Midland Steel Case Study

NightingaleHQ

Improved resource and waste management through tracking

Midland Steel, leading the EIT Manufacturing and Innovate UK-funded project "Re-imagining Design & Planning for Greener Reinforcement Steel Manufacturing," has significantly improved waste and carbon emission reduction through Nightingale HQ's Rebar Optimisation Tool. Addressing the 2019 global issue of 28.4 million tonnes of rebar cutting waste and 9.7 million tonnes of CO_2 emissions, Midland Steel replaced inefficient manual processes with digital solutions.

The adoption of the **GoSmarter Offcut Tracker and Scrap Weight Tracker Apps** has enhanced offcut management, improved operator efficiency, and increased awareness of scrap reduction, ultimately reducing losses from scrap sales and promoting sustainable steel production.

APPROACH

Conduct a evaluation of the current paper-based and Excel-driven waste management systems in place. Collaborate closely with the Production Manager and Technical Engineer to thoroughly map the workflows associated with offcuts and scrap materials. Additionally, focus on enhancing awareness and understanding of scrap and offcut management practices across the entire production team to foster a culture of sustainability and efficiency.

OBJECTIVES

- Fully digitalise the scrap and offcut waste management processes to significantly improve operational efficiency and data accuracy.

- Design and develop a user-friendly Offcut Tracking tool that enables operators to systematically record details of offcut materials generated during the production process.

- Empower operators to generate tags and input barcodes into the Offcut Tracker application, facilitating the organised movement of offcut materials into newly designated storage areas, thereby promoting easy reuse and minimising waste.

- Incorporate critical data points into the tracking system, including Stock Tag, Bars, Length, Machine, and Diameter, to ensure comprehensive traceability and reporting.

- Develop a Scrap Tracker application that allows operators to effortlessly log outgoing scrap weights, replacing manual processes and enhancing data transparency.

ACHIEVEMENTS

- Successfully implemented the Offcut Tracker App, resulting in more efficient management and reuse of offcut materials.

- Rolled out the Scrap Tracker application, effectively digitalising previously paper-based processes and enabling improved data collection and operational transparency.

- Conducted comprehensive onboarding sessions for the production team, ensuring smooth adoption of new digital tools and fostering a heightened awareness of waste management practices.

- Actively promoted scrap management initiatives during production meetings, driving behavioural changes that support sustainability and waste reduction goals.

KEY RESULTS

- ✓ Scrap and offcuts successfully being tracked
- ✓ Weekly process reviews with scrap figures as key metric of success
- ✓ Improved utilisation of existing Armoar system

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