AGC
Your Dreams, Our Challenge

News Release

AGC Introduces “Pallet IoT System” to Improve Logistics Efficiency

Tokyo, March 12, 2020–AGC (Headquarters: Tokyo; President: Takuya Shimamura) has independently developed and introduced a “pallet IoT system” for glass pallets (hereinafter, pallets) used for the transport of glass. On March 2, full-scale operation of approx. 1,400 large-size pallets all throughout Japan was started. This system makes it possible to ascertain the operating status and position information for each pallet, contributing to more efficient transportation, loss prevention, and inventory management.

Glass pallets are returnable carriers used to transport glass and are made of iron. It is said that approximately 10% of the glass pallets distributed throughout Japan every year cannot be recovered.[*1] Since the location of the missing pallets cannot be determined, they cannot be used to ship glass and are left to slowly fall into disrepair, leading to inefficient logistics operations and additional costs for the production of more pallets.

In order to solve these issues, AGC has independently developed a “pallet IoT system”, the effectiveness of which was confirmed through trial introduction in 2019, and full-scale operation in Japan began on March 2, 2020.

Pallet used for the transport of glass

Logistics tracker mounted on the pallet

This “pallet IoT system” displays information on a map sent from “logistics trackers”, IoT modules made by Alps Alpine for managing logistics materials, visualizing information on positioning, movement history, stagnation, and more. This allows logistics personnel to grasp the position and movement of pallets in real-time, improving the efficiency of transportation operations and preventing pallets from being lost or left to fall into disrepair.

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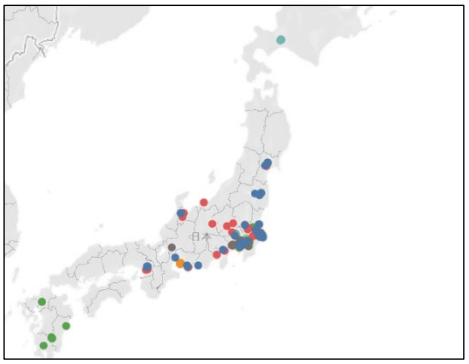
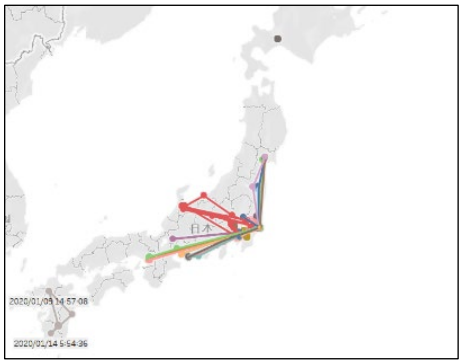


Displays the location of pallets by type



Displays pallet movement
and stagnation information

AGC aims to achieve the following through the introduction of the “pallet IoT system”:

- **Halve the loss of pallets and reduce costs**
- **Improve transportation efficiency by reflecting pallet positions, stock, and stagnation information in transportation plans such as routes and loads**
- **Reduce CO2 emissions during transportation by 1 to 5% through improved transportation efficiency**

AGC is considering further expanding the range of products covered by the “pallet IoT system”, as well as introducing the system in Europe and Asia, with a target of 30,000 pallets by 2022.

Under the management policy ***AGC plus***, the AGC Group is promoting “Smart AGC” using digital technology to transform business processes. By utilizing this technology in all operations including manufacturing, R&D, sales, and logistics, we aim to further increase the efficiency of operations and provide new added value to customers.

*1 Based on an announcement by the Flat Glass Manufacturers Association of Japan: http://www.itakyo.or.jp/upload/ecoglass-s_200127.pdf

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■ About the logistics trackers

For the first time in Japan, AGC has adopted “logistics trackers”[*2], IoT modules made by Alps Alpine for managing logistics materials, installing one on each pallet. Sigfox[*3] was adopted for the LPWA[*4] communication technology, realizing low cost, low power consumption, and long-distance transmission. The product can be operated for 10 years without needing to be charged, and pallet movements are measured whenever it is moved and at specific intervals, after which the position information and operating status is sent to the position management information system.

*2 In Europe, as of last year 250,000 units were in operation for DHL.

*3 A communication service provided by Sigfox. It specializes in IoT and has been deployed in more than 70 countries as “0G communication”, and in Japan is handled by Kyocera Communication Systems Co.

*4 Low Power Wide Area communication: Allows for communication over a wide area with a small amount of power consumption, making it suitable for use in locations where it is difficult to secure a power source or for IoT situations where battery replacements need to be minimized.

■ About Alps Alpine

Alps Alpine Co., Ltd. is a leading manufacturer of electronic components and vehicle on-board information equipment. It has produced numerous industry-first and No. 1 products since its foundation in 1948. They currently have 110 bases located across 26 countries worldwide and provide approx. 40,000 products and solutions to approx. 2,000 customers worldwide. These include device products such as switches, sensors, and data communication modules, unit products such as electronic shifters for vehicles and car navigation systems for commercial use, and systems and services such as smartphone apps and digital keys that utilize blockchains.

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