L3 Security & Detection Systems

Brisbane Airport Corporation (BAC)

Executive Summary

- Brisbane Airport is the premier gateway to Queensland and the third largest airport in Australia by passenger numbers

- To meet growing demand, BAC is upgrading infrastructure and equipment

- Needed a compact solution that could perform explosives trace detection (ETD)

- The OptEX provided a proactive ETD solution while lowering their costs and improving system performance

L-3's Easy, Efficient and Robust OptEX Delivers in Australia

Business Challenge

Brisbane Airport Corporation (BAC) is the operator of Brisbane Airport, the premier gateway to Queensland and the third largest airport in Australia by passenger numbers. In the 2011/12 FY the airport registered a record of more than 21 million passengers through its terminals. To meet with the growing demand, BAC is funding over $2.5 billion worth of infrastructure over the next 10 years. This includes replacing their existing fleet of explosives trace detection (ETD) equipment with a next generation solution that could handle the high checkpoint throughput requirements and meet recent regulatory requirements for ETD screening at the checkpoint. Specifically they were looking for a compact checkpoint-optimized solution that could effectively perform ETD on luggage and travelers while lowering their costs and improving system performance. Other ETD solutions required extensive maintenance and a high level of costly consumables and did not meet the budgetary and technical requirements.

Technology Solution

Departing from conventional ion mobility spectrometer (IMS) technology, L-3 Security & Detection Systems (L-3 SDS) OptEX tests sampled particulate for the unique heat signatures that indicate traces of explosives. It detects nanogram levels of explosives from the surfaces of objects, vehicles, or people. This unique energetic materials detection (EMD) technology enables OptEX to quickly and safely detect energetic material—from newly created compounds to documented substances such as TATP, TNT, PETN, RDX, NC, and nitrates. It provides a simpler approach to ETD, as no dryer consumables, carrier gases,

radioactive sources or internal reference calibrants are required. The total cost of ownership is reduced through reusable sample wipes and fewer consumables. The OptEX is unique as it does not require a library to identify known or new explosive threats.

Setup is easy. The unit ships to the customer, is uncrated and turned on with no warm-up time or calibration required. Users of every skill level can operate the OptEX with minimal training by simply wiping any object with a sample wipe and inserting it into the detector. Results are displayed in seconds. Wipes can be reused, even after a positive sample hit, enabling users to cut day-to-day operating costs while creating a more secure environment.

The Results

Brisbane Airport has experienced much improved passenger facilitation rates since introducing L-3 SDS' OptEX as their checkpoint ETD solution. This is partly thanks to the ability to operate the system with a fast analysis time and without clean out cycles. The cost per passenger has reduced considerably due to the absence of ancillary consumables such as dopants/internal calibrates/dryers etc. and there has been a dramatic increase in system availability which has had a positive impact on airport screening operations.

Features and Benefits

Increased Performance

- Full spectrum explosives detection
- Higher availability - requires no "clear down" or "bake out" time
- Fast analysis time (<4 seconds)

Low Cost of Ownership

- Reusable, long-life sample traps (up to 100+ samples each)
- No carrier gases/dopants consumables
- No dryer consumables

Increased Reliability

- Higher availability – requires no "clear down" or "bake out" sessions due to contamination
- Impervious to environmental fluctuations in humidity, temperature, barometric pressure etc.
- No substance library updates required for new or evolving threats

Reduced Maintenance

- No carrier gases/dopants replacements
- No formal daily, weekly or monthly maintenance requirements other than a recommended (daily) system alarm check and cleaning the sample drawer with an alcohol wipe (weekly).

Ease of Use and Operation

- Minimal operator training requirements
- Simple Pass/Fail alarm indicator
- No calibration required
- Internal data storage with USB and FireWire connections for exporting data and Reports
- Start up time <2 minutes

L-3

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