

Predictive maintenance lowers steel operations and maintenance costs

Reducing unscheduled downtime in steel mills

The hidden costs of unscheduled downtime can prevent manufacturers from reaching their production goals. The solution? Prevent unscheduled downtime from occurring in the first place. One steel manufacturer did just that with SKF Enlight AI's predictive maintenance solution.

Business problem

A major South American steel manufacturer was experiencing frequent unplanned downtime of its continuous steel caster. As a result, the plant was underperforming its revenue targets and was facing high maintenance costs from overtime labour expenditures.

The plant wanted earlier warnings of evolving downtime so they could proactively plan for and schedule repairs, as well as sensor-level data intelligence to improve root cause analysis of these recurring failures.



The solution

The plant began testing SKF Enlight AI on its continuous steel casters. Process data generated by over 400 sensors was analyzed by SKF Enlight AI's advanced Automated Machine Learning (AutoML) algorithms. Based on detection of anomalous behavioral patterns, the solution provided predictions of evolving failure and indications of the suspected root cause.

Results

SKF Enlight AI triggered alerts up to eight days before failure occurrence with an accurate prediction rate of 93%. Based on this and once fully deployed, it is estimated that the solution will reduce unplanned downtime by 30% and operational costs by 15%. Enlight AI's early failure warnings and data insights.

What is AutoML?

Within the machine learning discipline, there are multiple manual processes that are dependent on data scientists. AutoML applies advanced algorithms which automate manual machine learning processes, thereby reducing the need for human labor. With AutoML, industrial plants can scale predictive maintenance solutions across multiple plants within a few days.

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