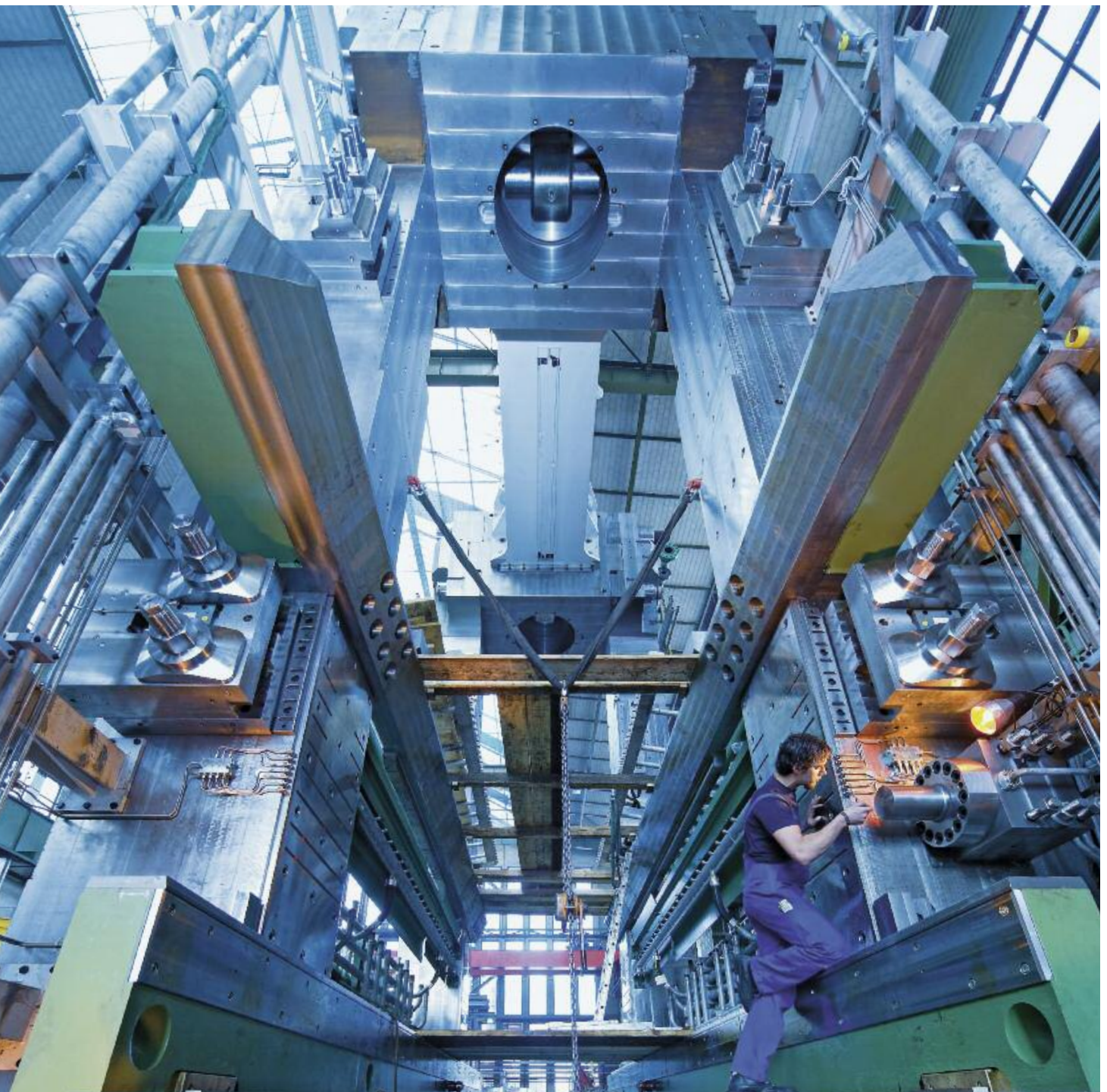


# **MANUFACTURING EXPERTISE worldwide**



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www.sms-group.com





# DUAL STRATEGY FOR SUCCESS

DEAR CUSTOMERS AND PARTNERS,

Maintaining its long-term commitment to Germany as an engineering and production location while also driving the international expansion of our production, the SMS group is perfectly positioned to meet the challenges of the global market for metallurgical plants and machinery.

One key factor here is our dense manufacturing and workshop network around the world. We will continue to produce the most complex machinery and plant components in our German facilities – at the very top level of technology and with know-how that has grown over decades. Essential to preserving this status is our continuous investment in the expansion and modernization of these production plants.

Simultaneously, we are building up even more international workshop, service, and production capacities. Here, it is all about special products geared to the local market that we can manufacture there at competitive prices. What's more, our presence on the ground ensures customers and partners can rely on fast, no-fuss service – today and in the future. Added to this is the benefit that third-party companies can use our production shops for getting drive and hydraulic system parts assembled.



There is a further focus on committing ourselves to our German production locations, yet we combine this principle with a global approach that ensures we are close to you and your markets. This has been a hallmark of our company for more than 140 years. It all started in 1904 when our plant in the Siegerland region of Germany built, for example, wagons for the coalmines in the Middle Kingdom. Today, China is one of our most important markets, where we operate not only an extensive service network, but also our own production locations.

That also means closely linking our engineering and production. Our engineers know all there is to know about current and future requirements in the steel, aluminum, and NF metals industries. As a systems supplier, we cover the entire process chain including electrics, automation, and services.

Read on to find out how we have spread our production worldwide and implemented this dual approach.

A handwritten signature in black ink, reading "Burkhard Dahmen". The signature is fluid and cursive, with a long horizontal stroke at the end.

Burkhard Dahmen, SMS group CEO

# 1

**SMS  group**

THE SMS GROUP IS A GROUP OF GLOBALLY OPERATING COMPANIES IN PLANT AND MACHINERY CONSTRUCTION FOR STEEL AND NON-FERROUS METALS PROCESSING. WE COVER EVERYTHING FROM PIG IRON PRODUCTION TO METALLURGICAL PLANT, ROLLING MILLS TO STRIP PROCESSING LINES, TUBE MILLS TO THERMAL TECHNOLOGY – COMPLETE WITH ELECTRICS AND AUTOMATION AS WELL AS SERVICE.

---





# PRODUCT RANGE



IRONMAKING PLANTS



METALLURGICAL PLANTS AND  
ENVIRONMENTAL TECHNOLOGY



FLAT PRODUCT PLANTS





LONG PRODUCT PLANTS



ELECTRICAL AND AUTOMATION SYSTEMS



PROCESSING LINES AND  
FURNACE TECHNOLOGY



PRODUCTION FACILITIES



FORGING PLANTS



TECHNICAL SERVICE



# 2



## PRODUCTION LOCATION GERMANY

READY EVERYWHERE IN THE WORLD TO BE CLOSE TO YOU, YET ALSO TO CONTINUOUSLY EXPAND AND SECURE OUR VALUABLE FUNDAMENTAL KNOW-HOW: THAT – IN A NUTSHELL – IS OUR DUAL STRATEGY. TO ENSURE OUR CONTINUED SUCCESS AS A GLOBAL TECHNOLOGY LEADER IN METALLURGICAL PLANT AND MACHINERY CONSTRUCTION, THE SMS GROUP IS PLOUGHING HIGH INVESTMENTS INTO ITS GERMAN LOCATIONS OF HILCHENBACH AND MÖNCHENGLADBACH AIMED AT MAINTAINING A QUALITY-ORIENTED, RELIABLE, AND THEREFORE HIGH-PERFORMANCE PRODUCTION STRATEGY.

---











## HILCHENBACH SITE MAP

The production facilities in Hilchenbach are located on an entire property of 145,000 square meters and are comprising an area of 55,000 square meters in total. It consists of production buildings carefully arranged around the central office complex, which keeps paths short to facilitate order processing.

- MECHANICAL WORKSHOP
  - WORKSHOP ASSEMBLY
  - WELDING MANUFACTURING
  - SERVICE WORKSHOP
  - TEST FIELDS
  - TRAINING WORKSHOP
- 



# HILCHENBACH LOCATION



Siegerland is an old iron region. This is where the origins of the SMS group lie, with the foundation in 1871 of forging company Carl Eberhard Weiss. Who would have thought then that this would lead to the SMS group of global players? Today, the Hilchenbach production plant ranks among the most modern anywhere in the world. Here, at this location, SMS launched the most ambitious investment program in its corporate history. That involved erecting buildings with a total floor-space of more than 10,000 square meters for a new welding and tube production shop, a finishing shop, plus the gear and hydraulic system production shop. Simultaneously, we upgraded our machine stock. Recently added to this was a state-of-the-art dispatch and outgoing goods center, significantly expanding the area available for workshop assembly.

## PROCESS OPTIMIZATION

What SMS means by modernization is more than just putting up new buildings and halls. A company that engineers and constructs high-tech plants needs to constantly analyze and optimize its own production routines. That's why we have systematically designed efficient processes in our Hilchenbach plant. Take for instance our new manufacturing cells that have significantly cut

component lead times. Now we can better synchronize work processes and reduce transport as well as storage periods. Typical of this is our new turning and milling center for coiler parts. It's designed to turn, mill, and cut gears – something that used to require separate work stages. Therefore processing a mandrel takes much fewer steps. And that in turn means a 40 percent time saving – a real added value because you can look forward to shorter delivery times. The plant is installed in our mechanical workshop where we can machine unit weights of up to 250 tons.

There is another key feature called the hydraulic system production shop. The model for the ultra-efficient production routines came from state-of-the-art automotive factories. Whereas hydraulic components manufacturing used to be spread through several halls, these parts are now produced completely in one workshop. Characteristic of the work routines are a systematic material flow from raw materials through to dispatch as well as bundling of all the required assembly and test activities. The result? Not only more efficiency, but also improved quality.

This also applies to the new test field. Here we can assemble hydraulic control systems, pre-set them, and test them thoroughly. Ultimately, you gain from shorter commissioning times.







## OPTIMIZED ROUTINES

Common to all our workshops – like the facility in Hilchenbach – is a process organization designed for a smooth-running material flow. This ensures a clear overview, speeds up routines, and improves the end products. Furthermore, it enables a reduction of lead times of up to 40 percent compared to pre-modernization production. That's an enormous advantage for you.

# 40



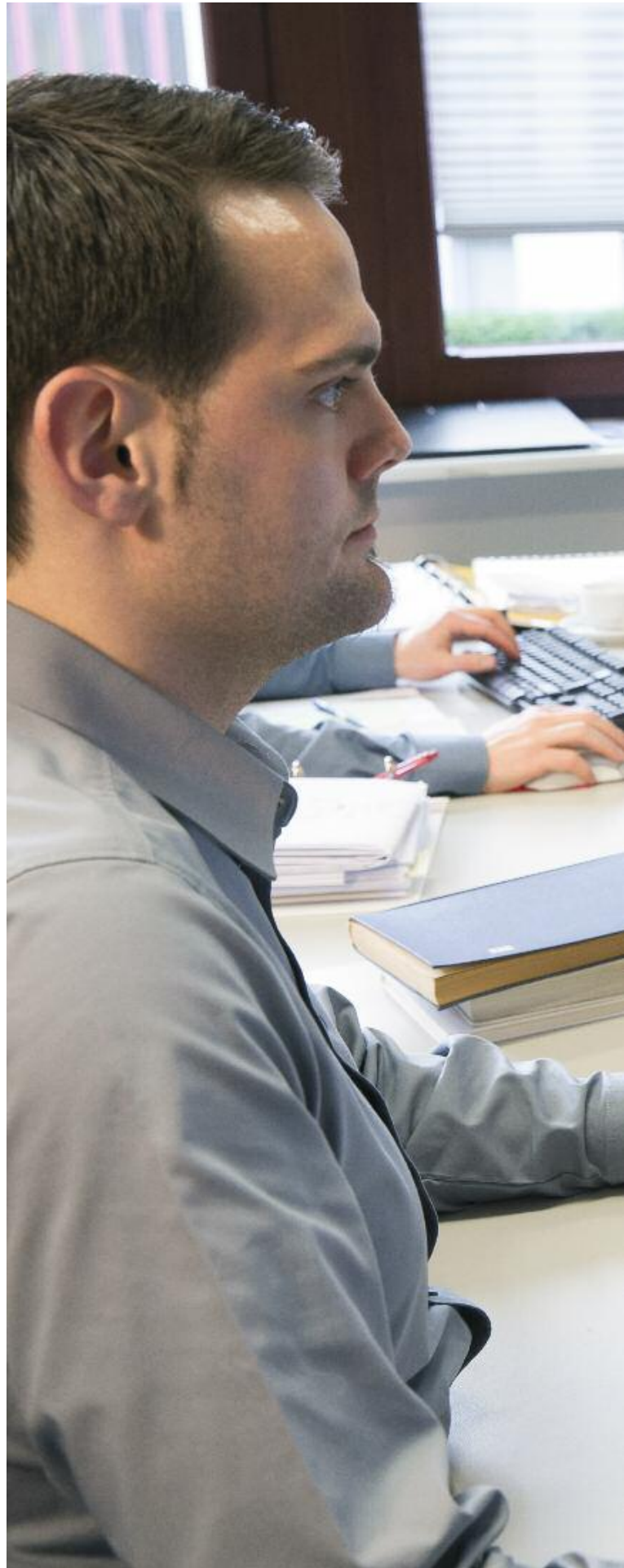
# OUR EXPERTS:

## COMPETENT AND CLOSELY CONNECTED

What adds to the efficiency of our plant in Hilchenbach is the close interaction between engineering and production staff. As an example it's enough to say that designers can find out quickly and easily whether a new idea is even practically feasible. They simply take a few steps to speak with their colleagues in the production shop.

Some 600 of these employees work on a total area of 55,000 square meters producing the core components of metallurgical and rolling mill technology – from sophisticated welded structures to mechanically manufactured parts. Available for these tasks are a high-performance machine park, innovative processing methods, powerful 3D CAM systems with CAD data transfer in all common formats, and heavy machinery assembly equipment. Our employees in Hilchenbach not only manufacture individual parts, they also put together component assemblies or entire machines weighing up to 400 t.

---







# 3D

## MAN AND TECHNOLOGY

Designing and constructing products that operate with precision and reliability under high loads requires extreme concentration as well as experience. Invaluable here are state-of-the-art technological systems that support our employees. Today, 3D methods are standard, along with simulation of the geometrical and physical characteristics of parts. Data gained in this way provides a reliable basis for production and accelerates processes.

---

The background of the page is a blurred industrial scene. It features large blue pipes and machinery, with a white cylindrical object in the upper right. The overall color palette is dominated by blue, white, and grey, with a red horizontal line separating the text from the bottom section.

# 800

## TECHNICIANS AND ENGINEERS

The expertise of our employees is something we regard as key to meeting customer requirements. That's why we trained and instructed 800 technicians and engineers in how to use the new machines and processes introduced as part of our restructuring. Equally important are future specialists starting their careers at SMS as junior staff. Opened in 2010, the LernWERK is a workshop especially for our apprentices. Every year, 80 young people embark on vocational training here, learning their skills from the bottom up – to the advantage of our customers worldwide.

---






# SCOPE OF PRODUCTS AND SERVICES

WELDING MANUFACTURING –  
MECHANICAL MANUFACTURING – GEAR MANUFACTURING –  
ASSEMBLY AND TEST FIELDS – MEASURING

## WELDING MANUFACTURING

Components for rolling mills must withstand the highest static and dynamic stresses. That requires optimal welded joints. Consequently, SMS ensures top welding quality with employees who are experts in welding many different materials together. To carry out their work, they use welding machines for perfectly even seams. Our production is certified according to DIN EN 1090-2 and meets the quality specifications for fusion welding of metal materials according to DIN EN ISO 3834-2. It's an approval which confirms that we meet all safety and quality assurance requirements for welding steel constructions.



### FACTS AND FIGURES

---

Unit weight:

- up to 250 t

---

Welding processes:

- E, MIG, MAG, WIG, UP, RES, and special welding technologies

---

Car-hearth annealing furnace

for furnace treatment of dimensions up to  
3,500 x 5,500 x 7,000 mm (h x w x d)

---

Surface treatment

- open jet blasting and priming booths

---

Certified acc. to DIN EN 1090-2 und ISO 3834-2

---





All major manufacturing processes come together in Hilchenbach. There is a total of more than 50 special machines – available for machining all sorts of workpieces.

# 50

---



## MECHANICAL PRODUCTION

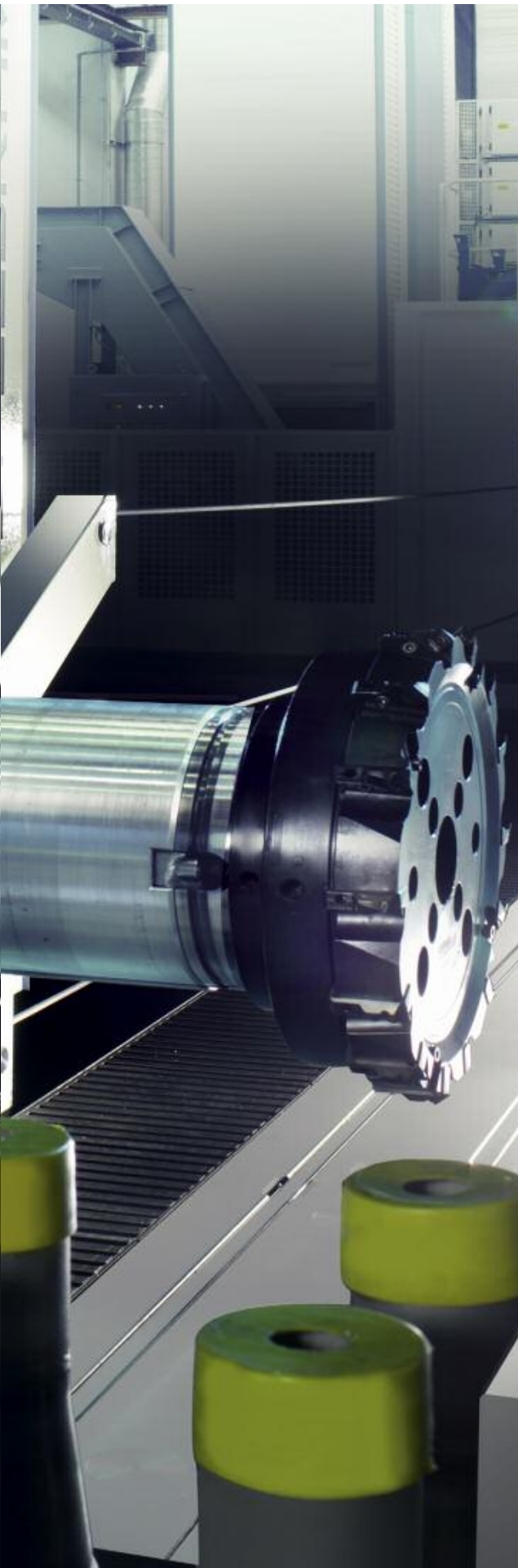
TURNING, DRILLING, MILLING,  
GRINDING, SHAPING

Totaling more than 50 systems, our machine tool park is tailored to the specific requirements of heavy plant construction. Included on the shop floor are machining centers, turning and milling centers, center lathes, boring mills, and a gantry-type portal milling machine for machining large parts as well as modern grinding machines that produce high surface qualities. All the equipment is CNC controlled. It's standard procedure for us to write the machining programs offline using a 3D-CAM system. Then we simulate the processes in advance so that we can detect and correct errors even in extremely complex machining schedules. This ensures shorter lead times.

---







## OUR KEY MACHINES AND EQUIPMENT

---

### CNC CENTER LATHES

Swing diameter up to 1,400 mm

Turning length up to 10,000 mm

---

### CNC CAROUSEL TURNING MACHINES WITH GRINDING, MILLING, AND DRILLING EQUIPMENT

Swing diameter up to 4,500 mm

Turning height up to 2,500 mm

---

### CNC TURNING AND MILLING CENTER

Swing diameter up to 1,200 mm

Turning length up to 8,400 mm

---

### CNC BORING MILLS

Working area  $x = 21,000$  mm,  $y = 6,500$  mm  
with rotary clamping device,  $\varnothing 1,000$  mm,  
as well as angled milling heads for machining  
in all axis directions

Rotary table with dimensions  $4,500 \times 5,000$

---

### CNC PORTAL MILLING MACHINES

Portal opening width 5,200 mm

Portal opening height 5,000 mm

Milling length 16,000 mm with angled milling  
heads in all axis directions

---

### CNC GRINDING MACHINES

with different dimensions

---

### CNC VERTICAL SHAPING MACHINE

with shaping stroke of up to 1,500 mm

---

### CRANE CAPACITY 250 t

---

## GEAR PRODUCTION

Operation under high loads, with low oscillation, and around the clock – these are stand-out features of our gears installed in rolling mills. That's only possible with precision dimensions, shape, and positioning. Simultaneously, all gear parts must feature high surface quality, especially on the toothing. To meet the exacting demands of these special products, we have set up a dedicated production area in Hilchenbach. It covers a floor-space of 4,000 square meters and includes complete machining centers for tooth milling and grinding, plus quality assurance and assembly zones.

The work carried out here covers the entire added value chain – from structural welding to the installation-ready component, including thermal treatment. There is a stand-alone measuring machine that inspects the gearing and can handle gearwheels weighing up to 40 t with diameters of up to 5,500 mm. This machine is also designed for checking grinding belts, which ensures top gearing precision.



Scan the QR code! The clip contains more information about our gear manufacturing shop.

[www.sms-group.com/qr/x9231](http://www.sms-group.com/qr/x9231)







## THE FOLLOWING TOOTH TYPES ARE POSSIBLE

### EXTERNAL TEETH

Diameter 100 to 6,000 mm

Module up to 40 mm

Weight up to 100 t

### INTERNAL TEETH

Pitch diameter up to 2,000 mm

Module up to 22 mm





## FACTS AND FIGURES

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Lifting capacity up to 400 t  
Lifting height up to 17 m

---

## FUNCTIONAL TESTING

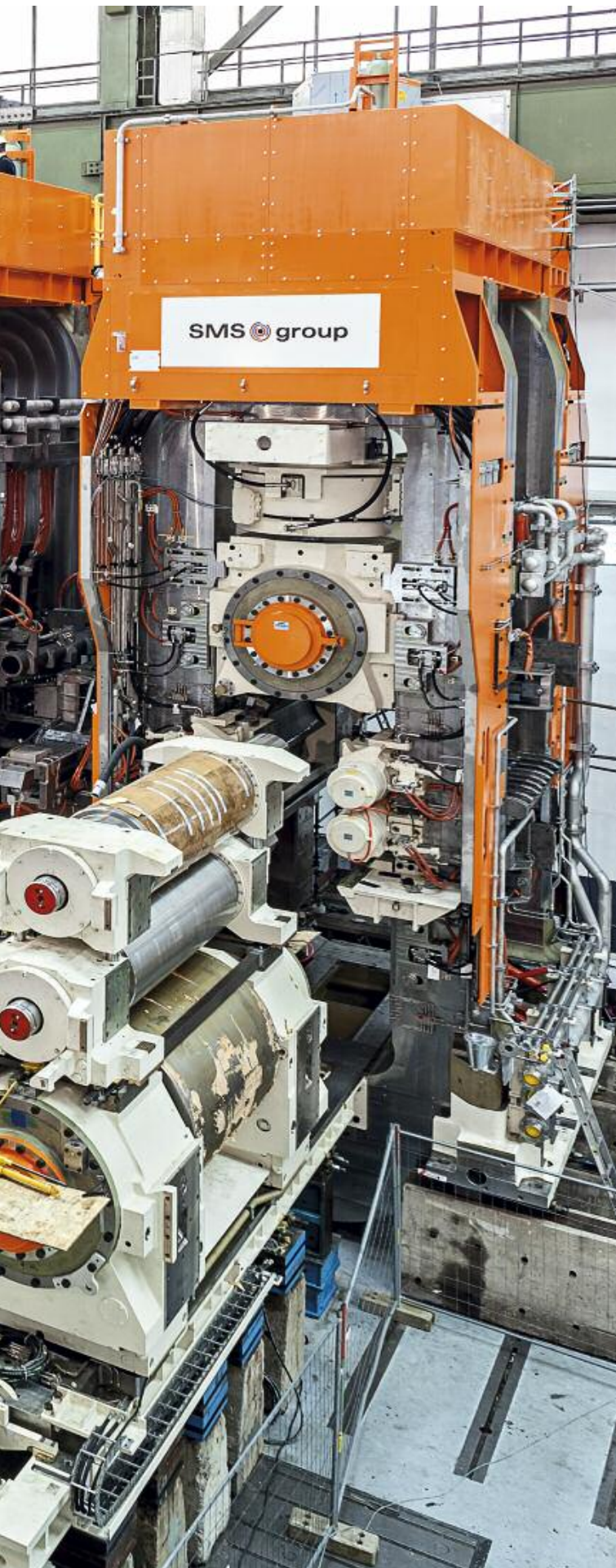
Hydraulic control systems with pump pressures up to 600 bar  
Cylinder pressure testing up to 3,000 t  
Water tests with up to 800 l/min  
Multi-plate filter tests

---

## PAINT FINISHING PLANT

---





## ASSEMBLY AND TEST FIELDS

Depending on the order, our teams pre-assemble or fully assemble the various products in several assembly halls. The heavy components assembly hall can handle components weighing up to 250 t, and with additional hydraulic equipment, we can even move loads of up to 400 t.

Also included in the assembly workshop program are functional tests and trial runs performed on our own test rigs. What we offer in the field of pipeline assembly is CNC bending, welding and laying of various tube and pipe materials. Furthermore, we are happy to carry out surface treatment of components, i.e. painting and preservation, as well as preparing them for shipment.

Direct rail and road connections ensure problem-free transport of heavy components to and from our workshops. There is even the option of obtaining the support of our shipping experts when drawing up plans for special transport challenges.

---

## MEASURING

High production quality is our hallmark, and quality assurance an essential factor in achieving it. To this end, we apply our own standards which go far beyond the usual norms.

OUR MEASURING AND TESTING/INSPECTION OPTIONS INCLUDE:

---

### NON-DESTRUCTIVE TESTING

- Ultrasonic crack testing
- Paint penetration and magnetic powder crack testing
- Hardness testing and crack depth measurement
- Grinding burn inspection

---

### THREE-COORDINATE MEASURING MACHINE with graphic, interactive programming

Coordinate range:

x = 3,000 mm, y = 2,000 mm, z = 1,000 mm

---

### GEAR INSPECTION MACHINE

- With temper etch inspection option
- Gearwheel diameter of up to 5,500 mm
- Vertical measuring area: 2,000 mm
- Workpiece weight up to 40 t

---

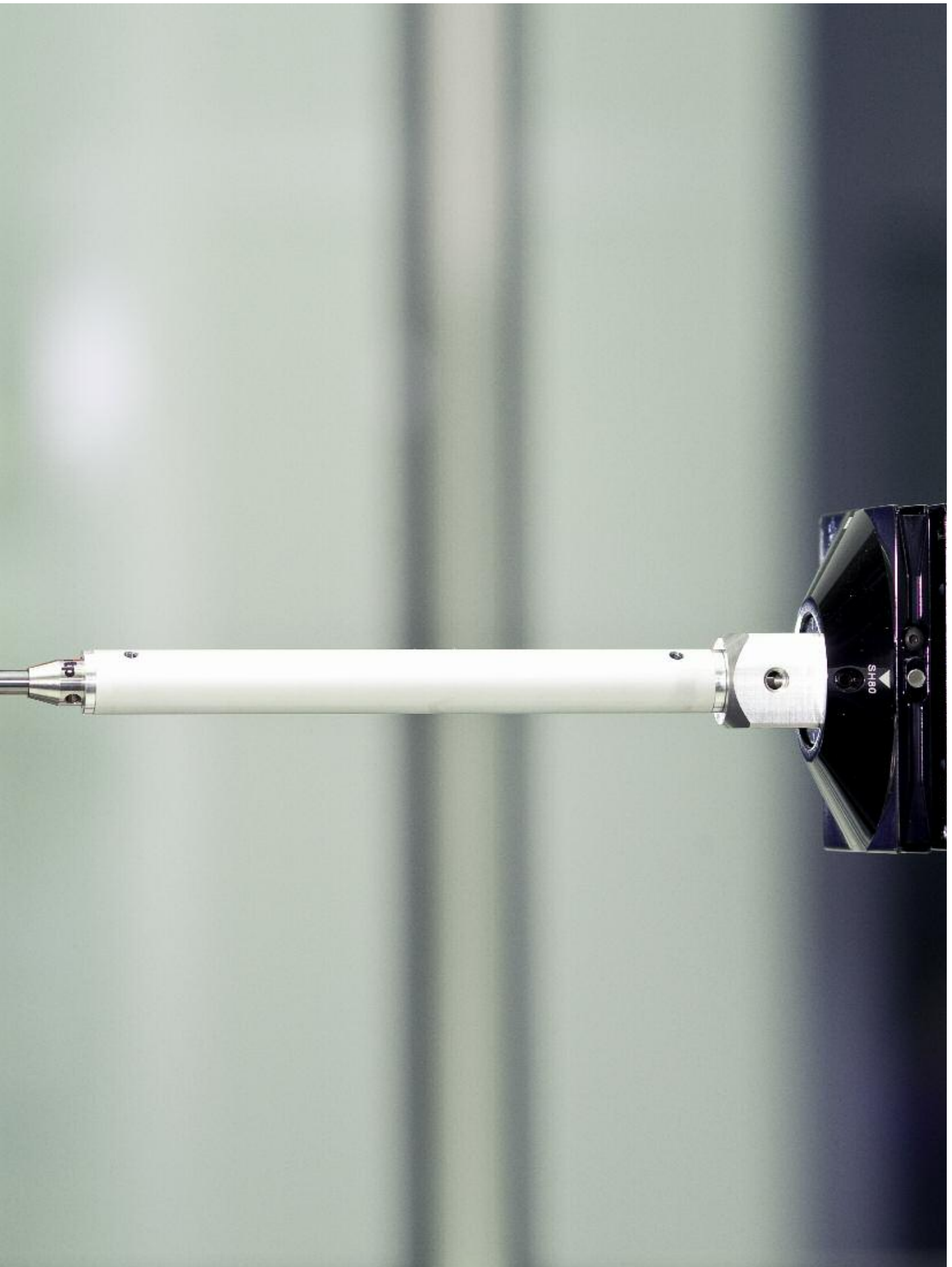
### 3D-MEASURING ARM

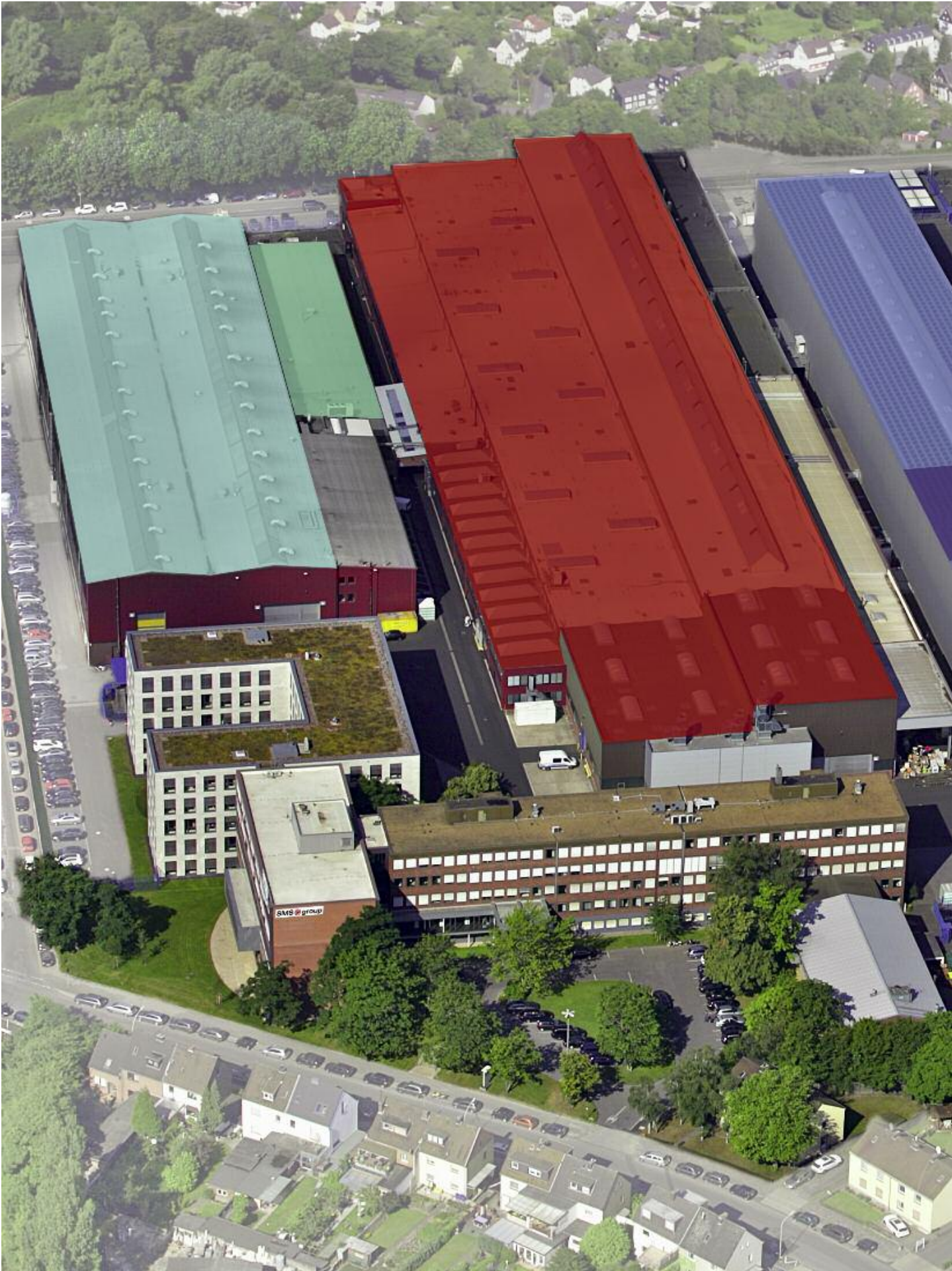
- Mobile 3D measuring arm, length: up to 1,2 m

---

Our testing and inspection personnel is certified according to DIN EN ISO 9712. This standard specifies principles for the qualification and certification of personnel carrying out non-destructive testing.











## MÖNCHENGLADBACH SITE MAP

Overall, the SMS group site on the lower Rhine stretches over 124,000 square meters, with 42,000 devoted to production and assembly. Right next door are the office buildings. That enables the engineering and production staff to cooperate very closely.

A total of more than 1,500 employees work in these two areas.

- MECHANICAL WORKSHOP
- WORKSHOP ASSEMBLY
- WELDING MANUFACTURING
- TEST FIELD
- TRAINING WORKSHOP





MÖNCHENGLADBACH

## MÖNCHENGLAD-BACH LOCATION

It all started in 1872, when the Meer brothers founded an engineering factory in Mönchengladbach. Today, the location benefits more than ever from its traffic-favorable situation for heavy-load transports: There are two traffic hubs practically on the doorstep – in the north-south direction: freeway 61, and in the west-east direction: freeway 52. Also nearby is Krefeld, where heavy components are loaded onto barges on the river Rhine, taking them ultimately to customers worldwide.

In 2010, the Managing Board launched the 2020 Workshop Concept. It's the largest modernization project in the corporate history of the Mönchengladbach production plant, completed in the first quarter of 2015.

Included here was not only construction of a new assembly hall with a floor-space of 4,000 square meters and a crane capacity of 180 t, but also the installation of 15 new machine tools in the area previously occupied by the mechanical workshop. A central computer-controlled machining line with fully automated workpiece charging as well as tools for unit weights of up to 10 t, a drilling line for processing cubic workpieces with unit weights of up to 120 t, and a five-axis lathe and milling center with maximum capacities of 60 t workpiece weight and 20 meter workpiece length – these are the key data detailing the new production capacity.








## VALUABLE KNOW-HOW

It's the employees that make the engineering and production departments in Mönchengladbach a quality plant. They offer you everything from feasibility studies to project planning and consulting, right through to design/engineering, production, and commissioning – all from one source.



- 
- TRAFFIC-FAVORABLE LOCATION, DESIGN/ENGINEERING AND PRODUCTION ON ONE SITE
  - PRODUCTION OF CRUCIAL CORE PARTS
  - MODERN MACHINE PARK
  - 3D CAM SYSTEM, CAD DATA TRANSFER IN ALL COMMON FORMATS
-





## OUR VISION

Processing whole workpieces with maximum precision on a single machine – that's our goal. Both we and you benefit from increased productivity, shorter lead times, and better quality. Optimized processes for manufacturing various mechanical engineering parts including procurement, production, and assembly ensure top efficiency in implementation. To achieve these goals, we rely on high testing and quality standards.

What makes all this possible is a powerful machine stock including modern CNC machining centers as well as state-of-the-art 3D-CAM systems that can process all common formats for rapid CAD data sharing.



# SCOPE OF PRODUCTS AND SERVICES

WELDING MANUFACTURING –  
MECHANICAL MANUFACTURING – GEAR MANUFACTURING –  
ASSEMBLY AND TEST FIELDS – MEASURING

## WELDING MANUFACTURING

As an experienced manufacturer of tube and pipe plants, long-product rolling mills, and machines for press and forging technology, we are acutely aware of the requirements for manufactured parts with welded joints used in challenging applications. Welding is too important to be left to chance. That's why SMS uses a wide range of conventional and automated welding systems.

---

### FACTS AND FIGURES

---

Unit weight:

- up to 60 t

---

Welding processes:

- MIG, MAG, WIG, UP, E, RES and special welding technologies

---

Surface treatment

- Spraying and priming booth

---

Flame cutting machine for accurate cutting of material up to sheet thicknesses of 120 mm

---

Certified according to ISO 3834-2

---





## CARE AT EVERY STEP

The production shop in Mönchengladbach is certified according to DIN EN ISO 3834-2. This series of standards specifies the quality requirements a manufacturer of welded components and structures must fulfill.

---



## MECHANICAL MANUFACTURING

TURNING, DRILLING, MILLING,  
GRINDING, SHAPING

### TO THE LATEST STANDARDS

The machine park in Mönchengladbach is stocked with more than 30 systems for processing components weighing anywhere from 100 kg to 200 t.

Included in the state-of-the-art technologies implemented here are several CNC machining centers, lathe-milling centers, drilling machines with rotating and sliding tables, plus a gantry-type portal milling machine. Our specialists program the machines using a 3D-CAM system. We put special effort into simulating the complex machining processes involved here in order to ensure disruption and fault-free production. This reduces errors and cuts the costs associated with them.

### RAPID REACTION

The machine park in Mönchengladbach is specially designed so that even short-term orders (service and repair orders) can be processed within tight deadlines.







## OUR KEY MACHINES AND EQUIPMENT

---

### CNC CENTER LATHES

Swing diameter up to 2,200 mm  
Turning length up to 20,000 mm

---

### CNC CAROUSEL TURNING MACHINE WITH GRINDING, MILLING, AND DRILLING EQUIPMENT

Swing diameter up to 2,400 mm  
Turning height up to 2,500 mm

---

### CNC TURNING AND MILLING CENTER

Swing diameter up to 1,200 mm  
Turning height up to 9,000 mm

---

### CNC BORING MILLS

Working area x=28,000 mm, y=4,000 mm  
with Ø 1,000 mm rotary clamping device  
and angled milling heads for machining in all axis  
directions  
Rotary table with dimensions 3,000 x 3,500

---

### CNC PORTAL MILLING MACHINES

Portal opening width 5,500 mm  
Portal opening height 4,600 mm  
Milling length 22,000 mm  
with angled milling heads in all axis directions

---

### CRANE CAPACITY 180 t

---

### CNC GRINDING MACHINES with different dimensions

---









## PARTS RANGE

We produce not only components for large machines, but also parts for machine tools. Crucial here is top precision.

---

## ASSEMBLY AND TEST FIELDS

The Mönchengladbach location features two newly built assembly halls with a total floor-space of more than 6,500 square meters. There are two assembly pits that make it possible to work on assemblies up to 15 meters tall. Also included in the range of services is pipe and electrical installation.

Our employees can carry out trial runs under real-life production conditions in the halls. To perform such quality / safety checks, we can use several test and inspection rigs. Installed in each hall is a crane with a capacity of up to 180 t. Furthermore, there are 20 wall-mounted and overhead cranes for different weight classes that ensure continuous assembly schedules without waiting times.

Special lifting gear is on site for loading components weighing up to 200 t for transport.







#### ASSEMBLY HALL

Crane capacity: up to 180 t

Lifting height: 12 m

#### PAINT FINISHING PLANT

Telescopic booth

Component length: up to 18 m

Weight: up to 120 t









## MEASURING AND TESTING

APPLICATION OF THE SMS MANUFACTURING  
STANDARD COMPRISING MEASURING AND  
TESTING OPTIONS

---

TESTING PERSONNEL CERTIFIED ACCORDING  
to DIN EN ISO 9712

---

### LEVEL 3 NON-DESTRUCTIVE TESTING

- Ultrasonic crack testing
  - Paint penetration and magnetic powder  
crack testing
  - Hardness testing and crack depth measurement
- 

### MEASURING OPTIONS

- Mobile 3D laser tracker, range: up to 30 m
  - Mobile 3D measuring arm, length: up to 3.6 m
-







# 3



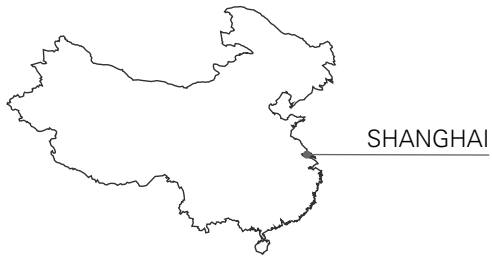
## PRODUCTION LOCATION CHINA

IN 1904, THE SMS GROUP SOLD A MILL STAND TO HANGYANG. THE SUPPLY OF THE MECHANICAL EQUIPMENT FOR A BLOOMING MILL, ALONG WITH THE NECESSARY AUXILIARY SYSTEMS, WAS THE FIRST ORDER FOR CHINA IN OUR CORPORATE HISTORY.

MANY MORE FOLLOWED.  
TODAY, THE SMS GROUP OPERATES TWO PRODUCTION LOCATIONS IN CHINA.

---





SHANGHAI

## SHANGHAI MINHANG

We established our workshop in Shanghai Minhang to ensure local production and assembly of SMS plants and machinery with German know-how.

Deployed on site in Shanghai are German manufacturing specialists as well as qualified staff responsible for supplier management. There is a total of 350 employees working in Shanghai. Ranging over 76,000 square meters, the site lies 5 km to the west of the river Huangpu. Each of the six assembly halls is 15 meters high, and together they offer 26,000 square meters of floor-space. Crucial to the smooth operations here are the options of reconditioning parts in our own machining hall or quickly procuring new parts from the workshop's own parts store.

Our experts offer their advisory service locally about everything to do with spare parts, service, and revamps.

---







## WORKSHOP DATA

FLOOR SPACE  
26,000 m<sup>2</sup>

MAXIMUM CAPACITIES  
Cranes: 126 t (2 X 63 t) in assembly hall  
Machines: 40 t

MAIN ACTIVITIES

- Mechanical workshop
- Workshop assembly
- Piping
- Testing

---

## SCOPE OF SERVICES

- Repairing core components such as spindles, mandrels, AGC cylinders, CVC® blocks
  - Reconditioning segment and roller table rollers
  - HVOF tungsten carbide flame spraying of rolls and mold plates
-









## OUR KEY MACHINES AND EQUIPMENT

---

### CNC BORING MILL

Working area x=7,000 mm, y=4,000 mm  
with angled milling heads  
Rotary table with dimensions  
3,000 mm x 3,500 mm  
Workpiece weight up to 40,000 kg

---

### CNC PORTAL MILLING MACHINE

Portal opening width 3,000 mm  
Portal opening height 2,500 mm  
Milling length 7,800 mm with angled milling heads  
Workpiece weight up to 30,000 kg

---

### CNC HORIZONTAL MACHINING CENTER

Working area x=3,000 mm, y=2,500 mm  
with angled milling heads  
Rotary table with dimensions  
1,600 mm x 2,000 mm  
Workpiece weight up to 16,000 kg

---

### CNC TABLE-TYPE BORING MILL

Working area x=3,000 mm, y=2,000 mm  
Rotary table with dimensions  
1,600 mm x 2,000 mm  
Workpiece weight up to 8,000 kg

---

### CNC HORIZONTAL MACHINING CENTER

Machining Dimensions (L x W x H):  
1,000 mm x 800 mm x 800 mm

---

### CNC VERTICAL MACHINING CENTER

Machining Dimensions (L x W x H):  
1,500 mm x 750 mm x 500 mm

---

### CNC CAROUSEL TURNING MACHINE

With grinding device  
Swing diameter up to 1,800 mm  
Turning height up to 1,000 mm

---

### CNC CENTER LATHES

Swing diameter up to 920 mm  
Turning length up to 7,000 mm

---

### HVOF-FACILITY FOR FLAME SPRAYING

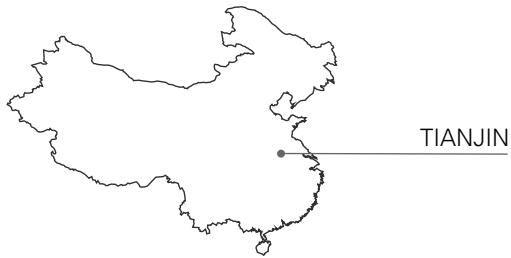
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### TEST STAND FOR PRESSURE TESTING OF AGC AND CVC CYLINDERS

Force max. 6,900 t

---





## TIANJIN

Available for steel manufacturers in our Tianjin workshop are modern processes for zinc pot roller reconditioning, while cold rolling mill operators benefit from our advanced technologies such as electro-discharge texturing (EDT) or roll chrome-plating.

SMS in Tianjin supplies an extensive range of services including roll neck repairs, CNC machining of roll bodies including the grooves, as well as final coating and sealing. What also counts is that the workshop is located close to many cold rolling mills in the north of the country. That ensures short paths to customers.

---





## WORKSHOP DATA

---

FLOOR-SPACE  
4,640 m<sup>2</sup>

---

MAXIMUM CAPACITIES  
Crane: 20 t, rolls: 10 t

---

CAPACITY  
Up to 600 rolls and 20 rollers per month

---

### SCOPE OF SERVICES

- Reconditioning molds
  - Nickel-plating mold plates
  - Repairing core components such as spindles and mandrels
  - Manufacturing new copper mold plates
  - Reconditioning segment and roller table rollers
  - Chrome-plating rolls including electro-discharge texturing (EDT) and zinc pot reconditioning
- 

### OUR KEY MACHINES AND EQUIPMENT

- CNC Center Lathes for workpiece weights up to 10,000 kg
  - CNC Center Lathes for workpiece weights up to 5,000 kg
  - CNC Center Lathes for workpiece weights up to 1,000 kg
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# 4

## PRODUCTION LOCATION INDIA

SINCE THE LATE 1980S, SMS HAS BEEN REPRESENTED ON THE INDIAN SUBCONTINENT WITH ITS OWN WORKSHOPS. HOWEVER, OUR RELATIONS WITH INDIAN CUSTOMERS GO BACK MUCH FURTHER. TODAY, INDIA IS ONE OF OUR MOST IMPORTANT FUTURE MARKETS: SO FAR, WE HAVE COMPLETED 200 LARGE PROJECTS THERE.

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BHUBANESWAR

## BHUBANESWAR LOCATION KHURDA

### WORKSHOP DATA

FLOOR-SPACE  
21,000 m<sup>2</sup>

MAXIMUM CAPACITIES  
Crane: 20 t, machines: 15 t

COPPER PLATE CAPACITIES  
240 broad sides  
300 narrow sides

### SCOPE OF SERVICES

- Reconditioning molds
- Nickel-plating mold plates
- Repairing core components such as spindles and mandrels
- Manufacturing new copper mold plates
- Reconditioning segment and roller table rollers

### OUR KEY MACHINES AND EQUIPMENT

- CNC milling machines  
(with five and three axes)
- Box-plating stations
- Immersion baths
- Testing and inspection devices
- Laboratory
- Special tools







SMS India Pvt. Ltd. supplies customers in India and neighboring countries with plants for the steel industry. Included here are submerged-arc furnaces, continuous casting technology, hot flat and cold flat rolling mills, as well as strip processing lines and furnace technology. Furthermore, an SMS Service Entry Point for automation systems is located in Gurgaon near Delhi. This is where service engineers answer customers' technical queries locally. There is a particular focus on safety, maintenance, and development of electrical plants. Our specialists use remote access to gain fast and secure access to customers' automation systems. That means they can provide support 24/7, which helps machine owners like you, especially in emergencies, save precious time. So whatever the problem, our experts tackle it with a tailor-made combination of global tele-service and individual, on-site support.

SMS India Pvt. Ltd. operates not only the service and manufacturing workshop in Bhubaneswar, but also has branches in Gurgaon, Pune, and Kolkata. Engineering and design are also in the mix at these locations.



You'll find more information about our Bhubaneswar location in the brochure SE-336E.

[www.sms-group.com/qr/se336](http://www.sms-group.com/qr/se336)

## OUR KEY MACHINES AND EQUIPMENT

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### CNC BORING MILL

Working area

x=16,500 mm, y=5,000 mm, z+w=2,300 mm  
with angled milling heads

Rotary table with dimensions

4,000 mm x 4,000 mm

Workpiece weight up to 80,000 kg

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### CNC PORTAL MILLING MACHINE

Portal opening width 4,500 mm

Portal opening height 2,300 mm

Milling length 15,000 mm

with angled milling heads and grinding device

Rotary table with diameter 2,000 mm and

workpiece weight up to 30,000 kg

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### 3AXIS-CNC PORTAL MACHINING CENTER (TABLE-TYPE)

Portal opening width 2,500 mm

Portal opening height 1,500 mm

Table width 1,500 mm

Table length 2,500 mm

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### 5AXIS-CNC PORTAL MACHINING CENTER (GANTRY-TYPE)

Working area

x=5,300 mm, y=2,900 mm, z=1,500 mm

With 2 angled milling heads

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### CNC CENTER LATHES

Swing diameter up to 4,100 mm

Turning length up to 9,700 mm (between centers)  
workpiece weight up to 30,000 kg (between  
centers)

workpiece weight up to 45,000 kg (in steady rests)

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### CNC GRINDING MACHINES

Swing diameter up to 600 mm

workpiece length up to 2,000 mm

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### PRESERVATION LINE WITH ROLLER CONVEYOR SHOT BLASTING AND PAINTING MACHINE

Plate dimensions up to

150 mm x 3,500 mm x 12,000 mm

Plate weight up to 32,000 kg

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### 4 AXIS CNC PIPE BENDING MACHINE

Pipe diameter 25 – 114 mm

Pipe length up to 12,000 mm

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### 3 ROLL CNC PLATE BENDING MACHINE

Max. load on top roll 1,600 t

Max. plate width 3,500 mm

Max. plate thickness 90 mm

Min. bending diameter 970 mm

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### MACHINES FOR HARD FACING OF ROLLS

Roll length up to 8,000 mm

Roll weight up to 8,000 kg

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### HVOF-FACILITY FOR FLAME SPRAYING

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### TEST STAND FOR PRESSURE TESTING OF AGC AND CVC CYLINDERS

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# 5



## CLOSE TO OUR CUSTOMERS

WE ARE A PARTNER TO OUR CUSTOMERS. THAT MEANS WE SUPPORT YOU WITH OUR KNOW-HOW AND EXPERIENCE THROUGHOUT THE ENTIRE SERVICE LIFE OF YOUR PLANTS. THIS ALSO APPLIES TO EQUIPMENT THAT IS RUNNING PERFECTLY, BECAUSE WE ADVISE YOU ON HOW YOU CAN ORGANIZE PRODUCTION EVEN MORE EFFICIENTLY.

## GLOBAL NETWORK

SMS EMPLOYEES KNOW THE TECHNICAL DETAILS OF YOUR PLANTS AND MACHINERY, SO THEY CAN SYSTEMATICALLY IMPLEMENT IMPROVEMENTS. APPLYING THE KNOWLEDGE OF AN ORIGINAL EQUIPMENT MANUFACTURER, THE SMS GROUP ENSURES SUSTAINED COMPETITIVENESS FOR YOU, ALWAYS SUPPLYING SOLUTIONS TAILORED TO YOU. THIS GOES FOR EVERYTHING FROM SUPPLYING SPARE PARTS TO REPAIRS AND MAINTENANCE, STAFF TRAINING, AND EXTENSIVE REVAMPS. OUR EXPERTS DELIVER SERVICE IN OEM QUALITY. SO YOU AND ALL OUR CUSTOMERS WORLDWIDE BENEFIT FROM A WIDE RANGE OF SOLUTIONS.

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[www.sms-group.com](http://www.sms-group.com)

**SMS group**

**Production**

Hilchenbach Location  
Wiesenstrasse 30  
57271 Hilchenbach, Germany

Mönchengladbach Location  
Ohlerkirchweg 66  
41069 Mönchengladbach, Germany

E-mail: [production@sms-group.com](mailto:production@sms-group.com)  
Internet: [www.sms-group.com](http://www.sms-group.com)

"The information provided in this brochure contains a general description of the performance characteristics of the products concerned. The actual products may not always have these characteristics as described and, in particular, these may change as a result of further developments of the products. The provision of this information is not intended to have and will not have legal effect. An obligation to deliver products having particular characteristics shall only exist if expressly agreed in the terms of the contract."