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FROM ORE TO STEEL

SMART SOLUTIONS FOR THE STEEL INDUSTRY

THE SINTER PLANT

STEEL

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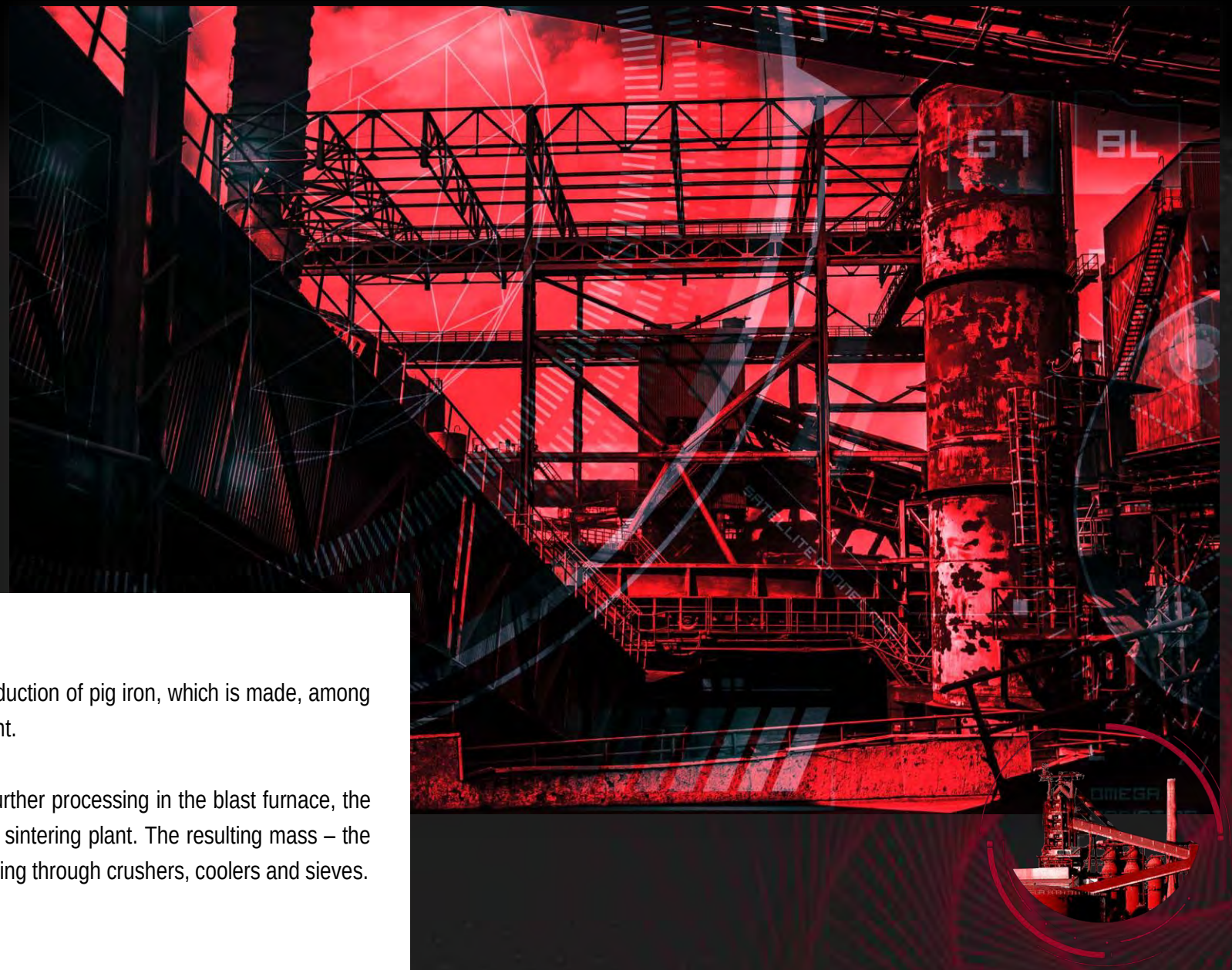

THE SINTER PLANT

Sinter is considered an important basic material for the production of pig iron, which is made, among other raw materials, from fine ore and coke in the sinter plant.

Since all materials must have a certain minimum size for further processing in the blast furnace, the raw materials are baked together by a firing process in the sintering plant. The resulting mass – the sinter cake – is fed to the blast furnace after further processing through crushers, coolers and sieves.

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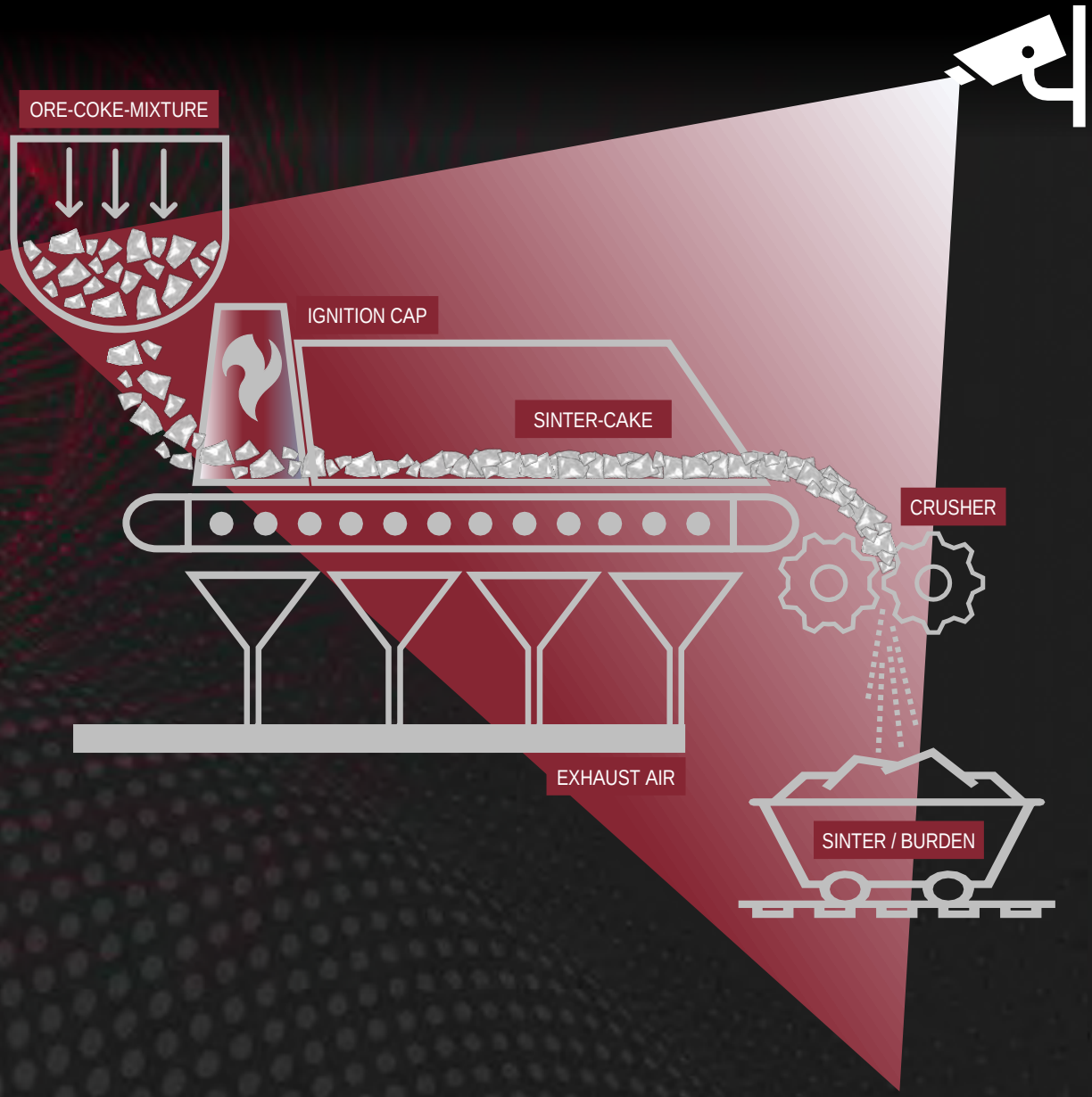
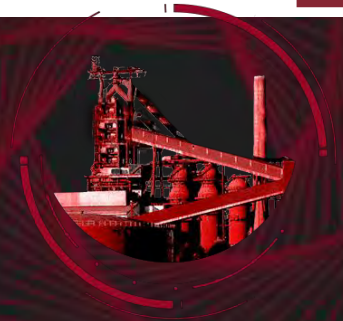


OVERVIEW CAMERAS

In process monitoring, which is geared towards detailed inspection and evaluation within a production chain, visual observation of the entire plant shouldn't be neglected. For this purpose, overview cameras are installed at strategic positions that they provide an overall picture of the current production. The images thus generated are transmitted live to the control center, so that any imminent malfunctions are detected at an early stage.

In addition to avoiding cost-intensive production downtimes, the environment also benefits here: a defective filter system can be detected more quickly, for example, as a change in the color of the exhaust gas often indicates a malfunction. The control center can thus take immediate action and counteract dangers.

At the same time, the use of surveillance cameras increases work safety for the specialist personnel directly working at the plants: The early detection of a malfunction, which the employee on site may not even be aware of, reduces the risk of an accident to a minimum.



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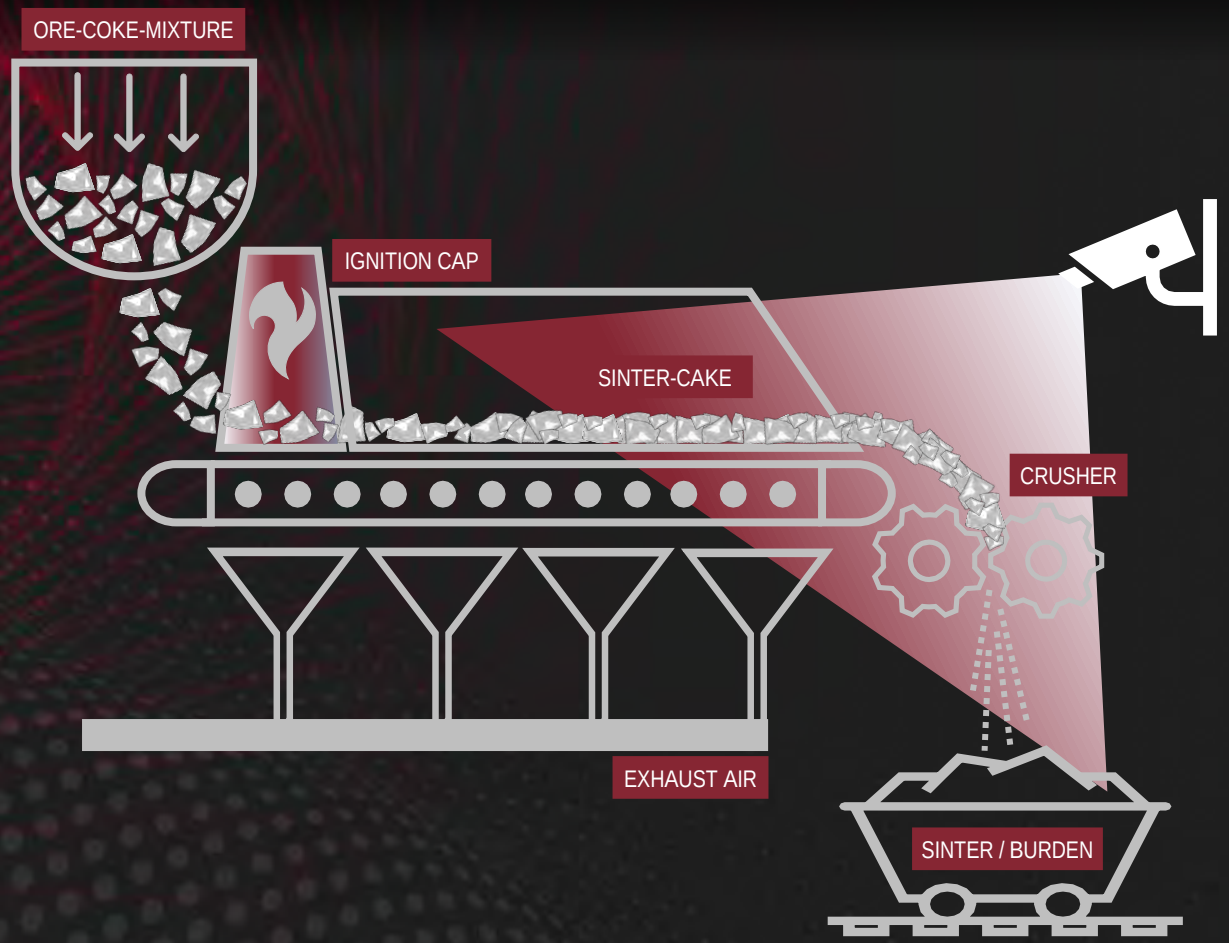
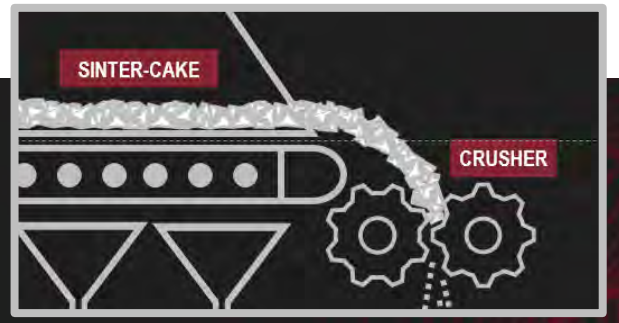


SINTER PROCESSING / CRUSHER

To ensure the sinter can be fed to the blast furnace after the firing process, it has to be processed immediately by downstream machines. The caking of the individual raw materials has resulted in a flat, porous mass of fine ore, coke and other auxiliary materials, which has to be crushed to the required size. To ensure that it breaks evenly, it is cooled during transport on the conveyer belt. Consistent temperature distribution is essential for this production step.

The use of visual or thermographic cameras helps the operator to detect deviations quickly. If the sinter cake breaks irregularly or if an undesired drop in the temperature is measured, partial process heat can be added again via nozzles located on the underside of the conveyor belt.



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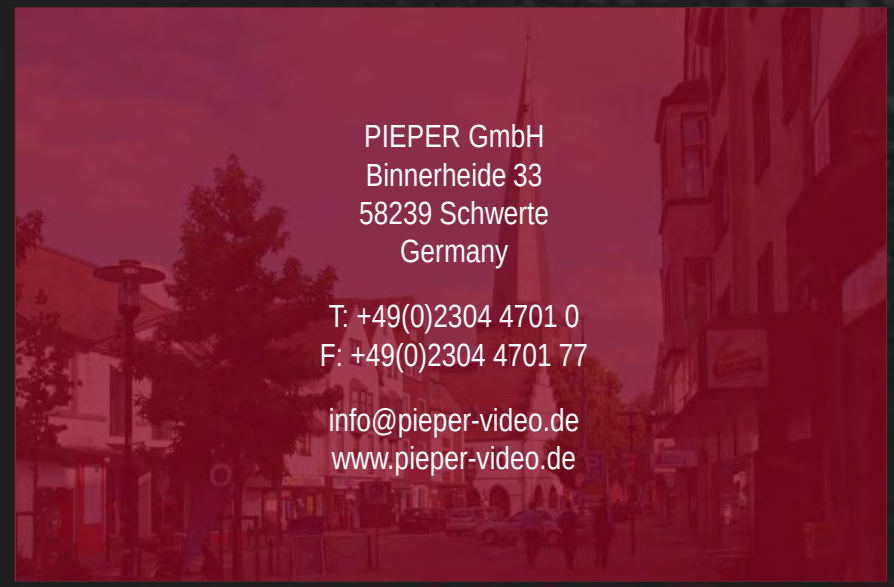

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