

ENCODED FLOOR SCANNING
INSIDE THE TANK, PLATE BY PLATE

IN-SERVICE INSPECTION & TESTING

PIPING, TANKS AND PRESSURE VESSELS.

API 570 piping, API 653 and API 620 tank, and API 510 / AS/NZS 3788 pressure vessel inspections by certified inspectors, backed by our own NDT crew. Encoded floor scanning, B-scan and PAUT corrosion mapping, vacuum box testing, NATA accredited relief valve and hydrostatic testing, and reports that give you remaining life and the next inspection date.

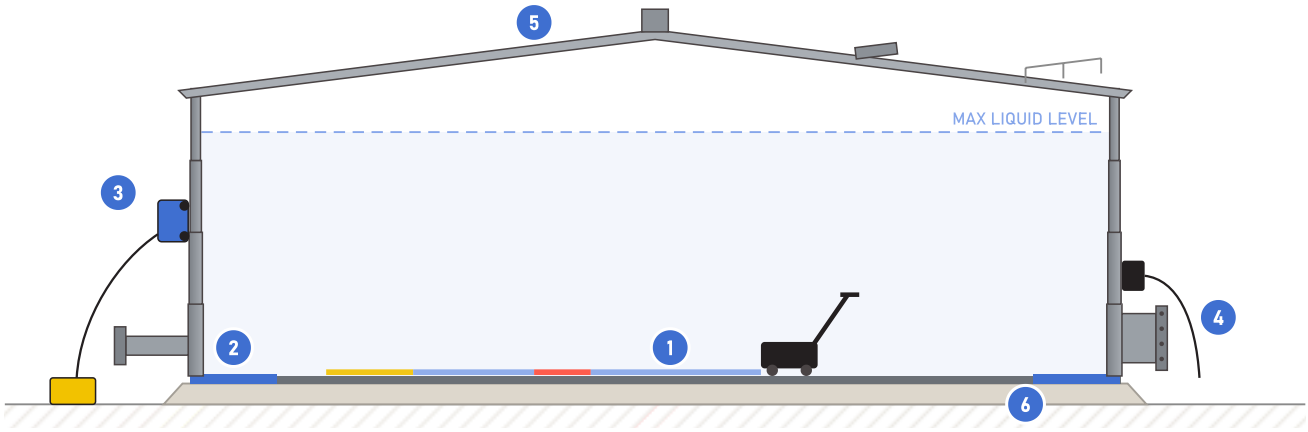
API 570 | API 653 | API 620 | API 510 | AS/NZS 3788 | AS 1940 | AS 1692 | AICIP | VACUUM BOX

PRV TESTING · NATA | HYDROSTATIC · NATA

STORAGE TANKS · API 653, API 620, AS 1940 & AS 1692

FLOOR TO ROOF, ONE INSPECTION.

Our API 653 inspectors work through the tank from the foundation to the roof, with the NDT done by our own technicians. Atmospheric API 650 tanks are inspected to API 653, and low-pressure API 620 tanks to the same principles against their design code. Findings are tied back to the code and to AS 1940 and AS 1692, so you know what needs fixing, what can wait and when to look again.



1 FLOOR PLATES
Every plate scanned with the MFE Mark IV, indications proved up with UT.

2 CRITICAL ZONE & ANNULAR
UT and PAUT where the floor meets the shell.

3 SHELL COURSES
B-scan buggy and UT on every course, t_{min} worked out course by course.

4 NOZZLES & MANWAYS
Necks to API 653 4.3.9, manway covers checked against API 650.

5 ROOF
UT and visual, with IRATA rope access where there's no safe walkway.

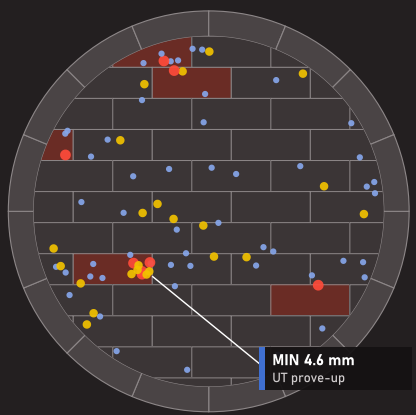
6 WELDS, FOUNDATION & COATINGS
MT, eddy current and vacuum box on welds, foundation and chime checked, coatings by NACE inspectors.

THE KIT

SCAN THE FLOOR. PROFILE THE SHELL.

MFE MARK IV FLOOR SCANNER

Encoded MFL scanning of every floor plate picks up metal loss on the product side and the soil side, so underside corrosion isn't missed. Indications are proved up with UT, and every plate is mapped and numbered.



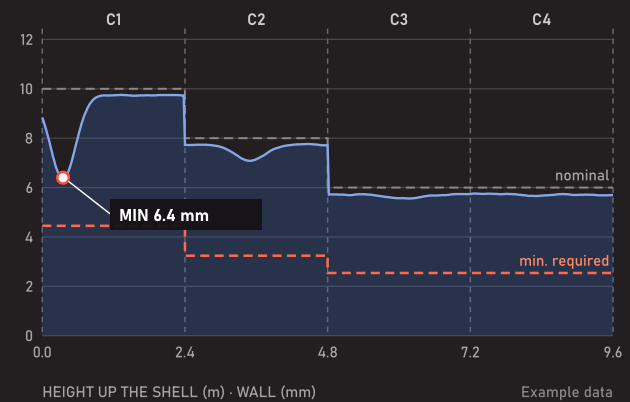
- Minor
- Moderate
- Severe, plate shaded

Annular ring
and critical zone
scanned separately

Example data

MAGNETIC B-SCAN BUGGY

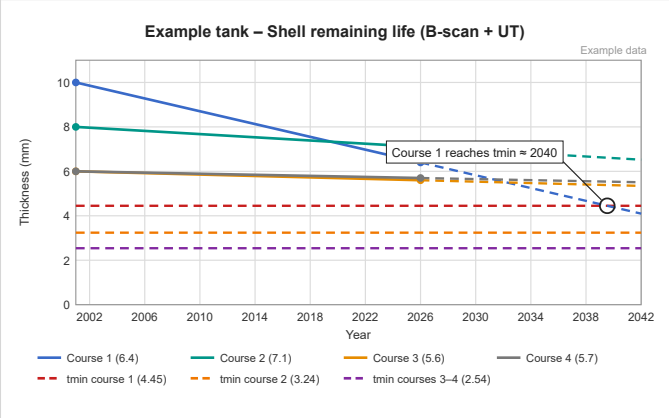
Magnetic wheels hold the buggy to the shell while it records an encoded B-scan: a continuous thickness profile up the wall instead of a handful of spot readings. Every reading exports to CSV.

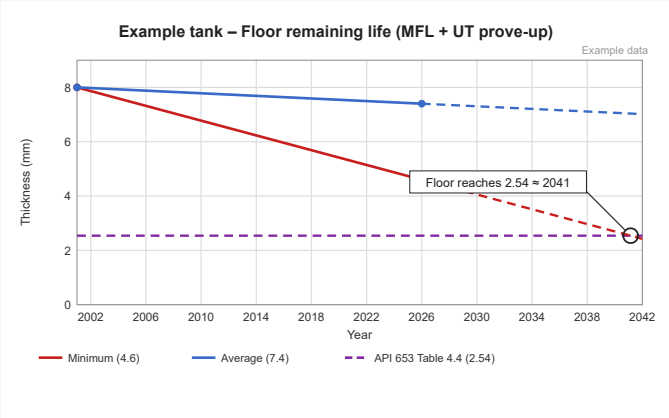


THE REPORT

REMAINING LIFE, WORKED OUT FOR YOU.

Each tank gets its own API 653 report. Minimum thickness is calculated for every shell course, corrosion rates and remaining life are plotted for the shell and the floor, and every finding is rated and photographed. These are the charts from our standard report, shown with example data.





FROM THE REPORT: SHELL AND FLOOR SUMMARY

Example: 20 m × 9.6 m tank, 9.1 m liquid level, SG 0.9, A516-70, E 0.85, built 2001

COMPONENT	NOMINAL (MM)	MINIMUM FOUND (MM)	MIN. REQUIRED (MM)	CORROSION RATE (MM/YR)	REMAINING LIFE
Shell course 1 (governs)	**10.0**	**6.4**	**4.45**	**0.144**	**14 yr**
Shell course 2	8.0	7.1	3.24	0.036	> 50 yr
Shell course 3	6.0	5.6	2.54	0.016	> 50 yr
Shell course 4	6.0	5.7	2.54	0.012	> 50 yr
Floor (MFL + UT)	8.0	4.6	2.54	0.136	15 yr

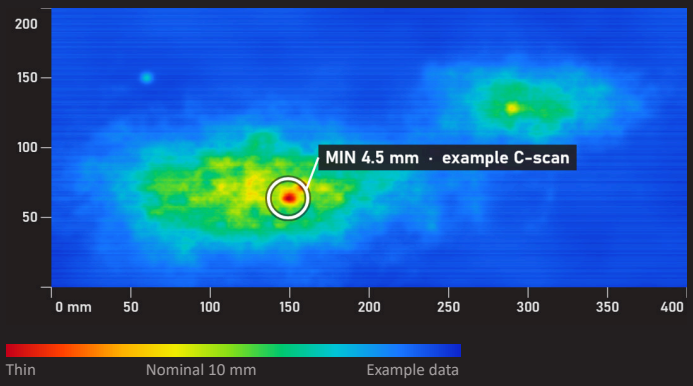
Next external: **3.4 yr** (API 653 6.3.2.1) | Next shell UT: **6.8 yr** (6.3.3.2) | Floor remaining life: **15 yr** (sets the internal, 6.4)

Min. required to API 653 4.3.3.1, 2.6 (H − 1) D G / (S E): the greater of the product and hydrotest cases, never less than 2.54 mm. Floor minimum to API 653 Table 4.4.

FINDINGS RATED: NEGLIGIBLE | LOW | MEDIUM | HIGH | EXTREME

PAUT CORROSION MAPPING

WHERE IT'S THIN, MAP IT.

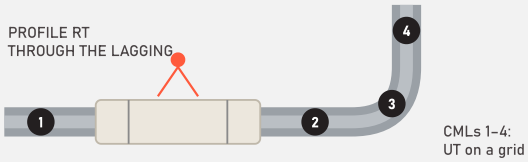


HydroFORM 2 and RollerFORM C-scans on shell courses, the critical zone and nozzles, including under scale where the client can't clean. Every reading exports to a colour-coded CSV, and the map feeds straight into the t_{min} and remaining-life calculations.

- Encoded, so the next inspection re-scans the same area
- Measured corrosion rate, reading by reading
- Full kit and examples in our PAUT brochure

PIPING & PRESSURE VESSELS

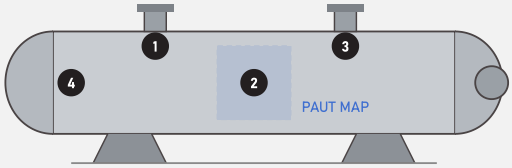
PIPING AND VESSELS, INSPECTED TO THE CODE.



PIPING

API 570 · AS/NZS 3788

- Thickness monitoring at CMLs, with a corrosion rate and remaining life for every circuit
- Corrosion under insulation: profile radiography through the lagging
- Elbows and bends mapped with FlexoFORM PAUT
- Dead legs, injection points and small-bore lines



PRESSURE VESSELS

API 510 · AS/NZS 3788

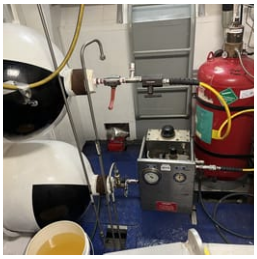
- Internal and external inspections by API 510 and AICIP certified inspectors
- Shells, heads and nozzles thickness-checked, with PAUT mapping where it's thin
- Remaining life and the next inspection date for every vessel
- Repairs, re-rating advice and the pressure test, in one place
- Leeb and Brinell hardness on welds, HAZ and parent metal



NATA ACCREDITED

PRESSURE RELIEF VALVES

Inspection, overhaul and certification of relief valves on our test bench. Set pressure and seat leakage tested by air or water to AS 1271 and API 527, NATA accredited up to 100,000 kPa.



NATA ACCREDITED

HYDROSTATIC TESTING

When a repair or alteration calls for a pressure test, we do that too. Piping and vessels tested to AS 1210, AS 3788, AS 4041, ASME VIII and B31.3, NATA accredited up to 100,000 kPa.



TANK FLOORS

VACUUM BOX TESTING

Floor lap welds leak tested with flat vacuum boxes, and the shell-to-floor corner weld with right-angle boxes. To API 650, API 653 and ASME V Article 10.



MADE TO SUIT

CUSTOM SUMP BOXES

Sumps and other awkward shapes don't suit a standard box, so we make custom vacuum boxes to fit, each with its own calibrated gauge.

OUR INSPECTORS

API 570
Piping inspector

API 653
Tank inspector, API 650 & 620 tanks

API 510
Pressure vessel inspector

AICIP
Pressure equipment inspector

NATA 12303
PRV, hydrostatic and NDT testing

HOW LONG HAVE YOUR ASSETS GOT LEFT?

Swift reporting, round the clock.

NATA | ISO 9001 | API | AICIP | AINDT | IRATA

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