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by **Battelle** Since 1965

Battelle Number(s):

12207-E

Patent(s) Issued

Available for licensing in some fields

Awards Won:

FLC Award - 2003

R&D 100 Award - 2003

Available Technologies

Acoustic Inspection Device (AID)

SUMMARY

The Acoustic Inspection Device is a portable, battery operated, hand-held device that uses sound waves to rapidly and reliably “look” into sealed containers. This small, versatile, and affordable tool is being used to rapidly screen bulk containers in the field, check for materials that can be used to build weapons of mass destruction, inspect containers concealing contraband or illegal substances, and detect fraudulently labeled containers. The AID significantly reduces the amount of time required to screen such shipments, while at the same time provides information about the liquid contents that would normally require invasive inspection (e.g. sampling) or opening of the container. This technology provides the capability to detect hidden objects or false compartments inside liquid-filled containers. It allows the user to determine the fill level and reliably classify or sort liquids based upon correlation of measured data with information in the on-board database of pre-characterized liquids.

The AID is also useful in manufacturing environments for detecting foreign objects within liquid products and for ensuring the accurate labeling of products by verifying the liquid contents against a manifest or other shipping documents.

ADVANTAGES

- * Broadens the range of effective screening tools available in the marketplace
- * Fast and easy to use in the field (designed for the layperson)
- * Precise and reliable information for quick and accurate detection
- * Detects contents without opening the actual container, reducing the associated health and safety risks of inspections.

STATE OF DEVELOPMENT & AVAILABILITY

The AID technology was originally developed by PNNL to verify compliance with a bilateral treaty between the Former Soviet Union and the U.S. It has since been used to verify and inspect chemical weapon stockpiles in Iraq following the 1991 Gulf War and has been used to train customs officials and border patrol inspectors in European countries where security resources are needed. The technology is currently licensed for security applications. Licensing rights are available in other fields such as chemical manufacturing, oil and gas production or distribution, and



other non-destructive examination applications. Spearhead Innovations, a licensee of the AID technology, currently markets the technology as its Product Acoustic Signature System (PASS) and Portable Acoustic Contraband Detector (PACD).

RELATED LINKS

» **Mehl, Griffin & Bartek Ltd. and its subentity Spearhead Innovations**

Licensee/Strategic Partner

<http://www.mgb ltd.com/>

» **DHS/FEMA Product Certification and Specifications**

https://www.rkb.us/contentdetail.cfm?content_id=90363

» **Spearhead Innovations (licensee) video demonstration of PASS**

YouTube (2009)

<http://www.youtube.com/watch?v=BGyeHnP4PwU>

Patents & Intellectual Property

» Patent #: 6,938,488

Technology Portfolio(s)

» Electronics

» Ultrasonics

» Chemical Sensors

Potential Industry Applications

» Aerospace & Defense

» Agriculture & Mining

» Automotive & Transportation

» Chemicals

» Consumer Products

» Energy & Utilities

» Food, Beverage & Tobacco

» Healthcare, Pharma, Biotech & Medical

» Manufacturing & Warehousing

» Oil & Gas

» Professional Services

» Public Administration & Government

» Recycling & Waste Management

» Security

» Wood, Paper & Forestry

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