



Giovanni Di Folco

International Contracting - A Consulting Engineer`s Perspective

Techno Engineering & Associates s.r.l.



Other articles written by the same author:

- Enforcement of a DAB decision through an ICC partial award; (co-author Mark Tiggeman - *Partner of the international law firm Kennedys*);
- Schedule and forensic delay analysis services;
- Quantum damages analysis services cost based claims;
- Dispute boards - a Contractor`s perspective;
- What do Contractors think of DABs 10 years after using FIDIC 1999 Contracts;
- Using Dispute Boards - Why? Best use/wrong use of Dispute Boards;
- The use of the Primavera software for the Management of Infrastructure Projects in Romania;
- Using Dispute Boards. The Romanian experience of Dispute Boards;
- Letters of intent, Bonds & Guarantee, Defects Liability Periods.

Introduction

The aim of this article is to briefly present the realities of the international construction industry assessed from the Consulting Engineer`s point of view and to highlight the aspects that may be changed in order to improve communication between **all** the parties involved, not just the contractual parties, to enhance the likelihood of reasonably achieving successful projects.



The construction industry may comprise many components:

- Civil Engineering (highways, bridges, railways, airports, dams, wastewater treatment plants, water reticulation works, tunnelling, etc.);

- Real estate (commercial and residential);
- Oil & gas (refineries, LNG facilities, exploration);
- Electrification (power lines, power stations, substations);
- Specialized construction and products (military installations, decorative items, electrical connections, architectural items, precast elements, special bridge accessories, etc.).

Based on his experience, the author for the purpose of this note shall only address the aspects related to the Civil Engineering Industry, Consulting Services.

International Contracting - Trends in Construction Industry

One of the most important trends in the construction industry, consists in the development of technologies and software, which whilst increasing the complexity of the construction projects, would aim at decreasing the construction duration.

Furthermore, considering the financial crisis that affected many regions worldwide, a new emerging trend in the construction industry is related to the usage of new technologies that are intended to decrease construction costs.

These difficult economic conditions also increased the competition between international companies over large scale projects and not only, which forced the re-assessment and re-organization of the utilization of all types of resources.

Moreover, the new technologies should cope with the extreme natural phenomena such as tsunami, earthquakes, hurricanes etc. and consequently should increase the safety and durability of the constructions.

Consequently, these new trends of the construction industry greatly amplified the level of the technical knowledge that a professional consultant should possess, as detailed below.

International Construction Industry - Consulting Engineers - Requirements

During the past years, the construction industry output increased considerably and in consideration of the latest technologies developed in this field and especially the new developed software for modeling, simulating, planning and designing works, the requirements to be fulfilled by a competent Consulting Engineer increased exponentially.



Generally, such requirements may be briefly summarized by stating that a competent Consulting Engineer should:

- be fluent in at least in one international language;

- be knowledgeable about the latest versions of software and technologies used in his/her industry;
- have an in-depth knowledge of planning and quantity surveying;
- have good knowledge of contract management and risk management;
- be familiar with the most used standard forms of Contracts within the construction industry;
- be accustomed with best Engineering practices and international standards;
- have good communication skills at all levels and leadership abilities;
- have good computer literacy;
- be experienced in the most used dispute resolution procedures.

Consulting Engineers - Actual scenario and future prospects - how it should be

a. Consulting Engineers - Actual scenario

Essentially it all revolves around the conditions of contract consulting engineers perform their work and assignments.

It is to be noted that under the FIDIC Fourth edition 1987, the Engineer was independent and he acted as an adjudicator when required to give an Engineer's decision under Clause 67.

However, when considering that the Engineer was appointed on a basis of a contract concluded with the Employer, it has been long argued that its independence could have been severely jeopardized by the direct commercial relationship with the Employer and in most instances it was.

In the relatively new FIDIC suite of Contracts, i.e. the 1st Edition 1999 of the Red, Yellow and Silver Books, the Engineer is not independent anymore and he acts as the Employer's agent.

The Engineer`s liabilities and duties are specified within the services contract concluded between the Engineer and the Employer based usually on the White Book - i.e. the “Client/Consultant Model Services Agreement”.

Under the **NEC 3** Contracts, the Employer appoints a Supervisor and a Project Manager.

The Supervisor is a job title that is not found in other standard forms of contracts used in the construction industry.

Similarly, in this particular form of contracts the Supervisor and the Project Manager are acting on behalf of the Employer, therefore they are not independent entities.

The main duties/responsibilities of the Engineer/Supervisor/Project Manager are presented below in a structured manner:

- **New FIDIC Contracts - Role of the Engineer (Red and Yellow Books only)**

- Administrates the Contract on behalf of the Employer;

- Reviews the Contractor`s Payment Applications and fairly determines the amounts due to the Contractor through the Interim Payments Certificates and the Final Payment Certificate;
- Monitors and maintains the quality control;
- Instructs varied works;
- Issues fair determinations;



- Issues the Taking Over Certificate;
- Issues the Performance Certificate.

- **FIDIC Fourth edition 1987**

- The same responsibilities as presented above;

- Acts as a dispute adjudicator under Clause 67, yet changed after 1992 by introducing the Dispute Board.
- **NEC 3 - Role of the Project Manager**
 - Acts as the Employer`s agent - manages every aspect of the Contract;
 - Independent certifier;
 - Has an obligation to act fairly and impartially with reference to the acceptance/rejection of the designs, programme of works, payments and assessment of the Compensation Events;
 - Has a duty to notify the Compensation Events;
- Has a duty to accept and assess the Compensation Events;
- Can instruct a change to the Works Information.
- **NEC 3 - Role of the Supervisor**
 - The Supervisor is similar to the Resident Engineer or the Architect and he has to verify whether or not the Works performed are in accordance with the contract;
 - The role of the Supervisor comprises two separate activities: testing and defects management;
 - Testing part includes:
 - inspections both on and off site;
 - testing being carried out by the Contractor, upon instruction;
 - testing being carried out by the Supervision without creating unnecessary delays.
 - Defect management part includes:
 - instructions to the Contractor to search for defects;
 - notifications sent to the Contractor in respect of any defect found;



- issuance of the Defect Certificate, thus bringing the Contractor's obligation to an end.

Apart from these obligations the Supervisor has another duty, namely to mark the Equipment, Plant and Material which are outside the Working Areas, the purpose being to enable payment to the Contractor of the Equipment, Plant and Material were bought or rented by the Contractor but are located outside the Working Areas.

However in practice, the Employer delegates the majority of the Project Manager's responsibilities to the Supervisor.

b. Consulting Engineers - Future prospects - how it should be



Please note that the following short presentation of the changes that should be made in the construction industry with reference to the role of Consulting Engineers with the purpose of improving the construction process, reflects the author's personal opinions based on his extensive international experience.

Independence

The main required change is related to the independence of the Consulting Engineers.

They should be rendered and used as independent engineers and not as Employer's agents. Unless this happens, there will always be conflicts between the parties in a construction contract.

However, the author has been a Consulting Engineer for many years and has experienced more and more limitations imposed by Employers even outside the scope of the aforementioned conditions of contract, which basically takes the role of the agent to the extreme.

Often in practice, the Employer tries to take advantage of the fact that they are the entities that have the money to run

the projects and consequently they try, successfully, to reduce the Consulting Engineers to simply abide by their instructions no matter whether fair, contractual or not.

Nobody denies that the Consulting Engineer and the Employer should have good communication and cooperation, however, such Engineers are professionals with a high degree of specialization, therefore the Employer should entrust the running of the project in their hands within the limits imposed by the consultancy agreements and let them do their job without undue and improper interference, which unfortunately does not happen.

Usage of the latest technologies and software

Furthermore, the Employer should be open to the use of the latest software and technologies available and should allow the Consulting Engineers to adopt them. This unfortunately is not given much importance due to budget cuts, which in the long run does cost more.

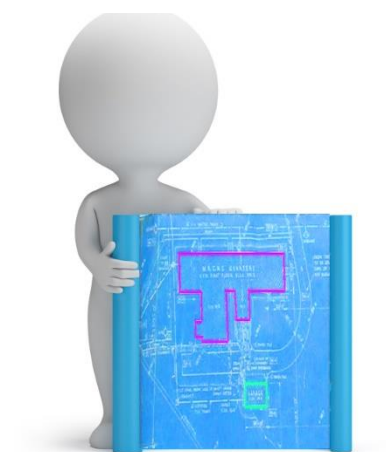


Adequate design

A proper and adequate design is the key to a successful project. Thus, if the Consulting Engineers are also the designers, then the Employer should allocate sufficient time for the design of the works in order to enable the Consulting Engineers to properly assess the sub-surface conditions, especially the ground water table, geomorphology, hydrology, the existing utilities and all other usual obstructions.

This does not happen and projects suffer serious delay due to the insufficiency of the design, which is quite the norm nowadays. In the author`s opinion, it would be best to separate the role of designer from that of the Engineer.

This would avoid the Engineer defending his position due to his design being usually insufficiently developed and detailed. Another solution would be for Employers to adopt the Design-Build project delivery system, whereby the Contractor would have the responsibility to design and construct the works.



About the author

Giovanni Di Folco is the Senior Partner and President of Techno Engineering & Associates. He is a highly motivated expatriate multi-discipline professional Civil Engineer with 30 years of experience in the construction and consulting industry (transportation and heavy civil works). Experienced as Projects/Contracts Manager and Claims Expert with extensive international experience gained in multi-disciplinary Civil Engineering Projects in Italy, Iran, Libya, South Africa, Kingdom of Lesotho, Sultanate of Oman, United Arab Emirates, Greece, Bulgaria and Romania, who attained professional recognition. He demonstrated acumen for construction and design Engineering and management at all levels, acute awareness of cost control and project planning, ability to provide an immediate and calculated response to situations in the financial, contractual, legal and technical sectors of the profession, proven ability to sustain responsibilities from high level management through to operational level.

He possesses acute awareness of specific Countries and International Law, the importance of quality and safety and the moral and legal responsibilities that they impose. Trained and operates to the most modern standards of ISO 9000, ICE, NEC, JCT and FIDIC Conditions of Contract and the strict and controlled safety regimes in force internationally. Although specialized as a Pavement Engineer by profession, the international experience gained has enabled his development of a wide diversity of his skills within the Civil Engineering Industry. During his career he has held positions of high responsibility such as “Counsel”, “Engineer” in the sense of “FIDIC”, Project Manager, Country Manager, Claim Expert and Adjudicator on major construction projects.

He is a FIDIC expert in his own right. He possesses a vast experience in adjudication using the DAB procedure and ICC arbitration either as Expert of opinion, Attorney or Counsel for Claimant or Respondent.

www.technoeng.com

Bucharest, ROMANIA

22 Muzelor Street, Sector 4

Tel: +40 21 336 30 76/77

Fax: +40 21 336 30 78

Sofia, BULGARIA

1517, "Haji Dimitar"

Residential Area, 2j "Vitinya" Street

BENI Building, entrance C

Tel: + 359 2 421 92 92 (3)

Fax: + 359 2 421 92 94

Doha, QATAR

Al Muthanna Complex

Salwa Road, PO BOX 22142

Tel: + 974 4465 3224

Fax: + 974 4465 4958