## Container X-ray technology

Customs is set to introduce a new inspection system at Australia's waterfront with the purchase of container X-ray technology.

The new technology will be introduced in Sydney and Melbourne, as part of a further streamlined cargo clearance process.

Other than assisting with clearance rates and the detection of prohibited goods, the system will limit the physical handling of goods. Although limiting the physical handling of goods it will significantly increase the number of containers that will be subject to detailed screening.

On a daily basis the container X-ray facility will allow up to 100 detailed physical inspections a day and in many cases containers will not need to be unpacked for physical examination purposes. The time taken to make a detailed inspection of a sea cargo container will be about 15 minutes – the time currently taken to make a detailed physical inspection is much greater (four hours plus).

The container X-ray facility is designed to scan a truck carrying fully laden shipping containers. Trucks can be any size up to a B-double. Trucks may be transporting one or two containers of either 20 or 40 feet in length.

Accelerator cabin

Scanning hall

Operation control cabin

Image inspection cabin

Inspection container truck

Shield wall

Electronic device cabin

rail

THSCAN MB1215 Inspection System Layout

The X-ray inspection takes place within a Scanning Hall that houses the unit, consisting of the X-ray imaging subsystem and associated mechanical and electromechanical components. The THSCAN MB1215 is a relocatable X-

ray vehicle inspection system, designed and manufactured by Tsinghua Tongfang Nuclear Technology Co. Ltd.

The truck drives completely inside the scanning hall. The driver and any occupants leave the truck and must exit the scanning hall before the X-ray inspection is conducted. While operating, the scanning hall is sealed against accidental entry using fast operating shielding doors. These doors will only open once the X-ray inspection is complete.

With more than 1.6 million containers arriving in Australia each year, the container X-ray systems will also have more far-reaching benefits including:

- An increase in revenue due to more frequent detections of misreported consignments, revenue evasion, tobacco smuggling and large-scale fraud;
- Increases in the level of voluntary compliance as a result of improved education and marketing of Customs requirements;
- Reductions in the time consignments remain under Customs control;
- The rationalisation of some cargo examination activity, especially where cargo is selected for examination for both commercial compliance and narcotic purposes.

Customs signed the \$11 million contract for the purchase of two new container X-ray systems on 30 May 2001, funded from the National Illicit Drugs Strategy (NIDS) budget. Detailed monitoring and evaluation of the system was carried out before signing the contract to purchase two THSCAN MB1215 relocatable container X-ray inspection systems from Chinese manufacturer Tsinghua Tongfang Nuclear Technology Co. Ltd.