

2023 Program

Digital to experts



Let knowledge grow your company

Welcome to SMS TECademy!

We are delighted to present to you our richly varied program for 2023. It offers you all the skills you need to succeed because SMS group is not only your plant and machinery partner, but also a great partner for your employees.

Invest in your most valuable asset: your employees.

Here, in this brochure, is an array of SMS TECademy trainings that will boost your expertise as a plant operator. Included in the mix are standard and customized training modules, as well as e-learning options.

You are, of course, free to choose whether you want to learn from our experts on your premises, at an SMS group location, or on your own PC – wherever and whenever it suits you! Our state-of-the-art, tried-and-tested training formats are geared specifically to practical applications.

This also pays off in 2023, so we deliver a range of trainings on subjects relating to engineering, maintenance, and plant technology. It's all about expanding, deepening, and above all securing your know-how! SMS TECademy trainers are experts in their fields and always have the right answers to your questions.

Here is how you benefit:

- You'll realize your full potential
- You'll pick up valuable tips from practical experience for practical application
- You'll enhance your operating and process reliability
- You'll gain unique, direct insight from our manufacturer know-how

A partner you can rely on

The SMS TECademy team supports you throughout the training cycle – always ready to answer any questions you may have.



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TECademy.

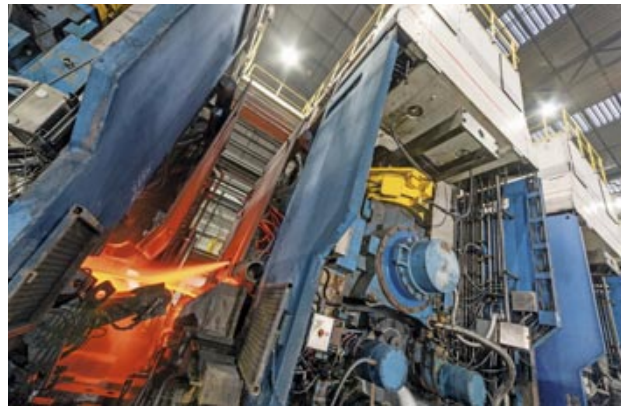


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Contents



General

What's the best way to operate, maintain, and repair plants and machinery? That's where our SMS TECademy specialists show you exactly what you need to know. These trainings get your employees fighting fit – in any field.

Let knowledge grow your company	2
Digital classroom	6
Live-Webinar und eLearning portal of TECademy	7
Our training portfolio for you	8
eLearning	41
Reference	44

Technology

The focus here is on the interconnections in the production process from steelmaking through to processed strip. Below you can see a whole range of trainings that convey specialist expertise designed to identify existing potentials and to develop plans for more efficient use of this extra scope.

Steelmaking, Basic training	10
Secondary/tertiary metallurgy, Basic training	11
Continuous casting, Basic training	12
Hot strip and heavy plate, Expert training	13
Cold strip, Expert training	14
Strip processing lines, Basic training	15
Hot-rolled aluminum strip, Expert training	16
Aluminum cold strip, Expert training	17
SMS group powder presses electrical engineering, Basic training	18
Slitting Lines, Basic training	19
Radial-Axial-Ringrolling, Basic training	20
Radial-Axial-Ringrolling, Advanced training	21
MERW-Technology	22
2-roll straightening machine, Basic training	24



Maintenance

Central to this area is in-depth insight into important operating parameters of all plants and components. That ensures consistently high product quality. Crucial objectives here are learning how to prevent or quickly remedy malfunctions.

Hydraulic cartridge technology, Expert training	25
SMS group Hydraulik Seminar, Basic training	26
Innovative maintenance in continuous casters	28
Basic training antifriction bearings	29
Oil-film roll-neck bearings, Basic training	30
The roll as a tool, Basic training	31
Roll workshop, Basic training	32
Rolls for cold rolling goods, Basic training	33

Plant technology

Your employees need a deep understanding of the interactions between control and operation. Only then can they ensure your plants run constantly, effectively, and profitably. This is how we teach plant operators to achieve high levels of plant efficiency.

Predictive Energy Management	34
Flatness measuring in flat rolling mills, Basic training	35
Measuring technology for seamless tube plants, (hot section), Basic training	36
Quality assurance systems	37
Technological control systems, X-Pact®/ProBAS	38
Safety strategies – Learning by the model	39
Low-voltage frequency converter X-Pact® Drive	40

Digital classroom

New ways of learning



Since 2019, the SMS TECademy has been offering SMS group customers a new and interactive way of learning

By using virtual and augmented reality applications in our Digital Classroom, you can immerse yourself in the virtual world of our plant and equipment and thus benefit from:

- A greater learning effect thanks to state-of-the-art methods and technology
- Practical training on a virtual model without interrupting the actual plant production schedule
- Training without the risk of faults or damage
- New and exciting training experience



We are happy to offer you our standard training sessions in combination with our Digital Classroom. Look out for the symbol with the VR glasses.



Live-Webinar

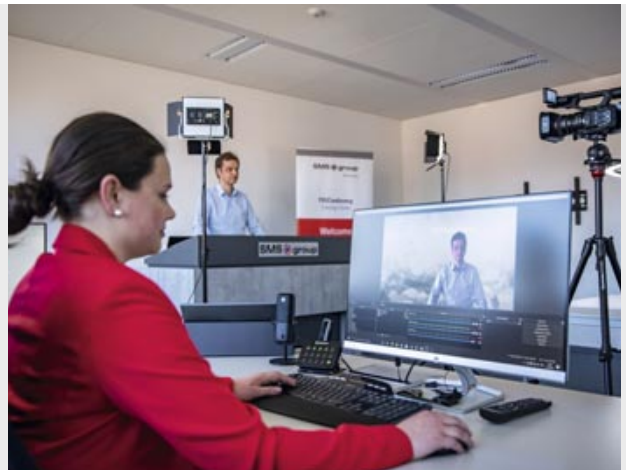
A new form of customer training

With our modern equipped Live-Webinar studios, we offer our customer new possibilities for trainings. The participation takes place via live meeting or live event - from the comfort and convenience of your workplace. Take advantage of the video recordings we make - these are available even after the end of the training course.

The Experience of yourself:

- Comprehensive VR models as well as 3D data from CAD design documents
- Assembly sequences based on real objects
- Streamable Powerwall, VR headset, AR tablet, and trainer screen content directly from our Digital Classroom.

Optional many topics can be held as a live webinar by arrangement.



Learning Portal of TECademy

NEW

Many trainings offers for classroom events and eLearnings

With our new learning portal, you get lots of free information about our products in the knowledge center. There you also find all the currents dates of our expert training courses. We offer not only classroom training courses but also attractive and interactively designed eLearnings.

Have a look!

You can find more information on our website.



Our training portfolio for you

Expert trainings

In 2023 we deliver a range of trainings on subjects relating to engineering, maintenance, and plant technology.

Individual trainings

Together with you, our TECademy experts draw up a tailor-made training just for you. That means you have a say in training contents, dates, duration, and location. Whether you prefer training directly on your plant, centrally at an SMS group location or as a live-webinar - the determining factor is always your practical benefit. It makes all the difference that our trainers work with your employees directly on real plants. This is how we transfer our know-how effectively. Ensuring top learning success plus broader, immediate, and real-world applicability.

eLearning

SMS TECademy online courses are available worldwide on the internet. We make use of the latest webucation tools, from interactive learning packages right through to web forums. In this way, the modules can be called up, completed and provided with feedback by the participants no matter what time it is.

Prices

Basic training: € 700.00 / day / person

Expert training: € 1000.00 / day / person

Factory tour

Transport

On request, we can organize passenger



Hotel

We can help you with hotel bookings



Expert training



Basic training



Safety

Please bring your safety footwear with you



Training documents

You will be given the course documents in electronic form



The Digital Classroom



Catering

Lunch is included in the price.



TECcademy.

Steelmaking



BOF

- Components, design, position in the steelworks, treatment mode, use of crude iron, coolants (scrap and alternative coolants), presentation of various BOF processes

EAF

- Overview of DC/AC electric melting furnaces, EAF components, design, EAF for carbon steels and stainless, acid and heat-resistant steel grades, charge materials, products

Secondary metallurgy

- Overview of secondary metallurgical plants, ladle furnaces, vacuum plants (VD, VD-OB, VOD, RH, CAS-OB, etc.)

Special processes

- ConArc, SHARC, SEAF, PEM

Material Steel

Classification of steel grades:

- General structural steel grades
- Case hardening steels, nitriding steels, free-cutting steel
- Q&T steel, roller bearing steel
- Tool steel
- Stainless, acid and heat-resistant steel grades

Filters and environmental protection in the field of metallurgical plants technology

Requirements: Basic technical understanding



SMS group Düsseldorf



2 days



By arrangement, German (#1011)

By arrangement, English (#1010)



Engineers, process engineers (metallurgists), super visors, technicians and foremen from Production, Planning, Maintenance and Service

Secondary/tertiary metallurgy



- Essential technological fundamentals
- Line rating
- New developments and trends

Requirements: Basic technical understanding



SMS group Düsseldorf



1 day



By arrangement, German (#1019)

By arrangement, English (#1018)



Engineers, foremen, process engineers,
and metallurgists employed in maintenance,
production, and service



Continuous casting



- Principles of casting and steel solidification
- Process technology for slab and thin-slab casters
- Overview of the different caster types
- Plant engineering for slab casters
- Plant engineering for CSP® thin-slab casters
- Hydraulic equipment and utilities
- Automation of continuous casters
- Innovations in continuous casting technology

Requirements:

No specific previous knowledge is required.



SMS group Düsseldorf



2 days



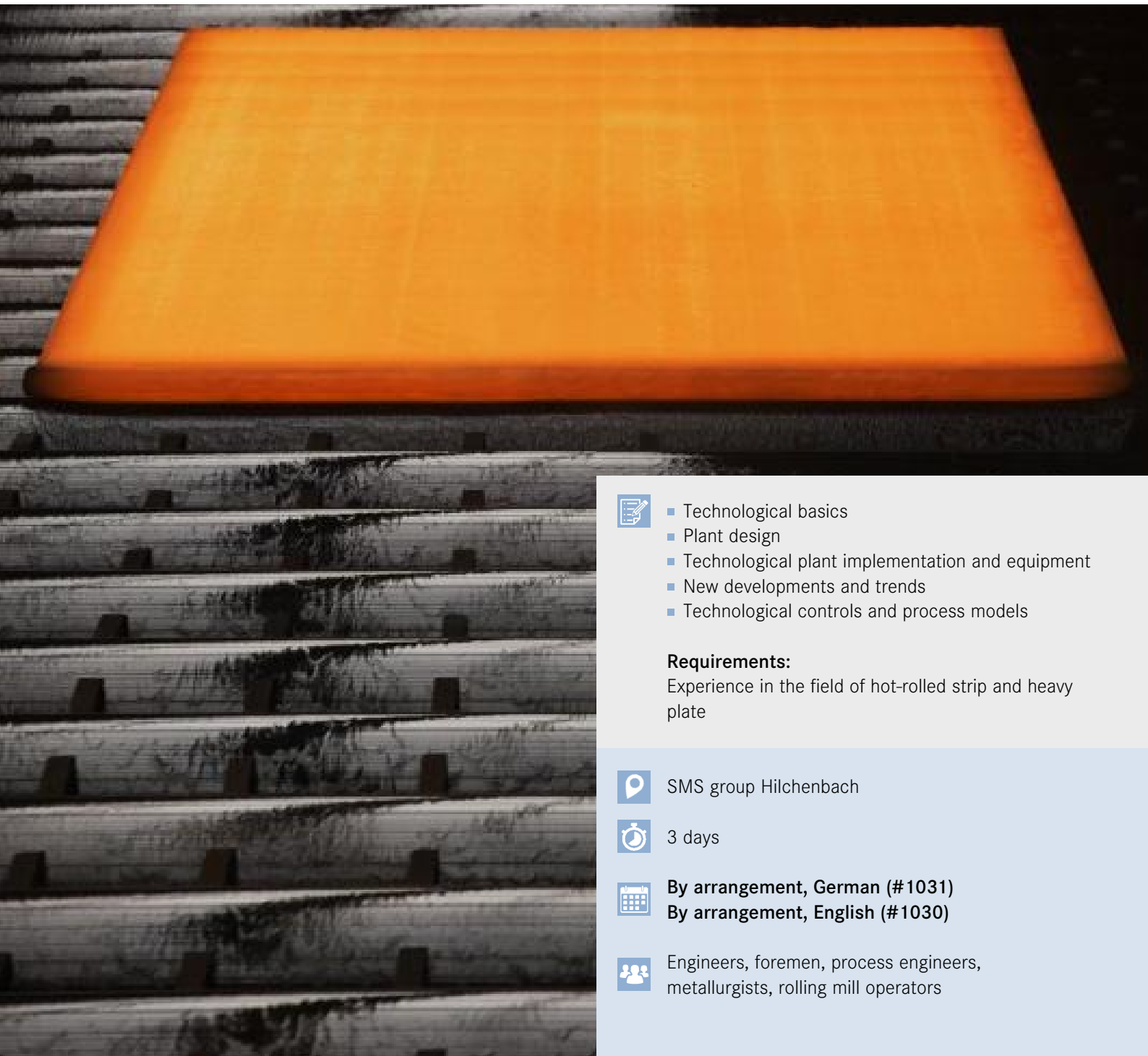
By arrangement, German (#1021)

By arrangement, English (#1020)



Engineers, process engineers, foremen, mechatronics engineers and metallurgists engaged in production, workshop and service

Hot strip and heavy plate



- Technological basics
- Plant design
- Technological plant implementation and equipment
- New developments and trends
- Technological controls and process models

Requirements:

Experience in the field of hot-rolled strip and heavy plate



SMS group Hilchenbach



3 days



By arrangement, German (#1031)
By arrangement, English (#1030)



Engineers, foremen, process engineers,
metallurgists, rolling mill operators

Cold strip



- Plant technology for cold rolling mills
- Technological basics of cold rolling
- Tribology/surface quality
- Strip flatness and evenness of cold-rolled strip Plant operation
- New developments and trends
- Technological control systems for cold rolling mills

Requirements:

Experience in the field of cold-rolled strip



SMS group Hilchenbach



3 days



By arrangement, German (#1041)

By arrangement, English (#1040)



Engineers, foremen, mechatronics technicians, metallurgists, rolling mill operators



Strip processing lines



- Basic elements of strip processing lines
- Introduction to strip processing lines for carbon steel
- Pickling lines and acid treatment plants
- Continuous annealing lines
- Hot-dip galvanizing lines
- Paint coating lines
- Electrolytic galvanizing and tin-plating lines
- Strip processing lines for electric strip (Si-strip)
- Strip processing lines for stainless steel
- Strip processing lines for aluminum
- Virtual-reality plant tour

In cooperation with EMG Automation GmbH:

- Strip travel control
- Strip stabilization (eMASS®)

Requirements:

No specific previous knowledge necessary



SMS group Düsseldorf



2 days



By arrangement, German (#1051)

By arrangement, English (#1050)



Engineers, foremen, mechatronics technicians, and metallurgists employed in maintenance, production, and service

Hot-rolled aluminum strip



- Principles of rolling on the flat strip
- Plant concepts for the hot rolling of aluminum strip and sheet
- New developments and trends
- Technological control systems and process models
- Exercises

Requirements:

Experience in the field of hot-rolled aluminum



SMS group Hilchenbach



3 days



By arrangement, German (#1033)

By arrangement, English (#1032)



Engineers, foremen, mechatronics engineers and metallurgists engaged in maintenance, production and service



Aluminum cold strip



- Principles and technology of rolling on the flat strip
- Process modelling and plant concepts for the cold rolling of aluminum
- New developments and trends
- Technological control systems and process models
- Measuring technology in aluminum cold rolling mills
- Exercises
- Visit to see the production of aluminum cold rolling mills

Requirements:

Experience in the field of cold-rolled aluminum strip



SMS group Hilchenbach



3 days



By arrangement, German (#1043)

By arrangement, English (#1042)



Engineers, foremen, mechatronics engineers and metallurgists engaged in maintenance, production and service



SMS group powder presses electrical engineering

at your plant



- Cards in PLC and CNC cabinet
- Monitor pages and diagnostic pages for service personnel
- Measurement points
- Digital signals
- LR, AR and UR signals
- Maintenance checks

Requirements:

- Authorizations for opening control cabinets
- Basic knowledge on the measurement of electrical signals



at your plant



3 days



By arrangement, German (#1013)
By arrangement, English (#1012)



Plant operators as well as maintenance staff

Slitting Lines

In cooperation with
Aluminum Academy



- Definition of commonly used terms in Slitting and Trimming
- Clearance and over lapping
- Parameter of band-edge
- Tools for slitting
- Important run out measurements
- Various slitter and trimmer set ups
- Slitting process
- Problem solving during trimming and slitting
- Storages for slitting and trimming tools
- Grinding recommendations

Requirements:

None, Basic knowledge of Slitting Lines advantageous



SMS group Düsseldorf



3 days



By arrangement, German (# 1017)

By arrangement, English (# 1016)



Operators, also Technicians/Engineers and Managers with little or no experience in slitting.



Radial-axial ring rolling



Basic training

- Influence of the ring geometry on machining allowances and tolerances
- Kinematics and dynamics
 - Radial/axial roll gap
 - Materials and resistance to deformation
 - Rolling forces and torques
- Performance limit control
- Design and manufacture of ring blanks
- Rolling strategies
 - Rolling curves and rolling phases
 - Roll stand and centering modes
 - Adaptive speeds in the roll gaps
 - Ring position control and ring displacement



SMS group Witten or at your plant



1 day



By arrangement, German (#1025)

By arrangement, English (#1024)



Machine operators, work schedulers,
technology specialists

Requirements:

No specific previous knowledge is required.



Radial-axial ring rolling



Advanced training

- Basic training for radial-axial ring rolling
- Process flow optimization
- Distinctive features of rolling profiled cross-sections
- Methods of determining profiled blanks
- Analysis of dimensional errors
- Analysis and evaluation options (data logger)
- Introduction to CARWIN and ROLLTRONIC control software
- Potential special target group:
 - RPT - 2-stage radial roll forming technology
 - APT - axial roll forming technology



SMS group Witten or at your plant



2 days



By arrangement, German (#1027)

By arrangement, English (#1026)



Work schedulers, technology specialists

Requirements:

No specific previous knowledge is required.
Experience in ring rolling would be an advantage.



MERW-Technology



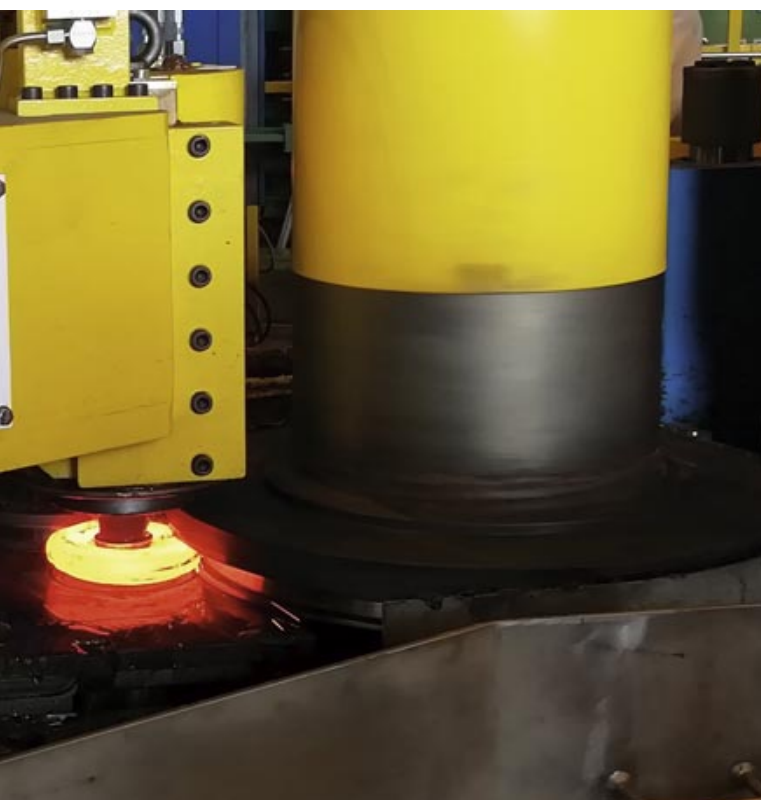
Basic-Training

- Description of the procedure
 - Radial rolling concept
 - Construction of the machine
- Ring geometry (wedge, reduction of wall thickness, diameter increase)
- Basic derivation for the calculation of rolling forces
 - derivation of wall reduction
 - Fictive diameter
 - Pressed length
- Rolling force / rolling moment
- Process parameters
 - Rolling feed / calibration feed
 - Ring dimensions
 - Background detection of ring dimensions
 - Influence of tool specifications
- Machine limits
- Design of sequence drawing
 - Finished shape
 - Additions (Allowances / Tolerances)
 - Rolling corrections
 - Preform design
- Tool design
- Rolling defects and their causes

Requirements:

No specific previous knowledge is required.
Experience in ring rolling is an advantage.





SMS group Witten or at your plant



1 day



By arrangement, German (#1029)

By arrangement, English (#1028)



Machine operators, operation planners,
Technologists



2-roll straightening machine



Processes and influencing factors in the production of straight bars/rods (Theory Part 1)

- Steel process technology
- Pre-straightening process parameters
- Straightening process parameters

The 2-roll straightener (Theory Part 2)

- Setting parameters of the straightener
- Straightening process
- Straightening principles
- Working with the pinch limit angle table

Correct application (Practical Part)

- Setting options for the straightener
- Setup for new material (systematic procedure)
- Exercises and questions

Requirements:

Basic knowledge of straightening as well as how to operate the straightener.



SMS group Mönchengladbach

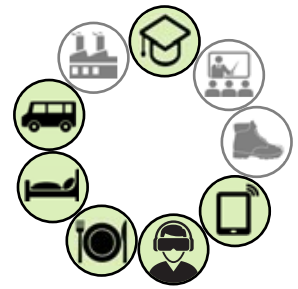


By arrangement, German (#4001)
By arrangement, English (#4000)



Operators, foremen, technicians and engineers working in maintenance, production and service areas.

Hydraulic cartridge technology



- Directional control valves
- Pressure valves
- Throttle valves
- Cartridge control system structures
- Control system examples
- Troubleshooting

Requirements:

Basic knowledge of hydraulics



SMS group Mönchengladbach



1 day



By arrangement, German (#5011)
By arrangement, English (#5010)



Specialist personnel, foremen, technicians,
and engineers from maintenance, production,
and service



SMS group hydraulic Seminar



- Basic elements
- Components and systems
- Hydraulic system applications in our Digital Classroom in Mönchengladbach
 - Maintenance activities
 - Virtual tour – pump station
- Hydraulic test field in Hilchenbach
- Use of customized hydraulic circuit diagrams
- Customer-specific troubleshooting

Requirements:

No specific previous knowledge is required.



SMS group Hilchenbach and
SMS group Mönchengladbach



by request



3 - 5 days



By arrangement, German (#2045)
By arrangement, English (#2044)



Plant operators as well as maintenance and
service/repair personnel





**Dive into our digital world
and take advantage of
our first interactive
training modules.**

Innovative maintenance in continuous casters



A complex approach to determining a continuous caster's readiness for operation in terms of the product range to be cast is realized by a diagnosis of the machine's condition. Multi-faceted technology-oriented evaluations of the alignment of segments and rollers in the strand guide improve product quality when casting steels that are susceptible to cracking and segregation

Block 1 / Solidification process:

- Causes of crack formation during steel casting
- Simulation of process states in the continuous caster

Block 2 / Strand guide alignment:

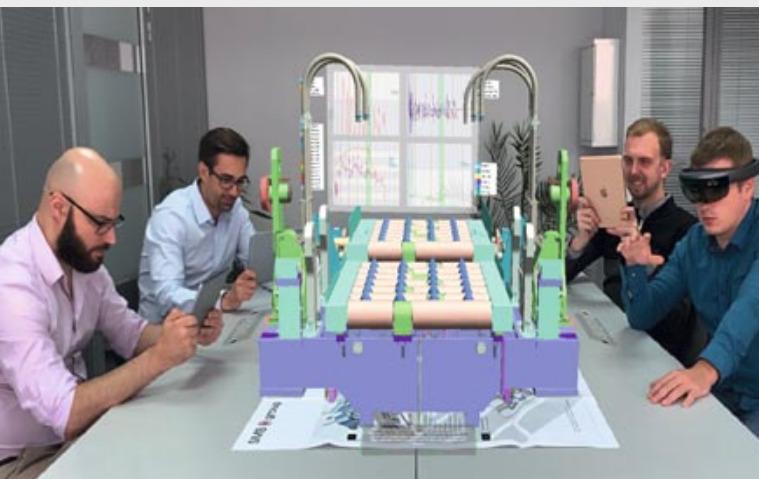
- Alignment of the rollers in the segment shop
- Alignment of the segments and rollers in the strand guide

Block 3 / Augmented reality:

- Use of augmented reality to analyze the condition of the plant
- Use of augmented reality for service in continuous casters

Requirements:

No specific previous knowledge necessary



SMS group Hilchenbach



1 day



By arrangement, German (#2531)
By arrangement, English (#2530)



Engineers, process engineers, industrial supervisors, mechatronics engineers, and production, workshop, and service employees

Basic training antifriction bearings

in cooperation with SKF



- Basic roller bearing know-how
- Assembly technology (practical exercises for participants)
- Lubrication and sealing of roller bearings
- Roller bearing damage - A defective bearing shows us what was going on!
- Status monitoring - It is more than a whisper!

Requirements:

No specific previous knowledge necessary.



SMS group Hilchenbach



900.00 €



By arrangement, German (#5043)
By arrangement, English (#5042)



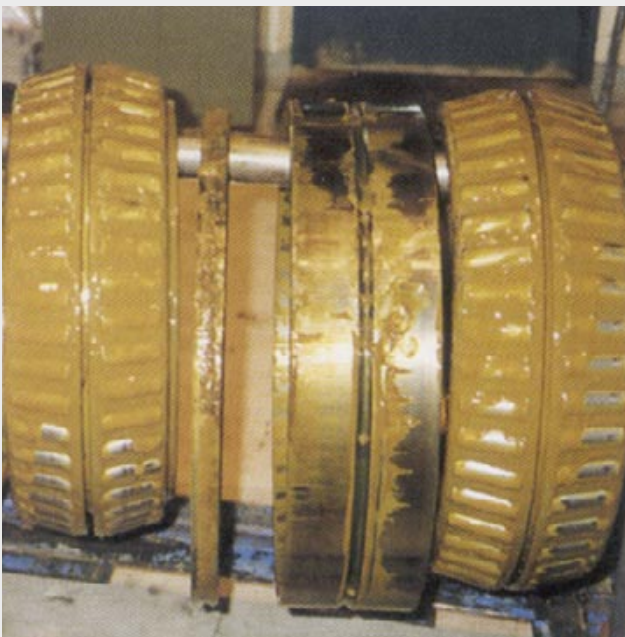
1 day



Mill managers, machine operators, employees in the roll workshop



At an on-site seminar, there is the possibility of carrying out a practical part (assembly and disassembly technique). For this purpose, a training room and the workshop are required. You will receive further information after registering for the course.



Oil-film roll-neck bearings

X-Roll® Oil Bearing



- Basics of hydrodynamic oil film bearings
- Hydrostatic auxiliary equipment
- Design and structure of oil-film bearings
- Installation in mill stands
- Evaluation of bearing damage
- Repairs of installation parts and bearing components
- Bearing types, modernizations
- Attaching systems
- Sealing systems



SMS group Hilchenbach



1,5 days



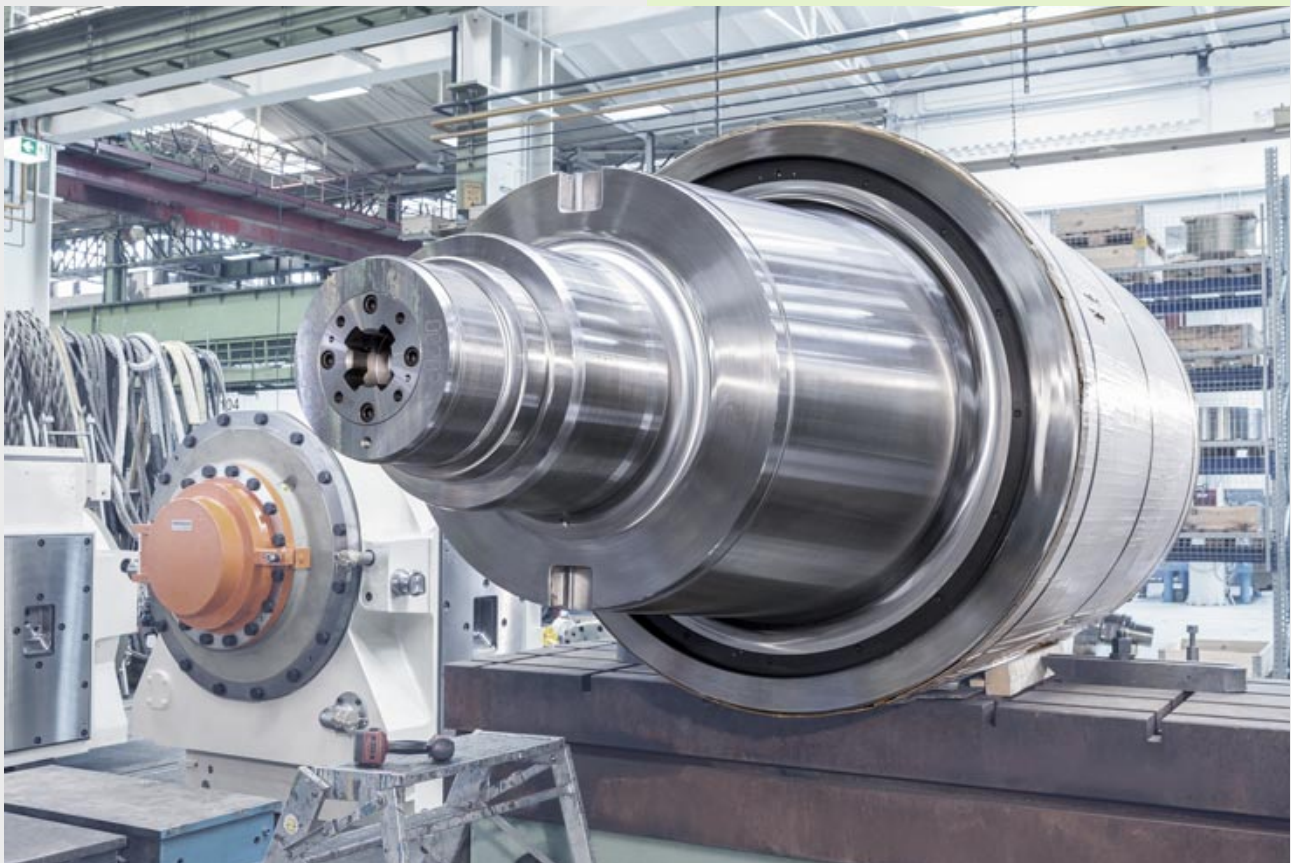
By arrangement, German (#2051)
By arrangement, English (#2050)



Employees in roll workshops as well
as rolling mill maintenance and servicing
personnel

Requirements:

No specific previous knowledge necessary



The roll as a tool

In cooperation with

Gontermann-Peipers GmbH



- Roll manufacturing
- Roll qualities and requirements
- Roll care
- Roll damage
- Guided tour of the roll production shop at Gontermann-Peipers GmbH, Siegen

Requirements:

No specific previous knowledge necessary.



SMS group Hilchenbach and
Gontermann-Peipers GmbH, Siegen



1,5 days



By arrangement, German (#2511)

By arrangement, English (#2510)



Managers of roll workshops, plant operators,
employees in roll workshops, and rolling mill
maintenance and servicing personnel



Roll workshop

In cooperation with

Maschinenfabrik Herkules GmbH & Co. KG



We recommend this training after the following expert trainings:

- Hot strip and heavy plate (page 13)
- Cold strip (page 14)
- Aluminum hot strip (page 16)
- Aluminum cold strip (page 17)

This is your opportunity to learn more about the very latest rolling shops.

- Basics of a modern roll shop
- Special features of grinding machine technology
- Real-time controls and their influence on the grinding process
- On-the-fly measuring systems
- Integrated roll inspection systems
- Roll shop equipment
- Automation of roll shops
- Guided tour of the production shop of our cooperation partner Maschinenfabrik Herkules GmbH & Co. KG

Requirements:

No specific previous knowledge necessary.



Maschinenfabrik Herkules GmbH & Co. KG,
Siegen



1 day



Date German (#2521):
By arrangement



Date English (#2520):
By arrangement



Rolling mill managers, plant operators,
employees in roll workshops as well as rolling
mill and roll shop maintenance and servicing
personnel



Rolls for cold rolling goods

In cooperation with
Steinhoff GmbH & Cie. OHG



- Manufacturing of rolls
- Roll qualities and recommendations for use
- Roll damages and how to prevent them
- Roll testing and quality assurance
- Roll handling for process optimization
- Roll manufacturing tour at Steinhoff

Requirements:

No specific previous knowledge necessary



Steinhoff GmbH & Cie. OHG, Dinslaken



1 day



by arrangement, German (#1023)

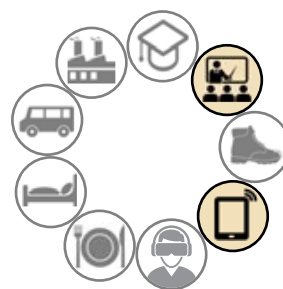
by arrangement, English (#1022)



Management personnel, plant operators, roll work-shop employees, maintenance personnel of the rolling mill



Predictive Energy Management for Sustainable Steel Production



In the seminar, we will focus on the topic of energy, resources and sustainability management for the steelmaking industry. Establishing effective systems for managing energy has become a major source of competitive advantage for energy-intensive segments such as steelmaking, mining and other processes industries.

Still, many industrial organizations lack a systemic, digitalized approach to energy management, which makes them vulnerable to unavoidable trends such as increasingly complex energy matrices, volatile energy prices, carbon taxes and stricter environmental and social regulations. Also, the organization's carbon footprint, inherently coupled to energy and operational efficiency, will impose additional pressure over profits and could even prevent industrial plants from running altogether. Decarbonization efforts will create significant opportunities for companies that implement and execute effective energy and sustainability strategies that effectively integrate shop floor operations to corporate management.

Thus, the goal is to present and discuss main concepts related to energy efficiency, energy planning, and overall energy management with a focus on short- and longterm performance improvement for the main processes and decision-making challenges found in steelmaking. The seminar will also present the Viridis Energy Platform and its main applications, showcasing their main features and emphasizing on how they create value for energy-intensive industries.



Online



2 hours



by arrangement



Energy managers, process engineers, operation managers



Flatness measuring in flat rolling mills



- Theory of flatness measuring
- Presentation of the BFI principle and comparison with other methods
- Presentation of the hardware components of the SMS group flatness measuring system
- Presentation of the roll structure
- Optional: Introduction to flatness control

Requirements:

No specific previous knowledge necessary.



SMS group Hilchenbach



1 day



By arrangement, German (#3041)

By arrangement, English (#3040)








Rolling mill staff, employees in roll workshops as well as rolling mill maintenance and servicing personnel



Measuring technology for seamless tube plants (hot section)



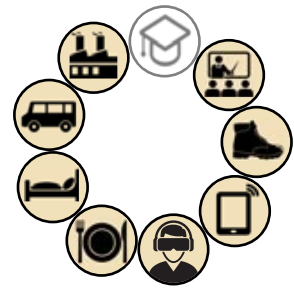
-  ■ Wall thickness measurement (ultrasonic, radiometric, others)
 - Length/speed measurement (laser Doppler method, correlation method)
 - Diameter and profile measuring technology (CCD cameras, laser scanning method, light-section measurement)
 - Pyrometry and more
 - Measured-data characterization and characteristic value determination, including data analysis with modern methods such as order or pitch length analysis
-  SMS group Mönchengladbach
 -  1 day
 -  **By arrangement, German (#6001)**
By arrangement, English (#6000)
 -  Engineers, technology specialists, technicians, rolling mill operators

Requirements:

No specific previous knowledge necessary.

Quality assurance systems

In cooperation with
EMG Automation GmbH



The following quality parameters and the corresponding measurement technologies are discussed during four course units and one works tour:

- Works tour
- Induction-based online measurement of tensile strength and yield strength EMG IMPOC
- Online measurement of the oil film based on two alternative technologies:
 - Infrared spectroscopy EMG SOLID® IR
 - Laser-induced fluorescence spectroscopy EMG SOLID® LIF
- Electromagnetic strip stabilization (EMG eMASS®) for hot-dip coating in combination with the EMG eBACS inductive baffle blade control system for optimal zinc or aluminum coatings



SMS group Hilchenbach



1,5 days



By arrangement, German (#3131)

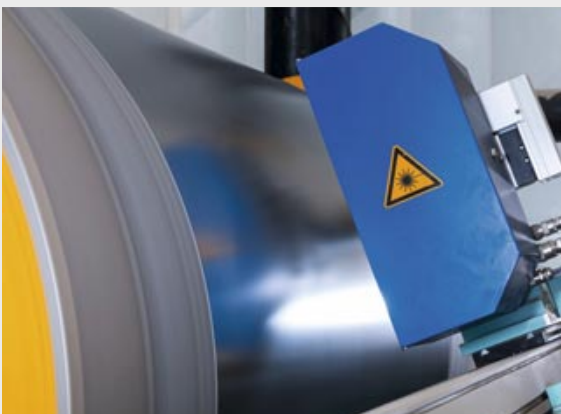
By arrangement, English (#3130)



Rolling mill management staff, line managers, quality assurance managers, process managers

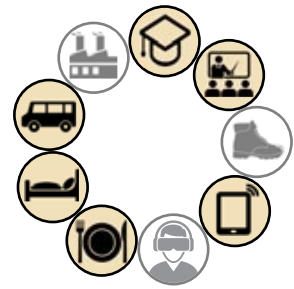
Requirements:

No special background knowledge is required, although an engineering background is an advantage.



Technological control systems

X-Pact®/ProBAS



X-Pact®



SMS group Hilchenbach (all trainings)



Target group (all trainings)
Software developers for technological control systems, electrical servicing personnel

Basic training

- Basics of graphic programming with logiCAD
- Working with the X-Pact®/ProBAS system configurator
- Basics of internal and external communication, X-Pact®/ProBAS development and diagnosis tools
- Basics of system hardware



5 days



By arrangement, German (#3011)
By arrangement, English (#3010)

Advanced training

- Refresher unit on the basics of X-Pact®/ProBAS
- Structure and programming of technological control systems with X-Pact®/ProBAS
- Data exchange/communication with external automation systems based on various protocols
- Diagnosis of internal and external communication



3 days



By arrangement, German (#3021)
By arrangement, English (#3020)

Maintenance training

- Basic structure of a control system
- Current best-technology in hardware and software
 - TCS control systems
 - HMI
 - Data recording and saving
 - Fieldbus systems
 - Sensors and actuators
- Diagnosis and hardware faults
- Software backup and restoration



3 days



By arrangement, German (#3051)
By arrangement, English (#3050)

Safety strategies – safety fence



Theory

- European safety requirements for machinery and plants
- Documentation requirements
- Selection of protective measures

Practice

- Practical operation of equipment, e.g. access procedures
- Safety precautions for servicing/maintenance
- Requirements for a complete machine group (linked plants) in practice

Requirements:

No specific previous knowledge necessary.



SMS group Hilchenbach



1 day



By arrangement German (#3061)

By arrangement English (#3060)

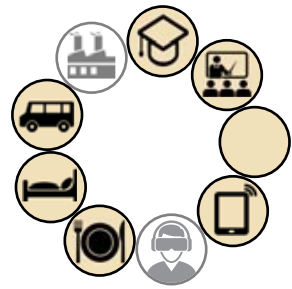


Project leaders, design engineers, plant operators



Low-voltage frequency converter

X-Pact® Drive



Basic training

- Presentation of the X-Pact® Drive converter system
- Hardware configuration of the X-Pact® Drive system
- Introduction to the software environment for commissioning and maintenance
- Commissioning of simple applications

Requirements:

Basic knowledge of electrical engineering



SMS group Hilchenbach (all trainings)



Target group for both trainings:
Site managers, project managers, commissioning engineers, maintenance staff



2 days



By arrangement, German (#3121)

By arrangement, English (#3120)

Advanced training

- Consolidation of the X-Pact® Drive functions
- Conducting of erection supervision, commissioning and maintenance
- Practical implementation of the software parameterisation
- Optimisation of the drive parameters

Requirements:

Basic training on the X-Pact Drive low-voltage frequency converter



2 days



By arrangement, German (#3123)

By arrangement, English (#3122)



The metallurgical process chain

From steelmaking to the finished product



The 7 modules of the webucation training:

- Introduction
- Steelmaking and submerged-arc furnaces (SAF)
- Continuous casting
- CSP® plants
- Hot rolling
- Cold rolling
- Strip processing lines



Seven 45-minute units



1 license	300.00 €
10 licenses	2,400.00 €
25 licenses	4,125.00 €

Training number
1210 (Englisch)
1211 (German)



Anybody who wants to understand the process from liquid steel to the finished product.



Hot strip and heavy plate production

Module 1: The basics and plant technology

Already addressed in the first module is “Basics and plant technology”, which gives you varied insights into the rolling gap. The module starts with a focus on the products hot strip and heavy plate, looking at the various measurements and requirements. Next, in the second section, we deal with the dimensions and definitions crucial for getting to grips with the processes in the roll gap: from the geometrical variables to the forces at work. You find out about the structure of mill stands and the various work roll diameters. Then there is an easy-to-grasp explanation of how roll gap adjusting systems compensate for disrupting influences.

Module 2: Hot strip production processes

Starting with the structure of hot strip mills and plant designs, you work your way through the basics for an overall understanding of the fundamentals of hot strip processing. Central to this module are the typical market demands of the quality of hot strip, plus the plant technology developed to meet these requirements. We take a look at the following quality characteristics: strip thickness, width, profile, contour, and flatness, coil shape, mechanical properties, and strip surface.

Module 3: Heavy plate production processes

First comes an introduction to the vast complex that makes up a heavy plate rolling mill. Then we home in on the special features of the rolling mill. The focus here is on the typical market demands of the quality of heavy plate, plus the plant technology developed to meet these requirements. We take a look at the following quality characteristics: strip thickness, profile, and flatness, width and rectangularity, sabers, mechanical properties.



60 minutes per module



1 license	200.00 € per module
10 licenses	1,600.00 € per module
25 licenses	2,650.00 € per module

Training number:

Module 1:

1250 (English)

1251 (German)

Module 2:

1252 (English)

1253 (German)

Module 3:

1254 (English)

1255 (German)



Technicians, engineers



All our webucation trainings require participants to have basic technical knowledge.

Technical requirements

- Operating systems: Microsoft Windows XP/ Windows Vista / Windows 7
- Graphic card with at least high color (16 bits), resolution 1024 x 768 or higher
- Sound card and audio output (headphones / speakers)
- MS Internet Explorer 6.0 (or higher)
- Adobe Flash-Player 10 (or higher)
- Internet access



Cold Pilger Mill (KPW)

- General introduction
 - Fields of application
 - Materials and their rollability
 - Rolling principle
 - Performance data
- Presentation of the machine type
 - Machine design
 - Upline and downline machines
 - Control sequence
 - Settings
- Technology:
 - Description of the rolling tools
 - Parameters of a rolling and their interpretation
 - Rolling problems and countermeasures

Requirements:

Basic technical training



60 minutes



1 license	200.00 €
10 licenses	1,600.00 €
25 licenses	2,650.00 €

Training number:

1262 (English)

1263 (German)



Technicians, engineers, operators



Can also be used on mobile terminals

HybrEx extrusion press

- General introduction
 - History of extrusion technology
 - Use of extrusion presses
 - Market requirements
- Hydraulic presses
 - Heavy metal extrusion presses
 - Light alloy extrusion presses
- HybrEx extrusion press
 - The HybrEx drive concept
 - The most important assemblies at a glance



60 minutes



1 license	200.00 €
10 licenses	1,600.00 €
25 licenses	2,650.00 €

Training number:

1264 (English)

1265 (German)



Technicians, engineers, operators



Can also be used on mobile terminals

Reference SMS TECademy

Steel Dynamics, Inc., Sinton, America

Integration test in the test field in Mönchengladbach

An integration test for the employees of Steel Dynamics, Inc. took place on November 11, 2020 in the test field of the SMS group.



Integration test established for many years

To make sure all functions are in perfect harmony and to optimize the production process right from the beginning, the complete automation system is tested and optimized in the test centers of SMS group under near-reality conditions long before it is installed at the customer's site. This integration test has been known as Plug & Work test for many years.

Plug & Work helps to significantly shorten the period of commissioning and the accelerate the ramp-up phase. Additionally, the integration test offers the opportunity for the future operating staff to be trained by SMS group experts on the original control desks.

Alfred Metz



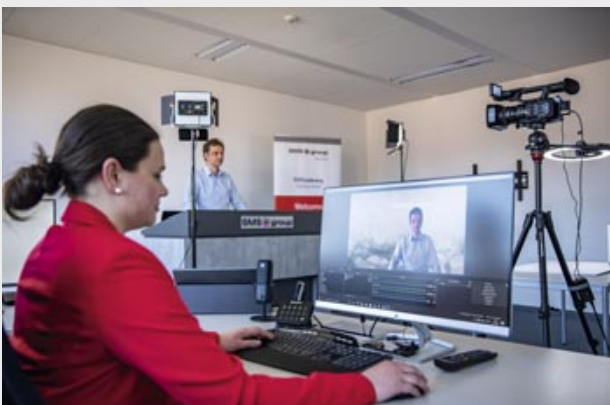


„It is really nice to be here in this test center with the SMS experts working on this project. Nice to work on the original equipment in 3D simulation and testing every function. Can't wait it is starting in Sinton.“

*Kyle Flattery,
Project Engineer, Steel Dynamics, Inc.*

„What I expected is what I am seeing. We have got our keyboards in front of us that we can press to move the equipment. We can see the reaction of the equipment on the 3D model being displayed and the simulation being displayed on the wall, and we have the ability to manipulate the HMI to make the equipment move. I am excited to see the equipment making real steel in our works in Sinton.

*Christopher Eiteljorge,
Electrical Project Engineer, SDI*



Live-Webinar

The following training sessions were conducted online in the period from November 2020 to June 2021.

Not only was the “Digital Classroom” used, in which future plant operations can be rehearsed in a virtual environment, but also the four recording studios of the TECademy. Experts can teach from SMS locations worldwide, while SDI participants sit in the U.S. and experience the training live. At the customer's request, the various training sessions can also be recorded for future access.

Benefits of live webinar:

By becoming familiar with the processes, plant operations can begin more quickly, and online training saves the customer travel time and expenses.

Karsten Weiss



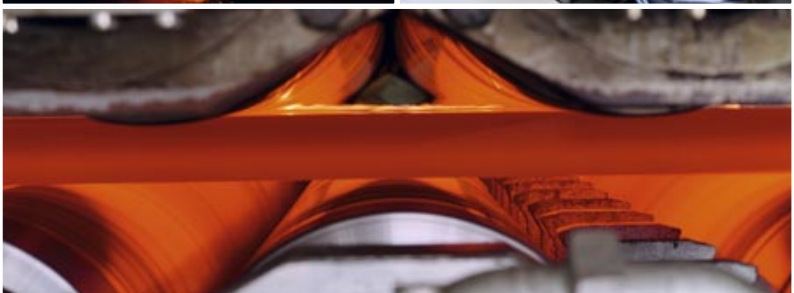
Digital
Workshops

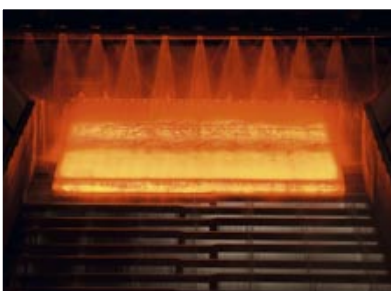


Plant
engineering

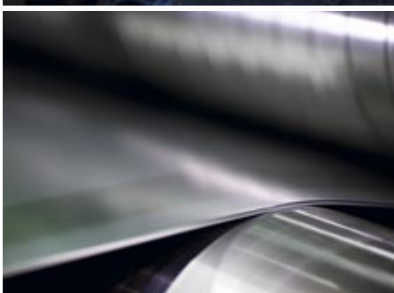
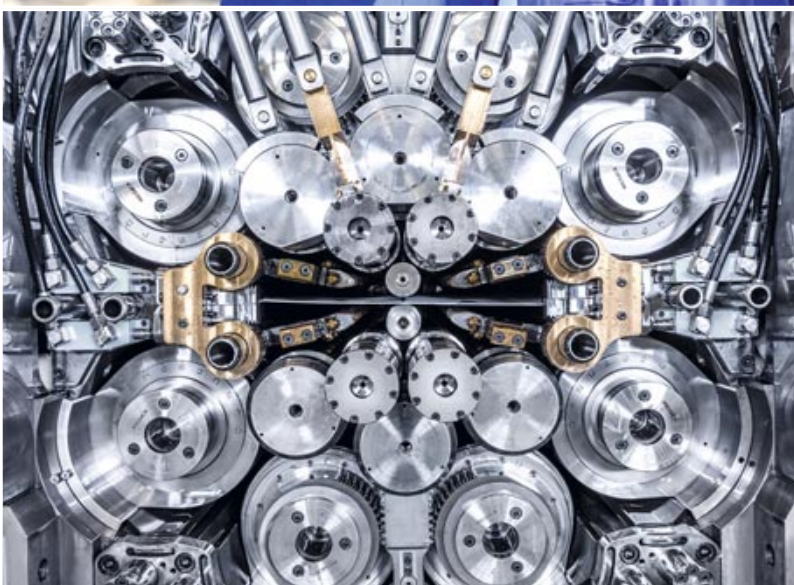


Technology





Maintenance



eLearning



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