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Towards zero-defect manufacturing for flat steel production - Introduction of the SurfConInspect Project

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Resource-efficiency and competitiveness are main aims of the European Green Deal transformation. In this global restructuring process yield improvement and reduction of waste aimed by a zero-defect production are low-cost opportunities for European steel manufacturers to realize a more sustainable production.

Enabling zero-defect manufacturing for flat steel production requires an early detection of surface defects and a fast and adequate control action once a defect appears. Therefore, the SurfConInspect (SCI) project follows a holistic approach incorporating new concepts for the measuring of surface defects as well as for the support of adequate control actions.

For the support of adequate control actions, a modular SCI framework will be implemented able to provide incoil control actions for the operator as well as directly for the process control systems. To support the operator the applicability of Augmented Reality (AR) devices for the online visualization of quality information directly on the moving coil will be investigated and a prototypical implementation is foreseen at an Inspection line of a tinplate production plant.

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