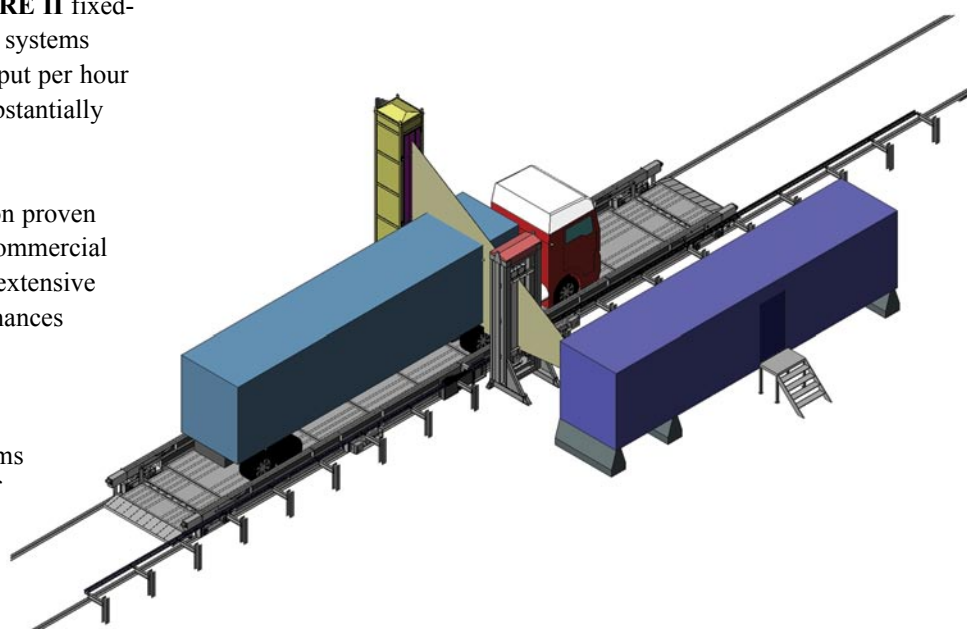




ALL SECURE II's unique self-shielded design suppresses the normal radiation signature typical with high-energy accelerators. This self-shielding design allows a significant reduction in wall thickness construction from two meters to 60 centimeters while ensuring the safety of the operator. This configuration is possible due to the compact accelerator design in the **ALL SECURE II** fixed-base inspection systems. Other non-automated systems are manpower intensive and have low throughput per hour and any increase in capacity and capability substantially increases operational costs.

ALL SECURE II inspection units are based on proven hardware including the accelerator, standard commercial modules, magnetron and cooling system. The extensive experience and industry knowledge of IBS enhances reliability and provides full service and maintenance capabilities.

ALL SECURE II fixed-base inspection systems can monitor, inspect and detect the contents of containers, cargo and fully loaded vehicles. These units come equipped with field-proven hardware including the accelerator, standard commercial modules, transporter and cooling system.



ALLSECURE II

ADVANCED INSPECTION SYSTEM FOR CARGO AND VEHICLES



Specifications

X-ray beam energy:	3 - 10 MeV, 4 power and continuous wave
Inspection envelope:	14.2 ft. high x 9.7 ft. wide x 83.0 ft. long 4.3 m high x 2.95 m wide x 25.3 m long
System throughput:	25 trucks per hour
X-ray beam orientation:	Horizontal
Penetration:	More than 14 in. (360 mm) of steel
Detector channels:	1024
Magnification:	X2, X4, X8, X16
Material discrimination:	Auto detection of SNM > 100 ccm
Image processing:	Scaling Gamma correction Sliding density window Edge enhancement Pseudo colorization



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SECURING YOUR BORDERS

Contraband, illegal activities and terrorist threats have escalated on a global scale to a level never before seen. The security of international borders, airports and shipping ports is of primary importance to governments, federal agencies and business at all levels. The most difficult areas to guard and protect effectively are borders and ports of entry. The sheer volume of large cargo containers crossing these boundaries on a daily basis has overwhelmed existing facilities, magnifying the immediate need for systems and units to inspect and deter all types of contraband, including weapons, explosives, nuclear material, “dirty bombs” and drugs.

IBS offers a state-of-the-art solution in its **ALL SECURE II** fixed base inspection system for the security of large targets, including cargo, containers and vehicles. **ALL SECURE II** units can be installed at major ports of entry and border crossings to control, inspect and identify specific target materials.

FULL-SCALE INSPECTION CAPABILITIES FOR LARGER TARGETS

IBS designed **ALL SECURE II** fixed base units to provide full-scale inspection capabilities for large targets, such as cargo containers and trucks, but with much higher throughput capabilities for more efficient operation and shorter inspection wait times. **ALL SECURE II** units provide greater penetration ability and convenience than other cargo inspections systems currently available. The units can inspect palletized cargo and vehicles ranging in size from automobiles to trucks bearing seagoing ISO containers.

The **ALL SECURE II** system utilizes combined technology

of the higher energy radiation, dual-energy configuration, radioactive materials detection and advanced data processing capability to scan a container or vehicle and accomplish the following:

- Detect, locate and identify weapons and other objects by their shape as interpreted by the operator/analyst on the computer screen
- Detect and locate explosives, radioactive materials, drugs and other forms of contraband as guided by the system’s computer and proprietary algorithms
- Verify contents to ensure compliance with the manifest, customs requirements and safety regulations
- Detect nuclear materials, including “dirty bombs”

DUAL-ENERGY, X-RAY CONFIGURATION WITH HIGH THROUGHPUT

ALL SECURE II fixed base inspection units combine dual-plane, dual-energy X-rays with proprietary algorithms to identify the effective atomic number (Z number) for the various materials in the target volume. Its dual energy 5-9 MeV radiation source incorporates high-energy beams with an extremely effective data processing system to allow differentiation between organic and various inorganic materials. The dual-energy X-ray process produces two beams that peak at different energies, generating two independent images – thereby increasing the probability of detection of contraband material, even material hidden behind another item. Comparing these images also yields information on the effective atomic number of the material traversed by the beam so the difference between the materials can be easily determined.

Capable of penetrating up to 14 inches (360 mm) of steel, this unit will quickly process a fully loaded container or vehicle. Other units with only single-energy X-ray system capabilities are limited in the amount of material they can process and in their ability to detect and identify specific materials. Only the **ALL SECURE II** inspection system utilizes a beam management process in conjunction with proven algorithms for automated detection capabilities.

Near Left: Accelerator
Far Left: Detector Assembly

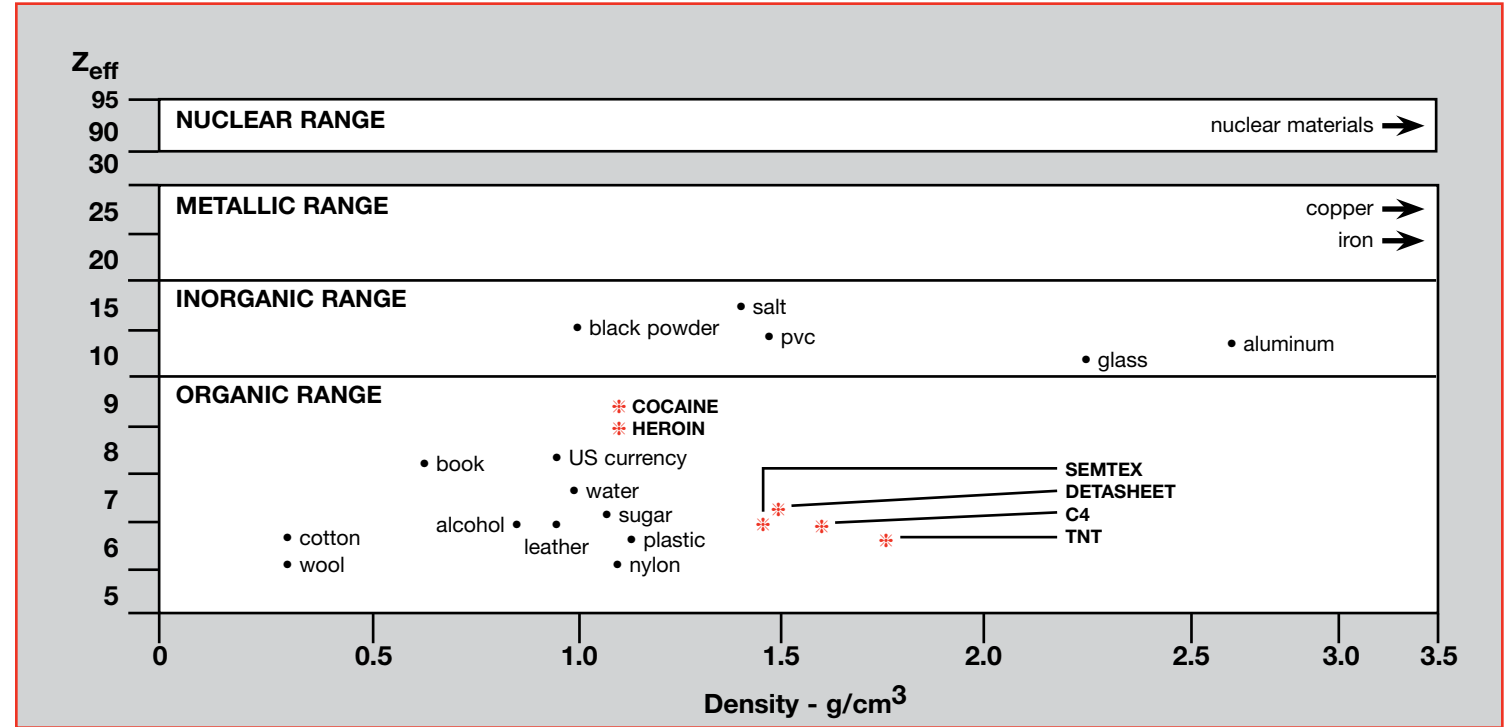


Chart identifying unique pairs of Z_{eff} number and mass density value

BUILT FOR SAFETY, RELIABILITY AND LOW COST

The IBS systems offer significant improvements over the other units in reducing the size of the equipment, lowering the cost of the systems and increasing the speed and sophistication of the software that is used to generate, monitor and dose regulate the dual-energy X-rays. The **ALL SECURE II** units have several features that reduce both initial acquisition and operation costs without sacrificing safety for operating personnel. **ALL SECURE II** systems meet international radiation criteria and are safe for the operator, target and environment, but at a

fraction of the price of competing systems. **ALL SECURE II** is the most cost-effective, non-intrusive inspection system currently available. The **ALL SECURE II** fixed-base inspection system is designed to optimize the beam geometry of the X-ray irradiation system and all containers, pallets and vehicles to be carried through the inspection beam at a uniform speed by a permanently installed transport system. This allows for efficient inspection of up to 25 or more containers or vehicles per hour.

Mobile Inspection X-ray Beam Energy for Effective Inspection

X-Ray Beam Energy	Inspection Penetration (Equivalent mm Steel)	Inspection Requirement (Equivalent mm Steel)	EFFECTIVE
ALL SECURE (6 MeV)	More than 300	300	YES
ALL SECURE (9 MeV)	More than 360	300	YES
Competitor 450 KeV	Less than 100	300	NO
Competitor 3.2 MeV	Less than 250	300	NO

