

The New Technologies for Air Cargo Security Inspections

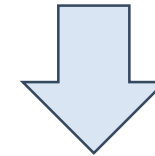
ZHANG LI
NUCTECH COMPANY LIMITED

2018-11-20

ICAO New Policy



ICAO's new policy direction for air cargo security:
Consignors not subject to approval by the Aviation Security Authority will be phased out by 30 June 2021.



100% security inspection of air cargo

by **June 30, 2021**

New Air Cargo Screening Methodology

The new screening technology and methodology need to be:



<https://www.icao.int/Newsroom/>

- Safe and Reliable
- Capable of detecting desired threats
- Easy to operate and maintain
- High efficiency
- Compatible with current and future operation

CONTENT



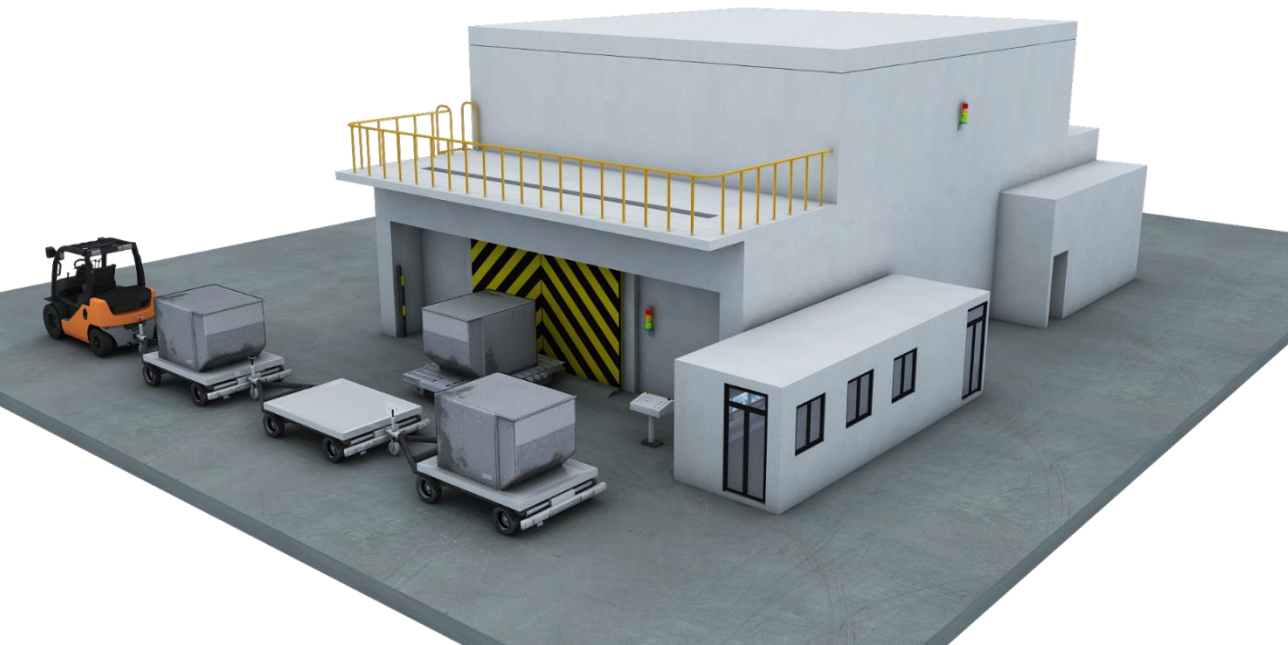
- **1. A New Technique for Consolidated Air Cargo Screening**
- **2. A New Solution for Break Bulk Air Cargo Screening**

Air Cargo CT for Consolidated Air Cargo Screening



- Innovative design
- World's **FIRST**
- Breakthrough in air cargo screening industry

NUCTECH Air Cargo CT



Consolidated inspection for air cargo;



Scanning size up to Q7;



3D, 2D, CT slice imaging;



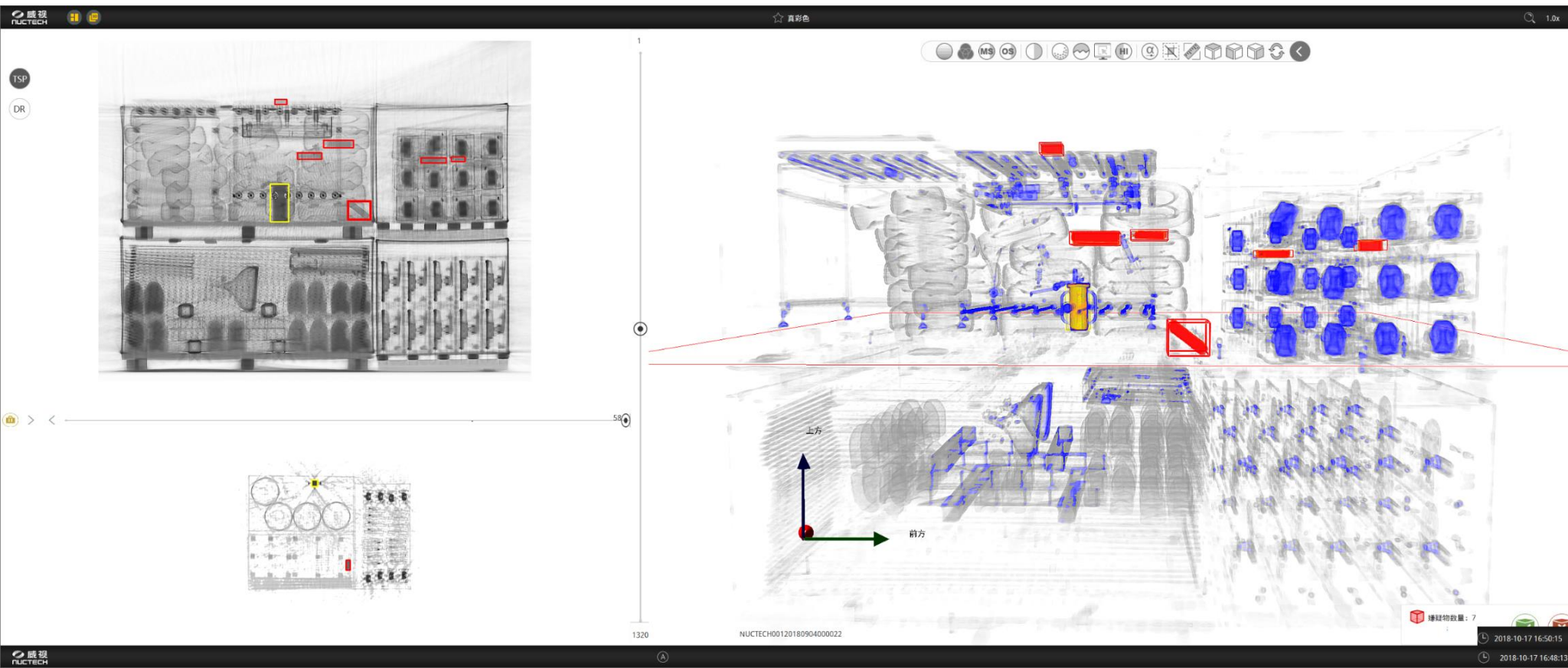
Auto-detection capability;



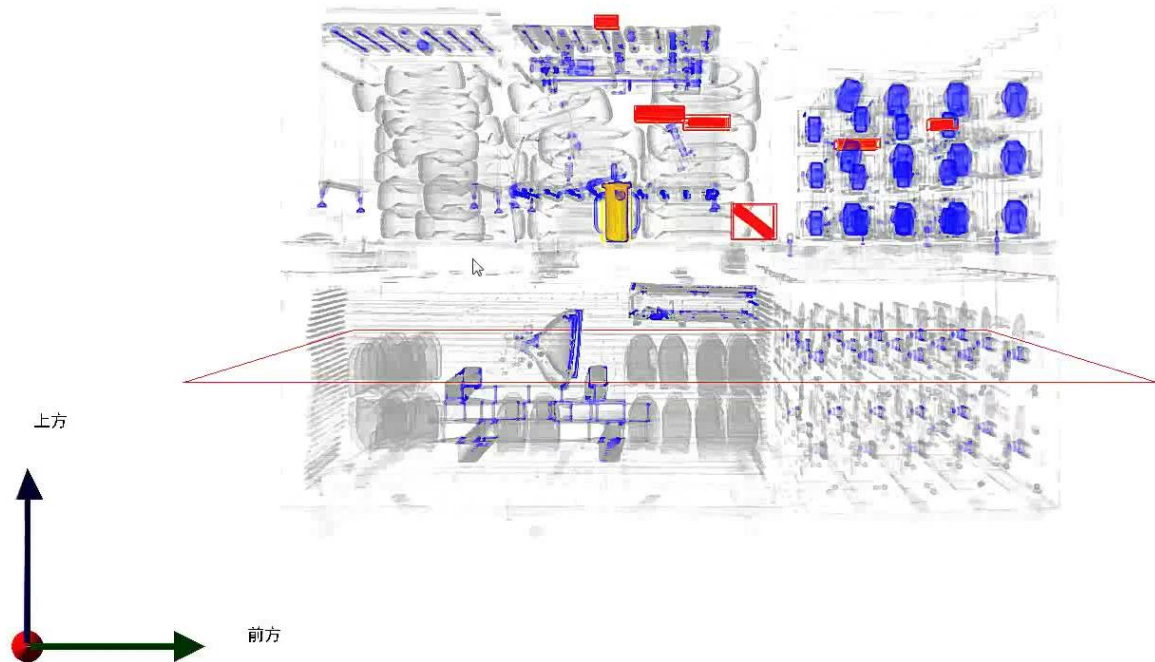
Throughput up to 25 pieces/h (standard size ULD);

NUCTECH Air Cargo CT

- Generate 3D image, 2D image and CT slice image
- Automatic alarm for explosives and high density items



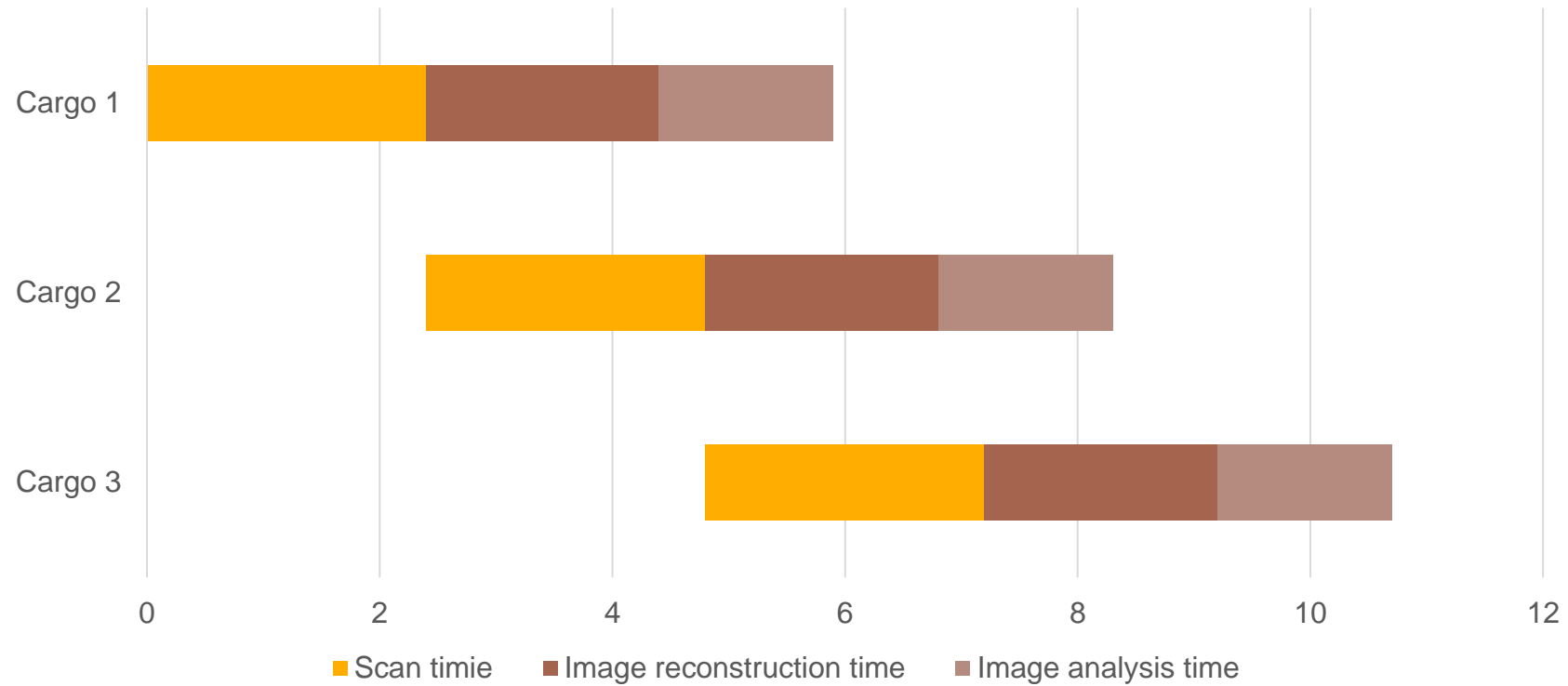
Full-Volumetric 3D Image



- Solve the problem of image clutter
- Reveal the contents in a heterogeneous air cargo
- Improve image analysis efficiency

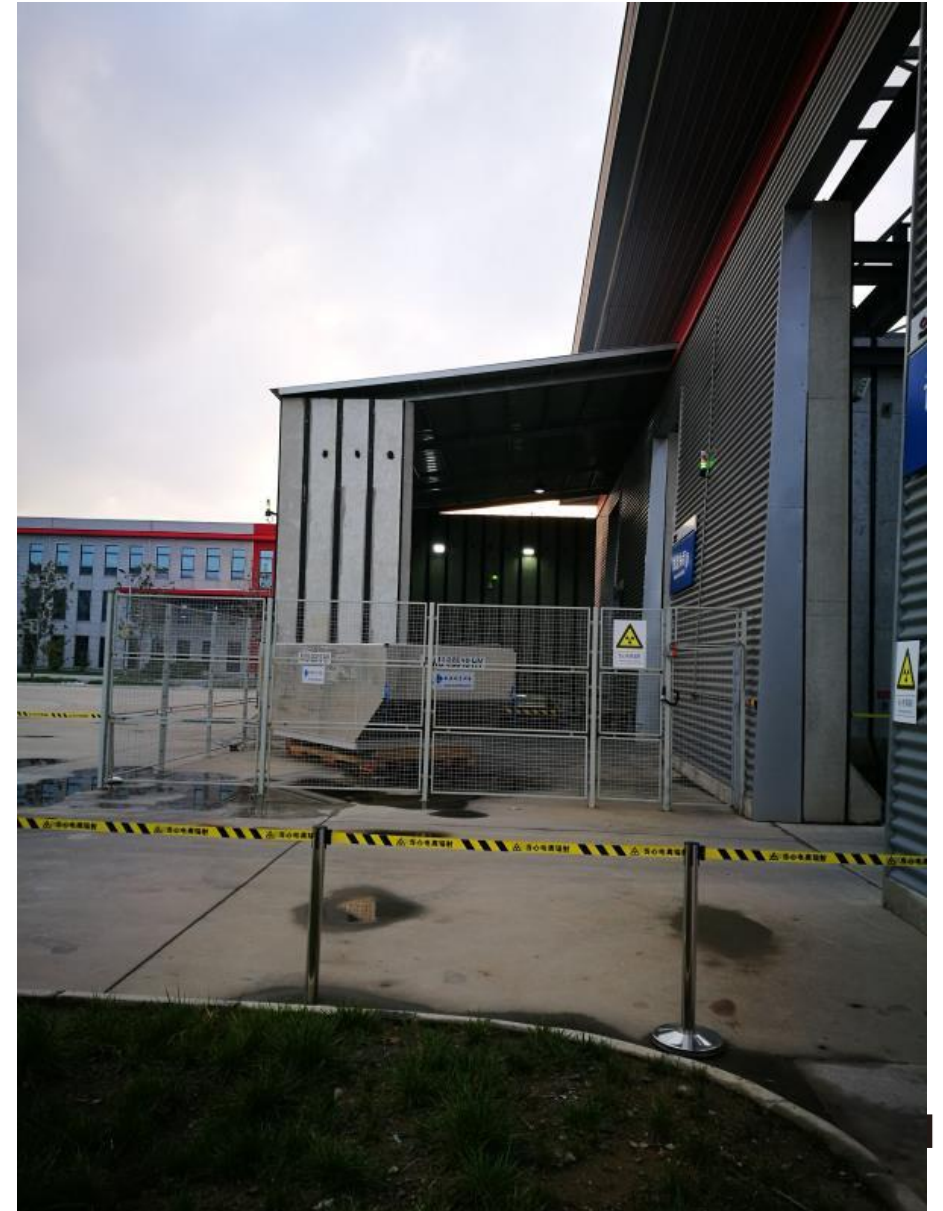
Screening Process

Cargo Processing Sequence



Installation

In Jintan Factory



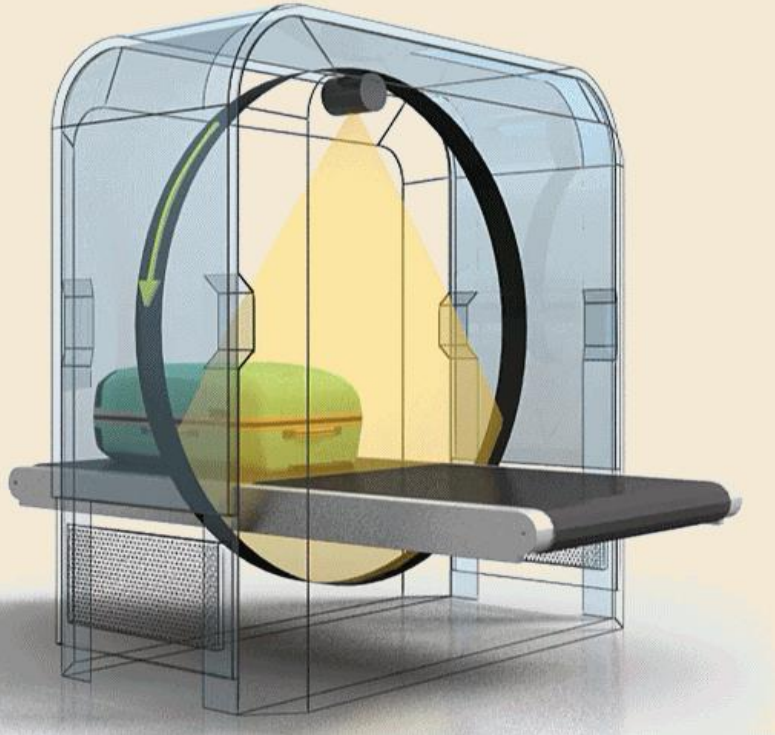
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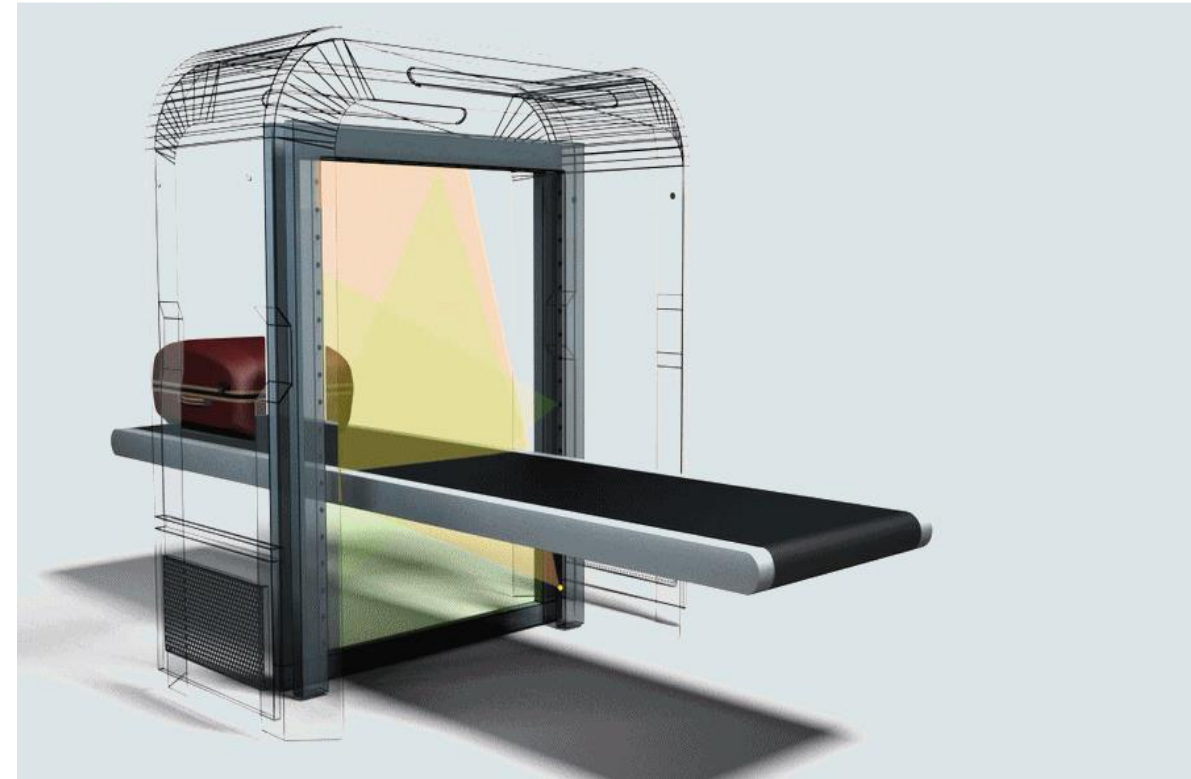
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Static CT

A new generation of distributed X-ray sources and electronic scanning X-ray sources



Static CT

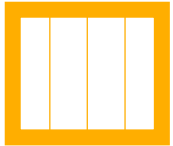


Static CT

Advantages



Less vibration and system noise



Larger tunnel size for air cargo



Quicker start up time without mechanical rotation



Lower manufacture and maintenance cost



Future improvement in image quality and throughput



Static CT

Specification :

Dimension: 4800mm(L)*2050mm(W)*2260mm(H)

Tunnel Size: 1050mmx1010mm

Conveyor Load: 200kg

Conveyor Speed: 0.5m/s , Max: 0.6m/s



THANK YOU

The background features a dark blue area on the left and a medium blue area on the right, separated by a white diagonal line. Overlapping these are several light blue, semi-transparent geometric shapes, including a large triangle and a quadrilateral, creating a layered, abstract effect.