



SMS Concast

Your leading partner for continuous casting technology
for long products



SMS Concast

Your leading partner for continuous casting technology



The SMS group's long-products competence center

SMS group is your leading full-line technology partner in the world of metals. SMS Concast is SMS group's specialist for casting semi-finished long products out of steel – billets, beam blanks and blooms.

SMS Concast– your leading partner for continuous casting technology

Every day, SMS Concast's continuous casting solutions are setting new productivity and quality benchmarks in steel plants around the world. After all, we introduced this technology to the steel industry back in 1954, and we have never stopped innovating. Today the pace of innovation is faster than ever.

TAEWOONG – Strong partner

“This steelmaking plant project – for round blooms of up to 1000 mm diameter – is one of our company's long-cherished ambitions for 20 years and SMS Concast has been supporting us throughout to make this project reality. Still now, almost two years after a successful start-up, the SMS Concast team ceaselessly cares and helps, when needed – committed and reliable.”

Mr Yongdo Huh, Chairman/Founder of Taewoong Co., Ltd., South Korea.

Your leading partner for strategic equipment lifecycle management

SMS Concast helps steelmakers get the most out of their equipment throughout its entire lifecycle, from designing a new plant or casting line to optimizing operations, maintenance, consumables, spare parts and repairs, all the way through to innovative modernizations.

Your leading digitalization partner

Machine learning, the Internet of things, Industry 4.0 – digitalization will be transformational for steelmaking. Smart steelmaking can deliver big improvements in efficiency, productivity, product quality, safety and logistics. SMS Concast is at the forefront of all these developments.

SMS Concast

Your leading technology partner for outstanding performance

Our proven competence helps you excel

Continuous casting machines from SMS Concast deliver outstanding performance for any long steel product, from 85mm sq. billets up to 1000mm diameter blooms! Since 1954, we have accumulated a vast pool of knowledge that includes rebar, special steel bar (SBO), bloom, beam blank,

curved and vertical casting techniques. And we have successfully applied our know-how around the world, commissioning **more than 3000 strands worldwide** for different continuous casting applications (see table below).

HYUNDAI – Quick project execution

“The cooperation with SMS Concast has been very fruitful and enabled us to restart production on time with an upgraded continuous casting machine adapted exactly to our high quality standards,”

Sang-Hoon Lee, Project Responsible and Mechanical Team Manager at Hyundai Steel Company Factory.

| Long product | Dimensions | End user products |
|--------------------|--------------------------------------|--|
| Billets | < 200 mm | Rebar, light sections, soft-steel wires, pre-stressed concrete reinforcing wire, carbon wire, tire cord, stainless steel for bars and wires, ball bearing steel etc. |
| Blooms | >= 200 mm (up to 1000 mm) | Medium and heavy sections, rails, ultra-clean, high-strength, special forgings, cutting-edge automotive, engineering grade, ball bearing, stainless, etc. |
| Rounds | > 85 mm ø | Seamless pipes, wheels, forged shafts, etc. |
| Beam blanks | 150x150x100 mm to 1150x490x130 mm | Light, medium and heavy sections, rolled beams, including wide-flanged beams etc. |

Billets



Blooms



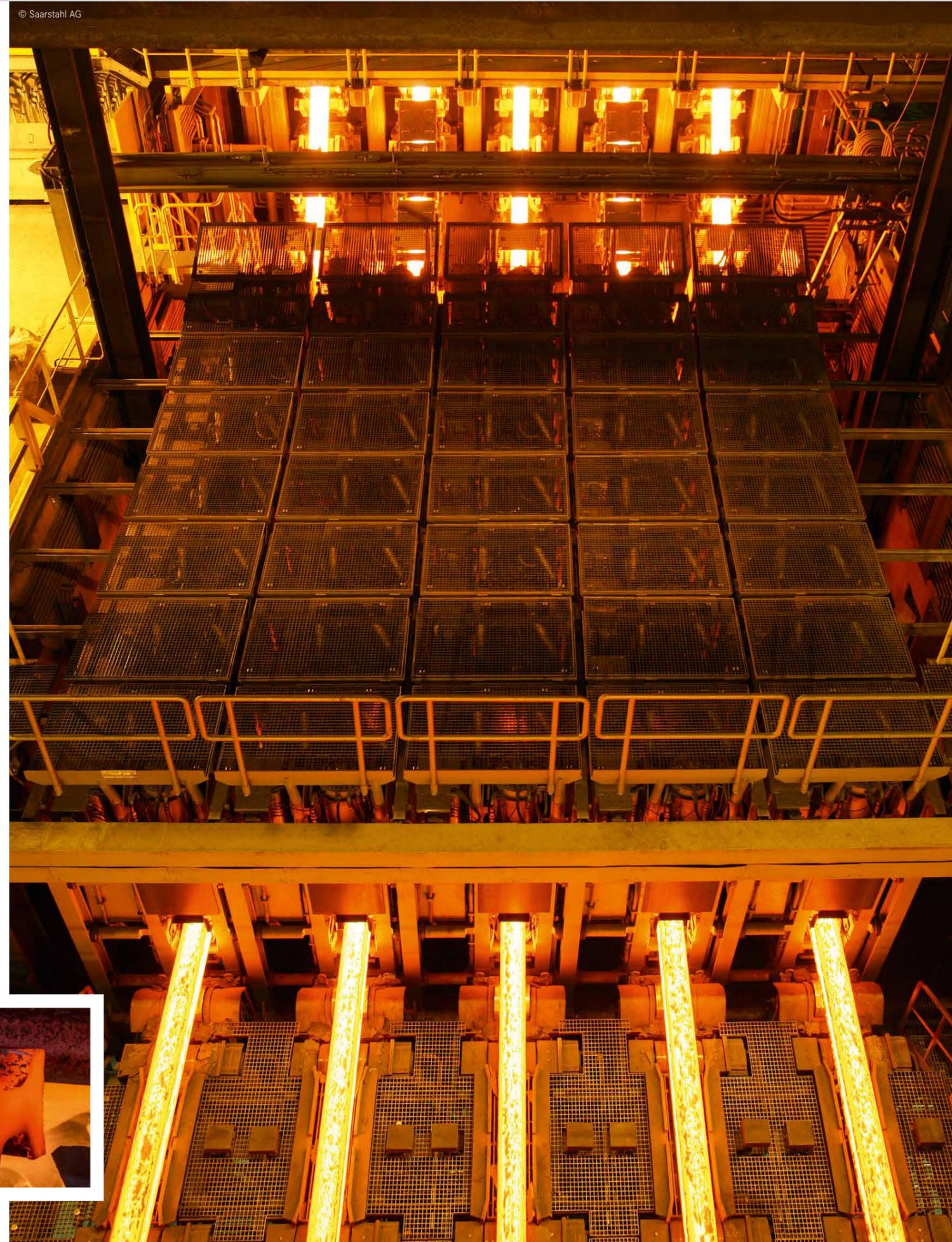
Rounds



Beam blanks



© Saarstahl AG



SMS Concast

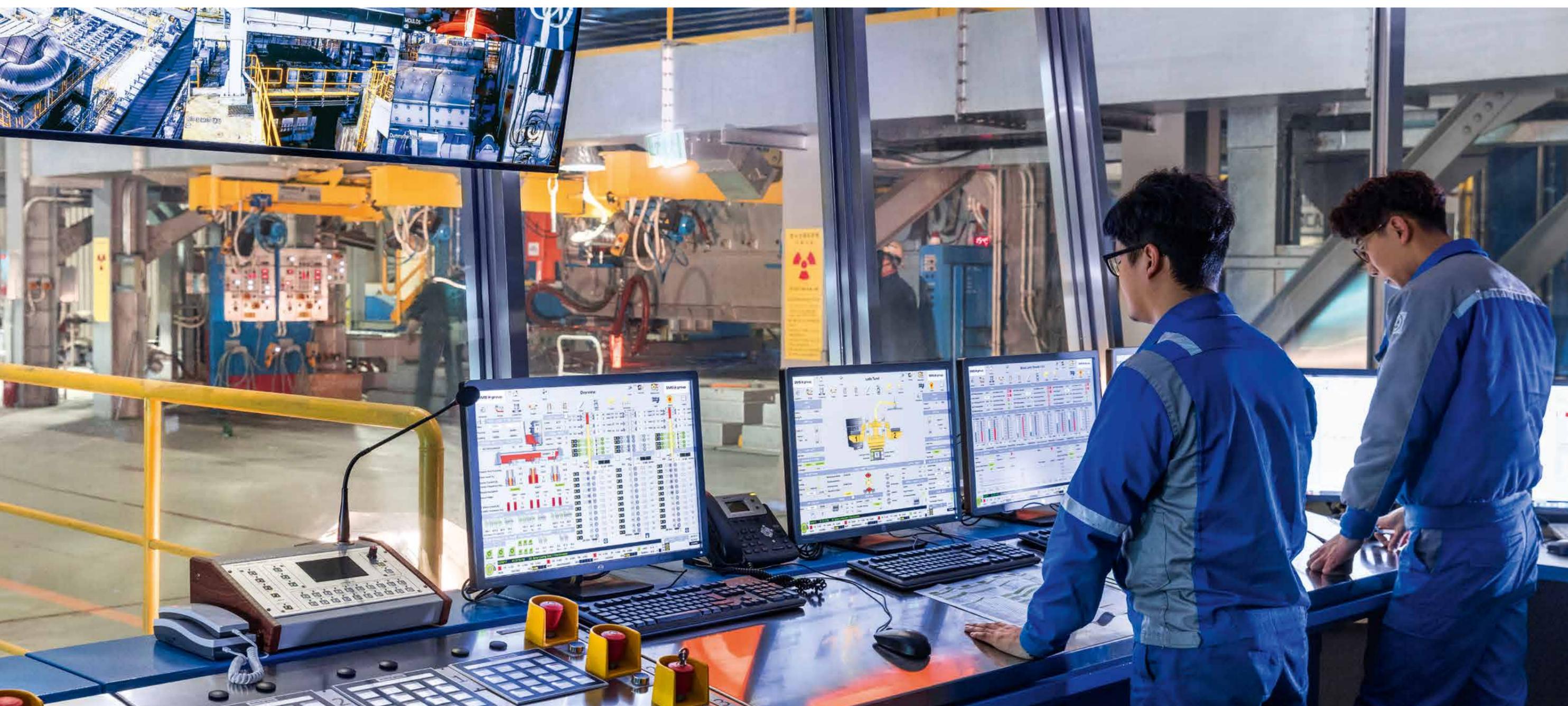
Your leading digitalization partner, today and tomorrow

A proven portfolio of integrated automation and control packages

All SMS Concast automation tools are developed in-house by SMS group and tailored to each client's specific requirements. The result is a smoothly integrated information system that enables process monitoring and management with state-of-the-art mathematical models, as well as plant-wide data collection and production coordination. SMS Concast's growing digital portfolio helps steelmakers produce the highest quality products throughout the whole solidification process. But that's not all.

Enhanced quality and safety with digitalization

The future of steelmaking is rushing toward us. Process controls are being decisively augmented by Industry 4.0 applications. Digitalization is not merely a buzzword for us. It accounts for a large share of our R&D activities. Robotics, temperature mapping and flow simulations are only a few examples of ongoing innovations that can boost performance and profits. We offer a range of robust systems and applications and we are ready to advise clients on how best to navigate the coming wave of technological change.



SMS Concast

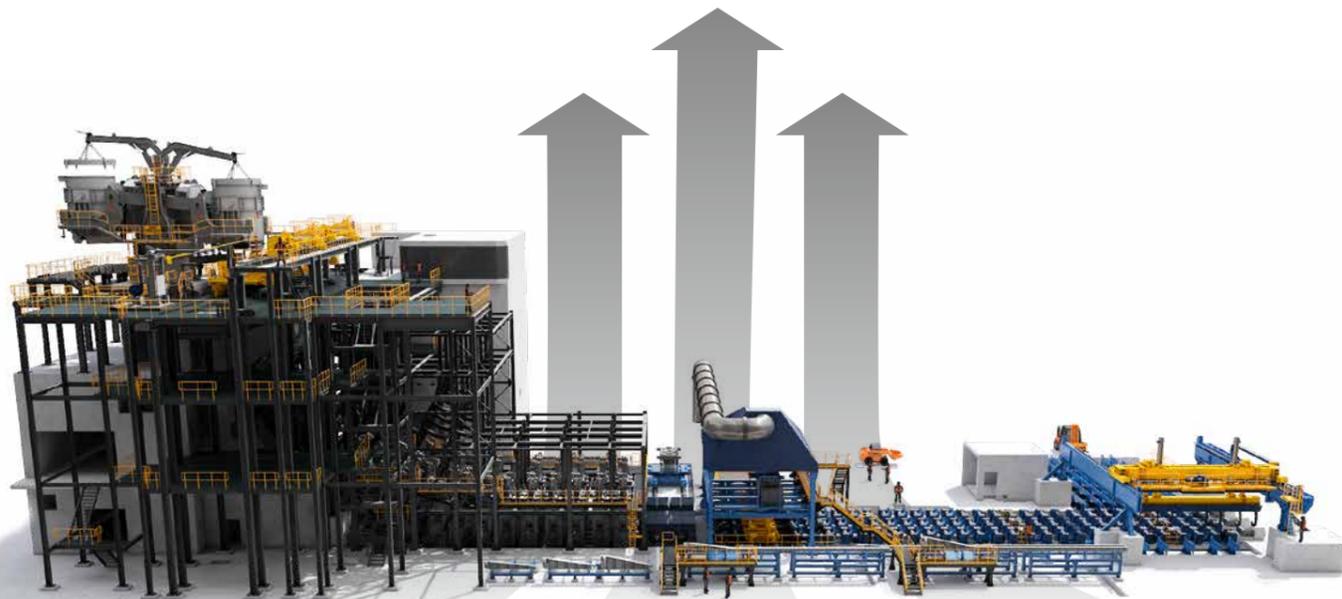
Your leading partner for equipment lifecycle management

Get the most out of your caster

Around the globe, SMS Concast and its subsidiaries engage a workforce of highly committed engineers, metallurgists and technicians, supported by a strong back-office and customer service team. In addition, we can rely on the extended service network of the SMS group.

As implemented by this dedicated workforce, our comprehensive portfolio of products and services will help you get the most out of your equipment in terms of safety, quality and productivity – at every stage of its lifecycle:

Safety
Quality
Productivity



BUILD
capacity

MAINTAIN
performance

OPTIMIZE
profits

BUILD up capacity and train staff for best results

SMS Concast designs and engineers robust continuous casters with cutting edge technology. Our specialists are ready to make sure that production starts smoothly and on time. But in the end, it's your people who will make the plant a success. We work closely with your staff to make sure they know how to get the best out of our equipment. We keep them up to date on the tools and systems they use. To do this, SMS Concast offers:

- Hands-on supervision and support during erection and start-up
- A full range of training programs and ongoing consultation services

MAINTAIN maximum performance

Your caster may run smoothly but there can always be unforeseen incidents, new product requirements, or just normal wear and tear that lead to downtime.

SMS Concast offers a full range of services and spare parts to keep your caster up and running:

- Emergency service and fast spare parts delivery
- Troubleshooting
- Remote service 24/7
- Repairs and refurbishments
- Operations and maintenance support
- On-site training
- Condition monitoring
- Computerized maintenance management system
- Warehousing
- Online parts identification
- OEM spare parts and consumables

OPTIMIZE profits – Extend your caster's service life and improve performance

Your markets can change and your caster in any case gets older. We offer services and products to extend your caster's service life and boost its performance:

- Caster check-ups and diagnostics
- Metallurgical support diagnostics
- Oscillation measurement
- Condition monitoring
- Mold optimization services
- Tailored technological and digital solutions

TimkenSteel - Reliable partner

"SMS Concast was a tremendous partner in helping us to bring the jumbo bloom vertical caster to life. With their team's collaboration, we successfully designed and built the largest continuous vertical bloom caster in North America, producing the largest continuous cast rectangular bloom cross-sections in the world with industry-leading internal cleanliness. After four years of operation, the caster is performing extremely well, and helping us to meet our customers' demands for the highest-quality large bars and seamless mechanical tubing. We value our ongoing relationship with SMS Concast, whether for new equipment, spare parts or technical services."

Bill Bryan, TimkenSteel executive vice president of manufacturing and supply chain.

In-house manufacturing of superior mold tubes

Based on our comprehensive process know-how, SMS Concast manufactures benchmark-setting mold tubes. New or refurbished, SMS Concast mold tubes are tailored to your specific casting technology requirements to yield superior casting results. We don't outsource this critical parts, we produce them in-house.



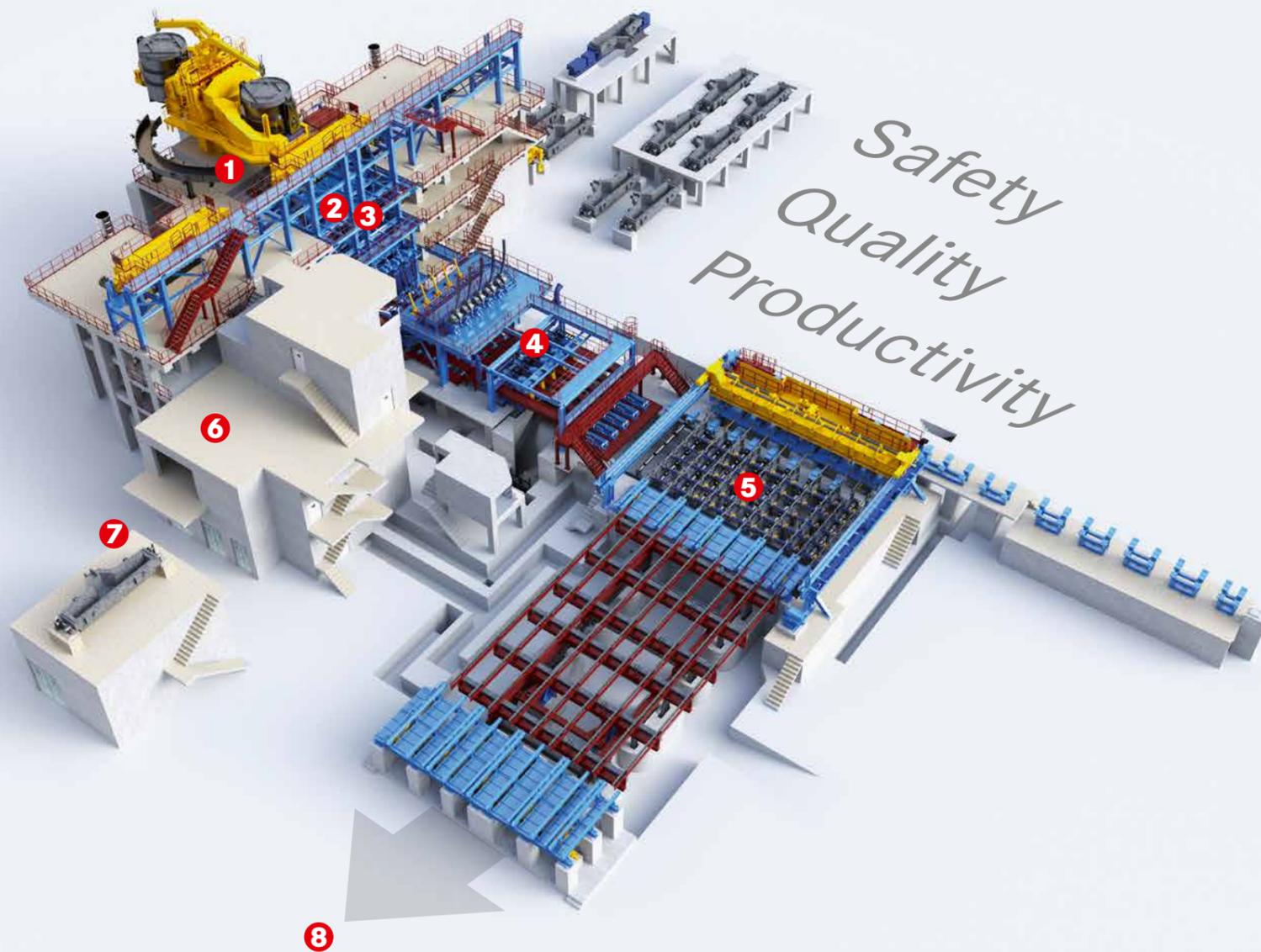
SMS Concast

Your leading partner for technological and digital solutions

SMS Concast's comprehensive caster solutions help you meet your production targets!

Are you planning a new casting machine or do you want to introduce new steel grades, replace old equipment or upgrade existing systems? SMS Concast offers exceptional stand-alone products, be it technological or digital. With its vast experience and innovative ideas, SMS Concast is your leading partner for long-product casting optimization.

SMS Concast helps to make you ready for the future today!



SMS Concast equipment, services and know-how can enhance continuous caster performance all along the process chain:

- 1 Casting platform**
Safety first – automate operations on the casting platform and eliminate lost time incidents (LTIs)!
- 2 Mold tubes**
Quality counts – ask our ExperShape Service for your ideal mold geometry!
- 3 Roller apron**
Meet your quality requirements – apply SMS Concast's dynamic mechanical soft reduction (DMSR) and CONSTIR electromagnetic stirrer systems!
- 4 Roller table**
Extended quality control – track and effectively eliminate billet rhomboidity with the help of our online rhomboidity detection system!
- 5 Discharge**
Airtight traceability for highest productivity – achieve faultless deliveries with our billet tracking system package CONMARK, CONREAD & CONYARD!
- 6 Control room and simulations**
Safety, quality and productivity for every cast – optimize caster settings using our COOL solidification modeling software!
- 7 Workshops**
Enhanced productivity – extend the service life of your mold! Maintenance mold measuring and refurbishment services can double the life of your molds!
- 8 Warehouses**
Be more productive in the billet yard – reduce handling times with the help of CONYARD, SMS Concast's wireless warehouse management system!

Learn more about our products and services at www.sms-group.com.

ArcelorMittal – Better quality and productivity

“As a result of their ExpertShape Service, SMS Concast proposed us a new BBL mold tube design. And it changed a lot: increased output, almost no more web cracks and a rejection rate of as low as 1 %!”

ArcelorMittal Gipúzkoa S.L., Spain

Let's discover the future of steelmaking together!

We are committed to helping our customers meet the steelmaking challenges they face today and tomorrow. Technology is bringing change, and so are new product applications and shifting markets.

Contact us to find out what we can do to improve your plant's productivity, reliability, product quality and profitability.



SMS CONCAST AG

Toedistrasse 9
8027 Zurich, Switzerland
Tel.: +41 44 204 6511

E-Mail: concast.info@sms-group.com
Internet: www.sms-concast.ch



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.