

SOLUTION BRIEF

AI Compliance for EPC & Heavy Construction Projects

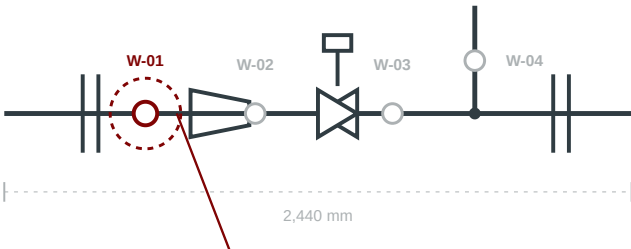
Catch the problem in the drawing, not on the job site.

Thousands of **datasheets, P&IDs, BODs, and SPPs** — checked against owner standards on tight schedules. The Platform compresses cycle time and produces PMC-ready citations on first pass.

— **WHAT THE PLATFORM SEES ON EVERY DRAWING**

Isometric · Weld Map **REV 02 · IFC**

ISO-3204 · LINE 4" -PG-1102-A1A



4 welds · 2 flanges · 1 valve · 1 reducer · 1 branch **3 findings**

FINDING · MAJOR W-01

Specified weld class does not meet pipe spec for the operating service.

Cited · **ASME B31.3 § 328.5** (with project WPS-1204 override)

FINDING · MINOR W-04

Branch reinforcement note missing on the isometric.

Cited · ASME B31.3 § 304.3.2

OBSERVATION Line spec

Line tag matches project spec PG-1102; verified clean.

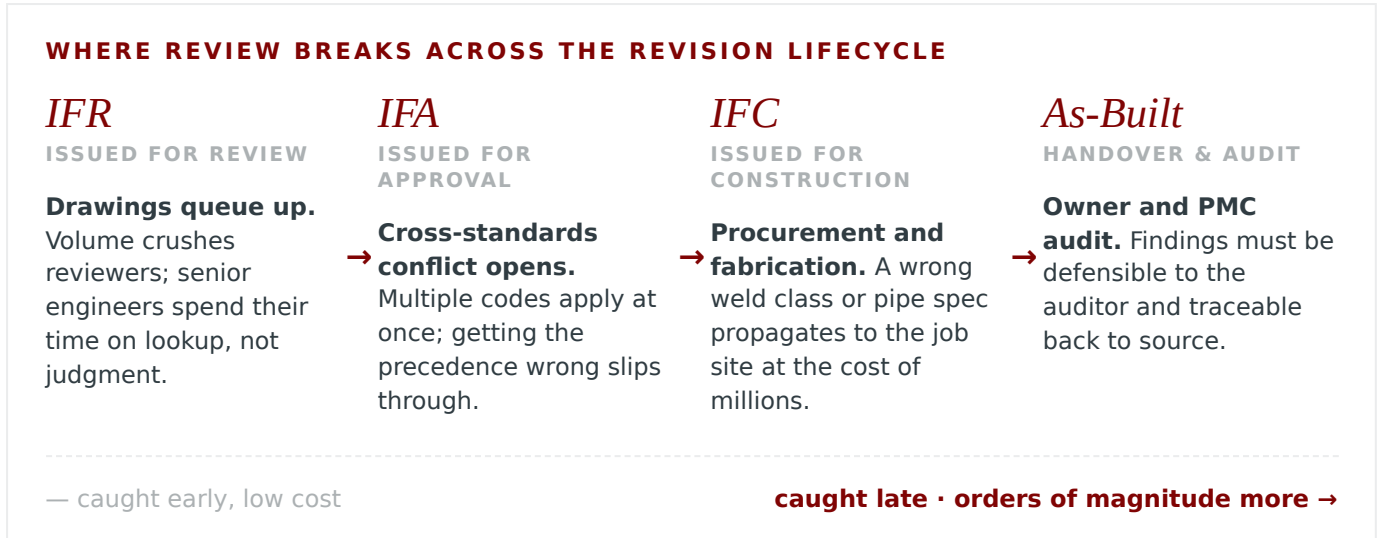
Reviewed · Project spec rev 3

Every weld. Every flange. Every clause cited. The platform reads owner standards, project specs, and weld procedures together — and produces audit-ready findings on the drawing, before fabrication.

● CITED ON EVERY FINDING

Drawing review is on the critical path. Always.

Thousands of **P&IDs, isometrics, weld maps, and datasheets** reviewed by hand against ASME, API, and NACE — every single one checked clause-by-clause against owner spec, project addenda, and the international codes that govern them. Rework from issues hiding in drawings accounts for **3-7% of total project value**. The problems didn't appear on site — they were already there. Just not found in time.



Why drawing review breaks down.

01

Drawing reviews are on the critical path
P&IDs, isometrics, and weld maps reviewed by hand against ASME, API, and NACE — thousands per project. Review becomes the bottleneck everything else waits on.

02

Issues found late cost a fortune
A non-conformance caught at drawing review costs almost nothing. The same issue found at turnaround or on site runs into millions in rework, schedule overruns, and disputes.

03

No project runs on one standard
A single pipeline scope may need ASME B31.3, API 570, NACE SP0169, and a client spec at once. Cross-referencing them manually takes hours — and gaps still slip through.

04

Turnarounds have no room for slow checks
Turnarounds are scheduled to the day. Compliance checks that take two days instead of two hours extend downtime directly — and in refining, every day offline costs a fortune.

05

Standards knowledge walks out the door
The engineers who know B31.3 cold are retiring. What they know lives in their heads, not in a system. When they leave, juniors start over on questions that were already answered.

06

Proving compliance during inspections is painful
When a regulator or client asks for evidence, assembling a traceable record from drawing to sign-off to standard is a manual exercise that takes weeks.

WHY THIS MATTERS NOW

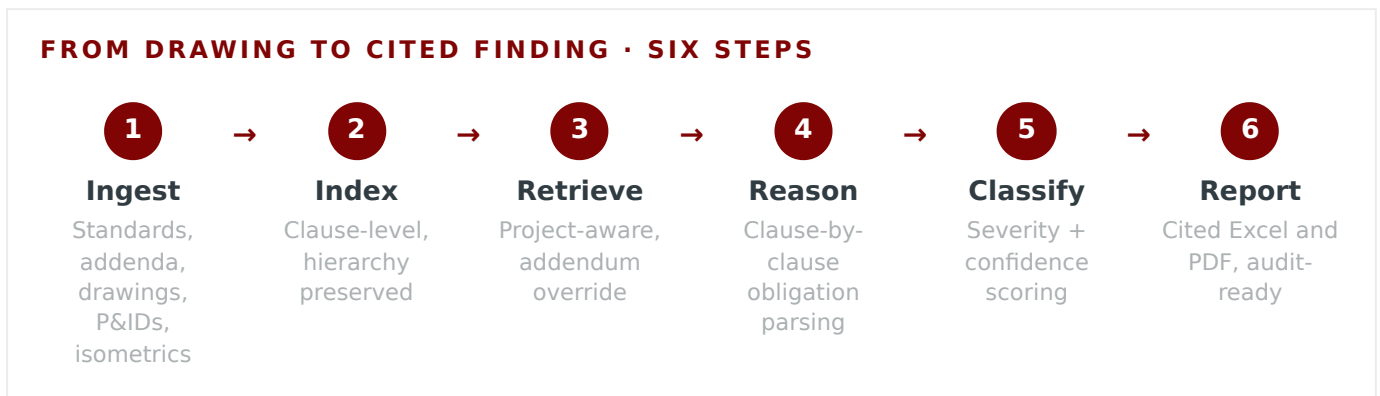
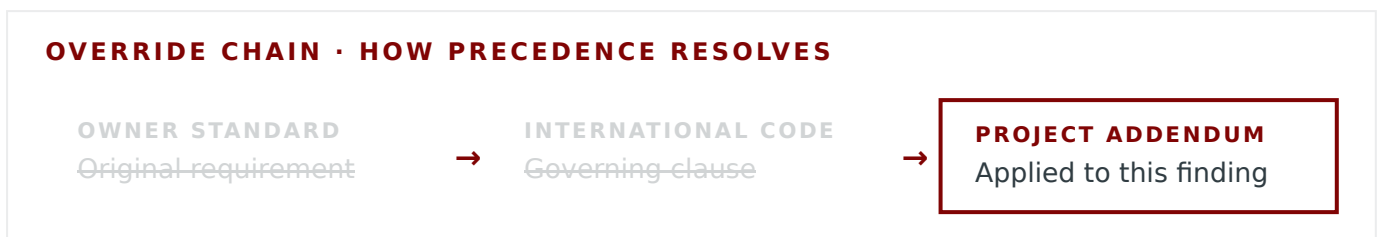
Owners are mandating AI in their tenders — AI engineering-standards compliance has moved from differentiator to requirement in Gulf operator tenders; others are following. Reasoning models have crossed the bar — grounded retrieval and clause-level citation now produce findings that hold up to PMC review, not just plausible-looking text. Senior discipline reviewers remain scarce; project volumes are rising.

Built for drawings, not paragraphs.

Engineering drawings carry meaning in their **tags, dimensions, and welds** — not just their notes. The platform ingests P&IDs, isometrics, weld maps, and datasheets as structured objects, parses obligations **clause-by-clause** against your full standards stack, and reasons about whether each drawing actually meets the requirement — distinguishing a "shall" from a "should," catching negations and thresholds, and applying the right precedence when standards conflict.

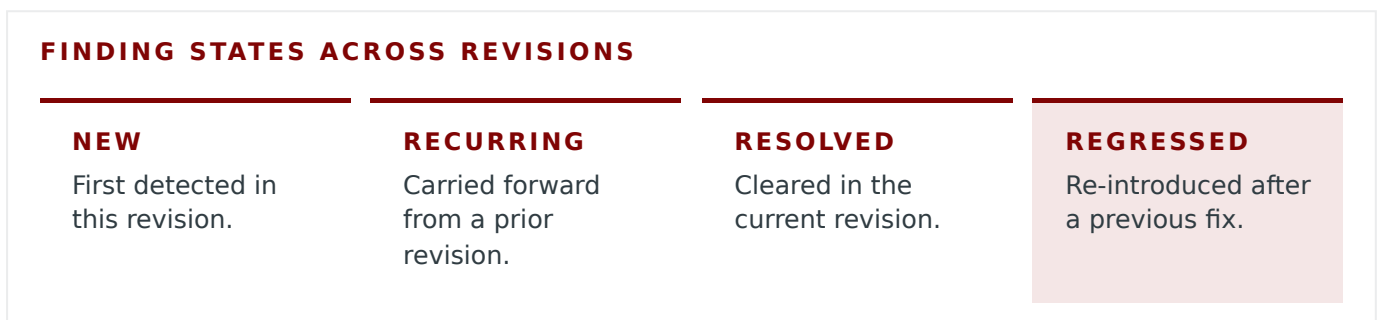
Multiple standards. One drawing. Right precedence, every time.

A single pipeline scope may need **ASME B31.3, API 570, NACE SP0169, and a project spec at once** — sometimes with weld procedures that override pipe specs. Getting the precedence wrong means the review is wrong. The platform parses the hierarchy at ingestion and applies the correct precedence at review time — every reviewer sees which clause version actually governed each finding, on every drawing.



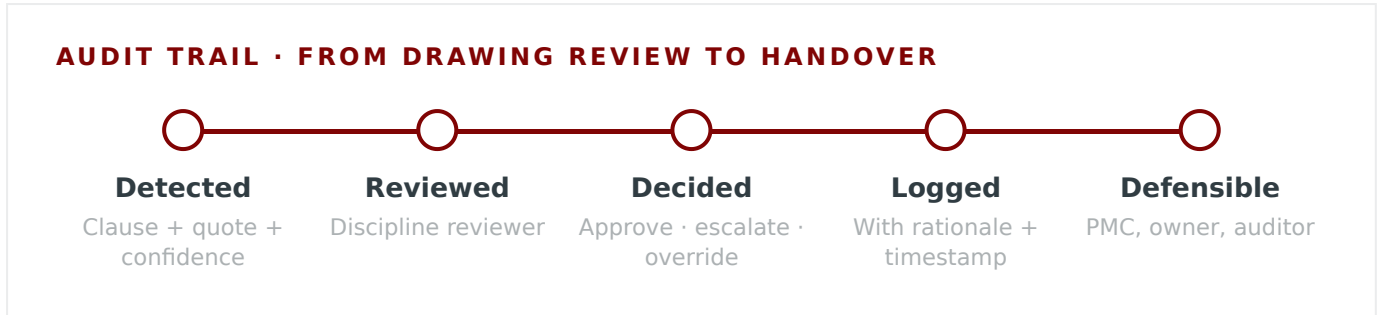
Drawings drift. The platform doesn't lose track.

Drawings change a hundred times between IFR and As-Built. A finding cleared in IFA can quietly come back in IFC. The platform tracks each finding through every revision — every reviewer sees what's new, what's been carried forward, what's been cleared, and what's come back. **Diagram-vs-diagram comparison** highlights structural changes between revisions automatically.



Defensible to inspectors. Traceable to source.

The platform's output is engineered to survive a PMC, owner, **inspector, or third-party regulator** review. Every finding carries a severity classification (Critical / Major / Minor / Observation), the source clause and source quote it references, and a confidence score reported *separately* from the verdict. Reviewers can approve, escalate, or override — every decision is logged, and the audit trail moves with the finding from drawing review to handover.



Time, throughput, and the cost of late issues.

<h3>70–80%</h3> <p>Reduction in review cycle time From active EPC engagements.</p>	<h3>10×</h3> <p>Throughput per reviewer Same team, more deliverables.</p>	<h3>60,000</h3> <p>Docs in 48 hours vs. 2–4 months manual Benchmarked vs. a 15-person team at ~500 docs/day.</p>
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Prove it on your drawings. *A 2-week scoped pilot.*

We configure the platform for one discipline and run a live review against your real engineering drawings — no platform commitment.

We bring

The platform configured for one discipline, an engineering AI lead, and a solution architect — delivered as managed SaaS.

You bring

One representative discipline standard, 8–10 IFR-stage deliverables (drawings, P&IDs, isometrics), and a discipline lead for two 90-minute sessions.

You get

Findings benchmarked against your manual review, an audit-trail sample defensible to your PMC, and a roadmap to production.

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