

Diagnostics Catalogue



PROVIDING
SERVICES
USING OUR
EXPERIENCE
TO BUILD
RELATIONSHIPS

When Performance Matters

OUR COMPANY

ScanTech was founded in 2001 as a private corporation in Canada. The inspiration at our inception was to provide exceptional customer service to the process industry at a competitive price. This remains a key component of our vision statement to this day.

ScanTech has now grown to offer our services globally on 6 continents. We have extraordinary local partners and outstanding customers worldwide.



MISSION STATEMENT

- Excel at meeting our customer's needs
- Building relationships with our customers and partners
- Providing leading edge technology for the industry
- Health, safety, the environment and quality in all we do

PROCESS DIAGNOSTICS

Using leading edge inspection techniques, ScanTech is able to diagnose and troubleshoot many issues affecting production facilities.

Our services are non-intrusive techniques that are performed while the vessels are operating. Little, if any, on-site preparation is required before our experienced team arrives. Results are provided immediately on-site after completion of the service.

INSPECTION SERVICES

- Pipe Scans
- Gamma Scans
- CAT Scans
- Neutron Backscatter
- Flooded Member Detection

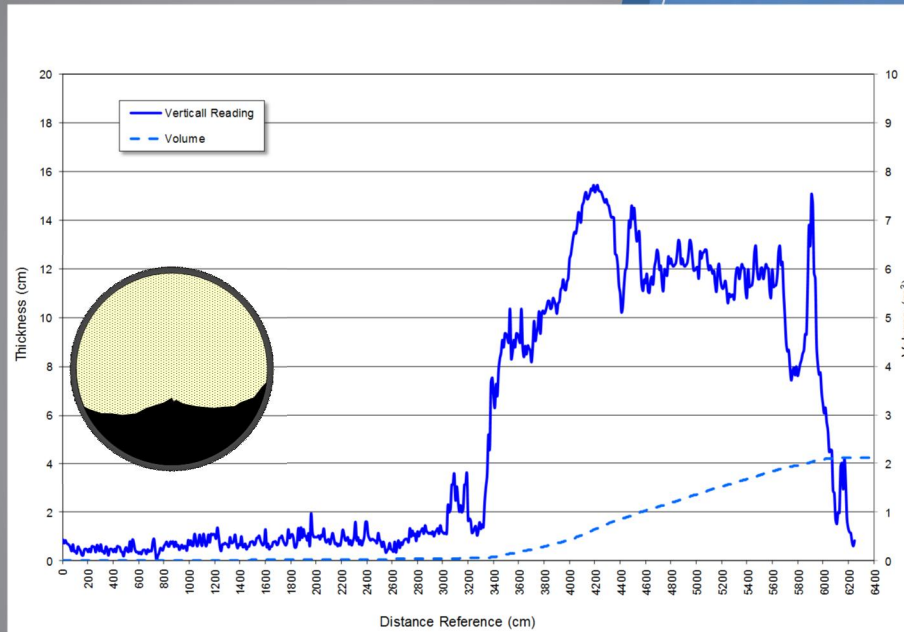
INDUSTRIES

Refineries
Chemical Plants
Gas Plants
Offshore Platforms
Power Generation
Pulp and Paper
Water Treatment
Food & Beverage
Mining



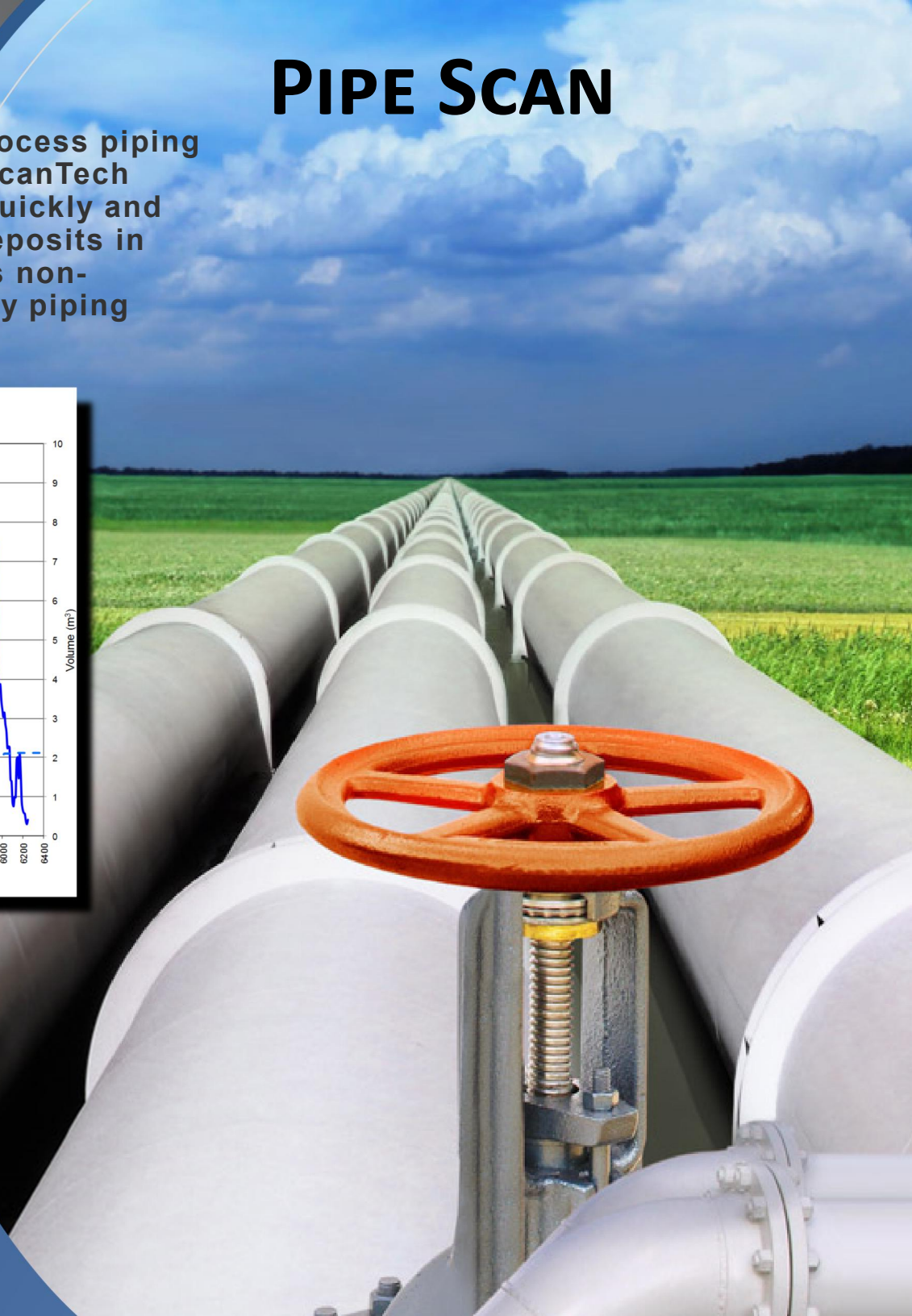
PIPE SCAN

Deposits and blockages inside your process piping can be difficult and costly to locate. ScanTech personnel use portable equipment to quickly and accurately determine the location of deposits in above ground piping. Our technique is non-invasive and can be used on almost any piping contents.



PIPE FLOW SOLUTIONS

- Position and extent of solids buildup
- Hydrate location within gas lines
- Assess liquid carryover in separators
- Monitor liquid / gas interface in pipeline purge
- Measure the extent and duration of slugging
- Locate lost refractory or lining
- Determine deposit cross sectional profiles



GAMMA SCAN

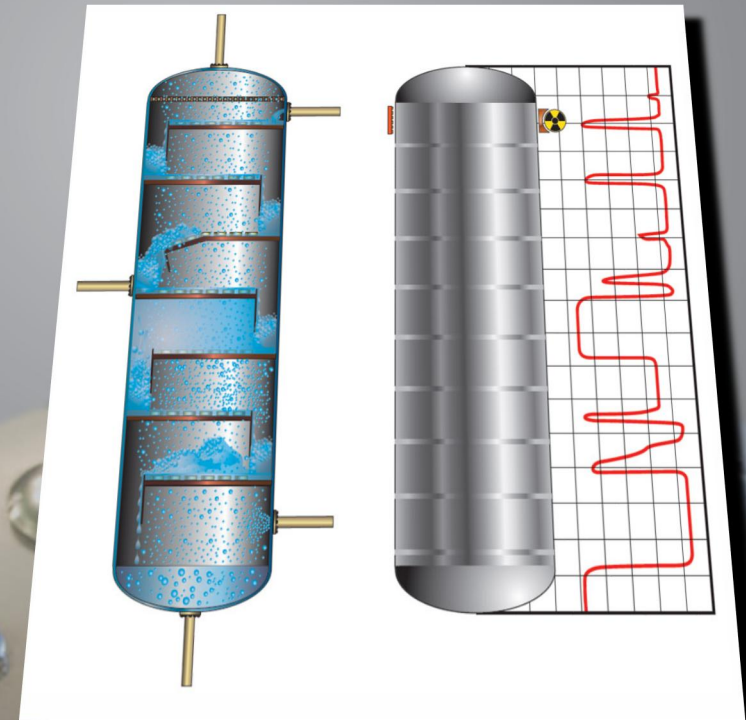
TRAYED TOWERS

ScanTech's non-invasive Gamma Scan technique is used to evaluate trayed columns for hydraulic performance and mechanical integrity. This critical knowledge is needed to optimize production and minimize plant downtime.

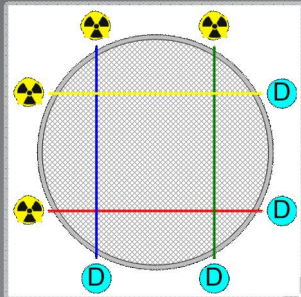
Immediate results delivered on site allow our customers to implement the appropriate solutions to increase production, reduce shut down time and lower their operating costs.

- **Verify tray placement or damage**
- **Determine froth height and levels**
- **Locate flooding and foaming**
- **Diagnose entrainment and weeping**
- **Detect process related problems**

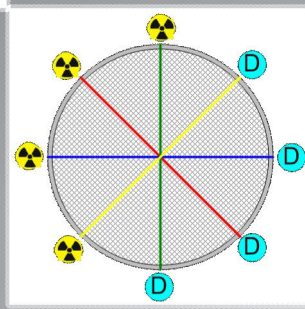
Gamma Scans have many uses including process optimization, condition monitoring, troubleshooting and pre-shutdown planning. Our team will work directly with you to assess your unique situation.



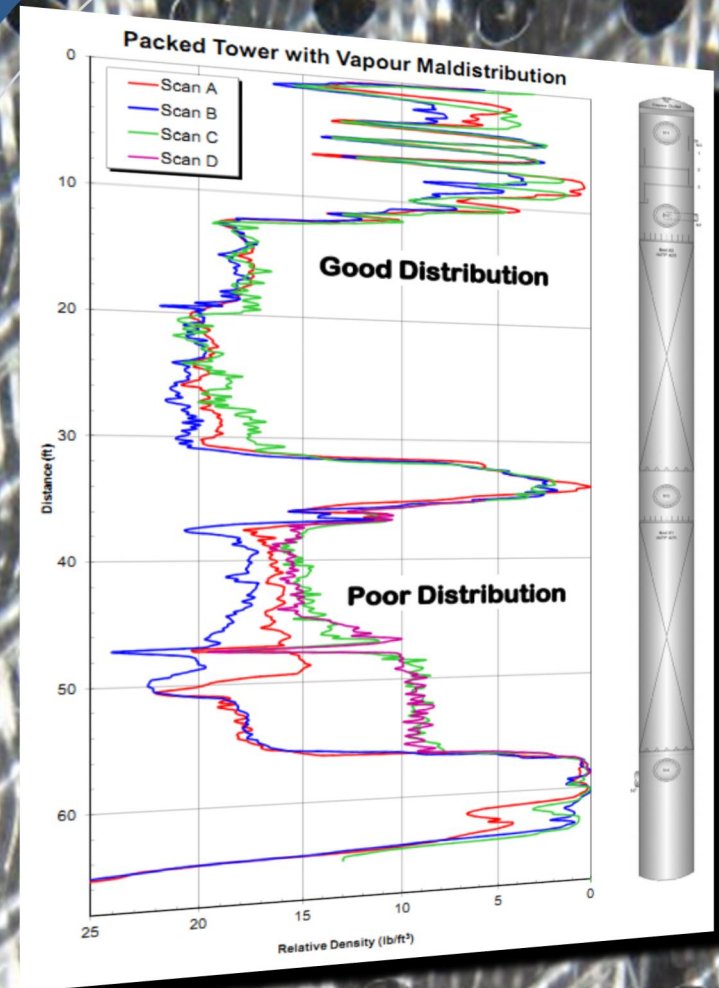
GRID SCAN



STRUCTURED PACKING & RANDOM PACKING



- Verify the position of packed beds
- Evaluate the distribution of liquid and vapour
- Confirm distributors and collector trays
- Detect crushed and fouled packing
- Locate foaming and flooding



ScanTech's Grid Scan is one of the most cost effective ways to identify maldistribution in packed towers. Using a geometric pattern of scan orientations the density profiles will overlay with an even flow distribution. If variations are detected between the scans, then deviations are present in the liquid or vapour flow pattern within the packing.

NuSCAN

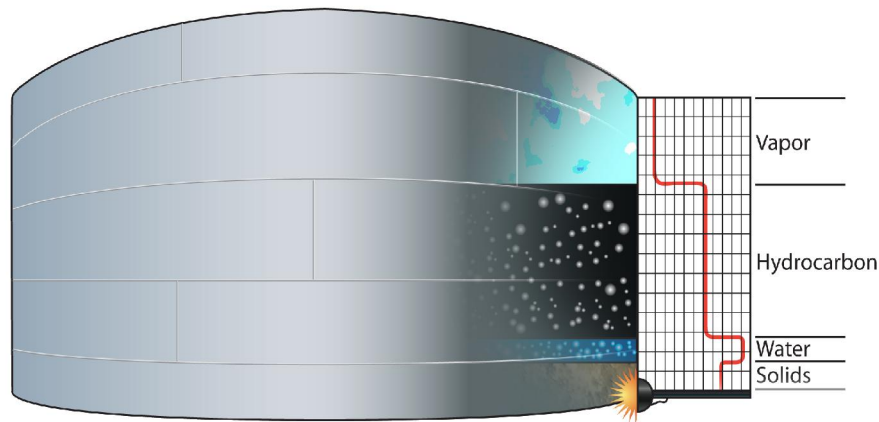
NEUTRON BACKSCATTER

LEVEL AND INTERFACE MEASUREMENTS

The neutron backscatter tool from ScanTech is a quick, accurate and cost effective method of measuring liquid levels and interfaces inside process vessels.

This highly portable non-invasive device measures differences in the hydrogen density of the fluids. Readings are taken from one side of the vessel with results instantly available on site.

- Interface measurements in tanks
- Froth heights in downcomers
- Levels on collector trays
- Deposit and interfaces in separators
- Calibration of level gauges
- Moisture under insulation detection



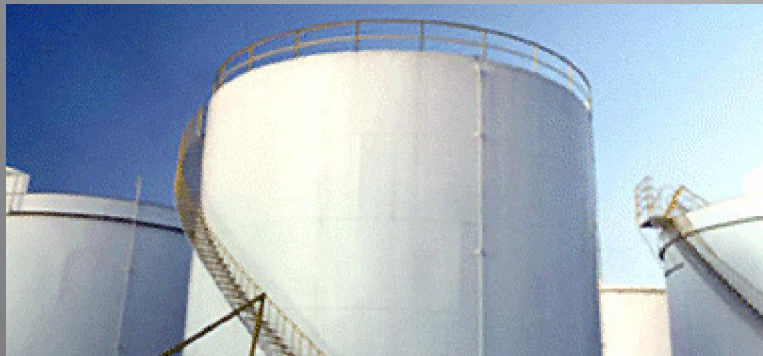
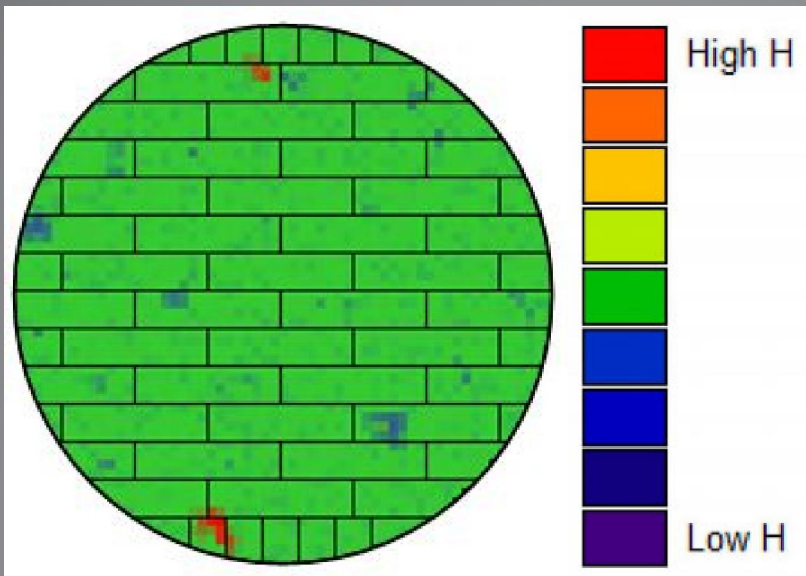
CORROSION UNDER INSULATION CUI / MUI DETERMINATION



Moisture within insulation can be detected with the NuScan equipment. Neutron Backscatter is a proven, rapid and effective technique for CUI or MUI inspection technique. Wet sections of insulation are identified for later removal and detailed inspection.

NEUTRON BACKSCATTER

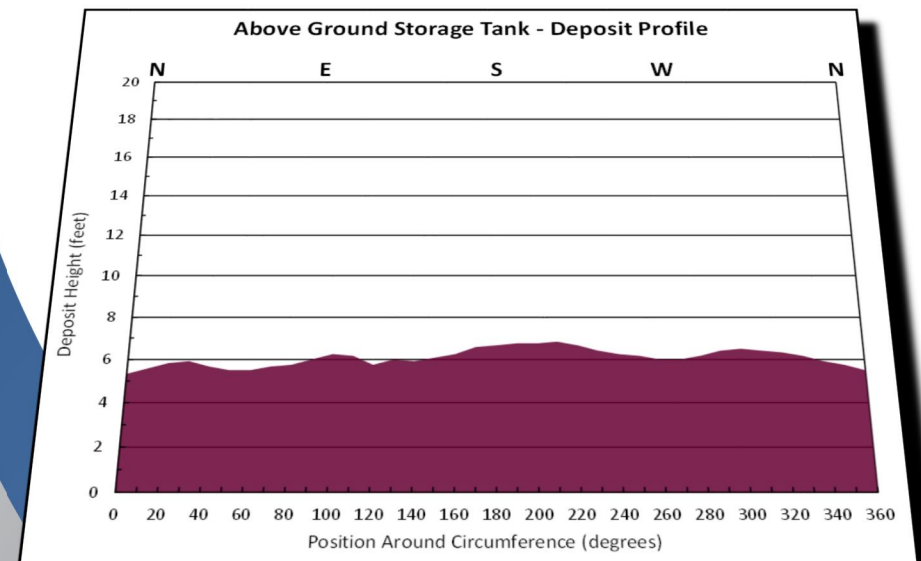
TANK FLOOR MAPPING



The NuScan is an effective technique for the rapid inspection of storage tank floors for voids. This non-destructive technique detects hydrogen differences allowing the visualization of empty or fluid filled spaces beneath the floor plates.

STORAGE TANK INVENTORY

ScanTech can quantify the inventory of storage tanks prior to servicing and shutdowns. The NuScan device is used around the circumference of the tank to measure solid or liquid interfaces prior to disposal and cleaning.



FMD & FMI

Flooded Member Inspections performed by ScanTech are quick and non-invasive. The service may be performed by remote operated vehicle (ROV) or by a diver in shallow water.

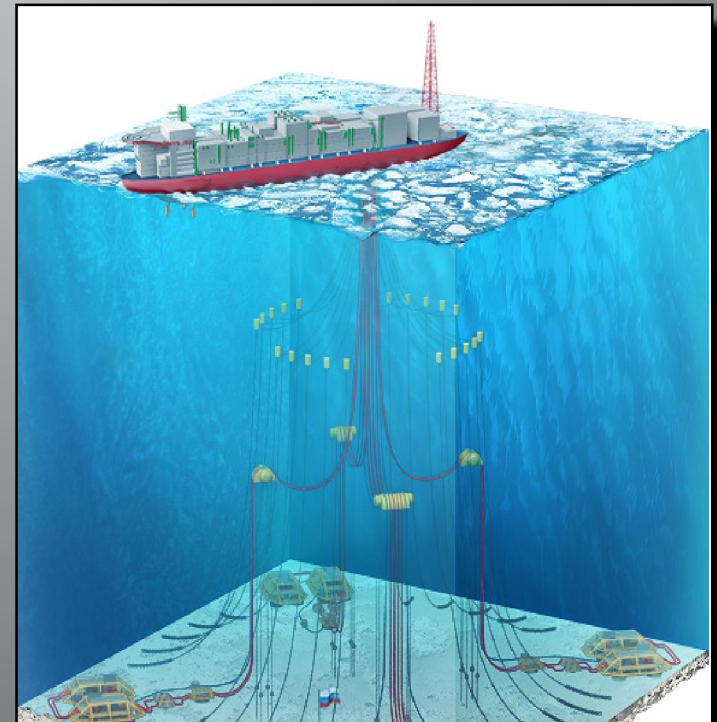
The FMD technique requires no external preparation of the members and works through tubular coatings and marine growth.

FMD inspections of:

- **Pier Pilings**
- **Buoyancy tanks**
- **Mid-water arches**
- **Subsea Pipelines**
- **Tubular platform supports**

FLOODED MEMBER DETECTION

The tubular support structure that holds up offshore platforms needs to be inspected to minimize failures. Inspections are carried out as part of a preventative maintenance program or for insurance requirements. The gamma transmission FMD technique is approved as an accurate and reliable method of flooded member detection.



SUBSEA FLOW ASSURANCE

PIG LOCATION AND TRACKING



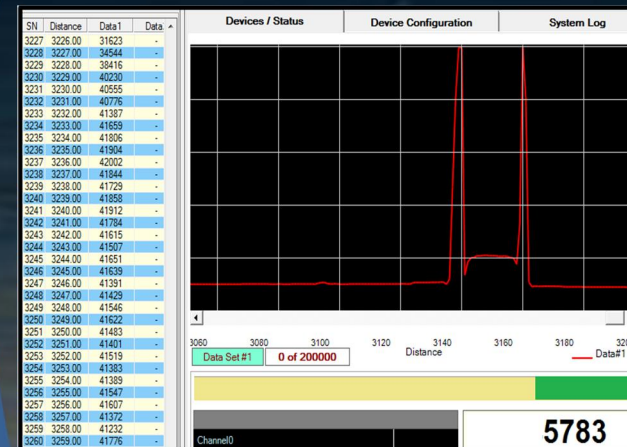
Tracking pigs is done by inserting a small radioactive tag in the pig before launching. ScanTech's FMD equipment is used to record when the pig passes a known location.

When pigs become stuck in subsea pipelines; the FMD equipment is used to search along the pipeline for differences in density corresponding to the components of the lost pig.



PIPELINE BLOCKAGES

When subsea pipelines become blocked, ScanTech's FMD equipment may be used to quickly and accurately determine the location allowing remedial planning and actions to minimize pipeline downtime and operator costs.



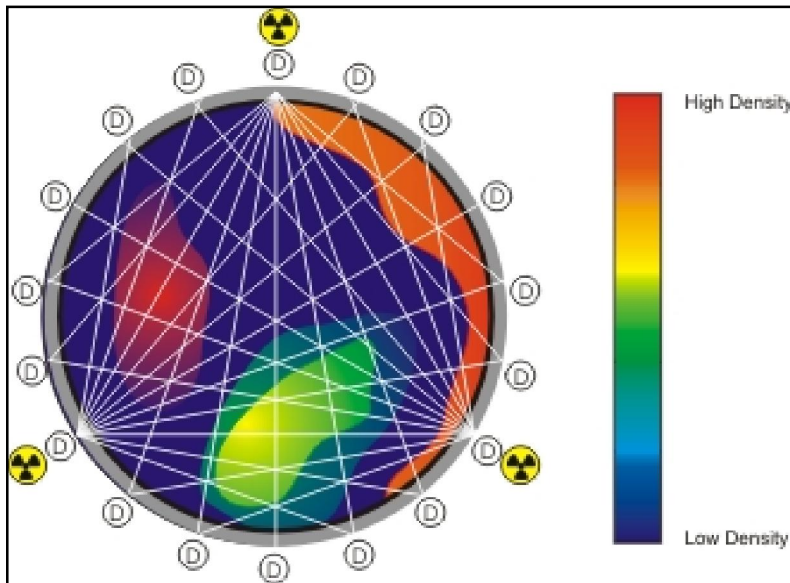
Stationary monitoring of slugs over time is another service provided with our FMD equipment.

CAT SCANS

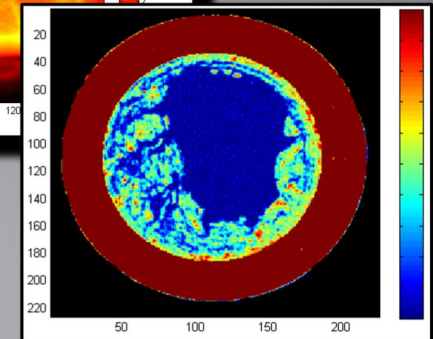
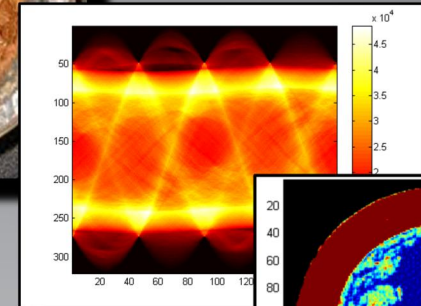
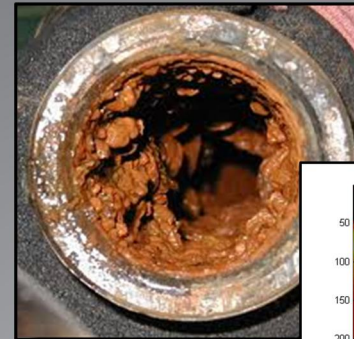


Computer Assisted Tomography (CAT) Scans are used to image the internal structure of vessels and piping. Density differences are resolved to produce a two dimensional density map of the area scanned.

A single source is used with multiple detectors in a geometric pattern to produce intersecting scan lines. The image of the object is created by analysis of each intersection point.



2 DIMENSIONAL DENSITY PROFILING



ScanTech's CAT scan service is used to determine fluid mal-distribution in packing and is the only non-invasive technique for distinguishing annular mal-distribution within the packed bed.

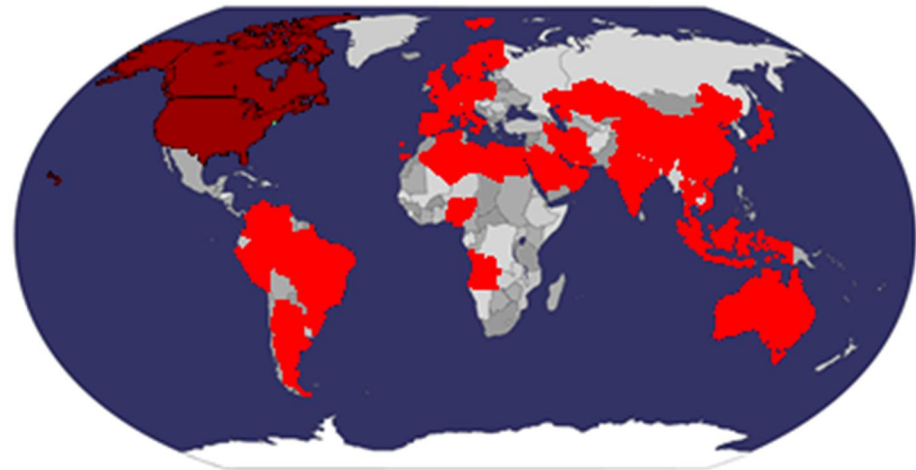
Distributor, plate and tray integrity can be analyzed for density irregularities within towers.

Blockages, deposits and density interfaces may be surveyed with this sensitive measurement technique.

CONTACT



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