CSR Topics

Environmentally-Conscious Transportation for Epson Printheads

Sakata Port with a view of Mt. Chokai

- September 8, 2016 -

Epson has manufacturing sites and sales centers in all parts of the world and so environmentally-conscious transport is an important consideration. Here we tell the story of a successful initiative in which we improved the way we export printheads, an important core component of printers.

The PrecisionCore inkjet printhead is used in a range of applications from offices to industrial use. This leading-edge technology enhances both the speed and quality of inkjet printing. Epson currently manufactures PrecisionCore inkjet printheads at three sites in Japan: the Seiko Epson Corporation Suwa Minami Plant (Fujimi, Nagano Prefecture), Tohoku Epson Corporation (Sakata, Yamagata Prefecture), and Akita Epson Corporation (Yuzawa, Akita Prefecture). Finished printheads are consolidated at Tohoku Epson, and were initially sent by truck to Narita Airport. From there, they were flown to our printer production site in Indonesia.

PrecisionCore printheads come with the latest inkjet printing technology. When they first went into volume production, Epson staff were working every day to try to improve the quality of the components. Because things were moving so fast, we chose to use air freight. The shorter lead time allowed us to get printers with the improved printheads into the hands of our customers more quickly.

PrecisionCore
Micro TFP printhead

Akita Epson
Tohoku Epson
SuwaMinami-plant

By the start of 2014, the quality of the printheads was quite stable, and we had found that we could depend on that quality even after roughly a month of exposure to high temperature and humidity during ocean freight. So to optimize shipping in terms of cost and environmental burden, we started looking into using ocean freight from Sakata Port, located about 8 km from Tohoku Epson. We were able to accelerate our plan further when Sakata Port improved its facilities.
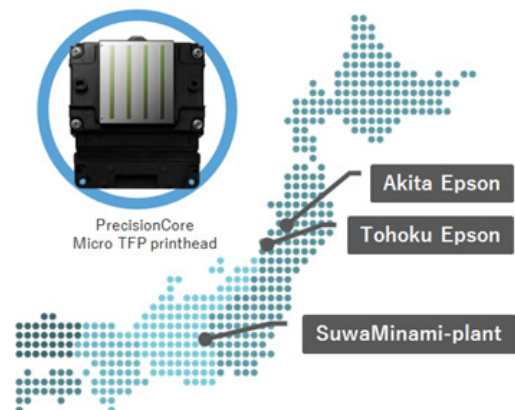
Checking vanning procedures with the forwarder

One other issue that came up with ocean freight was container vanning, that is, the loading of cargo into shipping containers. The Tohoku Epson logistics department did not have much expertise in that, so they worked with an ocean freight forwarder to come up with clear roles and procedures for each party. They then began with training. Additionally, to begin taking export declarations at the Sakata customs office, Epson was able to work with Yamagata Prefecture and the Tokyo customs office Sakata branch to export from Sakata.Port.

Containers being exported from Sakata Port

In May 2015, we started exporting printheads by freight container to Indonesia from Sakata Port. This meant much less truck transportation than if we had first sent them to Narita and much less air freight to Indonesia. Both costs and CO_2 emissions fell sharply.

CO_2 emissions reduction effect of switching to ocean freight (tCO_2)
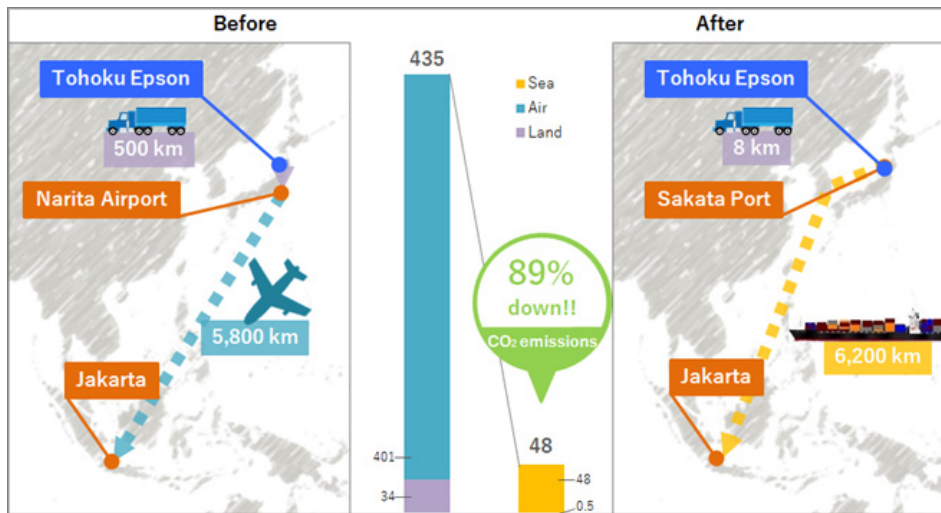
*A calculation of CO_2 emissions from shipping a 20-foot container from Tohoku Epson to the Indonesian capital, Jakarta (FY2015 results). The standard emission factor of the Japan Ship Technology Research Association is used for calculating emissions during sea transport.

Osami Matsushima, head of the Seiko Epson Logistics Planning Department, comments as follows: "To make sure there is no disruption in the supply of products to customers, we always have to choose the optimal logistics methods. Air freight generally offers the shortest route, but puts more burden on the environment. This is especially true with international shipping, where the routes tend to be long. In this case, we were able to take advantage of the proximity of a port to our plant. As a result, we could develop a route with little environmental burden. We also received some words of appreciation from people at Yamagata Prefecture and Sakata Port for helping to revitalize the prefecture. The development of stronger ties to the regional community was another great outcome from this initiative."

Other companies have dramatically increased the volume of goods they export from SakataPort. In 2015, the port handled 22,028 containers (20-foot container equivalent), a 60% jump over the previous year. Epson expects to increase exports of printheads to printer production sites in Indonesia and other places. Going forward, we hope to further reduce our environmental footprint and help boost local economic development by improving and simplifying packaging specs for large format printers, doing packaging in advance in the factory, and promoting exports to overseas sales centers through Sakata Port.

Production control, procurement, and logistics personnel
(Matsushima is second from the left in front)