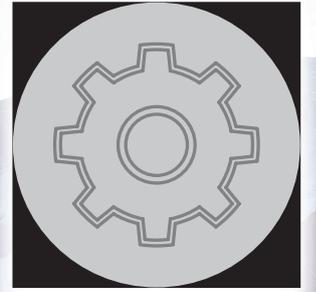


Rosink



Werkstätten



Rosink-Werkstätten GmbH

**SPECIALIST FOR HEAT-EXCHANGER,
FIN TUBES AND BOILER CLEANING
SYSTEMS**

Product and Service Portfolio

In the field of heat recovery Rosink-Werkstätten products find global success in the market. Since 1980 Rosink-Werkstätten design and manufacture heat exchangers and heat recovery units for various fields of application. The construction of smaller economizers for boiler plants up to large modules is customized and adapted to on-site space conditions. Rosink-Werkstätten strong point are our expert teams of shop floor workers and assemblers with technical know-how replacing an anonymous mass production in a positive way.

The company is a specialist in the field producing fintubes according to the patented NOH welding procedure. These helically finned tubes are fully welded and are available in a wide variety of material combinations and dimensions. Additionally double and single rectangular finned tubes complement our production program.

Furthermore Rosink-Werkstätten Cleaning Systems Division are designing and producing a full line of heat transfer surface cleaning products. Our range of products includes all types required for the cleaning of heating surfaces in power stations, heating and industrial boilers and incinerators.

With Rosink-Werkstätten you have a dependable partner at your side that established its reputation with reliability and flexibility for more than 30 years. Our team stands for the committed and competent provision of services with a high level of safety and quality consciousness.

KEY PRODUCTS AND SERVICES

ENGINEERING AND PRODUCTION OF HEAT-EXCHANGERS FOR

- Boilersystems Pre-heaters for warm- and hot-water boilers and steam boilers, including allpower classes and designs of condensing technology in public sector and industrial applications)
- Waste heat boiler systems behind gas and steam turbines (Water pre-heaters, evaporators and superheaters)
- Systems behind thermal afterburners and thermal waste air cleaners (Thermal oil heaters and water pre-heaters)
- Waste heat boiler systems / Industrial boilers

FIN TUBE PRODUCTION

- Powergeneration from waste heat recovery in combined cycle power plants
- CHP plants for district heating and industrial purposes
- Reactors and furnaces for the chemical and petrochemical industries

BOILER CLEANING SYSTEMS

- Cleaning systems for power plants, industrial boilers, waste incinerators and biomass power plants
- Project planning, design, production, delivery, installation and commissioning
- In-hause electrical engineering and panel shop
- Measuring sensors for cleaning optimisation
- Processmonitoring by hightemperature camera

SERVICE, MAINTENANCE AND REPAIR

With a large team of specialists in various fields, we offer our services to customers around the world. We will support you in your efforts to determine optimisation potential, to develop new concepts for modernisation projects and to repair faults. Regular maintenance work and preventive inspections avoid unscheduled down time and guarantee that the facility runs as it should. An extensive stock of replacement parts ensures that any component that needs to be replaced can be sourced quickly. The inspections aim to achieve the highest possible level of technical availability.

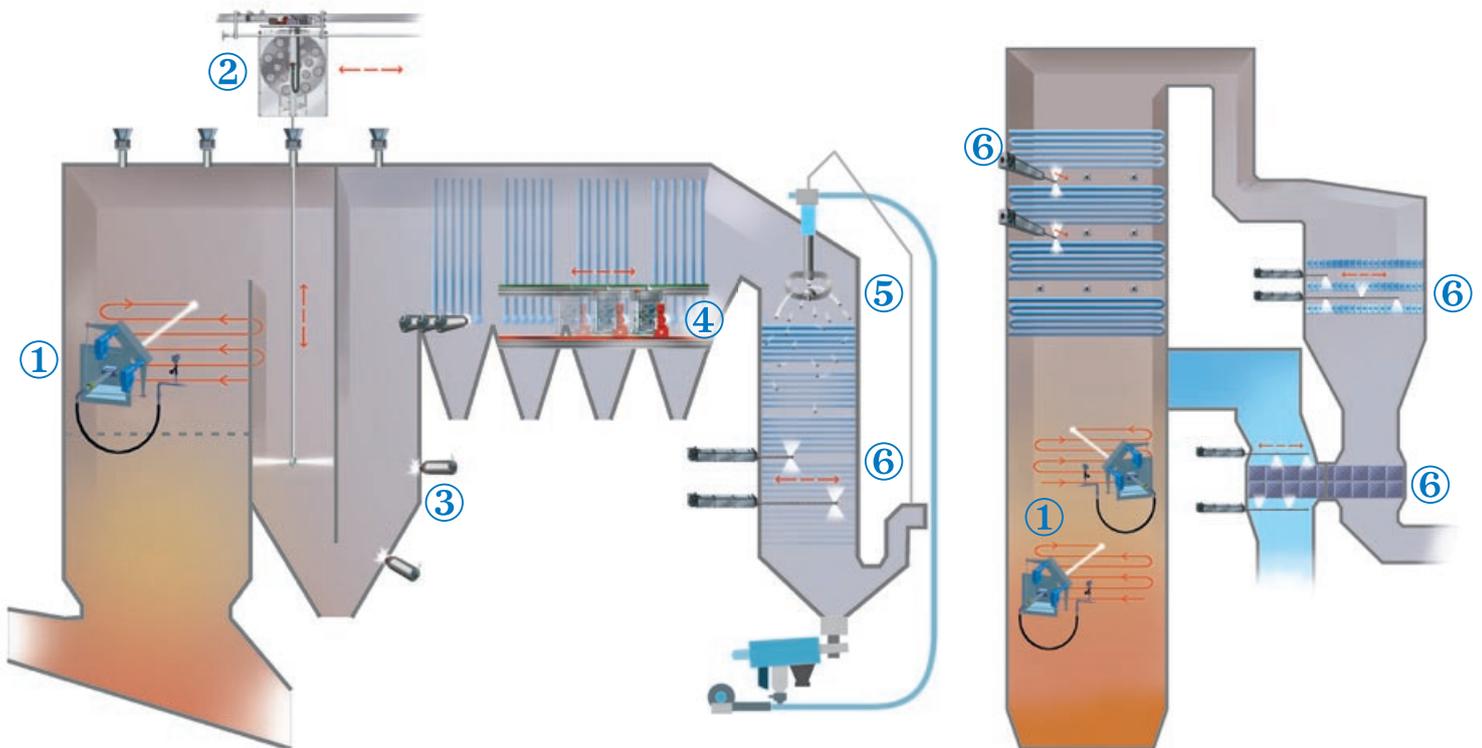
FABRICATION

Our fabrication facility is also located at the site in Nordhorn. On a shop floor measuring over 11.250 sq. m, approximately 160 employees manufacture high-quality, multiply certified products such as fin tubes, heat exchangers and heating surface cleaning systems.

RESEARCH AND DEVELOPMENT

In order to consolidate and expand our market position we focus on the improvement as well as on the development and value-engineering of our products. Naturally project-feedbacks as well as customer-impulses propel our R&D activities.

The complete range of cleaning products for power plants fired by fossil fuels as well as coal-fired power plants and gigant industrial boilers



1. WATER CANNONS

A tried-and-tested cleaning system for the furnace in which water is sprayed onto the opposing wall. Kinetic energy and the evaporation of water in surface pores remove even the most stubborn dirt.



4. RAPPING SYSTEMS

Vertical heating surfaces are usually equipped with rapping systems. The collectors are hammered, and these strikes clean the surfaces. The system can be provided with either pneumatic or mechanical rapping gears.



2. WATER-SPRAYING SYSTEMS

This efficient cleaning system for empty passes is based on a concept similar to the water cannon. Cleaning intensity is determined by the volume of water, nozzle size and sinking velocity. The patented pendulum action ensures that every nook and cranny is cleaned.



5. SHOT CLEANING

Vertical ECO heating surfaces can be cleaned not only with soot blowers, but also with shot cleaning systems. The shots are falling through the heating surfaces removing the dirt. After being screened they are led back into the cleaning cycle.



3. SINGLE RAPPING CYLINDERS

The intelligent single rapping cylinders clean boiler parts by means of the impact energy applied on reinforced rapping points at horizontal passes and as wall rapper on boiler walls, filters, hoppers or other locations.



6. SOOTBLOWER

Tube bundles like evaporator, superheater, economizer as well as air or gas preheaters and finned tube eco's will be cleaned by individually selected and designed sootblower types using steam, air or water.

Fintube Division

Rosink's Fintube Division have been designing, manufacturing and selling helically finned tubes since 1985 with global success and are one of the world's leading companies in this area.

Applications include electric power generation through waste heat recovery in combined cycle power stations, combined heat and power generation for industrial and district heating applications, reactors and furnaces for the chemical and petrochemical industries.

Rosink's customers are major international boiler manufacturers, petrochemical and chemical industries and corresponding engineering companies.

Rosink's yearly production capacity has been growing steadily, in line with the developments in the above-mentioned industries. Our machinery in operation includes GMAW and HF finning lines so that we can supply customers' demand whatever quantities are required.



Fully welded helically finned tubes

Finned tubes are major components of economizers, heat recovery boilers and many other industrial heat exchanger applications. They are available with solid/plain or serrated fins. All finned tube configurations are tailored to the customers' specific requirements and flue gas characteristics: serrated fins are mainly used for clean applications such as natural gas firing and solid fins where dusty or abrasive conditions exist.

Rosink Werkstätten has been very successful in producing helical fintubes using their own patented NOH-welding method (GMAW with filler metal) for more than 30 years. In addition, Rosink operate high-frequency (HF) finning lines in Nordhorn/Germany since 2006. All Rosink tubes are fully welded fin to tube designs and are available in a wide variety of material combinations and dimensions.

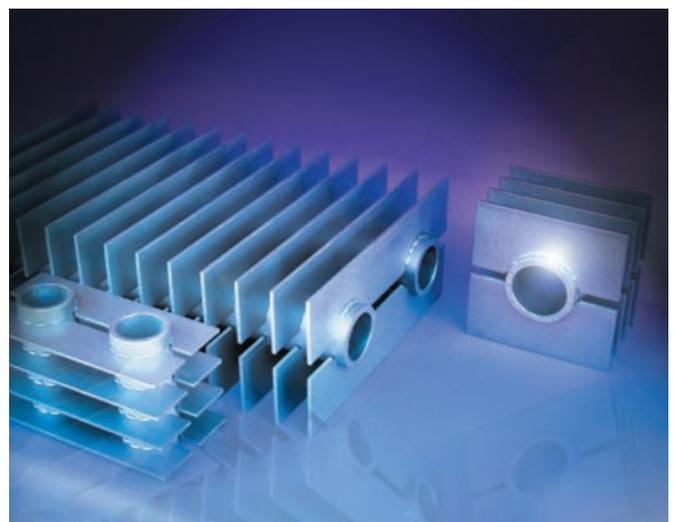


Rectangular Finned Tubes

Single pipe square finned tubes and twin pipe rectangular finned tubes are also manufactured as per customers' requirements. These are particularly suitable for dust laden exhaust gases, e.g. for economizers in coal and oil fired units or waste incinerators.

A straight exhaust gas passage with adequate spacing between the fins decreases soot build-up on the heating surfaces and contributes to easier cleaning and maintenance operations.

The fin segments are resistance welded onto the base tube. By means of a concentrated introduction of heat (power concentration) at each circular projection the required welding spot is produced resulting in a strong fin-to-tube bond. The number of circular projections is adjusted to the tube diameter.



The experts in engineering and producing heat recovery equipment and waste heat systems

Rosink-Werkstätten has many years of experience and has specialised in heat recovery from exhaust gases of firing systems. The design and production of heat recovery systems is one of the mainstays of the company. In this field Rosink-Werkstätten designs and manufactures exhaust gas heat exchangers for:

- Boiler systems
(preheaters for warm and hot water boilers, steam boilers, including condensing technology of all sizes and designs for municipal and industrial applications)
- Waste heat recovery units for installation behind gas and steam turbines (water preheaters, evaporators, super heaters). The heat recovery systems employed in Combined Cycle-plants (CCGT) generally consist of exhaust gas heat exchangers, fitting perfectly into the product portfolio of Rosink-Werkstätten.
- Industrial furnaces (waste heat systems).
- Systems behind thermal afterburning and thermal exhaust air cleaning systems (thermal oil heaters and water preheaters). These systems play an important role in environmental protection, as they remove pollutants from exhaust gases. This is achieved in a special burning process, resulting in high temperature exhaust gas, from which the heat is recovered, mainly using thermal oil systems. After starting with only a few units we now offer a full model range.

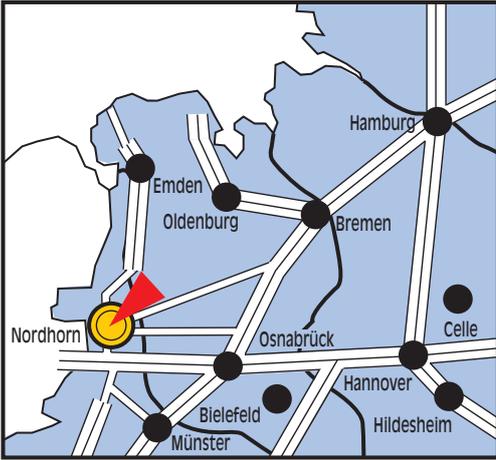
Rosink-Werkstätten Exhaust Gas Heat Exchangers use a coolant to recover heat from exhaust gases, which would otherwise escape up the flue via the chimney, and would thus be lost to the process. Heat recovery reduces fuel consumption, saves raw material resources and reduces pollutant emissions. The average amortisation time of such systems is 2 to 5 years.

Rosink-Werkstätten design and manufacture these exhaust gas heat exchangers with the aid of modern computer technology, backed up by special software. Exhaust gas heat exchangers are designed using programmes developed by the company itself, and all construction drawings are computer-generated.

All our heat exchangers are manufactured by qualified and experienced welders and fitters using also semi-automatic welding systems. Rosink-Werkstätten is a recognized specialist welding company manufacturing its exhaust gas heat exchangers to CE conformity in accordance with the Pressure Equipment Directive (2014/68/EU, Module H and H1) and the quality of its products is known in the industry. We are the market leader in the field of exhaust gas heat exchangers for hot water and steam boilers.



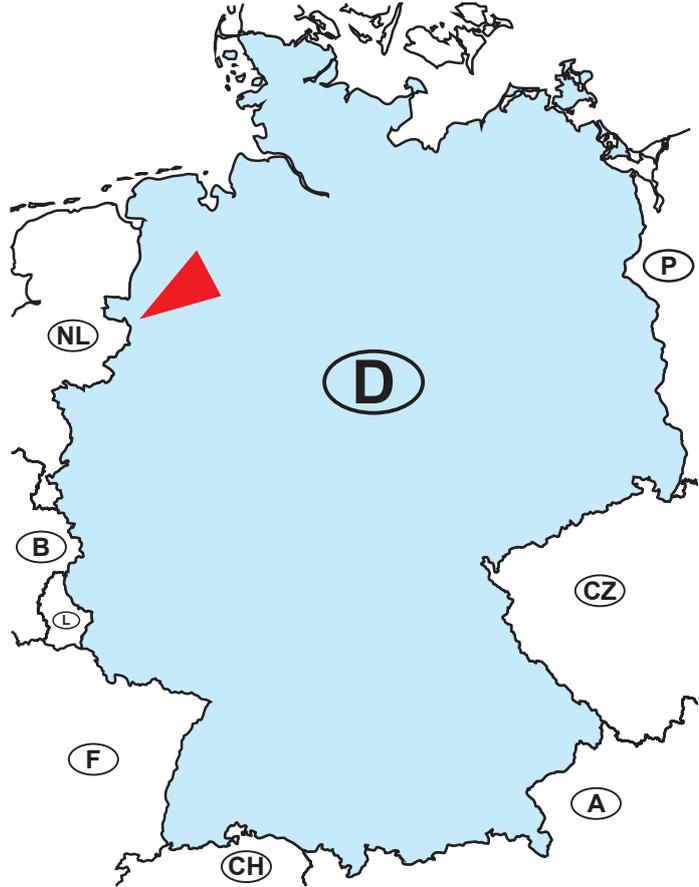
Get in touch with us



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