

工程產業全球化人才實務培訓班

國際統包工程契約與架構

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簡報大綱

- 國際統包契約簡介
- **FIDIC**系列與國際統包契約範本
- 重要契約原理
- 重要契約名詞
- 統包契約架構與內容

What is an EPC Contract

- An EPC contract contains provisions describing all responsibilities and guarantees associated with the built facility's plant performance, project schedule, plant warranty, and project completion.

Project Delivery Method

- Design-Bid-Build
- Design-Build
- EPC (Turnkey)
- Construction Management
- DBO
- BOT

Pricing of Contract

- Lump Sum
- Cost Reimbursement
- Unit Price
- Hybrid

Characteristics of EPC Contract

- Lump-Sum Based
- Project Financing Concerns
- Fast-tracking
- Value Engineering
- Cost of Risk

Issues in Lump-Sum EPC

- Scope of Work
- PMC's Role
- Price Adjustments
- Extension of Time
- Employer's Design Responsibility
- Definition of Completion
- Defects Liability

1999 FIDIC Series

- FIDIC Contract Documents
 - General Conditions
 - Particular Conditions
 - Tendering, Contract Form, DAB
- 1999 Series
 - 1999 Red Book (Construction Only)
 - 1999 Yellow Book (Design-Build)
 - 1999 Silver Book (EPC)
 - 1999 Green Book (Simple Construction)

Similar EPC Contracts

- ENAA Model Form Int'l Contract, 1992
- ICE Design & Construct, 2001
- DBIA, 1998
- AIA A191, 1996
- AGC 415, 1994
- EIC Contract, 1994
- FIDIC Orange Book, 1995
- FIDIC Yellow Book, 1999

Structure of EPC Contract

- Part I: Form of Contract
- Part II: General Conditions of Contract
- Part III: Particular Conditions of XXX Project
- Part IV: Technical Requirements
- Part V: Contract Price, BOQ and Unit Price
- Part VI: Exhibits

Important Contracting Concepts

- Nomenclature
- Scope of Work
- Employer's Responsibilities
- Contractor's Responsibilities
- Independent Contractor
- Time & Liquidated Damages
- Variation
- Acceptance & Rejection

Important Contracting Concepts

- Contractor's Default
- Payment Scheme
- Title and Risk of Loss
- Suspension & Termination
- Force Majeure
- Tests on Completion
- Warranties & Guarantees
- Indemnities

Nomenclature

- Approve/Approval
- Review/Acceptance
- Base Date
- Defect notification period
- Provisional Acceptance & Final Acceptance
- Goods
- Section
- Site

Scope of Work

- Express scope of works
- Implied scope of works

Employer's Responsibilities

- Time limitation on acceptance
- Provision of drawings, documents and design data listed in the Specifications
- No responsibility for errors or discrepancies in drawings and documents, except specified circumstances
- Assistance in obtaining government permits
- Provision of access to site

Contractor's Responsibilities

- Contractor's undertaking
- Taxes, levies & duties included in pricing
- Trade secrets
- Commencement within X days of EDC
- International professional standards of skills, care and diligence
- Site safety & public safety
- Other obligations
- Contractor's representations

Independent Contractor

- One who is hired to undertake a specific project but who is left free to do the assigned work and to choose the method for accomplishing it.
- One who commits a wrong while carrying out the work does not create liability to the employer.

Time & Liquidated Damages

- Project duration by calendar days
- CPM based schedule
- No-work days
- Schedule delay
- Staged LD
- Deduction scheme of LD
- LD cap

Variation (1/2)

- Employer's sole right to vary by instruction or by request for proposal
- Contractor's duty to notify Employer of change of law
- Time limitation for equitable adjustments on variation
- Employer's right to fix provisional adjustments

Variation (2/2)

- Contractor's right to propose a VE
- Contractor's right to request for variation under specified circumstances
- Grounds for equitable adjustment in variation

Acceptance & Rejection (1/2)

- Passing inspection or testing not equal to acceptance
- Testing & inspection carried out by inspector approved by Employer
- Employer's right to direct additional testing & inspection
- Employer's right of removal & replacement
- Employer's right to suspend defective work

Acceptance & Rejection (2/2)

- Employer's right to examine covered work
- Employer's right to reject and retesting
- Contractor's duty to make good
- Acceptance of the inspect not equal to acceptance of the works
- Final acceptance on expiration of DNP
- Acceptance by deduction

Contractor's Default

- Specified types of contractor's default
- Effect of contractor's default
- Employer's remedies
- Employer's right to contractual assignment

Payment Scheme

- Advance payment by percentage
- Calculation of progress payment
- Time of making progress payment
- Causes for withholding progress payment
- Re-measured BOQ, final account and final payment

Title and Risk of Loss (1/2)

- Title as evidential basis of property right
- Examples include bill of lading, dock warrant, dock receipt, warehouse receipt or similar documentary instruments
- Risk of loss not passing to Employer until taking over
- Although the goods are identified to the contract, the risk of loss does not pass to Employer until “acceptance”

Title and Risk of Loss (2/2)

- Contractor's care of the work extends until Provisional Acceptance
- No act, deed or thing which would result in lien/charge on materials or any part of the works
- Title passes when Employer pays

Suspension & Termination (1/2)

- Contractor's duty to protect, store and secure during suspension
- Contractor's right to suspend and terminate upon unpaid work
- Employer's right to terminate for convenience

Suspension & Termination (2/2)

- Contractor's right to terminate for Employer's prolonged suspension
- Contractor's right to terminate for substantial interference by force majeure events
- Legal effects of termination

Force Majeure

- Listed events as FM
- Contractor's duty to use best efforts to mitigate or eliminate FM's effect
- Contractor's burden to prove FM
- EOT as contractor's sole compensation in FM
- Economic hardship not equal to FM
- Upon FM interference, a grace period before re-negotiation

Tests on Completion

- Pre-condition of TOC
- Delayed TOC
- Interference with TOC
- Taking-over prior to TOC
- Retesting
- Failure to Pass TOC
- Tests after Completion

Warranties & Guarantees

- Time for completion
- Make good
- Conformity to all contract requirements
- Maintenance duty during DNP
- Payment to his subcontractors and suppliers
- Fitness for use
- Extended warranties & guarantees

Indemnities

- Employer's defense for the contractor
- Contractor's defense for Employer
- Indemnities on property loss or damage, and personal injury or death
- Indemnities of lien on materials or works
- No consequential damages
- Contractor's liability cap and exceptions