

# Precommissioning checklist

Pre-commissioning checks and tests are performed during and after construction. The pre-commissioning checklist below is general in nature and may need to be adapted to the scope of the project.

ACTIVITY DESCRIPTION	Yes	No	Comments
<b>ELECTRICAL</b>			
Check condition of equipment, quality of installation, compliance with project drawings, manufacturer's instructions, and safety rules and specifications.			
Perform preliminary tests with equipment de-energised, including...			
Insulation resistance measurements			
Di-electrical strength tests			
Loops and circuits continuity tests			
Earthing resistance measurements			
Carry out breakdown test of oil samples, and fill transformers with oil and			
Fill batteries with electrolyte.			
<b>INSTRUMENTATION</b>			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturer instructions, safety rules specifications.			
Remove in-line instruments before hydraulic tests.			
Carry out preliminary cleaning of hydraulic tubing lines and check the cleanliness conformity.			
Air Sub-header flushing			
Perform required pressure tests on...			
Instrument take-off piping			
Air piping			
Air tubing			
Hydraulic tubing			
Reinstall instruments after pressure tests and flushing of the process lines.			
Calibrate all instruments other than F & G detectors prior to installation			
Check continuity of transmission and identification of indication, control and alarm signals.			
Perform continuity and insulation tests for instrument cables.			
Perform continuity and tightness tests for pneumatic tubing.			
Install sealing fluids where required			
Checking of the earthing network			
<b>PIPING</b>			
Check quality of equipment, quality of installation, and compliance with Project drawings, manufacturers instructions, safety rules, specifications (painting and insulation needed). Verify especially gaskets and bolt types.			
Produce NDT clearance (Contractor QC activity)			
Carry out water or air flushing operations of piping.			
Carry out preliminary cleaning and hydrostatic testing of pipes.			

Remove all temporary supports, protections, bracing, and sea fastening stops, which were installed to prevent equipment damage during shipping, storage and erection.			
Alleviate any excess piping stresses that may be imposed on pipes, compressors or pump flanges.			
Provide and install all strainers, both temporary and permanent, spectacle blinds and temporary blanks.			
Check packing and packing materials and lubrication of valves; repack and lubricate if necessary.			
Supply and install line identification tags and signs, stencil lines for identification.			
Set or check pipe anchors, guides, spring hangers and supports after hydrotest. Provide cold and hot setting data.			
Install safety valves or temporary spool pieces during construction.			
Remove as necessary and transport all safety valves to and from test facilities.			
Test, set and tag all safety valves, then carry out safety valves final installation.			
Supply car seals or locking devices for block valves and safety equipment.			
Carryout leak test of shutdown valves.			
<b>VESSELS</b>			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturer instructions, safety rules specifications.			
Clean all vessels internally.			
Carry out vessels final inspection.			
Properly close up all vessel internal manways and openings after final inspection or after loading of chemicals, catalysts, etc. is completed.			
<b>TANKAGE</b>			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturer instructions, safety rules specifications.			
Install appurtenances.			
Clean inside tank.			
Carry out tank final inspection.			
Close manways			
<b>PUMPS</b>			
Check condition of equipment, quality of installation, and compliance with project drawings, manufacturer instructions, safety rules specifications.			
Set and cold align pumps and drivers			
Couple pumps to drivers			
Install temporary strainers			
Check that piston seal packaging followers, if any are correctly tightened.			
If discharge flow dampers are fitted (normally nitrogen filled bladder type) check these are correctly charged and installed.			
<b>COMPRESSORS</b>			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturer instructions, safety rules specifications.			
Install all piping and make piping corrections as required by manufacturer's tolerances. Set and cold align units.			
<b>DIESEL ENGINES</b>			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturer instructions, safety rules specifications.			

Set and cold align units			
Clean lube oil piping			
Fill lube oil system			
<b>LIFTING EQUIPMENT</b>			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturers instructions, safety rules, specifications			
<b>HVAC EQUIPMENT</b>			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturer instructions, safety rules specifications.			
Check alignment of motors/ fans and drivers.			
Check that tensions on drivers are correct.			
Check that fans and motors rotate manually and run freely.			
Check that anti-vibration mountings are correctly installed.			
Check that sealing compound of fire dampers is installed correctly			
Check that linkage and blades of dampers operate correctly and freely.			
Check that airflow direction in pre heaters is correct.			
<b>LIFE SAVING EQUIPMENT, LIFEBOATS AND LIFERAFTS</b>			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturer instructions, safety rules specifications.			
Check especially that lifeboat, Liferaft, Life Buoys, and Lifejacket certification and shop testing conform and agree to offshore regulations and are acceptable to the applicable legislation.			
Check that all lifeboat and Liferaft survival equipment has been installed i.e. radio, tools, spare parts, lamp, and emergency radio beacon.			
Check that all lifeboat and Liferaft instructions for use are clearly marked.			
Check that all Liferaft painter line is attached to a strong part of the installation and has an adequate length.			
Check launching apparatus.			
Check that the lifeboat security belt has been installed and hammer is ready to use (if using this system).			
Check Life Buoys storage locations.			
Check Life Jackets storage locations within individual cabins and on decks and that they are clearly marked.			
Check that all Escape Routes signs are clearly marked to indicate escape ways and muster points (such as arrows, numbers, display boards and routes).			
Check that escape ways are safe and secure.			
<b>ALL FIRE FIGHTING EQUIPMENT</b>			
Check storage locations of all extinguishers			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturers instructions, safety rules, specifications			
<b>TELEPHONES</b>			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturers instructions, safety rules, specifications			
Check especially that EX equipment has been installed in classified areas			
<b>PUBLIC ADDRESS</b>			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturers			

instructions, safety rules, specifications			
<b>BUILDINGS</b>			
Check condition of equipment, quality of installation, and compliance with Project drawings, manufacturers instructions, safety, rules, specifications			
<b>DRAWINGS &amp; DOCUMENTATION</b>			
Compile Pre-Commissioning Dossiers			
Red line Mark up on relevant Discipline Key Drawings			
Red line Mark up on relevant Vendor's Drawings			

Example - Precommissioning checklist