

OpsPilot

Technical Specification Writer — User Manual

Vendor-Ready Specifications · IOGP JIP33 · AI Engineering Co-Pilot

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What this guide covers — what a technical specification is, how the OpsPilot module builds a vendor-ready one, what to have ready, and the document you receive.

1. What is a technical specification?



A technical specification tells a vendor exactly what to supply — precisely enough that two vendors quoting against it offer the same thing, and precisely enough that what arrives is what you needed. Vague specifications are the root of procurement disputes: “suitable for the duty” means one thing to you and another to the lowest bidder, and the gap shows up as a pump that can’t make rated head or a vessel in the wrong material.

OpsPilot builds to the *IOGP JIP33 four-document architecture* — the model the supermajors and large miners use — and forces precision: it routes on equipment type to pick the correct parent standard (API 610, ASME VIII, IEC 60076 and so on), and requires Min / Normal / Rated / Max for every variable.

2. The JIP33 four-document structure

Part	What it specifies
A — Supplementary Specification (SS)	The technical requirements over and above the parent standard.
B — Information Requirements (IRS)	What information the vendor must supply (and when).
C — Quality Requirements (QRS)	The inspection, test and quality requirements.
D — Procurement Data Sheet (PDS)	The project-specific data filled in for this order.

3. What the OpsPilot module does

Role	Responsibility
 AI Coach (OpsPilot)	Builds the four-document JIP33 specification, routes on equipment type to the correct parent standard, forces precision on materials and parameters, and requires Min/Normal/Rated/Max for every variable.
 Engineering / Procurement Lead (you)	Provide the project-specific data — process and site conditions, materials selections, performance guarantees and commercial requirements. You make the engineering decisions; OpsPilot structures them into a defensible specification.

4. What you will be asked — have this ready

- The equipment type (so the correct parent standard is selected).
- The process and site conditions, with Min/Normal/Rated/Max for each variable.
- The materials selections and performance guarantees.
- The commercial and information requirements.

5. What you receive — the output

A complete, vendor-ready Technical Specification (Word): Parts A (Supplementary Specification), B (Information Requirements), C (Quality Requirements) and D (Procurement Data Sheet), plus a blank compliance matrix for vendors to respond against.

6. Worked example (illustrative)

Specifying a centrifugal pump. OpsPilot routes to API 610 as the parent standard, then layers the supplementary requirements on top. It won't accept "flow: about 200 m³/h" — it requires the rated point plus the min, normal and max, because a pump selected on a single number runs badly at the ends of its real operating range. Materials are pinned down (not "suitable for the service" but the actual metallurgy for the fluid), the quality requirements set what's inspected and tested, and the data sheet captures the project specifics. The blank compliance matrix means every vendor responds line-by-line, so you can compare bids on a like-for-like basis instead of refereeing four differently-worded proposals.

7. Getting the best result

- **Give the full range.** Min/Normal/Rated/Max — a single number specifies a machine that's wrong at the extremes.
- **Pin down materials.** "Suitable for the service" is where the cheap, wrong metallurgy gets in.
- **Use the compliance matrix.** Line-by-line vendor responses make bids genuinely comparable.
- **Let it pick the parent standard.** The right base standard does most of the specifying for you.

OpsPilot — AI Engineering Co-Pilot. Learn more at opsinnovatech.com