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PRESS RELEASE

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Noodle.ai and SMS digital launch AI-fueled application for the steel industry

The AI application will help steel companies improve on-spec mechanical properties of advanced steel products to meet the highest market demands

Leading Enterprise Artificial Intelligence® provider, Noodle.ai and SMS digital, the digitalization experts of SMS group, the world's leading plant engineering group for the metal industry, today launched MPV (Mechanical Properties Variability), the first joint AI-driven application for the steel industry following the announcement of

their partnership in June 2019.

As steel industry margins continue to shrink, one promising way for manufacturers to increase profitability is to pursue more advanced, high-strength steel production for applications such as automotive and electrical. However, production of these advanced steel grades requires much tighter control of the overall production process, which is impacted by numerous parameters across the mill.

The MPV application utilizes artificial intelligence and machine learning to create a unique 'sense, predict, and recommend' framework that addresses challenges associated with the variability of mechanical properties in steel production. Mechanical properties include things such as yield strength, tensile strength, and elongation. The application senses patterns within mill data to fully understand the drivers of mechanical property variability. It then predicts when increased variability will occur and recommends the optimal input parameters, or PDI (Process Data Inputs) settings, required to optimize target mechanical properties such as yield strength, tensile strength, and elongation.

As a result, the MPV application can help steel manufacturers achieve cost savings three ways: by reducing mechanical properties variability, reducing alloy costs due to better variability control, and minimizing out-of-spec production, which are sold as secondary grades or scrapped. One steel manufacturer using MPV is anticipating savings two million US dollars per year.

"Our ability to deploy AI to produce steel with tighter tolerances allows us to address the requirements of high margin segments such as automotive and electrical, which immediately impacts our top line revenues in addition to the obvious cost savings," said Denis Hennessy, Director of Product Development at Big River Steel, after implementing the MPV application.

In addition to addressing these challenges in mechanical properties variability, the AI and machine learning solutions that Noodle.ai and SMS digital have co-developed will also help steel manufacturers

optimize product quality, asset availability and production efficiency. Together, Noodle.ai and SMS digital combine manufacturing equipment expertise, process modeling experience, and cutting-edge data science to accelerate time to value, enabling customers to quickly realize bottom-line impact.

"This partnership with SMS digital was created to make efficiency improvements that not only help steel manufacturers' bottom line, but to rid the world of unnecessary industrial waste that often plagues

this industry," said Stephen Pratt, Founder and CEO, Noodle.ai. "We are encouraged by the results we've already seen with this application developed in partnership with SMS digital, and anticipate being able to assist an even larger list of steel manufacturers as we enter 2020 with MPV and the other applications we develop together."

About Noodle.ai

Noodle.ai applies advanced data science to industries at the core of the global economy to create a world without waste. With Noodle.ai's advanced Enterprise AI $^{®}$ applications, business leaders are empowered to make better decisions, reduce wasted energy, money, and resources, and ensure their businesses are built to last. Noodle.ai focuses on radical efficiency for supply chain and manufacturing using leading-edge artificial intelligence.

About SMS digital comprising SMS group Inc. Digital Solutions and SMS digital GmbH

SMS digital GmbH, the digital subsidiary of SMS group GmbH, and SMS group Inc. Digital Solutions collectively are a market leading supplier of digitalization for plant and equipment used in steel and NF-metals production and processing.

In close collaboration with its customers, SMS digital identifies and develops innovative products for the metals industry building on most advanced development techniques, in-depth metallurgical process knowhow and technological expert knowledge. SMS digital helps

its customers make their plants and machines ready for the digital age by means of digital applications and the use of AI.

SMS group is a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry. It has some 14,000 employees who generate worldwide sales of more than EUR 2.8 billion. The sole owner of the holding company SMS GmbH is the Familie Weiss Foundation.