

Generic Commissioning Process

This document takes you through the generic key steps associated with commissioning

FAT and equipment release

Commissioning begins onshore with commissioning engineers attending key factory acceptance tests (FATs) in order to familiarize themselves with the equipment and directly obtain any required commissioning clarifications from the suppliers' personnel. Activities that commissioning engineers may participate in include:

- Witness inspection and testing.
- Update and agree outstanding work list.
- Review vendor dossier and manuals.
- Review Inspection Release Notes (IRN).
- Complete verification of equipment functionality.
- Ensure compliance with specifications.

Construction

This covers construction completion, non-energised inspection, and testing carried out by the construction team. Specific tasks include:

- Inspect and check installed items.
- Complete polarity and loop checks.
- Complete hydro-testing.
- Complete cold alignments.
- Carry out flange management.
- Commence preservation of equipment.
- Prepare initial punch lists.

Pre-commissioning

Pre-commissioning, also known as function testing, is when the commissioning team carries out point-to-point wiring checks (such as loop tests) to confirm electrical connections are correct. Once this point-to-point checking is carried out, the commissioning team will power up individual loops and check that the control logic is operating as expected per cause and effects.

Specific activities during pre-commissioning include:

- Update and agree upon punch lists.
- Clean, flush, and drain pipework and vessels.
- Chemical cleaning.
- Energised equipment checks.
- Carry out Motor no-load runs.
- Final equipment alignment.
- Complete loop and function testing.
- Test control system interface.

Commissioning

The objective of the commissioning stage is to get the system/s to a state ready for start-up by operations. If pre-commissioning procedures and checks have been rigorously prepared and implemented, this should be relatively trouble-free. At this point, any design or construction issues will also become evident and have to be addressed.

Activities during the commissioning stage includes:

- Update/ and agree upon punch list.
- Conduct site integration testing.
- Check cause and effects.
- Perform leak testing.
- Complete media fills.
- Close outstanding technical queries.
- Pre-start-up audit.

Start-up and provisional operations acceptance

This is the “fun” bit where the system will be powered up, and hydrocarbons or other fluids/gases are introduced. Operations are responsible for starting up the equipment and introducing hydrocarbons etc. and they will be supported by the commissioning team during this period who will assist with any necessary adjustments or emergent issues. Operations will take provisional acceptance of the system at this stage.

Activities include:

- Reliability run tests.
- Conduct live ESD testing.
- Perform capacity tests.
- Complete the punch lists.
- Complete “as built” surveys.
- Make “red line” drawings available.