

## OpsPilot

# Inspection & Test Plan — User Manual

The Quality Contract Between Fabricator & Owner · AI Engineering Co-Pilot



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**What this guide covers** — what an ITP is, how the OpsPilot module builds one, what to have ready, and the document you receive.

## 1. What is an Inspection & Test Plan?

An Inspection & Test Plan (ITP) is the quality contract between a fabricator and an owner: it specifies, for every quality checkpoint in a job, WHAT is inspected, WHEN, WHO inspects, the ACCEPTANCE CRITERION, and the RECORD format. It is what prevents the argument at handover — “you never said you needed to witness that weld test” — by agreeing every check, and who attends, before fabrication starts.

The heart of an ITP is the intervention notation against each line: *H (Hold — work cannot proceed past this point without the inspection)*, *W (Witness — the party should observe)*, *S (Surveillance — random check)*, *R (Review — documents only)*. Getting the Hold points right is the whole art — too many and the job stalls waiting for inspectors; too few and a defect gets buried under later work.

OpsPilot builds to *ISO 9001 cl.8.5.1*, the *AS/NZS 1554* and *AWS D1.1 welding series*, *AS 4458 / ASME BPVC (pressure equipment)*, and *ASME BPVC Section V (NDT) and IX (welding qualification)*.

## 2. What the OpsPilot module does

Role	Responsibility
<b>AI Coach — QA/QC Engineer (OpsPilot)</b>	Builds a defensible ITP line by line — each with the inspection point, timing, responsible party, acceptance criterion, record format and the H/W/S/R intervention notation — to the applicable fabrication and NDT standards.
<b>QA / Project / Fabrication Lead (you)</b>	Provide the scope, the applicable codes, the fabrication sequence and the owner's witness/hold preferences — and you agree the plan with the fabricator.

## 3. What you will be asked — have this ready

- What's being fabricated or constructed, and the applicable codes/standards.
- The fabrication and inspection sequence (material receipt, fit-up, welding, NDT, testing, coating, final).

- The acceptance criteria for each check (the code clause or spec).
- Which points the owner wants as Hold or Witness.

## 4. The H / W / S / R notation

Code	Meaning
H — Hold	Work cannot proceed past this point until the inspection is done and signed. Used for checkpoints that later work would conceal.
W — Witness	The party should attend and observe, but work may proceed if they don't (with notice).
S — Surveillance	Random or periodic check, not every instance.
R — Review	Document/record review only — no physical attendance.

## 5. What you receive — the output

A complete Inspection & Test Plan (Word): a line for every quality checkpoint with the what / when / who / acceptance criterion / record, and the H/W/S/R intervention notation — the agreed quality contract for the job.

## 6. Worked example (illustrative)

Fabricating a pressure pipe spool. The ITP lines include: material receipt (Review of mill certs), fit-up inspection (Witness), root pass and final weld visual (per ISO 17637, acceptance to the code), NDT — radiography on a defined percentage of welds (Hold, because a pressure test later would conceal a buried defect), hydrotest (Hold, owner witnesses), and coating (Surveillance). The radiography line is a Hold precisely because once the spool is hydrotested and coated, you can't easily re-examine the weld — so the inspection must happen, and be signed, before work moves on. Every line names the acceptance criterion (the code clause) and the record, so at handover there's a complete, agreed quality dossier and no arguments.

## 7. Getting the best result

- **Place Hold points where later work conceals.** If a defect would be buried, it's a Hold.
- **Cite the acceptance criterion.** “Inspect weld” is meaningless without the code clause it's accepted against.
- **Agree it before fabrication.** The ITP's value is settling who attends what, in advance.
- **Don't over-Hold.** Too many Hold points stall the job waiting for inspectors — reserve them for the checks that matter.

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