

## Siemens launches state-of-the-art baggage handling system at Incheon International Airport in South Korea

- **Latest conveyor and sorting technology combined with innovative software**
- **Peak throughput of almost 20,000 pieces of baggage per hour**
- **Maximum convenience for over 72 million passengers per year**
- **Multi-year service agreement covering maintenance and repairs**

Siemens Postal, Parcel & Airport Logistics (SPPAL) has commissioned one of the most modern, high-performance baggage handling systems in the world at Incheon International Airport in South Korea. The system installed at the recently opened Terminal 2 combines innovative conveyor and sorting technology with smart software, enabling peak throughputs of almost 20,000 pieces of baggage per hour. Siemens implemented the system as the technology leader in a consortium with the South Korean company Posco. In addition, through a multi-year service agreement Siemens will ensure continuously smooth operation of the over 40-kilometer-long system. The integrated concept of system supply and maintenance from a single source reinforces the airport's efforts to increase passenger capacity from currently just under 58 million to over 72 million per year, thereby enabling the airport to solidify and further expand its standing as a leading hub airport in the Asian-Pacific region.

"Our future-oriented baggage handling system is the linchpin of the new prestigious Terminal 2 at Incheon Airport," noted Michael Reichle, CEO of Siemens Postal, Parcel & Airport Logistics. "With our innovative new system generation, advanced IT technology and our expert, reliable service, we are providing the customer with the kind of long-term support that helps drive profitable growth."

Jong-Seo Kim, Vice President Operations of Incheon International Airport Corporation (IIAC), said: “Our airport focuses first and foremost on passengers. This baggage handling system contributes decisively to ensuring the highest level of passenger convenience and comfort.” He added that, through the new Siemens system, IIAC follows on almost 20 years of joint experience with baggage handling projects and continues its systematic business management, which guarantees the best passenger service.

For example, the system supports ultramodern baggage handling processes that leave travelers adequate time to relax in the spacious departures area. Like all designs from Siemens, the system is equipped with redundant capacity to ensure the greatest possible flexibility and availability. Should any sections or components in the system fail, baggage is rerouted and arrives punctually at its destination. The delayed baggage rate at Incheon Airport amounts to merely 0.3 items for every 100,000 pieces of checked baggage. For the sake of comparison, the international average is much higher at 11.5 delayed bags for every 100,000 pieces. Incheon’s passengers benefit significantly in terms of security and reliability.

What makes this possible is innovative technology from Siemens, ranging from the 180 ergonomically designed check-ins in the departure hall to the 12 baggage reclaim belts in the arrivals area. All processes in the baggage handling chain are covered – from end to end. Inside the system, checked bags move from the new VarioBelt conveyor to four VarioSort TTS 1100 tilt-tray sorters that presort the baggage. The VarioSort TTS 1100 is specially designed to ensure reliable handling of large volumes of baggage. The new VarioTrays then assume the main sorting task and onward transport of each baggage piece. Another particularly impressive feature of this fast, high-throughput solution is its outstanding energy efficiency.

At Incheon, Siemens has implemented a tray-based early bag store (EBS) to provide temporary storage of transfer baggage. The EBS is a high-bay storage and retrieval system for 2,000 baggage pieces. With its innovative Lift&Run system, Siemens’ solution is considerably more flexible and efficient than comparable systems, with lifts performing all vertical movements and shuttles taking care of the horizontal movements. These movements take place simultaneously yet independently of one another.

High-performance software applications from Siemens facilitate intelligent process control throughout the entire baggage handling system. These include a programmable logic controller (PLC) and a Supervisory Control And Data Acquisition (SCADA) system for computer-based monitoring and control of all technical processes.

To ensure continuously smooth and efficient operations, the airport operator has concluded a long-term service agreement with Siemens covering maintenance and repair of the IT and PLC systems. As part of this innovative service concept, the on-site team will focus in particular on preventive maintenance, which comprises condition-based and predictive measures. This serves to prevent equipment and system failures, and thus operational outages. If faults do occur despite these maintenance activities, Siemens' on-site service team will respond around the clock to rectify any situation quickly and smoothly. The expert technicians are backed by decades of experience gained through service activities at major international airports such as Dubai, Beijing and Munich.

This current project represents yet another chapter in Siemens' ongoing successful collaboration with Incheon International Airport. Siemens Postal, Parcel & Airport Logistics implemented the airport's first baggage handling system in 2001 and also contributed to the 2008 expansion of the satellite building. All told, Siemens' baggage handling system at Incheon now measures over 130 kilometers long – one of the longest systems of its kind in the world. In rankings based on annual passenger satisfaction surveys, consulting company Skytrax has rated Incheon the world's best international airport ten times since it opened in 2001.

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