



Visitors' acknowledgement of safety regulations

All visits to Aktien-Gesellschaft der Dillinger Hüttenwerke, including the facilities of ROGESA Roheisengesellschaft Saar mbH and Zentralkokerei Saar GmbH, are undertaken at the visitor's own risk. In particular, all liability for loss, damage, injury and/or death is hereby expressly excluded except in cases in which such liability results from intent or gross negligence on the part of Dillinger Hütte and/or its officers, servants and/or representatives.

All instructions issued to visitors by Dillinger Hütte employees accompanying them and/or by Dillinger Hütte employees 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 DH employees.

Name of company/ educational institution:

Visit to DH facilities on (date):

List of participants:

	Surname	Forename(s)	Age	Signature (of legal guardian in case of persons under 18 years of age)
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Please continue on next page if more than 15 participants.

Historie

1685 Dillinger Hütte founded, its initial products being nails, scythes and cast-iron pots.

1804 Commissioning of the first plate rolling mill.

1809 With Napoléon Bonaparte's approval, Dillinger Hütte becomes one of Europe's first joint-stock corporations.

1815 Dillinger Hütte is now Prussia's most important supplier of rolled plate. Its range includes not only "black" (iron) and tin plate, but also copper sheet.

1835 Steam replaces water as the power source for the rolling mill. The Dillingen platemaker's gauge, covering twenty-four plate thicknesses, becomes the German national standard.

1871 The first specialized heavy-plate rolling line is commissioned, producing shipbuilding and boiler-making plate, in particular.

1954 Europe's most modern four-high stand, with rolls of 3,000 mm body length and a 7,000 h.p. drive, is installed in the heavy-plate mill.

1961 The world's first slab continuous caster is commissioned.

1969 The basic oxygen steelplant is commissioned.

1971 Completion of Dillingen's new Heavy Plate Rolling Mill 2, with a length of 1,200 m. The 4.3 m wide four-high mill produces 75,000 tonnes monthly.

1976 Dillinger Hütte achieves commercial maturity of the thermo-mechanical rolling process.

1982 Foundation of the ROGESA Roheisengesellschaft Saar mbH iron smelting and Zentralkokerei Saar GmbH coking-plant companies.

1984 Rolling of the world's first longitudinally profiled plate.

1985 Installation of a second rolling line permitting plate widths of up to 5,200 mm.

1991 EUROPIPE founded as a joint venture by Dillinger Hütte and Mannesmannröhren-Werke AG.

1992 A second rolling mill, GTS Industries (Dunkirk) is integrated into the group.

1998 The world's most productive continuous caster, for slab thicknesses of up to 400 mm, commissioned.

2000 The world's thickest thermo-mechanically rolled plate (120 mm for the "Les Garrigues" bridge, in France) is delivered.

2007 Initial measures implemented for modernization at Zentralkokerei Saar GmbH.

2009 Commissioning of a new coke-oven battery (at ZKS) scheduled. Construction of a BF-gas-fueled power plant for sustainable energy utilization and optimum environmental safety.

Today we are one of Europe's leading heavy-plate producer - and the Dillinger Hütte coat of arms is firmly established not only in Europe, but around the globe, as the symbol of high steelmaking technology and customer orientation.

At Dillinger Hütte, "heavy plate" stands for a broad range of formats and at least 2,000 grades of steel. We design and develop steels possessing the most diverse specialized properties for bridges, high-rise tower buildings, offshore platforms, ships, large-caliber pipelines, boilers, pressure vessels, earth-moving and other heavy-duty machinery, wind farms, and many other applications.

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 twenty-four hours, producing 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 ("burdening") 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. 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

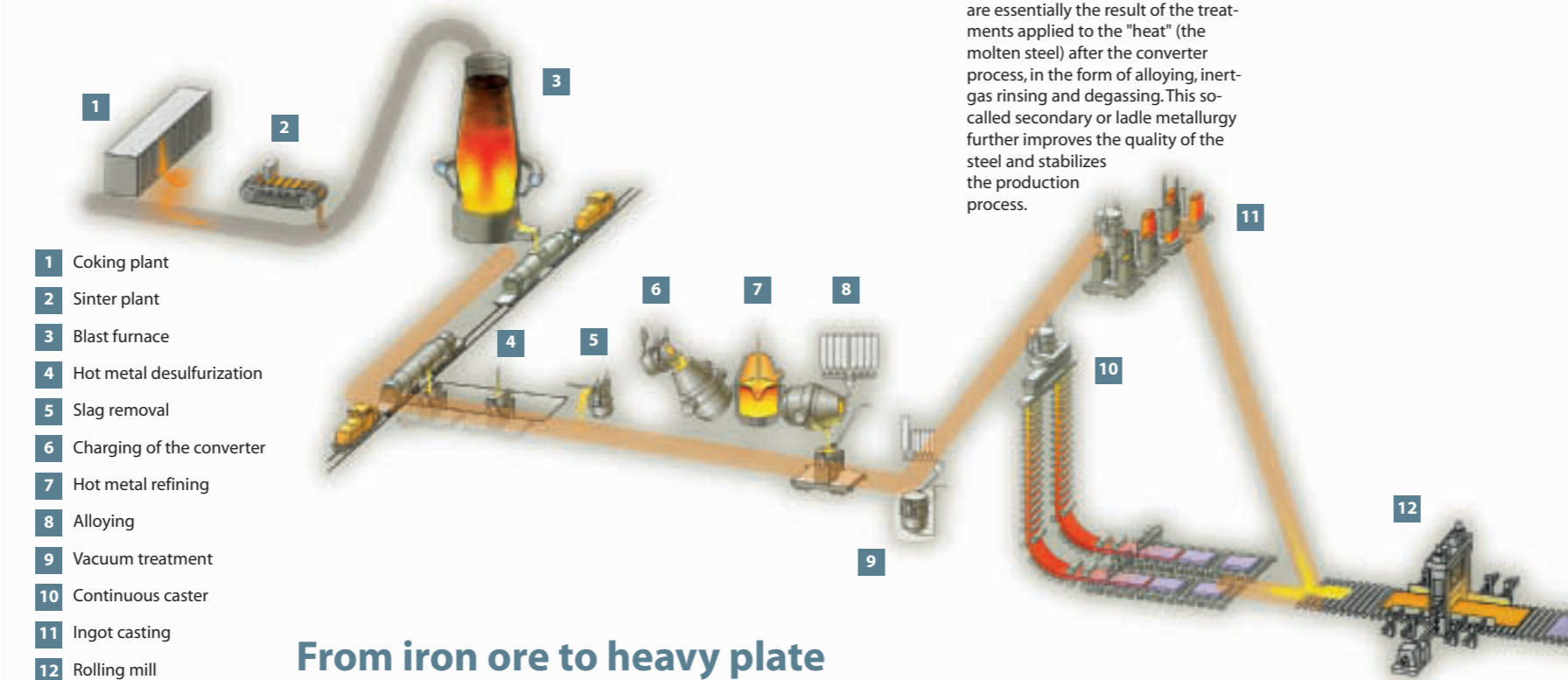
The blast furnace process is used to produce liquid iron, known in the steel industry simply as "hot metal". The byproducts are slag and blast furnace (BF) gas. Superheated air ("hot blast") is injected through so-called tuyeres, and combusts the coke. The reaction gases generated then rise up the BF 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.

Steelplant

The steelplant converts the hot metal into steel. Two operations are necessary for this: Refining, and secondary metallurgical or "ladle" treatment. Refining is the technical term used to describe combustion, or oxidation. Significant "tramp" (impurity) element contents in the hot metal must be combusted in the converter, or fixed in the slag, during this process. The aim of refining is to lower carbon content, and that of other tramp elements, to the specified levels, and the complete removal of all undesirable elements. Modern high-performance steels are essentially the result of the treatments applied to the "heat" (the molten steel) after the converter process, in the form of alloying, inert-gas rinsing and degassing. This so-called secondary or ladle metallurgy further improves the quality of the steel and stabilizes the production process.

Rolling mill

The steel refined and cast in the steelplant (by means either of continuous or ingot casting) is shaped in the rolling mill to plate suitable for the needs of steel users. This process also modifies the technological properties of the steel. Further treatment - above all, rolling - is necessary to complete this process. Rolling of steel takes the form of continuous or step-by-step deformation between a series of massive rotating rolls. The pressure applied causes plastic deformations which have beneficial effects on the microstructure of the plate, and thus on its mechanical properties.



From iron ore to heavy plate

Photos: Dillinger Hütte, EUPEC, Mori Building, BP Azeri, L&T

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Acknowledgement

Receipt - and thus acknowledgement - of the obligation to adherence to all safety instructions must be confirmed on the pull-out "Visitors' acknowledgement of safety regulations" page.

We wish you an interesting and pleasant visit to Dillinger Hütte.



DILLINGER HÜTTE

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For your own safety

Visits to operational industrial premises such as those of Dillinger Hütte necessitate special care and alertness. In entering the Dillinger Hütte 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 Hütte 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 enter the premises.
- Visitors must not leave the designated routes. Special care and alertness is required with respect to traffic on the site.
- 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 DH 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 Hütte property caused by the visitor during visits to the site must be reported immediately to the DH employee accompanying the visitor(s).

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

Call Plant Security on the following telephone number via the nearest available telephone after or, if possible, during administration of First Aid, rescue and/or firefighting activity.

Internal: 110

Mobile: 00496831/47110

The DH employee accompanying the visitor(s) must be notified immediately. In case of hazardous situations and in case of operational problems, the DH 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 DH plant site

- The provisions of the German Road Traffic Act and Road Traffic Ordinance ("Highway Code") apply everywhere on the DH site.
- Maximum permitted speed within the site is 30 km/h for all vehicles.
- 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 (photo-mobiles, digital cameras, cameras, etc.) is forbidden.
- Smoking is forbidden on the Dillinger Hütte plant site.
- The carrying, consumption and sale of narcotics on the Dillinger Hütte plant site is subject to prohibition without exception.
- Mobile telephones may be used only in emergencies.

WELCOME



DILLINGER HÜTTE