Air passenger requests are better handled using RFID

Application:
Airline catering is a competitive business where food is processed and handled on an industrial basis. RFID systems allow processes to be optimized starting as early as the kitchen. Recently, with the introduction of the Airbus A380 Super Jumbo, the tracking processes had to be extended into the airplane itself, mainly because the distribution of meals needed to follow a precisely planned timeline.

F61 read head for operation inside an induction oven

Goal:
RFID enables the exact correlation between passengers and their meals. The automated processes in the kitchen are extended into the cabin, where specific meal orders are associated with a cabin section and seat. RFID will also be used to support new meal selection processes for customers in business and first class.

Requirements:
RFID tags must be inexpensive as well as available in numerous shapes and housing styles such that they can be attached to all sorts of trays and catering containers. On the plane, the data on the RFID tags must be accessible during the heating process inside of an induction oven.

Customer advantage:
Each meal will be heated for the precise time necessary. As oven adjustments are automatic, meal distribution is optimized, which in turn improves the customer experience. By optimally using each oven, the number of ovens on board can be reduced, thus opening up valuable floor space for paying passengers.

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APPLICATION REPORT

What is being done:

Catering for up to 800 passengers on the Airbus A380 is a demanding logistics task and RFID systems offer interesting optimization potential. RFID-equipped trolleys are automatically identified and sent to the correct plane. During the loading process, the order is again checked for correctness. Once the food is on board, new high-throughput inductive ovens are needed to heat the meals in the right order. In order to take full advantage of these new heating technologies, precise time management is required, as each meal demands a specific amount of heat.

Induction ovens with integrated RFID systems read tags mounted to individual food trays.

The manufacture of commercial inductive ovens offers an RFID solution using a custom system developed by Pepperl+Fuchs. Passengers can order their meals a la carte using a seat-mounted touch screen. RFID controlled, their order arrives properly heated at meal times. This approach increases flexibility and saves kitchen space because each oven is always used to its full potential.

On the Airbus A380, culinary amenities offered in first class are controlled using RFID solutions.

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