Factory acceptance test methodology

A defined factory hold point, witnessed against the buyer's specification and test protocol

What this methodology covers

A factory acceptance test checks equipment against an agreed test protocol before dispatch. Its performance and functional tests complement production controls and the shipment-readiness checks of a pre-shipment inspection. The proposal names the equipment, serial or batch population, protocol, acceptance criteria, witness points, instruments, evidence, reporting deadline and decision authority.

Assignment boundary

Buyer-direct assignment	Sinospect attends independently of the factory and reports to the buyer. Where accredited work is required, the proposal names the accredited body and its specific duty.
Sinospect-supplied order	The FAT is Sinospect's own factory-side quality control under its supply contract. The buyer's acceptance authority remains as stated in the contract.
Release authority	Sinospect reports its recommendation. For its own supply orders, it releases the factory's final balance after the agreed QC or FAT passes; deposits and verified milestones follow the order terms. The buyer retains final acceptance, with any specific delegated authority recorded in the signed scope.

Minimum inputs before travel

- Purchase order, specification and approved datasheets
- Approved drawings, bill of materials and deviations
- Inspection and test plan, FAT procedure and acceptance limits
- Equipment identity, serial-number plan and test population
- Instrument list and calibration evidence
- Open technical queries and prior non-conformities

The specification and supplier proposal provide the starting point for drafting the witness scope. Travel follows confirmation that the test is ready to produce the agreed evidence.

1. Readiness review

- Reconcile the FAT procedure against the order, specification, approved drawings and ITP.
- Classify each declared test as routine, type, special, functional or performance testing.
- Confirm the shipping unit or defined sample will be the object tested.
- Resolve missing criteria, substituted conditions, simulations and blocked tests before the visit where possible.
- Check the instrument identity, range, accuracy and calibration status required for each acceptance value.
- Issue a readiness status: ready, ready with recorded limitations, or not ready.

2. Witnessed execution

- Record the exact equipment identity, nameplate and test configuration.
- Witness the agreed sequence and log measured values against the stated limits.
- Capture instrument references, settings, times, alarms, trips and test interruptions as they occur.
- Distinguish values read independently from values copied from supplier records.
- Record simulations, unavailable tests, representative-unit tests and deviations, including their effect on the result.
- Keep a traceable photo and document index tied to the test steps and findings.

The deliverable identifies the equipment tested, the test conditions, the acceptance criterion and the recorded result.

3. Findings, correction and retest

Every deviation is linked to the governing requirement and given a clear disposition. Severity sets the correction priority; the contract identifies the party authorised to accept the result.

Hold	Release remains on hold pending the required correction, test or evidence against the agreed criteria.
Retest	Correction changes the tested object or test basis and the affected test must be repeated.
Conditional carry-forward	An open item is visible, bounded and accepted in writing by the authorised buyer party.
Closed	Correction and the required evidence or witnessed retest have been verified.

- Retain original and post-correction results in the audit trail.
- Keep each failed run alongside the corresponding correction and final test result.
- Record supplier response, responsible party, deadline and closure evidence.
- Escalate safety, functional or identity failures immediately under the agreed communication plan.

4. Written recommendation

The report states release, hold, retest or a documented conditional path. It identifies open items, their consequence and who has authority to accept them. The signed supplier protocol accompanies Sinospect's own witness record as source evidence.

Report contents

- Assignment scope, date, factory, attendees and equipment identity
- Documents and revisions used as the test basis
- Test sequence, conditions, instruments and measured results
- Requirement-to-result matrix with pass, fail, blocked or not-applicable status
- Finding register, supplier response, correction and retest trail
- Photo and evidence index linked to serial numbers and test steps
- Open-item register and explicit release, hold or retest recommendation

Scope adapts to the equipment

- Transformers and switchgear: routine electrical tests, PD or temperature rise where specified, protection and accessory function
- Machines and production lines: safety, interlocks, sequences, cycle performance and output against an agreed trial
- Process and hygienic equipment: product-contact materials, cleaning, pressure, temperature and performance criteria
- Multi-factory packages: one master vocabulary and evidence standard, with separate identity and disposition for each site or call-off

Start with the files you have

Send the specification, supplier quotation, FAT procedure or ITP to jk@sinospect.com. Sinospect acknowledges the request within one business day. When the file is sufficient, it provides the initial written scope and quotation within two business days; otherwise it identifies the missing information.