

CONTRACTUAL PRACTICES IN TUNNEL AND UNDERGROUND WORKS IN INDIA

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It has been found that it is necessary to accelerate execution of various projects, more so hydropower projects, so that the requirement of the country for infrastructure development as well as production of required base power and peaking power is met with. With this in view, Government of India appointed a committee to re-structure the present contracting system which is one sided leading to dispute arising out of site investigation, geological surprises, design consideration and various other issues.

The end result of the dispute is inadequate cash flow during pendency of a contract and very large time over run. To see that this is mitigated, change in contract document is necessary so that an equitable contract document is made available for speedy execution of infrastructure projects in India by participation of Indian as well as international contractors. This is necessary because the volume of construction is much bigger than what Indian construction companies can handle. In order to see that this volume of work is executed, an equitable contract document needs to be evolved so that the contracts do not get jeopardized due to paucity of decisions which need to be given during pendency of contract. Authority to give an equitable decision must be available with the Engineer-in-Charge emerging out of the text of the contract document itself.

I would elucidate only the important issues which need to be changed in the Indian contract documents to make it acceptable to international construction industry:

1. Deficiencies in Tender / Contract Documents
 - 1.1 The conditions incorporated into any tender document strongly influence bid evaluation and subsequent execution stage. Failure to define clearly the rights and obligations of the parties, including sharing of risks, is a major problem. In many cases, clauses are included in the documents related to the physical realities of the work that are not based on sound logic. Taken together, these shortcomings lead to disputes between the Owner and Contractor, and ultimate stalemate or inordinate delays in the work.
 - 1.2 To achieve the best possible project outcome, it is important to avoid mistrust between the two parties, and to work with a spirit of give and take. Each party's needs should be accommodated to the extent possible through fair, logical and equitable contract clauses in the contract agreement.

1.3 The lack of a system for establishing accountability for delays and resulting cost overruns is another deficiency which has serious results. For example, it can result in the Contractor delaying his submission of revised method statements reflecting changed ground conditions or other complex situations arising at site, and delayed approval thereof by the Owner.

1.4 The FIDIC conditions of contract, which have been developed to maintain a proper balance with respect to the rights and obligations of the parties, are either not being adopted or they are adopted after modifying certain clauses to such an extent that the resulting contract loses the intent of maintaining the desired balance mentioned above, and can no longer be regarded as a FIDIC contract.

2. Deficiencies in Contract Administration

2.1

Contract Management has become a vital component of all projects because of the involvement of many parties, and the existence of different sets of contract conditions which have made effective contract management more complex.

There has been a lack of effort between Owners and Contractors to understand, minimize and resolve disputes amongst themselves in an amicable and effective manner.

Improper contract documentation and management during project execution increases the burden of claims.

The success or failure of any project hinges on the way the contract is managed by the parties to avoid cost overruns.

2.3 Shortcomings Attributable to the Owner

- the Employer does not actually own the site, so the Contractor cannot start construction;
- the Owner has not obtained the necessary clearances;
- the Owner has not performed sufficient site investigations;
- project financing is not ready;
- project cost estimates are not realistic;
- risk allocation imposed on the Contractor is unworkable;
- the designs are not frozen at the correct time;
- Insufficient collection or interpretation of relevant data;
- unrealistic schedule and target completion date;
- limited bidding time;

- selection based on lowest price without adequate consideration of contractor capability;
- due importance not given in deputing skilled & experienced Owner's team for project management;
- lack of cordial relationship with Contractor;
- delayed supply of drawings or instructions/ decisions by Engineer;
- not identifying the cause for a delay & failure to initiate timely remedial action;
- delayed approval of construction programmes;
- delayed response to Contractor's claims;
- biased determination of compensation;
- delayed interim certification and payment;
- improper evaluation of variations;
- extension of time not awarded in a reasonable time frame;
- excessive compromises on designs for commercial reasons;
- non-levying of liquidated damages for delay in completion of works;
- allowing the Contractor to execute works of specialised nature, when such works are specified to be executed by specialised agencies;
- acceptance of defective works;
- improper setting out of works at the time of handing over of site.

2.4 Shortcomings Attributable to the Contractor

- Failure to depute a competent project management team.
 - Lack of forward planning and budgetary control.
 - Casual attention towards critical targets of time, cost and quality.
 - Failure to use proper tools and techniques such as CPM network analysis, relating to forward planning and control.
 - Delays in procurement of materials and construction equipment due to a casual approach.
 - Inadequate maintenance of construction equipment, inadequate workshop facilities for repair of construction equipment, and shortage of spare parts for construction equipment.
 - Non-deployment of competent specialised sub-contractors

- Delay in mobilization
- Improper documentation and logging of site records, copies of agreed minutes and other important data relating to the works being executed.
- Delayed and illogical submission of information while seeking important decisions/ instructions from the owner in changed situations.
- Delay in submission of Method Statements for changed site conditions.
- Shortage of tradesmen and supervisors
- Inadequate quality control facilities and staff
- Delay in replacement / repair of defective works.
- Non-compliance with labour laws.
- Non-compliance with environmental and ecological requirements.
- Failure to implement the approved construction methodology
- Delay in submission of concreting schedule
- Presenting inadmissible claims, leading to avoidable disputes.

3. Shortcomings Related to Valuation of Changed Conditions

- Contractor's daily records of deployed resources are not maintained/ submitted by Contractor and/or signed by Engineer
- Unit rates of variations are not submitted by Contractor and/or approved by Engineer in time.
- Work is done but is not paid by Engineer in a timely manner.
- Either extra work is not recognised and over-assessed by the Contractor or it is under-evaluated by the Engineer.
- Impact of variations on construction schedule is not fairly determined by Engineer.
- Unforeseen physical obstructions are not properly recognised by Contractor and/or Engineer.
- Contractor's claims for additional "Time & Costs" impact are either not tenable or the Engineer or Owner do not respond properly.
- Issues may not be professionally handled, if the Engineer and the Contractor take their respective rigid stands while disregarding the needs of the project.

4. Shortcomings Related to Time Extensions

4.1 Assessment of applications for time extensions determines whether the Contractor is allowed an extension of time due to delays caused by factors beyond his control, or whether the Contractor may be liable for liquidated damages for the delay. If the Contractor is allowed an extension of time, he may be eligible to recover time-related costs (e.g. for remaining on site for a longer duration). Although the Engineer may be well acquainted with the problems leading to a delay, the onus for proving each and every thing contributing to the delay is generally left entirely on the Contractor.

4.2 Consideration of applications for time extensions is generally based on the following:

- Has an event occurred?
- Was the event unforeseeable?
- Was the overall progress of the work on the Critical Path delayed?
- Was the delay caused by the event beyond the control of the Contractor?
- Is the requested extension appropriate to cover the lost time?
- Is the Contractor responsible for the event?
- In summary – does the event entitle the Contractor to an extension of time?

4.3 The Contractor is required to give notification of occurrence of an event and full details thereof entitling him to a time extension, within time limits specified in the Contract. When the Contractor does not adhere to these limits, disputes regarding entitlement of the Contractor to a time extension inevitably result. Sometimes Contractors claim for a time extension for due to ineligibel causes, in order to save them from liquidated damages. As per FIDIC edition 1999, if the Contractor fails to give notice of claim for time extension within 28 days after occurrence of the event, he loses his right to make a claim. Timely notification and substantiation of claims with contemporary records by the Contractor is essential to good contract management. Following proper preparation and submission of a claim by the Contractor, the Engineer should make a fair and timely determination of the application, and should not have a tendency to make biased determinations of the delay and their impacts on the construction schedule. After a claim is allowed, the revised construction schedules should be prepared and approved within a reasonable and well specified time of claim approval, to avoid adverse effects on the performance of the Contractor.

4.4 In general, the possible grounds for an extension of time are:

- i) Variations
- ii) Unforeseeable physical conditions or disruptions
- iii) Delay caused by the Owner or a party under his control

iv) Force majeure conditions

- 4.5 Defaults of the Owner's obligations are sometimes underplayed to benefit the Owner, or because of a "fear psychosis" related to vigilance and audit measures.
- 4.6 The Engineer may apply faulty contract conditions to defend the Owner. Sometimes a lack of notice is taken as an excuse for not awarding extension of time.
- 4.7 Consequence of the above examples of biased determination and/or non-fulfilment of Owner's obligations are:
- i) Application of liquidated damages to the Contractor when he was not at fault, leading to an undue financial burden on the Contractor.
 - ii) Adverse impact on the project.
 - iii) Misunderstanding and lack of trust between the parties.
 - iv) Lack of approval for the revised construction schedule, leading to disputes regarding the completion date.
- 4.8 If the Engineer delays his decision on an application for a time extension, liquidated damages for delay (if warranted) are not imposed, and there is no pressure on the Contractor for timely completion. This can lead to the Contractor performing as if time is immaterial, thereby jeopardising the implementation schedule of the project.

5. Shortcomings Related to Dispute Resolution

- 5.1 The Engineer is required to arrive at an initial decision on any claim submitted by the Contractor. Sometimes claims are returned or denied due to a lack of information from the Contractor, without giving an opportunity to the Contractor to submit clarifications or additional information.
- 5.2 Sometimes a claim may be reserved for settlement at completion of the project. In such cases, interest is rarely paid.
- 5.3 When additional works are carried out by the Contractor, interim payments may not be paid in a timely manner, leading to increased outstanding payments due at the end of the Project.
- 5.4 Delay, Idling or Acceleration claims are often not resolved in a timely manner, leading to delays and extra costs due to extension of time.
- 5.5 Many tender documents state that extra costs (e.g. taxes and duties) due to changes in legislation that occur more than 28 days prior to the tender closing date or after 28 days prior to the tender closing date or after 28 days prior to the

latest date for submission of tenders will not be reimbursed to the Contractor. Many contractors will claim cost increases due to changed legislation which are not reimbursed according to the contract. Such claims cause confusion and typically lead to delays in determination by the Engineer.

- 5.6 For fair determination of claims, proper documentation, especially joint records, is essential. Such records are not typically maintained by the parties to an adequate standard.

Conclusion

Since India does not have one contract document for underground works being adopted throughout the country, I have given details of a contract document which will come in force in near future. This document has tried to weed out maximum number of problems faced in management of contracts in India. This document with some changes will be more equitable than FIDIC contract document. This will serve the purpose of increasing confidence in participation of international contractors in execution of works in India.