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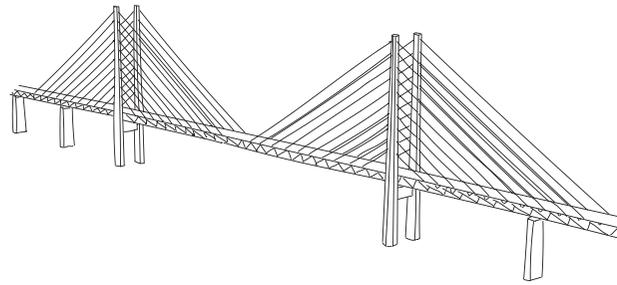
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## STEEL FOR THE WORLD OF THE FUTURE

Steel is the world's No. 1 structural material - and it is more sustainable than any other: it is infinitely 100% recyclable. Without steel there could be no energy turnaround - wind-energy towers and hydropower plants would be inconceivable without steel. To keep the production of steel climate-neutral, the emissions from steelmaking must be further reduced. For this purpose, Dillinger has set itself ambitious targets: we aim to save 55 to 60% of CO<sub>2</sub> emissions by 2030; by 2045, all steel production is to be CO<sub>2</sub>-neutral.

In addition to CO<sub>2</sub>-neutral production of steel, our sustainability strategy also extends to improving protection against the pollution of water, boosting our energy efficiency and enhancing our conservation of resources. The philosophy we have adopted: cutting-edge industrial technology combined with sustainable corporate management – nothing more, nothing less.

Our responsible and sustainable corporate conduct has already earned us several important awards.



## FOR YOUR OWN SAFETY

Visits to operational industrial premises such as those of Dillinger necessitate special care and alertness. By entering the Dillinger site, the visitor automatically undertakes to adhere to and obey all safety-relevant standards and, in particular, all applicable legislation, ordinances and regulations, rules and guidelines. Instructions given to visitors by their Dillinger contacts and/or guides must be obeyed. All prohibitions, requirements, warnings and rescue/escape instructions displayed within the works on notices, signs, etc., must under all circumstances be obeyed.

### General rules of behaviour and information

- All visitors must report to Plant Security at Gate 1 (signposted "Tor 1") before and after any visit to the plant site.
- The safety equipment (helmet, etc.) provided, plus closed robust footwear and tightly fitting clothing must be worn.
- Persons wearing shorts, skirts, open shoes, sandals and/or high-heeled shoes will not be allowed to take part in any site visit.
- Visitors must not leave the designated routes.
- Special care and alertness must be devoted to internal site traffic.
- The designated visitors' routes must be used within all plant buildings. Access to control facilities (control panels, control platforms, control rooms, etc.) and rooms containing machinery is permitted only when accompanied by and only upon instruction by the Dillinger employee accompanying the visitor(s).
- Always use the handrails on stairways, etc., never take two or more stairs at once, never take "short cuts" (i.e. never leave the designated routes).
- Persons under the age of 16 years, persons with mobility difficulties, users of heart pacemakers and persons with certain other health problems (e.g. asthma, cardiac problems, etc.) may not enter the plant.
- Damage to property: Any and all damage to and/or loss of Dillinger property caused by the visitor during visits to the site must be reported immediately to the Dillinger employee accompanying the visitor(s).

### Behaviour in case of danger (emergency, accident, fire)

The Plant Security service must be informed by calling the following telephone number on the nearest landline telephone or mobile telephone:

**Internal: 112**  
**Mobile: 06831/47112**

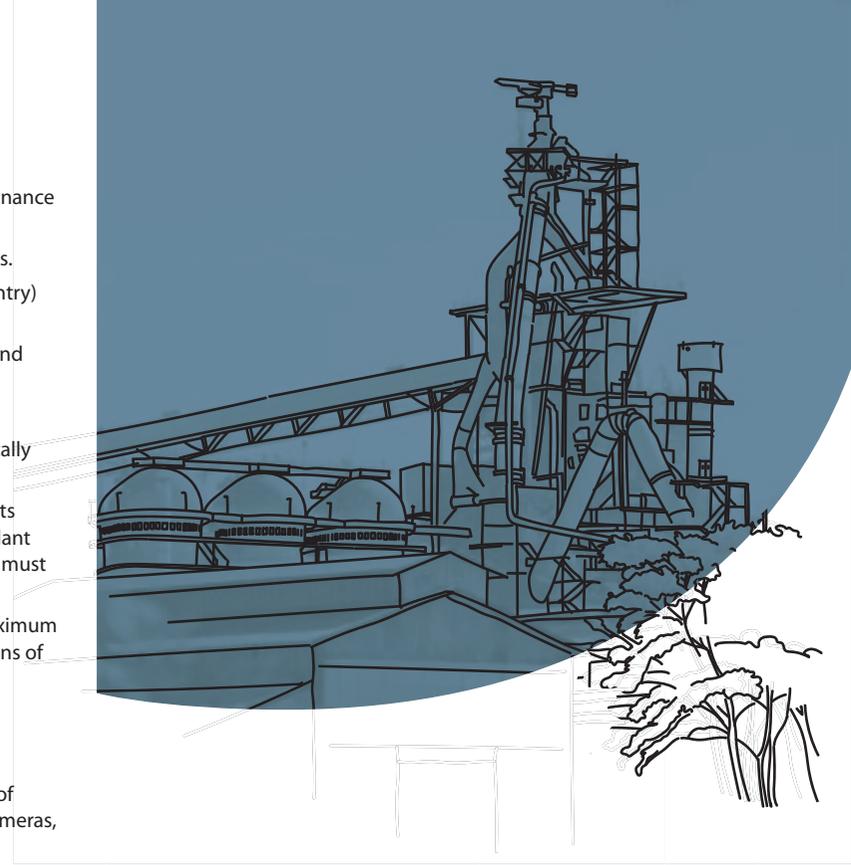
The Dillinger employee accompanying the visitor(s) must be notified immediately. In case of hazardous situations and in case of operational problems, the Dillinger operating staff have authority to issue instructions to any visitor(s), and thus exercise the company's legal rights and obligations vis-à-vis such persons.

### Traffic rules on the Dillinger plant site

- The provisions of the German Road Traffic Act and Road Traffic Ordinance ("Highway Code") apply everywhere on the Dillinger site.
- Maximum permitted speed within the site is 30 km/h for all vehicles.
- Drive at walking pace when passing through the gatehouse (site entry) zone.
- Rail traffic and cranes have priority at all times. The warning signs and notices displayed at crossing points must be obeyed.
- Never stand, drive or walk under suspended loads.
- Parking of vehicles is permitted only on the parking spaces specifically indicated for this purpose.
- The movement of oversize (extra wide) loads within the site presents special dangers. Such movements are generally accompanied by Plant Security personnel; all instructions issued by Plant Security officers must be obeyed.
- Motor travel within the plant site using more than one vehicle (maximum of three vehicles allowed) should be accomplished in closed columns of vehicles wherever possible.

### Prohibited activities:

- Filming and/or photography, and the carrying and use of all types of recording and/or transmitting equipment (Smartphones, digital cameras, cameras, etc.) is forbidden.
- Smoking is forbidden on the Dillinger plant site.
- The carrying, consumption and sale of narcotics on the Dillinger plant site is subject to prohibition without exception.



# WELCOME!

to Europe's leading producer of heavy plate

# HISTORY

- 1685** Ironworks founded by the Marquis de Lenoncourt on the instructions of Louis XIV
- 1804** First plate rolled at Dillingen
- 1809** Germany's first joint-stock corporation
- 1835** The Dillingen platemaker's gauge becomes the recognised standard throughout Europe
- 1948** Dillinger is a co-founder of SOLLAC
- 1961** Commissioning of the world's first continuous slab caster
- 1981** ROGESA and ZKS founded
- 1985** Commissioning of a 5.5 m four-high rolling mill
- 1992** Acquisition of the GTS Industries heavy-plate rolling mill in Dunkirk (Dillinger France)
- 1998** The world's first continuous slab caster for slab thicknesses up to 400 mm and featuring Soft Reduction
- 2010** The world's thickest slab: 450 mm!
- 2014** Steelwind Nordenham founded
- 2016** New vertical continuous caster CC6 sets innovative standards in all dimensions
- 2017** The world's thickest slab: 600 mm!
- 2018** A worldwide innovation: an eddy-current plate inspection system to detect local overhardening ("hard spots") is commissioned
- 2020** A first anywhere in Germany – hydrogen is used as a reductant in routine operation of the blast-furnace route for hot metal production



## COKING PLANT

The coking plant supplies the coke necessary for production of liquid iron ("hot metal"). Hard coal is distilled under exclusion of air at around 1,200 °C for approximately 22 hours: this leaves mechanically strong, highly porous coke. Byproducts include tar and crude benzol (refined later to benzene), which are used in highway engineering and in the chemicals industry. The coke itself supplies heat for the blast furnace, and its carbon removes the oxygen from the iron ore (the "reduction" process).



## SINTER PLANT

The fine ores required for production of hot metal must be consolidated into lumps before charging into the blast furnace. This is the function of the sinter plant, where the fine-grained ores are "baked" together with coke fines and so-called slag-forming agents to form solid lumps. The product from this plant (sinter) is then ready for burdening into the blast furnace, providing good reducibility and high iron contents, thanks to its chemical and mechanical properties.



## BLAST FURNACE

The blast furnace process is used to produce liquid iron, known in the steel industry simply as "hot metal". The byproducts are slag and blast furnace (BF) gas. Superheated air ("hot blast") is injected through so-called tuyeres, and combusts the coke. The reaction gases generated then rise up the BF shaft, heating the burden (coke, lump ores, sinter and pellets), setting off numerous, extensive chemical reactions and reducing the iron oxides. The hot metal and slag are now in liquid form, at temperatures of over 1,500 °C, and are tapped off for further processing at short regular intervals.



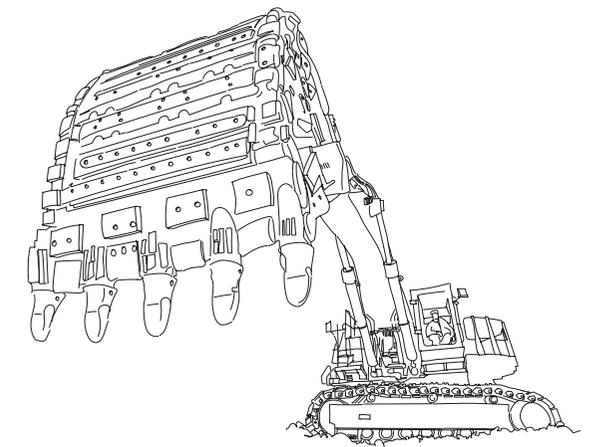
## STEELMAKING PLANT

The hot metal from the blast furnace is converted to steel in the steelmaking plant. Two operations are needed: refining is the technical term for the combustion or oxidation of any undesirable "tramp" (impurity) elements contained in the hot metal. This is done in the converter. The aim of refining is to reduce carbon content and that of other impurities to specified levels. Modern steelmaking is nowadays essentially dominated by downstream treatment of the molten steel (the "heat") after it leaves the converter by means of alloying, stirring (often known simply as "bubbling") and degassing. This so-called secondary metallurgy has as its aim the further improvement of steel quality and the stabilisation of the production process. The finished steel is then prepared for rolling, primarily by means of continuous casting.

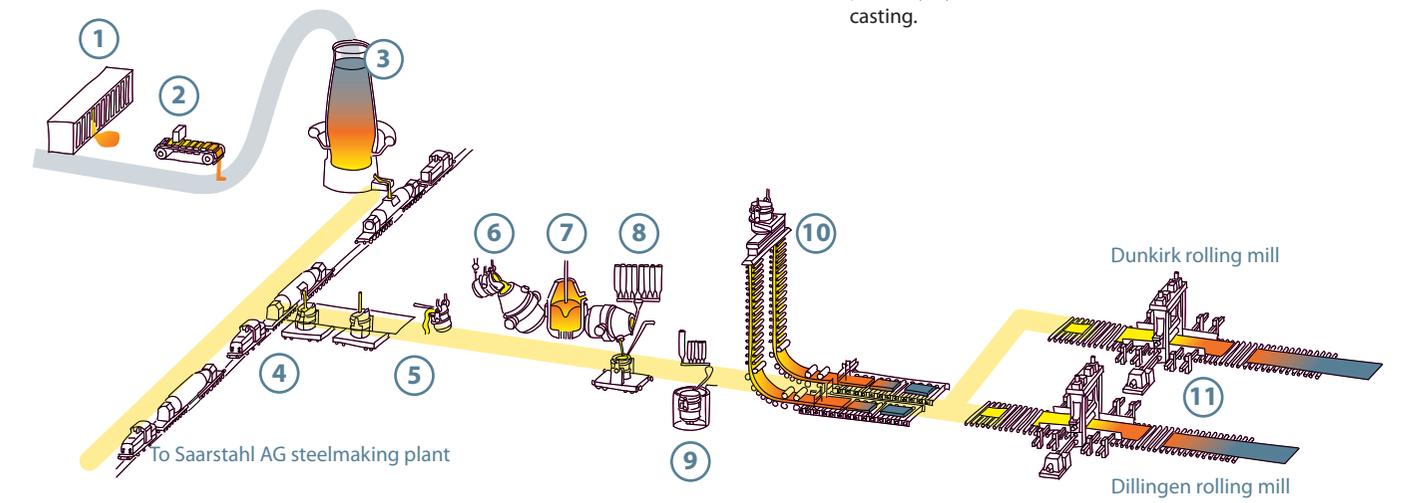


## ROLLING MILL

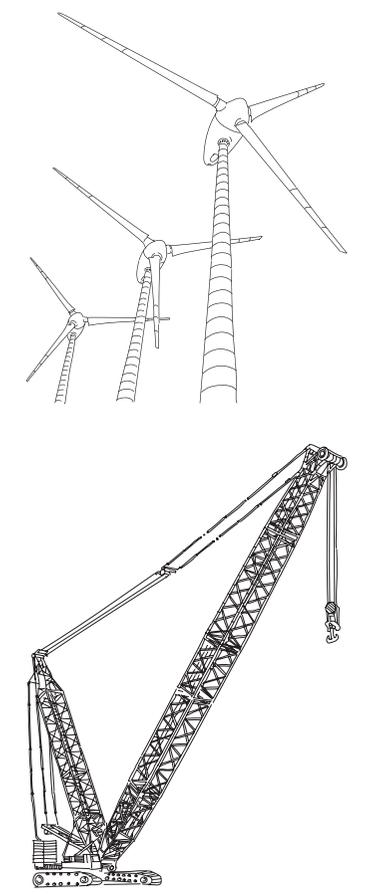
The steel cast in the steelmaking plant (slabs) is shaped on the rolling mill into the plates needed for use by the customer. The technological properties of the steel are also modified during this forming process. The steel must then be subjected to further treatment, the first operation being rolling. Rolling of steel is a continuous or intermittent forming process using a number of rotating rolls mounted in gigantic rolling stands. The pressures and forces applied during rolling cause plastic deformation of the material. This process is therefore used to adjust the desired shape and mechanical properties of the plates.



## FROM ORE TO HEAVY PLATE



- ① Coking plant
- ② Sinter plant
- ③ Blast furnace
- ④ Hot metal desulphurisation
- ⑤ Slag removal
- ⑥ Charging of the converter
- ⑦ Hot metal refining
- ⑧ Alloying
- ⑨ Vacuum treatment
- ⑩ Continuous caster
- ⑪ Rolling mill



# VISITORS' ACKNOWLEDGEMENT OF SAFETY REGULATIONS

During your visit you will be present on a plant site which is normally accessible only to persons possessing specialist knowledge. For your own safety, please note and adhere in particular to the following information, which applies to the entire Aktien-Gesellschaft der Dillinger Hüttenwerke site at the Dillingen location and to those of its affiliated companies and, in particular, those of ROGESA Roheisengesellschaft Saar mbH and Zentralkokerei Saar GmbH. (Note: The designations "Aktien-Gesellschaft der Dillinger Hüttenwerke", "AG der Dillinger Hüttenwerke" and "Dillinger" shall in all cases be deemed when used below also to signify the aforementioned companies).

Attention is hereby expressly drawn to the fact that all visitors enter our site at their own risk. Aktien-Gesellschaft der Dillinger Hüttenwerke therefore accepts no liability whatsoever for any loss or damage sustained during and/or in conjunction with any visit to the plant site. This disclaimer shall not apply in case of harm to life, limb and/or health arising from negligence/negligent violation of a duty on the part of Aktien-Gesellschaft der Dillinger Hüttenwerke or from intent or negligence/negligent violation of a duty on the part of any legal representative, employee or servant of Aktien-Gesellschaft der Dillinger Hüttenwerke.

All instructions issued to visitors by employees of Aktien-Gesellschaft der Dillinger Hüttenwerke accompanying them and/or by employees of Aktien-Gesellschaft der Dillinger Hüttenwerke in the plant, and all notices displayed in and around the plant, must be observed and must be obeyed.

I hereby confirm that I have read, understood and noted the above general statements concerning my safety. I hereby undertake to adhere to and obey the relevant regulations, rules of behaviour, safety notes and notices, and all instructions issued by Dillinger employees.