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PROCESS OPTIMISATION IN STEEL MANUFACTURING

Using photonic-based process monitoring to monitor relevant parameters for steel manufacturing

Use Case for Steel Manufacturing

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MULTIPLE is implementing its technologies to optimise the steel manufacturing process. An adaptive on-line control of the furnace and the rolling mill for the steel manufacturing process will be implemented, enabling the optimisation in terms of product and energy efficiency. For the furnace monitoring solutions, MULTIPLE is implementing pyrometer lectures across the line, thermocouple lectures inside the furnace, SWIR HSI monitoring of the steel slab and furnace walls, and UV measurements of slabs. Using edge computing, the process can be continuously controlled and adjusted in real time.

These fully integrated systems will optimise the operation point in the furnace and automatically adjust the reheating sequences and loads at the rolling mill, avoiding scraps and defective parts, ensuring end product quality, and reducing the consumption of energy.

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