

HEMG Weld Integrity Pro™

Universal Digital Welding Management & Traceability System

The Problem

Paper Weld Matrices, manual logbooks, and fragmented NDE records lead to high repair rates, regulatory audit failures, and the silent assignment of unqualified welders to critical joints. Without digital enforcement, every pressure system's integrity depends on processes that are inherently unreliable at scale.

The Solution

Weld Integrity Pro™ digitally replaces the manual Weld Matrix with a live, QR-coded, fully auditable system covering the complete weld lifecycle — from fit-up through NDE, repair, acceptance, and permanent traceability record.

Key Features

- QR Tag Replaces Manual Weld Matrix — every weld joint gets a unique QR code, physically replacing paper. Scan to access live weld record instantly.
- WPS/Welder Auto-Enforcement — system automatically lists only qualified welders based on P-Number, pipe size, wall thickness, position. Unqualified welders cannot be selected — no override.
- Automatic Welder Certification Expiry Alerts — expired welders removed from eligible list automatically. QA supervisor notified.
- NDE Tracking & Repair Loop — Fit-Up → Visual → NDE → Acceptance workflow tracked digitally. Repair loop triggered automatically on rejection.
- Metallurgy Traceability — heat numbers, material certificates, chemical composition across CS, SS, Duplex, Super-Duplex, Alloy, Inconel, Hastelloy
- 10 Automated Output Reports — ISO Pack, NDE Certificate, Fit-Up Report, Weld Summary, Dimensional Check, Internal Cleaning, Reinforcing Pad, Release Certificate, NDE Status, Welder RT Performance
- Digital Weld Birth Certificate — permanent record: Welder ID, WPS, PQR, heat numbers, NDE results, dimensional check, release status
- Spool Release Control — digital release workflow replacing paper certificates
- Welder Performance Analytics — RT repair rate per welder, triggers Academy training intervention

Standards Alignment

- ASME B31.3: Process Piping
- ISO 3834: Quality Requirements for Fusion Welding of Metallic Materials
- AWS D1.1: Structural Welding Code — Steel
- ISO 9606-1/2: Qualification Testing of Welders
- ASME Section IX: Welding and Brazing Qualifications

Industries Served

Oil & Gas | Refineries | Petrochemical | Nuclear | Pharmaceutical | Power Generation | Offshore
FPSO | Water & Desalination | Semiconductor | Construction EPC

Technical Specifications

- Deployment: Cloud-hosted SaaS | Private cloud | On-premises available
- Mobile: iOS/Android tablet app for field QR scanning
- Integration: REST API | CSV import for weld lists and personnel data

Contact

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