EPC Contracts Training Course: Risk Allocation, Variations, Delay and Liquidated Damages

15 – 19 February 2027
New York

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Programme Summary

EPC contracts are the subject of this one-week training course for contract directors, commercial managers and project directors at managerial level, ending in an EPC contract review file for one project. Risk, variations and delay under a lump-sum turnkey contract often reach dispute because obligations and records were unclear. The programme moves from risk allocation to price and programme duties, change, delay, liquidated damages and claims, then a full file review. Mars Training Centre UK delivers this programme on EPC contracts to mixed-organisation cohorts.

The Business Case

Under an engineering, procurement and construction contract, one party takes most of the delivery risk for a fixed price. When responsibilities are read loosely, notices are late and change is agreed informally, margins erode and disputes follow. Leaders who can read the allocation of risk and control the contract record protect both cost and relationships.

- Cost Overrun Exposure: Falls as risk allocation and price build-up are tested before and during delivery.
- Dispute Frequency: Reduces as notices, variations and delay records follow agreed routes.
- Claim Recovery: Improves as entitlement to time and money is evidenced within contract periods.

Principles and Evidence Base

- FIDIC Silver Book EPC/Turnkey Projects: Provides the standard allocation of design, price and programme risk to the contractor, used in Sessions 1, 2 and 5.
- Risk Allocation Principles: Tests whether each risk sits with the party best able to control or insure it, used in Session 1.
- Delay and Extension of Time Analysis: Separates employer-caused, contractor-caused and concurrent delay against the programme, used in Session 4.
- Contract Change Control: Records trigger, instruction, valuation and approval for every change, used in Session 3.

Intended Participants

- Contract directors who negotiate turnkey terms and approve risk positions.
- Commercial managers who administer variations, payments and claims during delivery.
- Project directors who answer for programme, cost and handover on lump-sum projects.
- Legal and procurement advisers who review contract documents before signature.
- Employer representatives who instruct changes and assess contractor entitlement.

Typical settings include power generation, oil and gas facilities, water treatment and transport infrastructure.

Learning Outcomes

1. Participants will be able to evaluate the allocation of design, price and programme risk in an EPC contract.
2. Participants will be able to construct a payment and obligations schedule that links milestones to deliverables.
3. Participants will be able to diagnose whether an event is a variation and how it should be valued.
4. Participants will be able to assess delay events and extension of time entitlement against the programme.
5. Participants will be able to calculate liquidated damages exposure and the limits that apply.
6. Participants will be able to justify a negotiation or administration position using an EPC contract review file.

Programme Structure

Day 1: EPC Contracts: Structure and Risk Allocation

Who carries which risk under a lump-sum turnkey contract?

- Turnkey Responsibility Map
- FIDIC Silver Book Risk Allocation Review
- Employer Requirements Clarity Check
- Contractor Design Responsibility Matrix
- Unforeseen Conditions Risk Register

Day 2: Price, Programme and Payment Obligations

What must the contractor deliver, by when, and for what payment?

- Lump Sum Price Build-Up Review
- Milestone Payment Schedule
- Programme Obligation Checklist
- Interface Between Engineering, Procurement and Construction
- Securities and Guarantees Summary

Day 3: Variations and Change Control

How are changes identified, priced and agreed?

- Variation Trigger Test
- Change Notice and Quotation Template
- Valuation of Variations Worksheet
- Employer Instruction Log
- Change Approval Route Map

Day 4: Delay, Liquidated Damages and Claims

How is delay assessed, and how do damages and claims follow?

- Notice and Time Bar Tracker
- Extension of Time Assessment
- Concurrent Delay Analysis Table
- Liquidated Damages Exposure Calculation
- Claim Submission Review Sheet

Day 5: EPC Contract Review File for One Project

Do the earlier tools form one EPC contract review file that supports a negotiation or administration decision?

- Applying the Session 1 Turnkey Responsibility Map
- Testing the Session 2 Milestone Payment Schedule
- Reviewing the Session 3 Variation Valuation Worksheet
- Checking the Session 4 Liquidated Damages Exposure Calculation
- Completing the EPC Contract Review File

Methodology

The programme uses case analysis built on a prepared contract extract for one power project and one process plant, each with a lump-sum price, a programme, correspondence and a set of change requests. Participants work through the extract in small groups, take a party's position and test it against the contract terms.

- Suggested activity: Mapping responsibility for a design error between employer and contractor.
- Suggested activity: Valuing a disputed variation from a quotation and records.
- Suggested activity: Building an extension of time case from a delay event log.

Capstone Output

Each participant completes an EPC contract review file for one project. It holds a responsibility map, a payment schedule, a variation valuation, a delay and liquidated damages calculation and a position statement. The file is used at work to prepare a negotiation, brief a project board and support or answer a claim.

Frequently Asked Questions

Is an EPC contracts course suitable for leaders who have not negotiated turnkey contracts before?

Yes. EPC contracts are taught through a contract extract and templates. It assumes experience of contracts, commercial or project work, but no earlier role negotiating or administering a lump-sum turnkey contract.

Which standard do EPC contracts in this programme rest on?

EPC contracts here rest on the FIDIC Silver Book for EPC and turnkey projects, together with general principles of risk allocation, extension of time analysis and change control.

How is the file from EPC contracts review used at work?

You use the EPC contract review file to prepare a negotiation, brief a project board and support or respond to a claim for time or money.

How do EPC contracts differ from a general construction contract management programme?

EPC contracts place design, price and programme risk on the contractor under a lump sum, while general construction contract management also covers admeasured and employer-designed forms.