

**Hitachi Starts Providing
“Walk-Through Type Explosives Trace Detection System”
to Detect the Presence of Explosives in 3 Seconds**



Walk-through type explosives trace detection system

Tokyo, September 29, 2016 --- Hitachi, Ltd. (TSE:6501; “Hitachi”) today announced that it will begin providing “walk-through type explosives trace detection system” for critical infrastructure facilities such as power plants and data centers from this October. The system detects explosives in 3 seconds by efficiently collecting the fine particles attached on ID cards and analyzing them with built-in devices. It can screen a maximum of 1,200 individuals per hour without disrupting people flow. As a first step, Hitachi aims to provide this system to critical infrastructure facilities such as power plants and data centers. Hitachi will contribute to improve the safety and security in the future by expanding the applications of this system to public facilities, such as airports, train stations event venues, etc.

In recent years, the need of explosive screening has increased to reinforce management of people flow and to tighten security measures for important infrastructures, public facilities, and event venues. Metal detector, X-ray equipment, and wipe-type explosives detector have been implemented to prevent people from

bringing in explosives. However, conventional explosives detection methods are time-consuming because they require human-operations. To reduce the inspection time, Hitachi developed an explosive detection prototype in 2012* in the “Integral promotion of social system reform and research and development project” of MEXT (The Ministry of Education, Culture, Sports, Science and Technology). The development of the current system has been accomplished after system refinement by considering practical use cases through field tests at airports and train stations.

The system enables more sensitive detection by adopting a newly-developed sampling component. A high-speed air flow collects fine explosive particles from an ID card when it is inserted into the authentication unit. In the prior prototype, fine particles were collected by holding the ID card over the reading unit. This product integrates a new sampling component where inserting the card into the authentication unit allows for shorter and more accurate inspections because the air flow hits uniformly the card at a fixed angle. The detection of explosive components from a very small sample is achieved by efficiently collected fine particles and concentrating them in a short period of time. In addition, Hitachi downsized the gate width from 35 cm to 29 cm by refining its internal design such as by creating a more compact mass spectrometer for explosive detection and modularizing each unit. The system can run nonstop whole day because it features long-life and high environmental-resistant parts.

Hitachi will exhibit the system at the Special Equipment Exhibition & Conference for Anti-Terrorism 2016 held at Tokyo Big Sight from 19th October (Wed) through 21st (Fri). It will also showcase the system at the Hitachi Social Innovation Forum 2016 TOKYO held at Tokyo International Forum from 27th October (Thu) through 28th (Fri).

Hitachi aims to ensure safety and security in public spaces by providing extensive security systems that would integrate surveillance cameras, face authentication systems, etc. Hitachi will also help customers and society to solve the issues by providing security systems as part of the basic feature sets of the IoT platform Lumada.

* Hitachi, Ltd. News Release (October 3 2012):
Prototype Boarding Gate with Built-in Explosives Detection
<http://www.hitachi.com/New/cnews/121003a.html>

About Hitachi, Ltd.

Hitachi, Ltd. (TSE: 6501), headquartered in Tokyo, Japan, delivers innovations that answer society's challenges. The company's consolidated revenues for fiscal 2015 (ended March 31, 2016) totaled 10,034.3 billion yen (\$88.8 billion). The Hitachi Group is a global leader in the Social Innovation Business, and it has approximately 335,000 employees worldwide. Through collaborative creation, Hitachi is providing solutions to customers in a broad range of sectors, including Power / Energy, Industry / Distribution / Water, Urban Development, and Finance / Government & Public / Healthcare. For more information on Hitachi, please visit the company's website at <http://www.hitachi.com>.

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