MAC SUITE · MACMONITOR

Macprotec Engineering · Houston

MACMONITOR

Proven inspection rounds on a 3D model of your plant

A paper round sheet cannot show that a point was visited, and a hot bearing written on it can take days to reach maintenance. MACMONITOR proves every visit with a signed tap at the equipment, checks each reading against the plant's limits, and puts every finding on the equipment the same shift.

THE COMPLETE SOLUTION, TAG TO CONTROL ROOM

1 · TAP
At each point
NXP NTAG 424 DNA tag, on-metal, one per inspection point. Every read is signed with AES-128 and a counter.

2 · RECORD
Field app
Rugged Android phones. Readings, checks, photos and notes. Glove-sized buttons, English or Spanish, works offline.

3 · VERIFY
MACMONITOR server
One plant PC, no cloud. Checks each tag read and each reading against limits. HTTPS, PIN sign-in by role.

4 · ACT
Your people
Dashboard and 3D view, urgent alerts, work requests for your CMMS, daily field data to MACDATA.

WHAT IT CATCHES

Problem	How MACMONITOR handles it
Missed or skipped points	Each point needs a tap. Missed points show on the dashboard the same shift
Rounds filled in from the control room	A copied or replayed tag read fails, and a tag counts only at its own point
Hot bearings, gearboxes and pinions	Readings checked against warning and alarm limits. Red opens a finding and an urgent alert
Leaks, spillage, seal wear, noise	Choice and yes/no checks with a severity, and photos on the finding
Slow drift in a reading	Every reading kept under the asset's plant tag and trended for months
Findings that never become work	Supervisor acknowledges and raises a work request for the CMMS

WHY IT WORKS

- **Proof without paperwork.** A signed tag read shows who was at which point, and when.
- **On the equipment.** Every visit, reading and photo is filed under the plant tag, on a 3D model built from a laser scan.
- **Built for the crew.** Rounds work offline and sync at the control room, keeping the time of each tap.
- **Inside the fence.** No cloud and no internet at runtime. It never connects to or writes to the DCS or PLCs.
- **Keys held by the plant.** Tag keys stay on the plant server, and the plant owns the certificate authority.
- **Grows as data.** New routes, checks and tags are added to the plant package, with no new software.
- **Part of MAC Suite.** Confirmed field findings feed MACDATA, MACDETECT and MACREL.

HOW WE WORK WITH YOU

1
Route review
Your current round sheets, checks and limits, captured in our intake workbook.

2
Site survey
Network, Wi-Fi and server location agreed with IT. Tag points walked with the area lead.

3
Scan and build
We laser-scan the area and build the 3D model, named by plant tag, and the plant package.

4
Install
Server installed. Tags programmed with plant-held keys, fitted and enrolled.

5
Rounds
Inspectors trained, first round verified, pilot reviewed at week 12.

To get started, we only need: the target area (kiln, mill or another shop) and access to the plant's site and network. Macprotec supplies the hardware (NFC tags, rugged phones and a server PC if needed) and does the laser scan, all priced in the proposal.

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