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News Release

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Okuma Corporation

Completion of the Next-Generation Smart Factory
The New Kani DS3 Factory

Okuma Corporation (President and CEO Yoshimaro Hanaki) has completed the construction and started operation of the new Kani Dream Site 3 (DS3) factory, that continues the concept behind the headquarters' factories, Dream Site 1 (DS1) and Dream Site 2 (DS2).

■ Background of Constructing DS3

Together with the trends of evolving IoT, big data, AI, and intelligent technology in the Fourth Industrial Revolution, there has also been a transformation in monozukuri*. The construction of "smart factories" that can achieve high-mix low-volume production while maintaining productivity equivalent to that of mass production has been moving forward.

Okuma was one of the first companies to start operation of our own DS1 smart factory in May 2013 that is a self-contained start-to-finish production system. In March 2017, we started operation of the DS2 parts factory. In this way, we have used IoT to achieve super high-mix-low-volume production that is highly efficient and has high value-added.

The DS1 and DS2 parts factory have led the way for the world's smart factories as "factories of the future integrating automation and expert techniques." Due to the advanced measures described below, when compared with older factories, these smart factories are 50 percent more productive and have reduced production lead time by 50%.

*monozukuri : the art of making things better than ever

■ Construction of Smart Factories

Our slogan is **"Made in Japan to win around the world"** and we have made innovations in production in our factories to achieve that goal.

In order to achieve high-mix low-volume production while maintaining productivity on par with mass production, we have combined the latest automation, unmanned operation technology, advanced IoT, and the know-how from our shop floor to develop and construct our ideal smart factories that we call **"Dream Site: factories of the future integrating automation and expert techniques."**

■ The Goal of DS3

The new Kani DS3 factory uses the cutting-edge smart machines, robots, and FMSs together with advanced IoT to accurately understand production progress and operation conditions. By issuing rapid work instructions, we aim to achieve super high-mix-low-volume production by doing the following:

- Machine part production at DS3 is synchronized with the assembly processes,
- so that **single-part production** is possible to achieve "producing the necessary parts at the necessary times in the necessary quantities."

The aim is to achieve highly efficient production on par with mass production.

We are constructing the Kani Plant to become a start-to-finish production plant that uses the smart monozukuri developed at the Dream Sites for vertical and horizontal machining centers and double-column machining centers.

We are expanding our production capacity by categorizing our plants by the models they produce, by building self-contained start-to-finish production systems throughout our company (Oguchi Plant, Kani Plant), and by increasing production efficiency.

■ Evolving Factories

We shall construct factories that are constantly evolving with the goal of making smart factories that spur improvement and innovation.

- **Smart machines, robots, and FMSs, such as super multitasking machines that have built-in AI and lasers, are used in advanced ways to achieve automation that allows 72-hour unmanned operation.**
- **Accurate and fast work instruction that utilize IoT (work instructions that are in hour and minute units and not in daily units).**
- **Progress and operation monitoring that spurs overall optimization improvements.**

We shall use the DS1 and DS2 as well as DS3 as demonstrations of smart factories, and offer the results they produce as solutions to our domestic and overseas customers.

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The content of the news release is at the time of the announcement.
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