

Facilities Commissioning and Turnover

SAQGulf experience in Commissioning and its well established consultant data base encourage us to give very details description of the process. Commissioning is very critical part of any project and it needs a very serious effort from the beginning.

In addition, Commissioning is a complete project life effort. A good commissioning starts with a good plan. It starts as early as the engineering phase and continues until performance test are successfully concluded and facilities are completely turned over to the end user including all punch list items are cleared , all project documents & manuals, procedures and drawings are finalized and submitted to client.

Below is details description of Scope of Services for Commissioning Team through project life cycle.

1. Project Enquiry / Tender Phase

Sub-Contractor will prepare the Commissioning & Start-up Commercial input during tender stage:

- Estimated Man-hours for the preparation & Execution
- Estimated Man-power for the preparation & Execution
- Requirement, tools, consumables, Spares parts, temporaries, etc...

2. Project Detailed Engineering Phase

Sub-Contractor will review and comments the following Engineering Deliverables:

- P&ID's, PFD's, UFD's
- Reviews the 3D Model for compliance with the pre-commissioning, commissioning and start up requirements and for accessibility & operability
- Recommended changes to P&ID's for commissioning & Start-up requirement

3. Commissioning Technical Preparation Phase

Sub-Contractor will prepare also during Engineering Stage all following Commissioning Deliverables:

- Responsible for performing technically correct commissioning procedures safely and within the deadlines, including the Q-records, as defined in the I&T program and I&T plans and within the defined time and cost frame
- Prepare Pre-commissioning & Commissioning Manual/Strategy and guidelines & Start up Execution plan for the project
- Definition of process systems pre-commissioning and commissioning scope within the sub-systems
- Establishing an organized critical path analysis for competent start-up and commissioning process

4. Start-up Technical Preparation Phase

Sub-Contractor will prepare also during Engineering Stage all following Start-up Deliverables:

- Develop Start-up Strategy / Guidelines
- Establish Start up Execution plan & Start-up & Safety dossier
- Prepare / Write / Approve the start-up procedures of the different system/equipment of the new facilities
- Develop Shutdown testing procedures (Different level)

5. Project Procurement Phase

Sub-Contractor will attend the Equipment's Factory Acceptance Test (FAT) :

- Review / Comments the Factory Acceptance Test procedures
- Inspection and conformity check of equipment @ vendor shop
- Witnessing of the equipment performance test at Vendor shop
- Issue FAT punch list (if any)
- Initial FAT report

6. Project Construction Engineering Phase

Sub-Contractor will review and approve the following Construction Engineering Deliverables:

- Input into construction and pre commissioning schedules (to fit with commissioning sequence)
- Review & Approve the construction / pre-commissioning schedule Review
- Approve the hydrotest procedure and the test packages
- Establish/Review & Approve the flushing & Blowing procedures
- Review & Approve the Air Gross Leak test procedure & packages

7. Project Construction & Pre-commissioning Execution Phase

Sub-Contractor will review and approve the following Construction Execution (Mechanical Completion) :

- Accept & Approve the pre-commissioning to achieve mechanical Completion (RFC) on a sub-system basis
- Monitor progress of the Pre-commissioning activities and advise Construction team the correcting actions
- Monitor the Categorization of the Mechanical Completion punch list items and Monitor the PL clearance
- Responsible person to accept the Mechanical Completion of the various Plant systems / subsystems

8. Project Commissioning Execution phase

Sub-Contractor will Execute & Manage & Supervise the following Commissioning Activities (onshore & offshore):

- Set up, Organize, Control and Manage Commissioning activities
- Perform / Supervise / Manage all commissioning activities (E&I Testing, OTP execution, N2 or N2He high pressure Leak Test, Chemical loading, chemical cleaning etc...)
- Approval the punch list activities and control of punch list items including clearance of punch list items
- Responsible person to issue Test-runs results and testing / performance reports within the framework of the relevant Engineering processes