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The road to zero customer complaints using total quality management

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A case study was conducted at ArcelorMittal Pecém, highlighting the evolution of quality control for carbon steel slabs intended for several industrial applications, including automotive, oil and gas, energy, and structural sectors. Initially, there was a considerable number of complaints, scrap, and rework in the early years of operation. Through the application of Total Quality Management (TQM) tools such as brainstorming, cause-and-effect diagram, risk matrix, and Pareto's analysis, the main reasons behind the quality issues of the slabs were identified, including surface defects, dimensional issues, and identification errors. Throughout the study, appropriate actions were implemented to address these issues, such as poka-yokes. Even with the introduction of high-added-value steels, the use of TQM tools allowed for a gradual reduction in complaints, rework, and scrap. This reduction is linked to cost savings, increased productivity, and improved customer satisfaction.