic & detail engineering
- ✓ Construction supervision & commissioning



RENOVATION OF A PRODUCTION SITE INTO A PRODUCTION AND ASSEMBLY PLANT OF LITHIUM BATTERIES

- 📍 Arnstadt / Germany
- € Investment sum ~ 8 million € (Engineering costs and renovation costs for one building)
- ↗ 6 module production lines, 7,500 storage areas
- 🔧 Renovation of three existing buildings (formally for solar panel production) & concept designing for a new storage building für ein neues

EPC SERVICES

- ✓ Conceptual studies
- ✓ KG 300 & 400 phases 01-07 planning
- ✓ Fire protection concept
- ✓ Construction supervision KG 300 & 400
- ✓ General contractor for KG 300 & 400 for building renovation



CONSTRUCTION OF A NEW PRODUCTION PLANT FOR INGOTS AND WAFERS

- 📍 Jena / Germany
- € Investment sum ~ 300 million €
- ↗ Confidential
- 🔧 Silicon, ingot and wafer factory for SCHOTT SOLAR

EPC SERVICES

- ✓ Conceptual study with site selection
- ✓ Handling of technical permission procedures for infrastructure and utilities
- ✓ Construction management

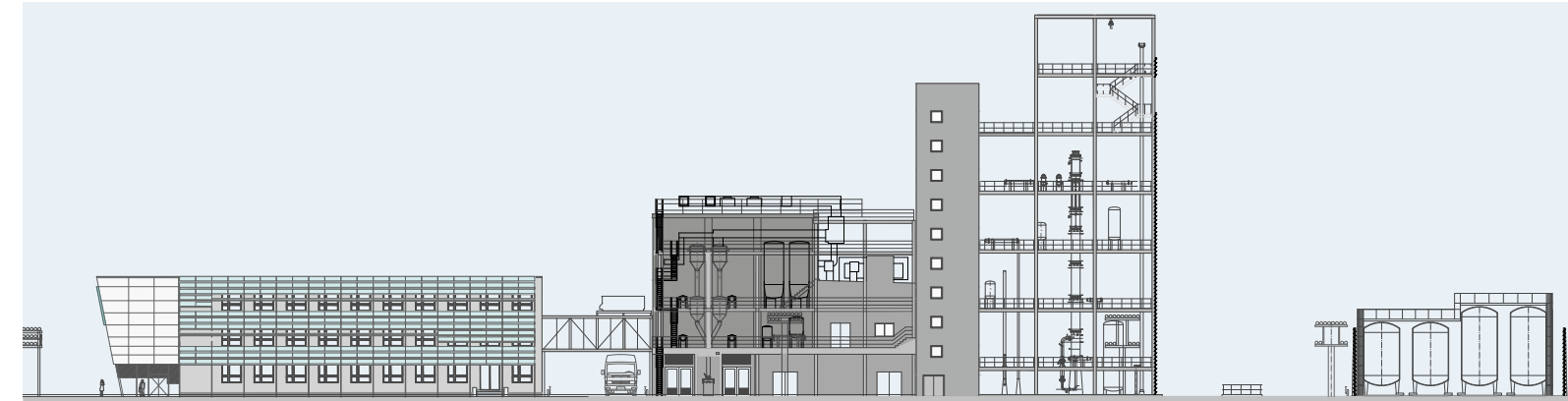


GRAPHENE PROCESSING

- 📍 Confidential / Germany
- € Investment sum confidential
- ↗ Confidential
- 🔧 Construction of a new production plant for processing of graphene into a raw material for energy storage systems

EPC SERVICES

- ✓ Engineering package: Basic, detail & authority engineering



MONOSILANE, CHLORO-SILANES AND POLYSILICON PRODUCTION PLANT

- 📍 Schwarze Pumpe / Germany
- € Investment sum confidential
- ↗ 750 kg / h of ultrapure silicon
- 🔧 Construction of a new production plant for the synthesis of trichlorosilane, monosilane and polysilicon from silicon, including all necessary ancillary plants, thermal incinerators etc

EPC SERVICES

- ✓ Plant design
- ✓ Engineering package: Basic & detail engineering, authority engineering
- ✓ Support for equipment and systems procurement
- ✓ Project management
- ✓ Construction management





DECARBON- IZATION

A broad field with enormous
potential to make optimum
use of resources.

“Ideas Inside – we’re always thinking about how
to link new and old technologies.”

Sabine Girbardt / Senior Project Manager at EPC

For several years, we have been working on the
technologies that enable us to make our indus-
try fit for the 21st century and facilitate decar-
bonization.

In addition to our participation in various
research projects with institutes and universi-
ties, we also use our expertise to support start-
ups in optimizing their technologies to pro-
duce hydrogen, city gas, syngas, methanol
and other synthetic fuels on an industrial
scale.

RANGE OF SERVICES

- ✓ Plants for the production of
syngases and hydrogen
- ✓ Modular plants for high-temperature
electrolyzers and further processing
steps such as gas purification
- ✓ Modular plants for methanol synthesis
- ✓ Consulting for start-ups
- ✓ ngineering for scale-ups of modules for
hydrogen and syngas production
- ✓ Biomass gasification plants for
syngas production
- ✓ Biogas and syngas feed-in plants



BIOGAS FEED-IN PLANT

- 📍 Neuburg-Steinhausen / Germany
- 💶 Investment sum ~ 5 million €
- ↗️ 700 Nm³/ h at 84 bar
- ⚙️ Compressor station for biogas feed-in

EPC SERVICES

- ✓ Consultation for concept phase
- ✓ Engineering package: Basic & detail
engineering, authority engineering
- ✓ Project management for engineering,
construction & commissioning
- ✓ Commissioning



SYNTHESIS PLANT

- 📍 Wolfen / Germany
- 💶 Investment sum confidential
- ↗️ Flexible capacity depending on
the raw materials
- ⚙️ Mono-product plant with multi-product
characteristics, synthesis, and high-purity
distillation

EPC SERVICES

- ✓ Engineering package: Basic, detail
& authority engineering
- ✓ Delivery of all equipment and materials,
including installation
- ✓ Construction and installation supervision
- ✓ Commissioning



SCALE-UP CENTER BIELEFELD

- 📍 Bielefeld / Germany
- 💶 Investment sum confidential
- ↗️ Flexible capacity depending on
the raw materials
- ⚙️ Small plant for synthesis

EPC SERVICES

- ✓ Project preparation
- ✓ Engineering package: Detail engineering

CLIENTS

A selection of our clients. We are grateful for our successful collaboration!





YOUR INNOVATION PARTNER

We are proud of our partnerships
and our comprehensive network
of industry experts.

Alongside our partners we set benchmarks in the polymer, fine chemicals, and pharmaceutical industries. Through close cooperation and exchange of expertise, we achieve outstanding results and offer our clients innovative solutions.

Our partnerships are built upon mutual open exchanges and an appreciation of experience in plant construction. Through collaboration with our partners, we strengthen our high expertise, are able to respond to our client’s wide-range of needs and offer customized solutions. Our broad

network allows us to draw on a wide range of resources and work together to find solutions for every challenge.

We value the long-term relationships with our partners and also their reliability and expertise. Together we strive for improvement and offer our clients a high-quality services.

With EPC Engineering & Technologies GmbH, discover the efficiency and strength of a highly connected company.



TOP 100 Innovator 2019



LEG Hidden Champion Award 2023

EXCELLENCE

Our numerous awards
for innovationstrength and
expertise demonstrate that we
are the right partner for your
future projects.

Our constant efforts to develop innovative solutions are recognized by industry experts and institutions and is an acknowledgment of our leading role in the industry. They motivate us to continue being a technological pioneer, with the goal to always offer our clients the best possible solutions. These awards reflect our commitment to new innovations and reinforce our internal pursuit of innovation. Staying true to our motto: “Ideas Inside”.

- 2024** „Global Market Leader – Future Champion“, WirtschaftsWoche
Business magazine award for EPC’s technology licencing of the phosgene-free polycarbonate technology
- 2023** „Hidden Champion Award“ –Technology & Global Market Leader from Thuringia
LEG Thüringen (State Development Corporation of Thuringia)
- 2023** „Global Market Leader – Future Champion“, WirtschaftsWoche
Business magazine award for EPC’s technology licencing of the phosgene-free polycarbonate technology
- 2022** „Global Market Leader – Future Champion“, WirtschaftsWoche
Business magazine award for EPC’s technology licencing of the phosgene-free polycarbonate technology
- 2019** „TOP 100 Innovator“
Award for strategy and innovation management
- 2019** WirtschaftsWoche Business magazine award. Recognized as a valuable employer
- 2014** „TOP100 Innovator“
Award for turnkey plant design

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„We only build plants when we understand their technologies.“

EPC Engineering & Technologies GmbH values

www.epc.com