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## Press release

### **Japanese steel producer JFE Steel optimizes blast furnace production using Swedish 3D machine vision technology**

One of the world's most advanced steel producers, JFE Steel in Japan, has improved feed-control for optimizing the coke particle size distribution to the blast furnace at their west Japan steelworks. After extensive onsite testing, JFE Steel has bought multiple 3DPM® online particle size distribution measurement systems enabling feed-control and improving blast furnace production.

Blast furnace operation and steel production is dependent on the coke particle size distribution fed into the blast furnace. The particle size mixture needs to allow good gas flow through the particle bed to ensure an even distribution of heat and the desired production performance. Using 3DPM, good online estimation of the coke particle size distribution allows feed-control to optimize the input coke size distribution and as a result improve blast furnace performance.



Developed by MBV Systems in cooperation with Australian vision specialist Dr Matthew Thurley from Innovative Machine Vision (IMV) and Lulea Technical University (LTU), 3DPM is a world leading vision system for online particle size distribution measurement. 3DPM uses high speed 3D profile measurement based on laser triangulation encapsulated in a robust protective housing to ensure seamless, low maintenance operation in harsh industrial environments. At the core of 3DPM are the advanced algorithms for particle delineation, classification and sizing ensuring stable reliable measurement suitable for automatic control.

JFE Steel is very satisfied with the results. A senior researcher says that 3DPM was exactly what they had been looking for and that “3DPM is a very useful tool for the operation of our blast furnaces. And we found it user-friendly.”

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In addition to improvements in quality and efficiency following the installations of the 3DPM Systems, the cooperation continues between JFE Steel and MBV Systems to further develop the understanding of the blast furnace operation. Together, the two companies plan further development into other factors measurable by 3DPM.

3DPM® is available globally from MBV Systems AB

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