

Engineering Technologist interview questions

careers.com.au: common questions and what they're really testing

What to expect

Engineering Technologist interviews sit between an engineering interview and a trade or site-based one. Employers want to see that you can produce accurate design documentation, test and commission real equipment, and hold your ground on standards and safety when a project is under time pressure.

- **Technical and design:** Questions about CAD work, tolerances, materials, calculations and how you verify that a design actually works in the field.
- **Process and project delivery:** Walk-throughs of how you take a design from concept to issued drawings, and how you track cost, scope and inspection records.
- **Behavioural:** Past examples of solving technical problems, catching errors others missed, or working with trades and contractors.
- **Safety and compliance:** How you identify hazards on site, apply AS/NZS standards and WHS requirements, and handle non-conformances.
- **Scenario and judgement:** Situations where cost, schedule and compliance pull against each other and you have to decide and defend a position.
- **Stakeholder communication:** Explaining technical detail to clients, project managers or suppliers who are not engineers.

Usually two stages. The first is a conversation with the engineering manager or technical lead covering your background, software proficiency and one or two design or commissioning scenarios, often with a drawing or calculation exercise. The second, for site-based roles, is a walk-through of a plant or project with the supervisor and a safety representative, where you talk through what you would inspect and how you would document it. Expect follow-up questions that test whether your answers hold up under detail.

1. Walk me through how you take a concept design through to issued drawings.

Why they ask

This is the core of the role, and the interviewer wants to see a repeatable process rather than a one-off success story.

How to structure your answer

Use a sequence structure: brief and constraints, concept options, calculations and modelling, drafting and checking, review and approval, then revision control after issue. Name the software and the checking steps at each stage.

Example answer

"I start with the brief and the constraints, which usually means talking to the engineer, the client and whoever will build it. From there I sketch two or three concept options and run the basic calculations in MATLAB or by hand to see which ones are viable. Once we agree on a direction, I model it in SolidWorks and produce the detail drawings in AutoCAD, including tolerances, materials and finishes. Before anything is issued I have a colleague check it against the specification and the relevant standard, and I record that check. After issue, any change goes through a revision number with a note on what changed and why, so the workshop is never working from an old drawing."

2. Tell me about a time you identified a technical problem on site that others had missed.

Why they ask

It tests attention to detail, whether you speak up, and whether you follow a problem through to a fix rather than noting it and moving on.

How to structure your answer

Use STAR. Keep the situation and task brief, spend most of your answer on what you actually did, and finish with the outcome and what you changed in your own practice.

Example answer

"We were commissioning a pump set at a treatment plant and the readings were within range, but the vibration felt wrong to me on startup. I asked for the run to be paused and checked the alignment against the installation drawings. The baseplate had been grouted slightly out of level, which was putting load on the coupling. I documented it with photos and measurements, raised a non-conformance, and worked with the fitter and the contractor to have the baseplate corrected before the system was signed off. It added two days to the program, but it avoided a coupling failure once the plant went into continuous operation. Now I always check baseplate level and alignment myself rather than relying on the commissioning certificate."

3. You inspect an installation and find it doesn't meet the specified standard. The contractor says fixing it will delay handover. What do you do?

Why they ask

It puts compliance against schedule pressure, which is the daily reality of inspection and commissioning work.

How to structure your answer

Use a judgement-under-pressure structure: establish the facts, assess the risk, decide and communicate, then escalate and document. Show you can be firm without being difficult.

Example answer

"First I'd confirm the facts, recheck the standard and the specification so I'm certain about what's actually required rather than relying on memory. Then I'd assess how serious the gap is. If it's a safety issue or something that would fail at audit, it has to be fixed before handover, and I'd say that plainly and explain the consequences of leaving it. If it's minor and doesn't affect safety or function, I'd look at whether it can be rectified during the defects period with a written commitment. Either way I'd put it in the inspection report with photos and a clear description, tell the project manager the same day, and follow up until it's closed out. Delays are a commercial problem, not a reason to accept non-compliant work."

4. How do you approach a tolerance or fit problem where the parts aren't going together as designed?

Why they ask

Employers want to know you can diagnose a real manufacturing or assembly problem with a method, not by trial and error.

How to structure your answer

Use a diagnostic structure: measure and confirm, isolate the source, check against the drawing and standard, then choose between rework and design change. Mention verification after the fix.

Example answer

"I'd start by measuring the actual parts and comparing them to the drawing, because the problem is often in manufacture rather than design. Then I'd narrow down where the variation is coming from, whether it's the machining, the material, the assembly method or an unrealistic tolerance in the first place. If the parts are out of specification, it's a quality issue and the supplier or fabricator needs to correct it. If the tolerance itself is too tight for the process being used, that's a design change, and I'd work with the engineer on a revised tolerance that still meets function, then document it through a drawing revision. After the change I'd check the next batch to confirm the fit is consistent, not just fix

the one unit in front of me."

5. How do you manage safety when you're on site commissioning equipment?

Why they ask

Site work carries real risk, and the interviewer needs to hear that safety is part of how you plan the job, not a form you sign at the gate.

How to structure your answer

Use a hazard-control structure: prepare before you go, identify and control on arrival, work within permits and isolation procedures, then review and report.

Example answer

"Before I go to site I read the SWMS and the commissioning plan so I know what's energised, what's isolated and who else is working in the area. On arrival I do a walk-through with the supervisor, check the isolation and lockout arrangements, and confirm the area is clear before anything starts. During commissioning I keep the test area controlled, communicate before each energisation, and stop the job if anything changes. If I see a hazard that wasn't in the plan, I raise it and get it controlled before continuing. Afterwards I record the test results and any incidents or near misses, because that's what keeps the next commissioning safer."

6. Describe how you would explain a technical issue to a client who isn't an engineer.

Why they ask

Technologists are often the bridge between the technical team and the client, and this question tests whether you can translate without oversimplifying or hiding risk.

How to structure your answer

Use a translate, options, agree structure: plain description of the problem, why it matters to them, the options with their trade-offs, and a recommendation. Avoid jargon and avoid burying the cost or program impact.

Example answer

"I'd start with what the issue actually means for them, in plain terms, rather than the technical detail. For example, I'd say the support structure is corroding faster than expected in that environment and if we leave it, it will need replacing within a few years. Then I'd set out the options: repair it now, change the material specification, or monitor it and plan replacement later. I'd explain what each option means for cost, downtime and durability, and give a clear recommendation with my reasoning. I'd send a short written summary after the meeting so there's a record of what was agreed, and I'd check in a few days later to confirm they're comfortable with the decision."