



Construction Management for the Project Professional

Potential PDH: 24

Description:

This course is designed for project managers, project engineers, facilities engineers, construction managers, discipline engineers, operations staff, and all disciplines that work on integrated project teams for onshore and offshore projects. This course addresses the skills necessary to interface with and effectively manage field construction. While construction projects are addressed, the Project Engineer that must manage engineering, procurement, and especially field construction will find the course particularly useful. The course addresses how to effectively manage field construction to deliver the project on time and on budget.

While many projects do front end loading effectively, projects ultimately fail due to poor execution or engineering/construction. With a focus on construction the course provides the tools necessary to establish the proper field organization to manage engineering and procurement, which are two key inputs to construction success.

The case study focuses on a construction project that is challenged in the field (due to prior poor decisions) that the Project Leader must address to be successful. Exercises, the case study, and class discussions provide learnings that the participant can immediately apply upon returning to work.

You will learn:

- How the construction schedule should drive engineering and not vice versa.
- How to use the "Path of Construction" to drive project success.
- What a day in the life of an effective Construction Manager looks like.
- How to manage the construction contractor and influence their field supervisors to deliver a successful project.
- Methods to establish the appropriate Owner's construction team given the construction strategy and construction challenges to ensure a successful project.
- How to interface with the home office and engineering contractor to ensure field Requests for information, engineering drawings, timing of material delivery, etc. support project success.
- How to use a three week look ahead schedule and the daily craft foreman's work plan to ensure the project stays on schedule.
- Root causes of poor craft field productivity and what the Owner can do to improve productivity to support aggressive project cost and schedule targets.
- How to select the right construction strategy given the overall project contracting strategy (e.g. what work should be subcontracted out, what work should the general contractor do via direct hire, what is the Owner's role in the field construction organization, etc.).



- The “Fatal Four” issues associated with construction personal safety.
- How to use field project controls and progress monitoring to ascertain construction areas that are challenged and require immediate attention.
- Methods to manage the contractor to minimize construction claims and how to handle a claim once it occurs.

Outline:

- The role that construction management plays during FEED and Detailed Engineering to support success in the field.
- Field project controls, earned value, buildup of field indirect charges, determination of “all in” field labor costs, etc.
- Temporary construction facilities, construction infrastructure, field equipment, etc. and the role they play in construction success.
- Key components of a Construction Execution Plan and how Project Leaders and Construction Managers can use it to ensure engineering and procurement support the field effort.
- Major components of a Construction Field Procedures Manual and how Construction and Project Managers can use it to avoid rework and effectively organize the construction effort.
- Advanced Work Packaging and how it effectively integrates material, engineering, field labor, scaffolding, and equipment to keep the project on schedule.
- Methods to ensure field staff support the Project Leader to deliver a successful project (Field Superintendent, Craft Foreman, Field Engineering Staff, and Administrative Staff).
- Contract types, contractor selection, and effective contractor management.
- Managing the construction claim process.
- The importance of a structured, field construction communications plan to ensure project controls, engineering, and procurement support field construction.
- Utilizing an effective field construction contractor selection process including review of RFQ’s, contractor interviews, etc.
- How to effectively conduct a constructability review with the Owner and Contractor.

Subject Matter Expert (SME):

Pieter ‘Pete’ Luan is a seasoned expert with over 30 years of experience in management consulting, project management, and project consulting within the petrochemical and energy industries. He has served as a project consultant on major initiatives, including three petrochemical megaprojects totaling \$15 billion and a \$6 billion refinery expansion, where he led peer reviews, gate-clearing processes, and constructability and execution planning sessions. Pete has collaborated with senior management to enhance the predictability of brownfield projects, focusing on front-end planning, risk management, contracting strategies, and governance to ensure project success.



As a dedicated educator and leader, Pete has developed and delivered courses on project controls, risk management, and project delivery systems. He has also facilitated workshops on enterprise capital risks, executive alignment, and project governance. Holding both Bachelor's and Master's degrees in Mechanical Engineering from **Rice University**, Pete combines technical expertise with practical experience to help professionals optimize project outcomes, improve performance metrics, and mitigate risks effectively.

