

**International Construction Contracts and Dispute Resolution  
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**Presentation Notes on:**

**AN OVERVIEW OF FIDIC CONTRACTS**

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**1. The Traditional FIDIC Forms of Contract**

Over the years FIDIC has produced a number of standard forms of contract between various parties - e.g. between employers and their consultants, or between contractors and their subcontractors – as well as other ‘best-practice’ guidelines. However, I shall only discuss FIDIC’s standard forms for contracts between ‘employers’ and their ‘contractors’. FIDIC’s term ‘Employer’ means the purchaser, owner or client who employs the ‘Contractor’ to physically carry out the project ‘Works’.

The ‘traditional’ FIDIC forms for contracts between employers and their contractors, which have become so widely used throughout the international construction market, and which are so familiar to most of those working on construction projects where the various parties involved come from different countries, are commonly known as the ‘Red Book’ and the ‘Yellow Book’. The correct titles of these Books are respectively:

- Conditions of Contract for Works of Civil Engineering Construction (1987)
- Conditions of Contract for Electrical and Mechanical Works including Erection on Site (1987)

The first edition of the Red Book was published in 1957. It was based on the UK standard conditions of contract for domestic projects in the UK, and was intended to provide a standard for use with those many projects being undertaken at that time by British and other engineers in the Commonwealth and other countries abroad. The result has been that the documents have tended to be orientated towards a Common Law approach. This, however, does not seem to have hindered their widespread use also in Civil Law countries. There were 4 editions of the Red Book, the last being in 1987 (with reprints with editorial amendments in 1988 and 1992).

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As is clear from the title, the Red Book was intended for civil engineering construction works such as roads, water and sewage facilities, bridges, dams, hydropower stations, tunnels and all other such construction work, where most of the work is carried out at the 'site'. The detailed design was provided by the employer or his engineer. It soon became clear that this standard contract was not satisfactory for contracts where the major part of the work was carried out 'off-site', e.g. at the manufacturer's workshops. This led to the production of the first edition of the Yellow Book for electrical and mechanical plant in 1963. Thus the Yellow Book has more emphasis on testing, commissioning procedures, guarantees, etc. and is suitable for manufactured plant, such as turbines, generators, switchyard equipment, and so on. Under the Red Book payment is made to the Contractor every month according to the amount of work carried out by the Contractor during the month. It is relatively easy to establish by measurement the work as it is carried out on site<sup>2</sup>. For work being carried out at the factory, monthly measurement is not practicable, and so the payment terms of the Yellow Book specify payment, usually on a lump sum basis, according to milestones achieved, e.g. a certain percentage when manufacture and testing at the factory is complete, after shipping and delivery to site, when erection is complete and on satisfactory commissioning.

One of the interesting features of construction projects is that nearly every project is unique. Certainly there are projects that are repeated, but by and large no one hydropower station is identical to another, no dam nor tunnel is precisely the same as another. The main principles of construction work, however, may be to a considerable extent standard. Thus it is not possible to write a standard form of contract which will suit all civil works, or all electrical and mechanical works, but it is possible to formulate some guidelines of 'best practice', provided allowance is made for the differing or unique factors of individual projects. The Red and Yellow Books cope with this situation by having a Part I, which is the standard conditions applicable, hopefully, to the great majority of projects, and a Part II, the 'Conditions of Particular Application', which must be drafted to suit the precise requirements of the actual project in hand. FIDIC's intention is that the printed Part I itself shall not be altered, and that any necessary alterations, modifications or additions should be collected in Part II. By not altering the Part I, persons regularly working in the industry will become familiar with the standard clauses, and will immediately see all modifications by looking at the Part II.

The FIDIC Conditions have become recognised as being fair and balanced to both the parties, i.e. the Employer and the Contractor. It is FIDIC's firm belief and dedicated principal that a fair and balanced contract is in the lasting best interest of all concerned. An unfair, unbalanced contract may give a temporary advantage to one or other party, but such advantage will be short-lived, and the negative long-term disadvantages will greatly outweigh any short-term gain. Thus we see in the Red and

Yellow Books a fair and balanced allocation of risks and responsibilities between the 2 parties to the contract. The basic principle is that the risk is allocated to the party that is best able to bear and control that risk, and that the contractor can only be expected to be bound by and to price for conditions which are known to him or which he is able to foresee and reasonably to price in his tender. Both Books have therefore clauses stipulating recompense and time extension when uncalculated hindrances occur, e.g. late receipt of drawings, or in the case of unforeseeable physical obstructions or conditions being encountered during the execution of the works.

Both Books have the ‘Engineer’ whose job is principally to supervise and monitor the work being carried out by the Contractor. He has many specific duties, which are stated in the various clauses. In several clauses it is stated that this or that ‘shall be in strict accordance with the Contract to the satisfaction of the Engineer’<sup>3</sup>. Basically it can be said that the two contracting parties, i.e. the Employer and the Contractor, have agreed that someone should be appointed to monitor the work being carried out by the Contractor and who should ‘keep the balance between the parties’. Who should this be? Obviously someone with adequate experience of the work in question, and whom both parties can trust to act professionally and impartially. No one is better suited to this role than an independent, experienced engineer from a reputable, accredited consulting engineering firm (or, more correctly, the firm itself).

The Red and Yellow Books published in 1987 both had the formal ‘Engineer’s Decision’<sup>4</sup> as the last step in solving an argument or dispute, and all that a party could do thereafter was to submit the dispute to arbitration. There was, however, a ‘cooling off’ period during which amicable settlement should be attempted<sup>5</sup>.

## **2. The Orange Book**

At the beginning of the ’90’s FIDIC decided to publish a new Book to suit the growing market trend for projects being procured on a design-build or turnkey basis. FIDIC set up a task group for this purpose, which resulted in the ‘Orange Book’, i.e. the Conditions of Contract for Design-Build and Turnkey (1995).

The Orange Book included a number of innovations. One such change was the departure from the traditional role of the Engineer. In the Orange Book there is no Engineer as such. He was replaced by ‘The Employer’s Representative’, and the difference between him and the Engineer of the Red and

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<sup>2</sup> Red Book Clause 56.1

<sup>3</sup> e.g. Red Book Clause 13.1

<sup>4</sup> Red Book Clause 67.1, Yellow Book Clause 2.7

Yellow Books was that he was not required to be impartial. However, when he was required to determine value, cost or time extension, he had to ‘determine the matter fairly, reasonably and in accordance with the Contract’.

When it comes to dealing with disputes the Orange Book did away with the traditional ‘Engineer’s Decision’ and replaced it by resort to an independent dispute adjudication board (DAB)<sup>6</sup>. This DAB of one or three members shall be appointed jointly by the Employer and the Contractor at the commencement of the contract. The cost of the DAB shall be shared by the parties. (More will be said about the DAB later in this conference).

At about this time the World Bank, while including the FIDIC Red Book in its Standard Bidding Documents (SBD), made a few significant changes, one of the most important being the substitution of the Engineer’s traditional pre-arbitral ‘Decision’ by a mandatory Dispute Review Board (DRB) for all large contracts. Partly because of this, and partly in answer to evolving international views on dispute resolution, FIDIC published in 1996 a Supplement to the Red Book for use of a DAB instead of the ‘Engineer’s Decision’.

### **3. The 1999 Suite of Standard Conditions of Contract**

With the publishing of the Orange Book, FIDIC decided that an update of the Red and Yellow Books was necessary, and a task group was appointed for this purpose. The task group was instructed to standardise the New Books, e.g. same definitions, same layout and clause numbering, same wording except where differences required, etc., which had not been the case with the Old Red and Yellow and the Orange Books. They were also to be as user-friendly as possible, and be a balance between legal precision and practicability, i.e. correct level of detail. It was to be remembered that they are primarily intended as ‘manuals of good engineering practice’ prepared by engineers for practical use.

After years of work, studying current practice, reviewing other standard documents, asking for and studying comments, and so on, the task group handed over for final publication late in 1999 a suite of four new Standard Forms of Contract<sup>7</sup>. This new suite comprises 3 Books for major works and 1 for minor:

- Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer : *The Construction Contract* (New Red Book)

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<sup>5</sup> Red Book Clause 67.2, Yellow Book Clause 50.1

<sup>6</sup> Orange Book Clause 20.3

<sup>7</sup> Available from FIDIC Bookshop, Box 311, CH-1215 Geneva 15, Switzerland. [www.fidic.org](http://www.fidic.org)

- Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Plant, and for Building and Engineering Works, Designed by the Contractor : *The Plant and Design/Build Contract* (New Yellow Book)
- Conditions of Contract for EPC/Turnkey Projects : *The EPC/Turnkey Contract* (Silver Book)
- Short form of Contract : *The Short Form* (Green Book)

The Books in the new suite are all marked ‘First Edition 1999’, and the reason is that they can not be regarded as direct updates of FIDIC’s previous ‘Red, Yellow and Orange Books’.

The suite has now been complemented by the Contracts Guide for the three major New Books, dated 2000 (but published in 2001). The Contracts Guide is a monumental publication of some 350 pages. It includes the full text of the three major New Books side by side, which means ease of comparison. It also includes a wealth of other useful information – far beyond the actual commentary on the standard clauses – for those involved in procurement of construction projects.

#### **4. The New Red and Yellow Books**

As will be noted from the titles, the emphasis for the New Red and Yellow Books has changed from the old civil works versus e & m (electrical and mechanical) works to which party is responsible for the design (or most of the design). In modern composite projects the all-important allocation of risks is mainly dependent upon who is responsible for the design, not which particular type of work dominates. Many projects involve several or many types of work.

The New Red Book is similar to – and an update of – the Old Red Book, but with some new features:

- suitable for all projects where main responsibility for design lies with Employer (or his Engineer)
- *some* design may, of course, be carried out by Contractor
- administration of Contract and supervision by Engineer
- approval of work, payment, etc. certified by Engineer
- work done is measured, payment according to Bill of Quantities
- option for payment on Lump Sum basis

The New Yellow Book replaces both the Old Yellow Book and the Orange Book:

- Old ‘Yellow Book’ dealt only with electrical and mechanical construction works (most design being done by Contractor)

- the ‘Orange Book’ from 1995 dealt with Design-Build and Turnkey for civil and other construction where majority of design done by Contractor
- New Yellow Book is thus suitable for all types of projects where main responsibility for design lies with Contractor
- recommended for the provision of electrical and/or mechanical plant, *and* for the design and execution of building or engineering works
- *some* design may be carried out by Employer or his Engineer
- Employer provides ‘Employer’s Requirements’ to which Contractor designs
- administration of Contract and supervision by Engineer
- approval of work, payment, etc. certified by Engineer
- payment on Lump Sum basis, usually against a Schedule of Payments
- testing procedures usually more complicated than for ‘New Red Book’

Identical or similar provisions are included in both Books for many matters:

- traditional competitive tendering procedures are envisaged
- risk sharing is balanced between Parties, as in Old Red and Yellow Books, e.g.
  - Employer takes risk of ‘adverse physical conditions’ – Cl 4.12
  - and unforeseeable ‘operation of the forces of nature’ – Cl 17.3(h)
  - and design by Employer – Cl 17.3(g)
  - in addition to war (anywhere), terrorism, riot, & similar (within the country), etc
- all claims, from either Party, have to follow a strict procedure – Cl 2.5 & 20.1 (see later)
- Engineer is no longer stated to be ‘impartial’ as old Red & Yellow Books
  - he ‘shall be deemed to act for the Employer’, except as otherwise stated – Cl 3.1
  - however, when he has ‘to agree or determine’ any matter he shall ‘*make a fair determination in accordance with the Contract ...*’ Cl 3.5
- Employer must submit – when requested – evidence that he has the finances to pay the current Contract Price – Cl 2.4 (Applies to all 3 Books)

## 5. The Silver Book (EPCT Book)

The Task Group realised early on that the Red and Yellow Books only covered part of the international need. With their balanced risk-sharing it meant that:

- Employer only pays extra when specific risks actually occur
- Contractor does not have to estimate for unlikely hard-to-value risks
- BUT final price and time is uncertain.

However, the market has shown requirement for more certain final price and time in two ways:

- some Employers have – for many years - changed the FIDIC Books’ balance to place more responsibility on Contractor
- the development of privately financed projects (BOT etc) means that lenders want definition of final price and time.

For such projects the Contractor is being asked to cover a wider range of risks of final cost and time. These may include the risk of poor ground conditions, a guaranteed result, and so on. To ask contractors to bear such extra risks means that the price for the project will be higher to cover the extra risk-taking. Employers will anyway have *some* risks.

FIDIC therefore produced this *completely New Book* for:

- those projects where Employers want traditional projects but with a more certain final price and completion time and less Employer-risk
- BUT as a Book where the Parties enter the Contract with full understanding, and acceptance, of the risks (instead of trying to adapt another risk-sharing arrangement)
- and as a common starting point for EPC<sup>8</sup>/Turnkey type projects, usually with private financing, in a BOT or similar environment.

The EPCT Book is thus intended to be suitable for the many projects, both larger and smaller:

- particularly E & M and other process plant projects
- all types of employers
- often civil law countries
- where government employer or private developer wants his project on a fixed price turnkey basis and with strictly two-Party approach (i.e. no Engineer)

EPCT Book includes an ‘Introductory Note’ where these matters are discussed.

Among the features of the EPC/Turnkey Book (Silver Book) the following can be mentioned:

- responsibility for design lies solely with Contractor
- Employer provides ‘Employer’s Requirements’ to which Contractor designs
  - Employer’s Requirements usually ‘performance specification’ type
- Contractor carries out all engineering, procurement, construction providing a fully-equipped facility, ready for operation at ‘the turn of a key’
- no Engineer – instead it is the Employer who may appoint an Employer’s Representative
- lump sum Contract Price

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<sup>8</sup>EPC = ‘engineering, procurement, construction’ (US) which is approx same as ‘Turnkey’ (European)

- extended testing procedures including Tests after Completion
- Contractor takes majority of risks, Employer pays more to cover such risks
- final price and time of completion should be more certain

The circumstances for use of the Silver Book are different from traditional projects:

- Employer's Requirements is usually only a brief performance type specification
- procurement procedures are different, with only a small number of tenderers
- Contractor should be given freedom to carry out Works in his chosen manner
- Contractor has to prove reliability and performance of completed project
- privately-financed projects subject to more negotiation than public

These Conditions are *not suitable* in following circumstances:

- if time or information is insufficient before Contract signature
- if considerable work is underground or difficult to inspect
- if Employer intends to supervise closely or control or review
- if an intermediary determines interim payments
- where part of Works is designed by Employer
- for public bidding without negotiations

in such circumstances the P&DB Book should be used instead

We unashamably note that the Silver Book has come about because of market demand – given free choice FIDIC would normally recommend use of P&DB with its balanced risk sharing.

## **6. The Short Form of Contract (Green Book)**

The main forms of contract are rather long and unnecessary unwieldy for relatively simple projects. So FIDIC have also prepared a much simpler form. Originally the intention was to have a form to suit works of value up to about US\$ 500,000 and six months' duration. As the work progressed it was understood that the amount of the contract sum should not be the governing factor, but rather the complexity of the work. For example, simple and repetitive sewer laying works, or transmission line, or rural road works often do not need a complicated form of contract, while the cost may be large. A special example might be dredging works, which is relatively simple, but involves very expensive equipment.

The Book, now entitled the Short Form of Contract, was published in 1999 together with the 3 Major Books. It is green in colour, and therefore commonly called the 'Green Book'! The drafters have done

an excellent job of providing all the provisions necessary for such works in a total of 15 clauses, with a total length of only 10 pages. The sentences are short, and the language uncomplicated and simple to understand. This means that this form is ideal for many, many contracts of a simple nature, particularly in the developing countries, and countries like those of the former Soviet Union – rural roads, water and sewage projects, electricity transmission, and the like.

Translation is rather easy, and foreign contractors, employers and engineers in countries such as these do not like lots of paperwork and legal clauses. Nor are such necessary under these circumstances. I see a great future for this Book on many projects in many countries, and I suggest it be used whenever possible. The World Bank have found it so useful that it is now incorporated in their Standard Bidding Documents for Simple Works.

The printed Book itself is some 35 pages long, but that includes the Agreement with its Appendix, Rules for Adjudication and Adjudicator's Agreement, and some 10 pages of Notes for Guidance.

The Short Form has basically the same balanced risk sharing principle as the New (and old) Red and Yellow Books. There is no 'Engineer', so it is a 'direct' contract between the Employer and the Contractor, but the Employer may appoint an Employer's Representative. Design can be carried out by either party, and all types of construction work may be covered. Payment may be on a lump sum basis or on any other basis.

## **6. Conclusion**

By the introduction of this suite of 3 matching new standard forms for major contracts, together with the 'Green Book' for minor works, FIDIC has updated and widened the scope of its standard forms. It is believed and hoped that one or other of the suite will be suitable for use on virtually every international engineering construction project, from minor projects, through the whole range of traditional civil, electrical, mechanical and other plant contracts, to the large complex multi-disciplinary projects, including those of BOT or similar type.

As regards which Book to select for any particular project, guidance is given in the Introduction to the FIDIC Contracts Guide<sup>9</sup>.

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<sup>9</sup> The FIDIC Contracts Guide, 2000, with detailed guidance on using the First Editions of FIDIC's 3 major New Books