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| The Four FIDIC 1999 Contract Condition: Their Principles, Scope and Details |
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| 1. FIDIC's Previous Standard Forms of Contracts |
| Prior to 1998, Federation Internationale des Ingenieurs-Conseils (FIDIC) published three forms of building and engineering contracts: for civil engineering works (known as the Red Book), for electrical and mechanical work (known as the Yellow Book), and for design-build (known as the Orange Book).In the 1977 edition of the Red Book, its Explanatory Memorandum stated that *"The Clauses of universal application have been grouped together and are referred to as Part I ",* and there were no payment terms in Part I. Numerical data was to be contained in an Appendix to Tender, but other date (including payment provisions, law and language) was to be included in a Part II of each contract. The document concluded with notes intended as an aide-memoire in the preparation of the Part II.The 1980 edition of the Yellow Book similarly contained clauses of universal application in Part I; and numerical data was to be contained in an Appendix to Tender. Other data was to be included in Part II, and brief guidance for its preparation was included.The Foreword of the 1987 edition of the Red Book stated that *" The Clauses of general application have been grouped together in this document and are referred to as Part I"*; the latter contained detailed payment provisions, but nothing for an advance payment. Again, numerical data was to be contained in an Appendix to Tender, and other data (law, language, etc.) was to be included in a Part II of each contract. Guidance and example wording for the preparation of this Part II was published in a separate volume ("Part II").The 1987 edition of the Yellow Book contained a more detailed Part I, and  introduced a Preamble for insertion of essential data in lieu of an Appendix to Tender. The data  which was to be included to the relevant Part I provisions were necessary.Thus, the Red and Yellow Books have developed in the direction of "user-friendliness", where the "users" are the individuals who write and administer the contracts. Prior to 1987, these Books contained the terms which were not expected to be changed; and any job-specific terms had to be drafted by the user. The 1987 edition included far more within the Part I, accepting the reality that many users amend it. These users needed to take care in avoiding errors in their drafting of each Part II, and tenderers had to be careful to read the tender documents thoroughly.User-friendliness was developed further in the Yellow Book. It provided a focal point (and thus a check-list) for all essential data, with Part I not having to rely on provisions or data to be stated in Part II. Part contained provisions which were considered to apply to the option most often used, leaving users to amend in Part II if they so required. This provision of a focal point for essential data continued in the Orange Book, by expanding. |
| 2. FIDIC's 1999 Forms of Contract |
| In September 1999, FIDIC published four new First Editions:**1    Short Form of Contract,** which may be suitable for a small contract (say, under US$ 500 000) if the construction time is short (say, less than 6 months), or for relatively simple or repetitive work (say, dredging), irrespective of whether the design is provided by the Employer or the Contractor, and of whether the project involves civil, electrical, mechanical and/or construction works.**2     Conditions of Contract for Construction** ("the Construction Book" or "CONS"), which are recommended for building or engineering works where most of the design is provided by the Employer. However, the works may include some Contractor-designed civil, mechanical, electrical and/or construction works.**3     Conditions of Contract for Plant and Design-Build** ("the Plant & E-B Book" or "P&DB"), which are recommended for the provision of electrical and/or mechanical plant, and for the design and execution of building or engineering works. The scope of this Book thus embraces both old Yellow and Orange Books, for all types of Contractor-designed works.**4     Conditions of Contract for EPC/Turnkey Projects** ("the EPC Book" or EPCT"), which may be suitable for the provision on a turnkey basis of a process or power plant, of a factory or similar facility, or of an infrastructure project or other type of development, where * a higher degree of certainty of final price and time is required, and
* the Contractor takes total responsibility for the design and execution of the project.

However, in the following circumstances, the EPC Book is not suitable and the Plant & D-B Book is considered preferable. * If there is insufficient time, or insufficient information, for tenderers to scrutinise and check the Employer's Requirements or for them to carry out, their designs, risk assessment studies and estimating: tenderers need to take particular account of Sub-Clause 4.12 (under which the Contractor is responsible for the consequences of encountering unforeseeable ground conditions) and Sub-Clause 5.1 (under which the Contractor is responsible for certain aspects of the Employer's Requirements, such as the applicability of ISO standards), so tenderers need information on the matters related to such risks and they need time to assess it and to evaluate all risks;
* If construction will involve substantial work underground or work in other areas which tenderers cannot inspect: for these types of works, the risks of encountering unforeseen conditions may be so great that the lowest tender is the one submitted by the least knowledgeable tenderer or most reckless gambler;
* If the Employer intends to supervise closely or control the Contractor's work, or to review most of the construction drawings: with the more Contractor's risks, he needs to have grater freedom of action and less interference by the Employer;
* If the amount of each interim payment is to be determined by an official or other intermediary: the EPC Book does not provide for an "Engineer" to administer the Contract and determine the amount of each monthly (or other) interim payment, which needs to be determined in advance and defined in a Schedule of Payments.

The remainder of this paper focuses on the three "New Books" for major works, namely CONS, P&DB and EPCT They each comprise three parts: |
| GENERAL CONDITIONS |
| Guidance for the Preparation of the Particular Conditions (GPPC)Letter of Tender, Contract Agreement and Dispute Adjudication Agreements |
| In order to use these Conditions, each contract's Conditions of Contract is to be defined by wording included in the Foreword of each GPPC: The Conditions of Contract comprise the "General Conditions", which form part of the "Conditions of Contract for..." First Edition 1999 published by the Federation Internationable des Ingenieurs-Conseils (FIDIC), and the following "Particular Conditions", which include amendments and additions to such General Conditions. The GPPC then provides guidance on what (if any) provisions may be appropriate for a contract's Particular Conditions, and on the preparation of the other tender documents.A principle that we applied throughout the drafting has been to facilitate the preparation of the tender documents, and in particular the preparation of the Conditions of Contract. Unlike most other published form of Conditions, those published by FIDIC recognise the reality that the tender documents for a particular project typically have to include provisions which are not appropriate for other projects. Preparation of the tender documents has been facilitated by:**a) flexibility,** (i) by anticipating alternative arrangements (for example, a lump-sum contract under the Construction Book), and (ii) by stating in the General Conditions which provisions are subject to what is stated in the Particular Conditions (because they may not be universally applicable); and**b) user-friendliness,** (i) by maximising the General Conditions so as to minimise Particular Conditions, and (ii) by identifying one location for essential contract specific data.In the Construction and Plant & D-B Books, where further non-technical data is required, the sub-clause refers to this data being stated in the Appendix to Tender: the published example of which thus provides a check-list of these essential items. The EPC Book does not refer to an Appendix to Tender, so the non-technical data to be specified by the Employer is stated to be in the Particular Conditions; and a check-list of the General Conditions' references to such data is included in the introduction to the GPPC.In all three New Books, their Forewords state that the General Conditions were drafted on the principle that users would find it more convenient if any provisions which they did not wish to apply could simply be deleted or not invoked, than if additional text had to be written in the Particular Conditions (because the General Conditions did not cover their requirements). If this criterion was considered inapplicable for a Sub-Clause, it is intended to contain provisions that were considered applicable to most contracts.It should therefore be noted that some of the provisions contained in the General Conditions may be inappropriate for an apparently-typical contract. The basic concept was to provide maximum convenience for users, particularly those who prepare the tender documents, for whom a degree of competence is necessary. Thus, as much text as possible is incorporated into the General Conditions, including some from the old Part II. Some provisions cannot apply unless invoked/enabled by the insertion of the required data; and provisions can readily be disabled by omission of the data or by deletion. Consider, for example, the following Sub-Clauses: 4.2 - Performance Security4.21 - Progress Reports13.8 - Adjustment for Changes in Cost14.2 - Advance Payment14.5 - Plant and Materials intended for the Works Users should not regard the applicability of these Sub-Clauses as an essential part of a FIDIC contract, or of what is occasionally (erroneously) referred to as "the FIDIC Rules". FIDIC does not prescribe that its contracts must include these matters, as though to do otherwise would be contrary to FIDIC's principles. Conversely, it would be wrong to imply that a contract accords with FIDIC's principles if it distorts the risk allocation contained in the General Conditions.When tender documents are being prepared, the General Conditions (particularly those which refer to the Particular Conditions) should be reviewed by suitably-qualified personnel with the relevant expertise, including the contractual, technical and procurement aspects. Whilst it would be unwise for them to distort the allocation of risks contained in the General Conditions, these personnel need to ensure that all the complete Conditions of Contract, the General and Particular Conditions, are appropriate for the works, the Employer and the jurisdiction.Personnel preparing tender documents need to be able to concentrate on the particular aspects of the project, and not assume that a previous project's voluminous conditions may be adequate. Their needs should be facilitated by the principles adopted in the preparation of the General Conditions, because they contain provisions that can readily be invoked to cover what used to be contained in a user's standard Particular Conditions.In particular, they will need the FIDIC Contracts Guide, which has just been published. |
| DETAILS OF THE NEW BOOKS FOR MAJOR WORKS |
| The New Books have 20 clauses, covering similar subject matter in all three Books except:

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| **Construction** | 3 The Engineer | 5 Nominated Subcontractors | 12 Measurement and Evaluation |
| **Plant &D-B** | 3 The Engineer | 5 Design | 12 Tests after Completion |
| **EPC Book** | 3 The Employer's Administration | 5 Design | 12 Tests after Completion |

Wherever possible, similar wording is used in all three New Books in the equivalent Sub-Clauses. Clause 1 commences with Definitions, some of which are illustrated in the charts at the end of each Foreword. Each New Book has its particular set of tender documents:**Construction:** Letter of Tender, Conditions of Contract, Specification, Drawings & Scheduled;**Plant & D-B:** Letter of Tender, Conditions of Contract, Employer's Requirements, Schedules & Contractor's Proposal;**EPC Book:** Conditions of Contract, Employer's Requirements & Tender.A Construction or Plant & D-B Contract will also include a Letter of Acceptance and/or a Contract Agreement, and either document may bring the Contract into force. Typically, the Contract Agreement will bring an EPC Contract into force.For Contractor-designed Works, the Employer's Requirements should include all relevant criteria, including quality, performance criteria and testing, but need not specify any matters which would be imposed on the Works by the applicable law. Quality should be specified in terms that are not so detailed as to reduce the Contractor's design responsibilities, not so imprecise as to be difficult to enforce, and not subject to anybody's future opinions which tenderers may consider impossible to forecast.Two of the General Provisions specify principles that need no repetition later: 1.2 "agreement" means in writing, resulting in a permanent record; and1.3 "approvals", "certificates", "consents" and "determinations" are to be in writing; and are not to be unreasonably withheld or delayed. Clause 2 covers the role of the Employer, commencing with his obligation to give right of access to the Site. Sub-Clause 2.4 requites the Employer to submit, within 42 days of receiving the Contractor's request, reasonable evidence that financial arrangements have been made and are being maintained which will enable the Employer to pay the Contract Price (as estimated at that time) in accordance with Clause 14. If the Employer felt it necessary to constrain his obligation, he would have to include an amendment (in the Particular Conditions) saying what if any evidence he would provide, and tenderers would be able to take account of such an amendment when tendering.Having received "reasonable evidence", the contractor must himself be reasonable in not issuing another request too soon thereafter. Clearly, it would be reasonable for him to request more evidence when a Variation has caused the (increased) Contract Price to exceed the amount covered by the previous evidence, If the Contractor does not receive such evidence, Clause 16 entitles him to suspend work or reduce the rate of work, and ultimately (if no evidence is received within 12 weeks) to termination.The next Sub-Clause, 2.5, sets out the procedure for the Employer to follow in the event of a claim against the Contractor. Similar procedures apply to claims by either Party: 2.5 Employer's claims for money, and for extension of a Defects Notification Period under 11.320.1 Contractor's claims for money, and for extension of a Time for Completion under 8.4 The Employer is not entitled to withhold an interim payment for reasons that were not previously notified to the Contractor with particulars substantiating the Employer's claim. In the same way that Sub-Clause 20.1 requires the Contractor to comply with a claims procedure, Sub-Clause 2.5 specifies an appropriate procedure for the Employer. One major difference between these Sub-Clauses is the absence of any provision imposing strict time constraints on the Employer, it being considered that any wording could give rise to unfairness in terms of when the Employer's Personnel should have become aware of a defect giving rise to a claim.If the Employer withholds payment, alleging reasons of which the Contractor was unaware, the Contractor will be entitled to financing charges under Sub-Clause 14.7. These ("step off") provisions constrain the Employer's entitlement to withhold payment, requiring the amount to be substantiated and agreed or determined under Sub-Clauses 2.5 and 3.5. In the Construction and Plant & D-B Books, the Employer must pay the amount certified by the Engineer, which therefore has to take account of the Employer's entitlement as agreed or determined under Sub-Clauses 2.5 and 3.5.In the Construction and Plant & D-B Books, Clause 3 describes the role of the Engineer. Sub-Clause 3.1 (a) states that the Engineer is deemed to act for the Employer except as otherwise stated in other Conditions. This sub-paragraph (a) specifies what is generally the Engineer's actual role under his agreement with the Employer, but does not state that the Engineer acts impartially because of the problems caused when such a statement proves false. If the Employer perceives the advantages of the Engineer being required to act impartially, and he has the professionalism to do so, Sub-Clauses 3.5 may be amended in the Particular Conditions.The Engineer may delegate authority under Sub-Clause 3.2 although there is no defined "Engineer's Representative". The role of these delegated assistants is to assist the Engineer.Under Sub-Clause 3.4, the Contractor may object to a proposed replacement Engineer within the six weeks after being given notice by the Employer, with supporting particulars. Typically, the Employer might prefer the Contractor to have no such right of objection, but deletion of this provision would give tenders reasonable concern regarding the Employer's intentions. Conversely, the Contractor might prefer an entitlement to veto replacement but the Employer may consider such an entitlement acceptable. Sub-Clause 3.4 thus provides a reasonable compromise between the conflicting preferences of the Parties.The Engineer's duties include making "fair determinations" under Sub-Clauses 3.5, 14.6 and 15.13. Although the Construction and Plant & D-B Books rely upon the role performed by the Engineer, they define the Parties' rights and obligations in direct terms, and not in terms of the opinion of the Er:gineer: for example, see the, first sentence of Sub-Clause 8.4 (quoted below).In the EPC Book, Clause 4 covers the equivalent provisions for turnkey projects, maintaining the similar clause structure. It commences with provisions entitling (but not requiring) the Employer to appoint a Representative with delegated powers. Under Sub-Clause 3.4, The Employer's entitlement to issue instructions is constrained by the need for them to state the contractual obligation and the Sub-Clause containing such obligation.Clause 3 concludes with Sub-Clause 3.5 which sets out the procedure for agreeing or determining various matter: including Employer's claims, Contractor's claims, and the evaluation of Variations and of the Construction Book's Works. All New Books have many provisions requiring a matter to be agreed or determined in accordance with Sub-Clause 3.5. "If the Contractor suffers delay and/or incurs Cost as a result of ..., the contractor shall give notice... and shall be entitled subject to Subject to Sub-Clause 20.1 to:(a) an extension of time of any such delay, if completion is or will be delayed, under Sub-Clause 8.4 and(b) payment of any such Cost, which shall be included in / added to / the Contract Price.After receiving this notice, ... shall proceed in accordance with Sub-Clause 3.5 to agree or determine these matters." Under the EPC Book, if the Contractor notifies dissatisfaction with a determination within 14 days, it is not binding. It defines the dispute to be adjudicated under Sub-Clause 20.4.Clause 4 covers many of the Contractor's general obligations. Sub-Clause 4.1 states his obligation to execute the Works, and requires any contractor-designed works to be (when completed) fit for the intended purpose defined in the Contract. This is an important matter to be borne in mind when the tender documents are being written, in particular because of the absence of any reference to purposes which may reasonably be inferred from the Contract. Although the risk is fairly allocated to the Contractor, he may not be able to be indemnified by his insurers or his subcontractor consulting engineers.In the Construction Book, the Contractor is only responsible for the design of the Permanent Works to the extent specified in the Contract. Sub-paragraphs (a) to (d) specify general requirements in respect of such designs, unless they are defined otherwise in the Particular Conditions. These general requirements are also stated (in 13.3 (b)) as being applicable to any subsequent Contractor-designed "value engineering" proposals, unless otherwise agreed by both Parties: see below.Sub-Clause 4.2 requires the Contractor to provide a Performance Security in the amount specified in the Appendix to Tender (Construction and Plant & D-B Books) / Particular Conditions (EPC Book). Provisions are included for extending the security, and for the Employer's indemnity in respect of any claim which he was not entitled to make. As with previous editions the New Books specif y that *"the Performance Securityshall be . . . in the form annexed to the Particular Conditions or ...".* When preparing the tender documents, the Employer has to decide what wording to annex. See later paper.Sub-Clause 4.3 describes the role of the Contractor's Representative. Sub-Clause 4.4 covers Subcontractors: who are subject to the Engineer's consent in the Construction and Plant & D-B Books. Under the EPC Book, the Contractor notifies the Employer of intended Subcontractors to the extent specified in the Particular Conditions, and no mention is made of the Employer's actions.Under Sub-Clause 4.10, the Employer is stated to have made available all relevant data on sub-surface and hydrological conditions by the Base Date, which is 28 days before the date of submission of the Tender. In the Construction and Plant & D-B Books, "Unforeseeable" is defined as "not reasonably foreseeable by an experienced contractor by the date for submission of the Tender", allowing nearly 28 days after the Base Date for tenderers to assess the date. The Employer is also required to make available the same types of date that comes into his possession thereafter.In the Construction and Plant & D-B Books, Sub-Clause 4.12 defines "physical conditions" and covers those which are "Unforeseeable". Under a new provision, the engineer may also review whether other physical conditions in similar parts of the Works were more favourable than could reasonably have been foreseen when the Contractor submitted the Tender. This provision may be particularly relevant for a tunnel, where there may be adverse conditions, in respect of similar parts of the Works, will not result in a net reduction in the Contract Price (otherwise, an Employer might have been tempted to conceal favourable information from tenderers).The EPC Book contains no such protection is respect of unforeseeable difficulties, which all become the risk of the Contractor under Sub-Clause 4.12. The Employer should assess the likely acceptability of such risks before issuing tender documents.Sub-Clauses 4.19 and 4.20, if enabled by details in the Specification (Construction Book) or the Employer's Requirements (Plant & D-B and EPC Books), cover the arrangements for the Employer's provision of power, other services, "Employer's Equipment" and free-issue material: similar to the equivalent sub-clauses in the Orange Book.In the Construction Book, Clause 6 covers the appointment of nominated Subcontractors: because they are sometimes required, not because their use is recommended. On the contrary, Sub-Clause 5.2 (a)-(c) suggests some of the problems that may have to be overcome. Although it has been suggested that such provisions should be omitted, it seems doubtful whether the absence of these provisions would simplify matters if the Employer insists on subcontractors being nominated.In the Plant & D-B and EPC Books, Sub-Clause 4.5 covers nominated Subcontractors; and Clause 5 covers the aspects related to contractor-design, including the review (under Sub-Clause 5.2) of Contractor's Documents. It should be noted that the defined term "Contractor's Documents" only includes the technical documents which the Contractor is required to submit, and that the review procedure only applies to whichever of these documents are required to be reviewed, all in accordance with the Employer's Requirements. It might appear that the Engineer (under Plant & D-B) and the Employer (under the EPC Book) can interfere with the Contract's design by requiring changes without admitting that they are Variations. Under the Plant & D-B Book, this could happen in respect of documents for which the Engineer's approval is required, and would presumably result in dispute.Under the EPC Book, Sub-Clause 5.2 contains no reference to an "approval" for the Employer to withhold, so the Contractor can proceed (after the "review period") even if no "consent" has been given. The Employer is not expected to require the Contractor to produce detailed drawings, although it was impractical to define the extent of "Contractor' Documents" within the General Conditions, Also under the EPC Book: (i) Sub-clause 7.3 only requires the Contractor to notify, before off-Site covering-up or packaging, to the extent specified in the Contract, (ii) Sub-Clause 7.6 omits the paragraph requiring the Contractor's compliance with the Employer's instruction, instead referring to the need for it to comply with Sub-Clause 3.4, and(iii) Non-compliance with Sub-Clause 7.5 or 7.6 is not mentioned in Sub-clause 15.2 as a default entitling the Employer to termination. Sub-Clause 7.7 defines the date when each item of Plant and Materials becomes the property of the Employer. In the event of suspension, property passes when conditions 8.10 (a) & (b) have been satisfied, without further pre-conditions relation to payment.Clause 8 covers the time-related aspects. Sub-Clause 8.3 covers the provision of programmes showing how the Contractor proposes to execute the Works. Each such programme is to be supported by a report describing the methods that the Contractor proposes to adopt. Programmes are not "approved": the contractor~proceeds in accordance with the Programme, except to the extent that (i) he has been advised of its non-compliance, or (ii) it does not actually comply, with the Contract. Unrealistic Programmes do not provide a sound basis for claims. Sub-Clause 8.4 defines the Contractor's entitlement to extensions of time: i) *"The Contractor shallbe entitled... "* which is not stated as being subject to anyone's opinion.ii) *"... subject to Sub-Clause 20.1 ..."* the second and the final paragraphs of which may affect the entitlement to an extension of time.iii) *"... to an extension ... if and to the extent ... that completion ...is ... delayed...":* so the extension should typically be calculated by reference to the delay in completion attributable to a listed cause. It may have disrupted progress but may not itself have been the cause of any delay in completion. For example, a listed cause may only delay works which are not on the critical path and thus do not delay "completion for the purposes of Sub-Clause 10.1 ".iv) *"... completion for the purposes of Sub-Clause 10.1 ..."*: its first sentence (sub-paragraph (i) defines the extent of the work which is to be completed within the Time for Completion, and which is relevant when considering extensions of time. The work must include the matters described in Sub-Clause 8.2 (a) & (b) but may exclude, as permitted in Sub-Clause 10.1(a), "any minor outstanding work and defects which will not substantially affect the use of the Works or Section of their intended purpose". A Variation, a cause of delay under other Sub-Clauses, exceptionally adverse weather, Unforeseeable shortages in availability of personnel of Goods due to epidemic or governmental actions, or delay attributable to the Employer or his Personnel.Sub-Clause 8.7 covers delay damages, previously called liquidated damages (a phrase which is also applicable to some of the possible types of non-performance damages). It will be noted that delay damages are no longer referred to as an exception to the deductions which the Engineer is required to incorporate into Payment Certificates. The Engineer is required to incorporate all deductions, which are to have been agreed or determined under Sub-Clause 3.5, in Payment Certificates: which the Employer is then required to pay in full, without offsetting his claims against the Contractor until they have been agreed or determined.Clause 9 covers Tests on Completion, with more detail being provided in the Plant & D-B and EPC Books because of the importance of such Tests in determining whether the Works satisfy the Employer's requirements. Under the Construction Book, Tests on Completion may be less important, except in respect of any parts of the Works designed by the Contractor.Clause 10 specifies the conventional procedures for certification of completion and for the Employer's taking-over. In the Construction and Plant & D-B Books, Sub-Clause 10.2 covers completion of parts of the Works, without the old Red Book's reference to completions of substantial parts of the Works. Under the EPC Book, the Employer is not entitled to use or occupy any part of the Permanent Works prior to the completion of the Works (or Section), and is in breach of the Contract if he does so.Defects Liability obligations are specified in Clause 11. Sub-Clause 11.3 entitles the Employer to claim (under Sub-Clause 2.5) extension of the Defects Notification Period.In the Construction Book, Clause 12 covers the measurement and valuation of the Works. Irrespective of a "Variation", a Bill rate or price for an item of work may be amended if: i) the measured quantity of the item is changed by more than 10% from the quantity of this item in the Bill of Quantities of other Schedule,ii) this change in quantity multiplied by such specified rate for this item exceeds 0.01 % of the Accepted Contract Amount,iii) this change in quantity directly changes the Cost per unit quantity of this item by more than 1%, andiv) this item is not specified in the Contract as a "fixed rate item"; In the Pant & D-B and EPC Books, Clause 12 covers the possible Tests after Completion, which may be carried out by the Employer (Plant & D-B Book) or Contractor (EPC Book). There did not seem to be clear views as to who typically carried out Tests after Completion, so we solved the dilemma by providing for either arrangement.Clause 13 covers Variations and adjustments for changes in legislation and in cost. Variations are not binding if the Contractor promptly notifies that he cannot readily obtain the required "Goods" which means Contractor-design, Variations are also not binding if the Contractor promptly notifies that the proposed Variation will have an adverse impact on safety, suitability, or the achievement of the specified performance criteria.Sub-Clause 13.2 describes procedures for the Contractor's proposed Variations. In the Construction Book, sub-paragraphs (a) to (c) specify general provisions in respect of any such proposals which involve amendments to the design of the Works, unless otherwise agreed by both Parties. It is usually essential to agree these (or other) provisions before tree Variations is approved or instructed. The Sub-paragraphs have not been drafted as FIDIC principles, and only apply if the Parties fail to agree other provisions.The general procedure for variations is described in Sub-Clause 13.3. The Variation may be preceded by a Contractor's proposal, which may have resulted from his initiative under Sub-Clause 13.2 or from the request mentioned in the first sentence of Sub-Clauses 13.1 and 13.3.In the Construction and Plant & D-B Books, Sub-Clause 13.8 specifies the adjustments for changes in cost, so as to avoid users having to write the necessary text in the Particular Conditions. These provisions are based upon the assumed availability of suitable cost indices. The formula defines the adjustment multiplier (Pn) to be applied to the contract value of each month's work. Note that Pn is the "multiplier" and is not the amount to be added to the contract value of each month's work. Pn will typically be more than unity, due to inflation.Sub-Clause 14.1 sets out the financial principles of the Contract, remeasurement or lumpsum. The remainder of Clause 14 describes the procedures for payments to the Contractor, which in the EPC Book are not subject to the issue of Payment Certificates. Payment procedures commence with the Contractor's submission of a (monthly of other) Statement, with supporting documents which are to include the progress report under Sub-Clause 4.21.Sub-Clause 14.2 provides for the possibility of an advance payment, Sub-Clause 14.4 provides for the possibility (especially for lump-sum contracts) of a Schedule of Payments, and Sub-Clause 14.5 provides for the possibility of making payment for Plant and Materials which have been shipped to the Country and/or have arrived at the Site. As is stated in the Forwords, provisions such as these are included for the convenience of users. In each case, the Contract has to include the relevant data if these provisions are to be invoked/enabled.In the EPC Book: Sub-Clause 14.5 envisages that other provisions (such as a Schedule of Payments) may entitle the Contractor to payment for Plant and/or Materials prior to arrival at the Site; Sub-Clause 14.6 requires the Employer to notify the Contractor of any items in the Statement with which the Employer disagrees; and Sub-Clause 14.7 (b) defines the Employer's obligation as being to pay the amount which "is due" in respect of each Statement. The contractor's entitlement to financing charges under Sub-Clause 14.8 then arises form the Employer may have paid all of the amount not notified as disagreed under Sub-Clause 14.6.Under the Construction and Plant & D-B Books, the entitlement to financing charges under Sub-Clause 14.8 is based upon when the Engineer received the Statement, progress report and other supporting documents, irrespective of the date on which the interim Payment Certificate (if any) was issued. Such certification date. could, for example, be after the date defined in Sub-Clause 14.7 (b) by which payment should have been made.Sub-Clause 14.10 provides for a Statement at completion, which is to include all amounts to which the Contractor considers he has or will become entitled. Under Sub-Clause 14.14, the Employer's liability is limited to amounts included in this Statement and amounts arising after the issue of the Taking-Over Certificate for the Works. Under Sub-Clause 16.1, the Contractor is entitled to give notice of suspension in the event of specified defaults, which include the Engineer's failure (under the Construction or Plant & D-B Books) to issue a Payment Certificate. Clause 16 then continues by specifying the procedures for termination by the Contractor.Clause 17 covers risk and responsibility. Sub-Clause 17.1 defines the extent to which each Party indemnifies the other in respect of claims for personal injury or damage to property. Sub-Clause 17.2 defines the Contractor's responsibility for care of the Works. Sub-Clause 17.3 lists the risks which, if they eventuate, entitle the Contractor to compensation in respect of loss or damage to the Works, Goods or Contractor's Documents. Depending upon the matters stated in Clause 19, some of the risks listed in Sub-Clause 17.3 may be so exceptional as to be Force Majeure.Sub-Clause 17.5 specifies general provisions for intellectual and industrial property rights, defining the extent of each Party's indemnity and describing procedures in the event of claims for infringement. Sub-Clause 17.6 specifies limits to each Party's liability.Clause 18 covers insurances, most of which are required to be arranged by the "insuring Party". It is subsequently named as the Contractor unless otherwise stated in the Particular Conditions (in this case, the second paragraph makes Clause 18 subject to any insurance terms agreed between the Parties). The provisions thus provide for the possibility that, for some of the insurances (typically those for the Works); the Employer may wish to effect insurance: by defining himself (in the Particular Conditions) as the insuring Party in respect of the relevant insurances (in this case, the third paragraph makes Clause 18 subject to the details annexed to the Particular Conditions.The Works are to be insured in the joint names of the Contractor and Employer. The insurer should make each claims payment jointly to both the Parties, although this seldom happens. If a Subcontractor is named in the insurance policy as additional insured, the insurer would thus make each claims payment jointly to each such additional insured as well as the two Parties: which could require a physically-large cheque to make the payment! The situation is covered in the fourth paragraph of Sub-Clause 18.1.Some Employers require payments to be made wholly to them, with the Engineer determining how much the Contractor should receive (often allocating blame), which is considered to be unwise and possibly wrong. Insurers only compensate a party for actual loss, so the party who bore the loss claimed should then be reimbursed, even if he appears blameworthy. Sub-paragraph (b) of Sub-Clause 18.2 therefore specifies that both Parties are jointly entitled to receive payments from the insurers, payments being allocated for rectifying the loss or damage.If the insuring Party fails (or is unable) to effect and keep in force its insurance, the other Party may effect the insurance at the cost of the defaulting Party. For various reasons, such other Party may not do so, possibly because insurance is no longer available at commercially reasonable terms. Sub-Clause 18.1 therefore concludes with provisions that address these circumstances.Under Sub-Clause 18.2 (d), The insuring Party is~required to effect insurance in respect of some of the Employer's risks, excluding (in each case) risks which are not insurable at commercially reasonable terms and the exclusions described in sub-Paragraph (e). If this cover ceases to be available, the last Paragraph of Sub-Clause 18.2 comes into effect.Clause 19 covers Force Majeure, which is defined in Sub-Clause 19.1 as an event which a Party could not have provided against, and could not control, avoid or overcome, The Clause includes general protection to the Contractor in respect of legal or physical impossibility.Clause 20 covers the submission of claims and-the settlement of disputes, See later paper.  |
| ILLUSTRATION |
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| Conditions of ContractFor ConstructionEmployer-designEngineer certifies payment, based upon measurement and the Bill Quantities  | Consitions of Contract for Plantand Design-BuildEngineer certifies payments, based upon the lump sum pricing  |
| Conditions of Contract for EPCTurnkey ProjectsContractor-designEmployer *may* appointa RepresentativePayment are not certified  | Short Form of contractDesign by either PartyEmployer *may* appointa RepresentativePayments are not certified  |

CONS: Conditions of Contract for **Cons**tructionP&DB: Conditions of Contract for **P**lant **& D**esign-**B**uildEPCT: Conditions of Contract for **EPC T**urnkey Project**General Conditions**Guidance for the Preparation of the Particular Conditions Letter of Tender, Contract Agreement, and Dispute Adjudication Agreements*GPPC* - The Conditions of Contract comprise the "General Conditions", which form part of the "Conditions of Contract for..." First Edition 1999 published by the Federation Internationale des Ingénieurs-Conseils (FIDIC), and the following "Particular Conditions", which include amendments and additions to such General Conditions**User-Friendliness**CONS + P & DB : If a General Condition necessitates further data, the sub-clause makes reference to this data being contained in the Appendix to Tender EPCT\* data in Particular Conditions: GPPC's checklistAll three Books:If a General Condition deals with a matter on which different terms could apply on different contracts, the principles applied in writing General Condition were:(a) users would find it more convenient if any provision which they did not wish to apply could be deleted or not invoked, than if they had to write a Particular Condition;or(b) in other cases, where the application of (a) was considered inappropriate, the General Conditions contain provisions which were considered applicable to most contracts.1.    General Provisions2.    The employer3.    The Engineer - CONS + P & DB       The Employer's Adminiatration - EPCT4.    The Contractor5.    Nominated Subcontractors - CONS        Design - P & DB + EPCT6.    Staff and Labour7.    Plant, Materials and Workmanship8.    Commencement, Delays and Suspension9.    Tests on Completion10.  Employer's Taking Over11.  Defects Liability12.  Measurement and Evaluation - CONS       Tests after Completion - P & DB + EPCT13.  Variations and Adjustments14.  Contract Price and Payment15.  Termination by Employer16.  Suspension and Termination by Contractor17.  Risk and Responsibility18.  Insurance19.  Force Majeure20.  Claims, Disputes and Arbitration**Clause 1 - General Provisions**Sub-Clause 1.1.1 - The ContractCONS: Letter of AcceptanceLetter of Tender + AppendixConditions of ContractSpecification, DrawingsBoQ & other SchedulesP & DB: Letter of AcceptanceLetter Tender + AppendixConditions of ContractEmployer's RequirementsSchedules & ProposalEPCT- Contract AgreementConditions of ContractEmployer's RequirementsTender**Clause 1 .- General Provisions**1.2 "agreements" shall be written (permanent record)1.3 Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed1.5 Priority of Documents*CONS:* 1.9 Delayed Drawings or Instructions*P & DB:* 1.9 Errors in the Employer's Requirements1.10 Employer's Use of Contractor's Documents1.13 Compliance with Laws1.14 Joint and Several Responsibility**Clause 2 - The Employer**2.4 Employer's financial ArrangementsThe employer shall submit within 28 days after... [being requested] reasonable evidence that financial arrangements have been made and arebeing maintained which will enable the Employer to pay the Contract Price (as estimated at that time) & see clause 162.5 Employer's ClaimsEmployer is only entitled to set-off against (or deduct from) and amount due/certifiedin accordance with this Sub-Clause *which refers to 3. 5 - Determinations***Claims**

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| Sub-Clause 2.5: Employer's procedure to claim payment, and/or an extension of the Defects Notification Period  | Sub-Clause 20.1: Contractor's procedure to claim extension of the Time for Completion, and/or additional payment  |
| "Sub-Clause 3.5: agreement, or "fair determination"  |
| Sub-Clause 11.3 entitles the Employer to and extension of the Defects Notification Period in respect of periods when the Works cannot be used for intended purposes  | Sub-Clause 8.4 entitles the Contractor to an extension of the Time for Completion if and to the extent that (Sub-Clause 10.1's) completion is delayed by a listed cause  |

If the Contractor suffers delay and/or incurs Cost as a result of..., the Contractor shall give notice... and shall be entitled subject to Sub-Clause 20.1 to:(a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4, and(b) payment of any such Cost, which shall be ... Contract Price. After receiving this notice,... shall proceed in accordance with Sub-Clause 3.5 to agree or determine these matters.***CONS + P & DB*: Clause 3 - The Engineer**3.1 (a) the Engineer is deemed to act for the Employer (b) the Engineer cannot relieve a Party of any duties,...(c) Engineer's approvals, ... or other acts shall not relievethe Contractor of any responsibility under the Contract 3.4 If the Employer intends to replace the Engineer, the Contractor is to be given 42 days' notice, which is to include replacement's experience. No replacement if the Contractor raises reasonable objection***EPCT* : Clause 3 - The Employer's Resentative**3.4 Each instruction shall be written and shall state the obligation to which it relates3.5 Each Party shall give effect to each determination unless the Contractornotifies dissatisfaction within 14 days **Options for the Intermediary**

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| *CONS + P & DB*Payment Certificates issued by Engineer. DAB makes pre-arbitral decisions on disputes *c.f.old Orange Book*  | *EPCT*No intermediary, so no Payment Certificates. DAB makes pre-arbitral decisions on dispute  |
| *CONS + P & DB, with a stated Particular Condition*Payment Certificates issued by Engineer, who also makes impartial pre-arbitral decfisions on disputes *old Red & Yellow Book*  | *CONS + P & DB, with another Particular Condition*Payment Certificates issued by impartial Engineer, but DAB makes pre-arbitral decisions on disputes *old Red & Yellow Supplements*  |

**Clause 4 - The Contractor****4.1 General Obligations***CONS*: The Contractor shall design: to the extent specified in the Contract*Sub paragraphs (a)-(d) unless otherwise stated* and design Plant & Materials as required for them to be in accordance with the Contract*P & DB + EPCT*, When completed, the Works Shall be fit for. the purposes for which the Works are intended as defined in the Contract**Clause 4 - The Contractor**4.1 General Obligations4.2 Performance Security4.4 Subcontractors4.10 Site Data*4.12 CONS + P & DB: "Unforeseeable"* (1.1.6.8 not reasonable foreseeable by an experienced contractor by the Tender submission date)More-favourable physical conditions?4.19 Electricity, Water and Gas4.20 "Employer's Equipment" & free-issue material4.21 Progress Reports*CONS*: **Clause 5 - Nominated Subcontractors***P & DB + EPCT:* Clause 5 - Design5.1 General Design Obligations5.2 Contractor's Documents comprise those specified in Employer's Requirements those for regulatory approvals, as-built documents and the operation-and-maintenance manuals5.5 Training**Clause 6 - Staff and Labour****Clause 7 - Testing****Clause 8 - Commencement, Delays and Suspension**8.1 Commencement of Works8.2 Time for Completion8.3 Programme no `approval"8.4 The Contractor shall be entitled subject to Sub Clause 20.1 to an extension of the Time for Completion If and to the extent that completion for the purposes of Sub-Clause 10.1 is or will be delay by... a Variation, a cause of delay under other Sub-Clauses, *CONS + P & DB*: exceptionally adverse weather, Unforeseeable shortages in availability of personnel or Goods due to epidemic or governmental actions or delay attributable to Employer or his Personnel**Clause 9 - Tests on Completion****Clause 10 - Employer's Taking Over****Clause 11 - Defects Liability***CONS:* **Clause 12 - Measurement and Evaluation**12.3 Evaluation - new rate or price if  |