

Inspection That Starts With Fabrication Data

How integrated inspection management takes the manual data entry out of piping fabrication QA.

In most fabrication shops, inspection and documentation run as parallel processes. Drawing numbers, spool identifiers, material certificates, welding records and fabrication status already exist in the engineering and production systems — but then have to be re-entered by hand into spreadsheets and quality records. The result is duplicated effort, transcription errors, and traceability that has to be reconstructed after the fact instead of captured as the work proceeds.

Because of this, the bottleneck is rarely the inspection itself, but that the inspection layer is cut off from the data that should be driving it.

A different starting point

JointCheck, developed by 3R solutions, was built to close that gap. Instead of a standalone inspection database that has to be fed by hand, it is part of the wider 3R software ecosystem — isometric processing, spooling, work preparation,

workshop control and fabrication tracking — and it works directly from the data those systems already hold.

Because the engineering and production data are already available, the inspection workflow inherits them. Drawing numbers, spool IDs, material certificates, weld records, fabrication status and project requirements are moved into JointCheck without re-keying. Thus,

inspection becomes a continuation of fabrication rather than a separate administrative track added at the end.

How it works in practice

Inspection requirements are assigned automatically — from project specifications, NDT matrices, client requirements or configurable lot definitions — so every component and weld carries exactly the examinations it needs.





When JointCheck is connected to 3R's RAMP workshop control system, inspectors are notified the moment a spool, weld or fabrication lot is released for inspection. Nobody must wait on a status report, and nothing is handed over or re-entered manually. The applicable procedures, acceptance criteria, and checklists are already attached to the item in front of them.

As fabrication progresses, JointCheck:

- Generates inspection reports and quality records directly from live fabrication data
- Keeps documentation and procedures under revision control

- Tracks inspector qualifications, certifications and recertification dates
- Monitors welder performance and flags joints that need additional examination, such as radiographic or ultrasonic testing
- Organises records by project, system, subcontractor, spool or weld joint
- Maintains full traceability from material receipt through final inspection

Because every record stays tied to the fabrication data it came from, the quality dossier builds up as the

work is done — rather than being assembled, page by page, in the rush before handover.

What it delivers

For project and quality teams, the payoff is concrete: real-time visibility into fabrication and inspection status, audit-ready traceability without the end-of-project scramble, and far less time spent shifting the same information from one system to another.

Inspection stops being the paperwork that trails behind fabrication. It becomes part of the fabrication process itself.

