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Human-free casting operation. Safety and efficiency increase thanks to robotization and artificial vision

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The continuous casting phase in steel production still requires several manual operations near molten steel, posing significant safety risks. This paper explores how the integration of advanced robotic technologies can fully automate casting operations, significantly improving safety, process efficiency, and overall production performance.

The study highlights the differences between various robotic applications, demonstrating how tailored solutions can meet specific production plans, even by leveraging short maintenance stops to implement automation without major disruptions. The modular adaptability of these solutions allows for step-by-step installation, ensuring seamless integration into existing processes while maintaining operational continuity.

Furthermore, the paper discusses the importance of operator training and familiarization, outlining a structured customer training program designed to facilitate a smooth transition to robotic automation and enhance user confidence in managing the new technology.

By combining automation, flexibility, and a progressive implementation approach, robotic solutions are set to redefine the future of continuous casting, making steel production safer, more efficient, and highly adaptable to industry needs.

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