

# DISPUTE – A CASE STUDY

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**Abstract - One of the greatest challenge facing the construction industry during the last couple of decades has been how to resolve disputes arising in construction contracts' in a timely and efficient manner with minimal financial costs, without hindering the pre-planned end results on a construction project.**

**Wide scale adoption of Dispute Review Boards (DRBs), sometimes also called Dispute Adjudication Boards (DABs), in large size engineering projects construction contracts is just more than a decade old in the advanced world. During this period, DRBs have been found ideally suited to dispute resolution process in large size projects involving sophisticated technology and Intricate construction techniques such as in tunnels & underground construction, heavy industrial & process buildings, hydro engineering power projects, bridges & highways and marine works.**

## I. INTRODUCTION

Dispute is defined as misunderstanding between two parties. So long as human nature is what it is there will always be disputes, and those disputes what ever their characters are, they must be resolved if society is to exist in a civilized way and the problems must be resolved as quickly, as cheaply and as satisfactory as possible. Conflict resolution is probably the most important area for the future of mankind and the continued existence of the world.

Conflict is seen to be a normal procedure in the construction industry and time has come for professionals to come up with ideas on how to handle the situation to normal.

## II. A CASE STUDY OF DISPUTES IN BUILDING CONSTRUCTION WORKS.

Govt. of India has included the city slum rehabilitation projects in Basic Services to Urban Poor (BSUP) under Jawaharlal Nehru National Urban Renewal Mission (JNNURM). Client intends to develop the city towards the vision of sustainable slum less city and is constructing multi-storied buildings for identified slum dwellers. These buildings are constructed in cast-in-situ monolithic RCC load bearing walls and floors with Aluminium formwork technology which suits the mass housing projects in our country.

Aluminium formwork system enables the walls and slab together to be poured with cast in place concrete in the same operation. This increases efficiency and also produces an extra ordinary strong structure with excellent concrete finish,

with consistent concrete shapes and finishes are obtained floor after floor. The dimensional accuracy of concreted work also results in consistent fitting of doors and windows. The excellent form finish of concrete reduces the need for plastering.

The central sanctioning and monitoring committee (CS&MC) under the Ministry of Housing and Urban Poor Alleviation, Govt. of India, under JNNURM programme has recommended use of this technology for speedy, low maintenance, durable, high earthquake resistant and fire resistant structures with modular planning.

The basic element of formwork is panel, which is of extruded aluminium rail sections around the panels, welded to aluminium face sheet with ribs. This produces lightweight panel with high stiffness to weight ratio, with negligible or no deflections due to fresh concrete loads. The de-shuttering of the formwork is very simple. The props supporting horizontal shuttering are in direct and continuous contact with slab concrete, even while the wall and floor slab formwork panels are being de-shuttered, with the provisions in IS 456-2000 code for plain and reinforced concrete, for stipulated slab de-shuttering time can be followed easily, resulting in reduction in time for de-shuttering.

The tender involved construction of 4800 tenements for slum dwellers. And the work order was given on December 2007.

### A. In The Contract The Clause For Disputes was as

**Tender Clause :** All disputes and differences of any kind whatever arising out of or in connection with the contract as the carrying out of the work (whether during the progress of the works or after their completion and whether before or after the determination, abandonment or breach of the contract) shall be referred to and settled by the Superintending Engineer (SE). But if the contractor be dis-satisfied with the decision of the SE or as to with holding by the SE of any certificate of the Engineer or as to with holding by the SE of any certificate to which the contractor may within 60 days after receiving notice of such decision give a written notice to the other party requiring that / may claim to entitled them and in any such case the contractor such matters in dispute be referred to in appeal before a committee and the decision taken by the committee will be final and binding on both the parties.

### B. Contractor Raised Many Issues Which Gave Rise to Disputes.

#### 1. Dispute raised by the contractor:

Due to change from Ground + 4 storey (G+4) type building structure to Parking + 7 storey (P+7) building with different architectural arrangement.

The original aluminium formwork set employed by them remained under utilized and hence contractor demanded suitable compensation.

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Contractor could not get sufficient land parcels, due to non-availability of sufficient land, to execute the required numbers of houses as per the contract.

The overall repetitions of aluminium formwork (MIVAN shuttering) expected cannot be achieved, hence, contractor demanded suitable compensation.

### ***Tender Clauses***

The Engineer-in-charge shall have power to make any alterations in or additions to the original specifications, drawings, designs, and instructions that may appear to him to be necessary or advisable during the progress of the work, and the contractor shall be bound to carry out the work in accordance with any instructions in this connection which may be given to him in writing signed by the Engineer-in-charge and such alteration shall not invalidate the contract, and any additional work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work, and at the same rates as are specified in the tender for the main work.

The contractor shall be deemed to have carefully examined the work and site conditions including labour, the general and the special conditions, specifications, schedules and drawings and shall be deemed to have visited the site of the work and to have fully informed himself regarding the local conditions and carried out his own investigation to arrive at rates quoted in the tender.

### ***Opinion of the Consultant***

Tender clause permits the employer to modify and alter the designs and for which no extra claim can be entertained. On available land also, contractor could not complete the houses within time and only one set of aluminium formwork was bought on site instead of bringing two sets as per contract. If contractor would have tried to complete the work with required speed then he would have achieved the expected repetitions of aluminium formwork.

Also, when the client changed the plan, the contractor kept quiet and did not raise any issue of compensation.

### ***Clients decision***

Such compensation cannot be claimed as per contract.

***Dispute Resolution Committees (DRCs) decision :***

Claim can not be considered.

### ***2. Dispute raised by contractor***

Contractor claimed that due to change in architectural arrangement of the building, the initial quantum of shuttering area in “Square meter” (m<sup>2</sup>) to the “Cubic meter” (m<sup>3</sup>) concrete quantity has changed. P+7 type building requires more quantum of shuttering to complete the required work.

### ***Tender Clause***

As mentioned above.

### ***Opinion of the Consultant***

In case of G+4 type building the thickness of wall, slab, shear walls, etc. are 100mm in thickness and other members are also same as in case of P+7 type building.

Just because of introduction of two lifts in P+7 (earlier not in G+4) type building, the RCC shear walls are 150mm in thickness which implies that square meter (m<sup>2</sup>) of shuttering

to complete one cubic meter (m<sup>3</sup>) will be less if compared with 100mm thick structural elements.

### ***Clients decision***

Contractor is being paid as per the cubic meter (m<sup>3</sup>) of concrete work done and which includes the cost of aluminium form work hence, the claim is rejected.

### ***DRCs decision***

Claim is rejected.

### ***3. Dispute raised by Contractor***

As per contract, the monthly basic prices of construction material (cement, steel, bitumen, C.I., D.I. pipe, ceramic/anti-skid tiles, glazed tiles, window shutters, door shutters and metal door frames). Should be declared by the client every month. But only cement and steel rates are declared every month. For taking the basic star rate, the higher rate should be considered from the basic rate of material for working out value of ‘P’ or the rate declared by client in the month preceding the month of receipt of tenders.

So the contractor wants the price variation provisions to be changed from the direct variation against material to general price variation based on the whole rate price indices and consumer price indices. Also, requested to include cement and steel under general price variation.

### ***Tender Clauses***

Standard formula for calculation of Labour, Material and POL component is used and the value of ‘P’ is Cost of work done during the period under consideration minus, the cost of cement, HYSD and mild steel, bitumen, C.I and D.I pipes, vitrified tiles, glazed tiles, antiskid tiles, door shutters, window shutters calculated at the basic star rates as applicable for the tender, consumed during the quarter under consideration. Basic rate of cement in rupees per metric ton as considered for working out value of ‘P’ or average price per metric ton including taxes, prices as circulated by the office of the client under consideration prevailing one month preceding the month in which the last date prescribed for receipt of tender, falls, whichever is higher. And same is applicable for steel, bitumen, C.I., D.I. pipe, ceramic/anti-skid tiles, glazed tiles, window shutters, door shutters and metal door frames.

### ***Opinion of the Consultant***

Consultant explained that there is a general tendency among the bidders to speculate the prices of costly construction material during the time of construction. To reduce this speculation amount, the constructors were offered price variation on some materials.

The balance cost of construction was to be calculated based on the variation in wholesale price index and labour indices. Monthly price of cement & steel are declared by the client but for remaining items also it should be declared.

### ***Clients decision***

The price variation for cement and steel will be given as per tender clause and for all other materials general price variation can be given based on the wholesale price index and labour indices.

*DRCs decision :*

Contractor to produce escalation bills as per clients (above) decision and client to release the applicable bills immediately.

**4. Dispute raised by Contractor**

Client is deducting 1% cess from each RA bill as cess against labour welfare cause. Cess deduction certificate should be issued. Also, the receipt of tender was in the month of December 2007, and the government resolution for cess deduction came after the date of receipt of tender. Hence, the recovered cess should be released.

**Opinion of the Consultant**

Cess deduction certificate should be issued by the client.

**Clients decision**

Cess deduction certificate can be issued.

**DRCs decision**

The committee stated that if the government resolution of state government for deducting 1% cess is prior to the date of receipt of tender then no refund will be given to the contractor and deduction certificate will be issued by the client.

But, if it is after the date of receipt of tender then refund should be given to the contractor.

Hence, committee resolved to check the dates.

**5. Dispute raised by Contractor**

Recalculate the additional lift charges for the overhead water tank & the lift machine room which was not in the tender.

**Tender Clauses**

If the additional and altered work includes any class of work for which no rate is specified in this contract, then such a class of work shall be carried out at the rates entered in the schedule of rates of the government or corporation or at the rates mutually agreed upon.

**Opinion of the Consultant**

Client can modify the lift and overhead water tank charges.

**Clients decision**

Admissible amount for additional lift charges for lift machine room and overhead water tank will be permitted.

**DRCs decision**

The committee agreed to the clients (above) decision.

**6. Dispute raised by Contractor**

For the provision of water closet item the rate should be revised as the area surrounding the pan requires brick bat filling to match the floor level from the sunken slab top.

**Tender Clauses**

It is already included in the rates and specification of the item in the contract document.

**Opinion of the Consultant**

State DSR rate for providing and fixing water closet pans, the quantum of brickbats to achieve the desired floor level is already included in the tender rate.

**Clients decision**

Contractors demand to increase the rate of item cannot be considered.

**DRCs decision**

The committee decided to reject the claim.

**7. Dispute raised by Contractor**

Rates of various extra items due to change in building structure shall be revised year to year.

**Tender Clauses**

Extra item rates should be taken from prevailing state DSR.

**Opinion of the Consultant**

As the price variation is not admissible for extra items. Extra item rates can be taken from prevailing state DSR.

**Clients decision**

For extra items the rates as per state DSR can be considered.

**DRCs decision**

The committee decided to pay the admissible extra items to the contractor as per prevailing state DSR rates.

**8. Dispute raised by Contractor**

Client should waive the interest on the mobilization advance given to the contractor due to lesser land parcel available for the work and so the overall financial turnover per month is less than the estimated progress.

**Tender Clauses**

The advance loan shall be repaid with percentage deductions from the interim payments certified by the engineer under the contract. Deductions shall commence in the next interim payment certificate following that in which the total of such payments to the contractor has reached not less than 15% of the contract price or 6 months from the date of payment of first installment of advance, whichever period concludes earlier, and shall be made at the rate of 20% of the amounts of all interim payment certificate until such time as the loan has been repaid, always provide that the loan shall be completely repaid prior to the expiry of the original time for completion.

**Opinion of the Consultant**

The contract clearly states that rate of interest shall be 6% on the outstanding mobilization and equipment advance. Contractor has fully utilized the advance amount and so as per contract, the interest can not be waived.

And if contractor wants to reduce the recovery of interest, they should reduce the outstanding amount against the advances availed by them.

**Clients decision**

Client is not at all responsible for the slow progress of work so, no question of waiving the interest on mobilization advance arises.

As per contract the client can given 15% mobilization advance and 5% machinery advance to the contractor. And accordingly client gave 20% of advance amount (24 crores) to the contractor and from the RA bills client could recover only 8 crores due to very slow progress. Also, as in contract all the amount should have been recovered in the original time period & not in the extended time. But still the client gave so much time to the contractor.



Against the advance amount contractor had submitted the bank guarantees with the client. The bank guarantees validity period was till 16/11/2011. Client gave in writing to the concerned bank on 29/10/2011, for revoking the remaining amount of 16 crores.

In the mean time the contractor went to the court and then the order to maintain status quo (stay) from court was obtained. On 14/11/2011 court gave the decision of revoking bank guarantees. Then again on 15/11/2011 the contractor approached district court and district court gave its decision in clients favour on 15/11/2011.

Lot of difficulties arose to revoke the bank guarantees from concerned bank. Actually bank guarantee is a agreement between only the bank and the beneficiary. Lot of complaints were made against the bank to Reserve Bank of India. And at last with continuous struggle the client could get the amount from the bank just one day before its validity date.

Hence, the interest on mobilization advance can not be waived.

### *DRCs decision :*

The committee decided to take the action as per contract conditions.

### *C. Recommendations to Take Efforts for Existing Project to Bring it on Track Now.*

Though the progress is very very slow, it is also true that to float another tender and to take different approvals, the client is going to waste a considerable time in all such procedures. Therefore, the client should give another two months extension and keep a track on day to day micro activities of the contractor & see that whether he can atleast achieve 2 months target. If the contractor fails in doing it then another tender should be called for.

Also, if the situation arises to call another tender, then the work should be split up in four parts and four different tenders should be called, so that work can be finished earlier.

Weekly meetings at very higher level, regarding the progress of work should be taken up very seriously, and if any hurdles they should be sort out on priority.

### *D. Effect of Dispute on Project Performance*

Dispute resulted in clients dissatisfaction regarding work. The progress of work slowed down. Initially the client had given 10% of mobilization advance and 5% of machinery advance (total 20% advance) to the contractor and could not recover the advance amount given to the contractor (see figure 1).

Due to slow progress, the contractor could not get enough cash flow to keep the finance rolling (see figure 2). Also, he could not return the advance amount and 6% interest on that amount due to no work, no running account bills.

Relation between contractor and client was not healthy due to dissatisfaction on both sides.

Unhealthy relations opened the doors of court. The case went in the court as client wanted to invoke all the bank guarantees of contractor which were kept with client against the advance amount. Ultimately, the result was on clients side. But as court had given stay it resulted in wastage of considerable time.

The cost per dwelling unit escalated to two times the original cost as was during the tender acceptance. Hence, dispute resulted in time and cost overruns.

Also, the contractor has lost his profit margin & the client had to pay much more amount for the completion of the project due to dispute.

### III. RECOMMENDATIONS TO AVOID DISPUTES IN FUTURE PROJECTS.

Total project is to be broken down into smaller well-defined packages with a view to optimize the number of contracts to be needed for better planning, coordination and implementation of the whole project. So, a well organised contract management system should be developed.

Absence of contract management system or loosely formulated system gives undue advantage to contractors through misuse of the arbitration, compensation and payment clauses to jack up their receipts, mask their poor performance, to manage their delays etc. in fact, contractors, in order to take such advantages, try to raise dispute. Such disputes can be avoided once owners contract management mechanism is active with sound planning and networking and ensures that all the related inter linked activities, responsibility of which lies with the owner are taken up in time and joint inspection is undertaken regularly to monitor the progress of contractors work.

Unless the land is in the possession the tender should not be floated at all.

For disputes nominated institutes can be referred to, like ICA, Institution of surveyors, CIDC, BAI etc.

Addition of dispute clauses as in FIDIC document or in Ministry of Statistics and Programme Implementation (MOS & PI) contract document should be done.

To avoid disputes the improved procedures for the following should be developed :

- Delegation of more powers at project level.
- Project implementation manual.
- Network based monitoring system.
- Extensive training to project managers.
- Prioritization of projects matching with available resources.
- Amendment to land Acquisition act.
- Development of standard rehabilitation package.
- On-line computerized monitoring system.

Understanding and evaluation of claims prior to taking it to litigation.

Stakeholders should not take much time for execution or decision making. Projects sometimes involves large number of stakeholders for its completion which in itself can lead to disputes because of the different ways in which each person views his or her position in the project and their contribution to it. To avoid disputes in future emphasis should be given on:

- Ease of understanding,
- Clearer text,
- Clearer risk allocation,
- Clearer roles,
- Clearer procedures,
- Reduced sources of conflict,
- Reduced gamesmanship,
- Clearer payment for change,
- Clearer dispute procedures and,
- Clearer guidance,

- Perfection in contract document,
- Knowledge of psychology of people in construction,
- Strategic Management,
- Design accuracy,
- Perfect geotechnical data,
- Accurate drawing plans and,
- Perfect planning.



A SAMPLE FLAT

FINISHING STAGE IN PROGRESS

REFERENCES.

- [1] Ministry of Statistics and Programme Implementation, Government of India, Standard general conditions for domestic contracts.
- [2] FIDIC Conditions of Contract for Construction, For building and engineering works, May 2005.
- [3] Actual Project Execution Site.

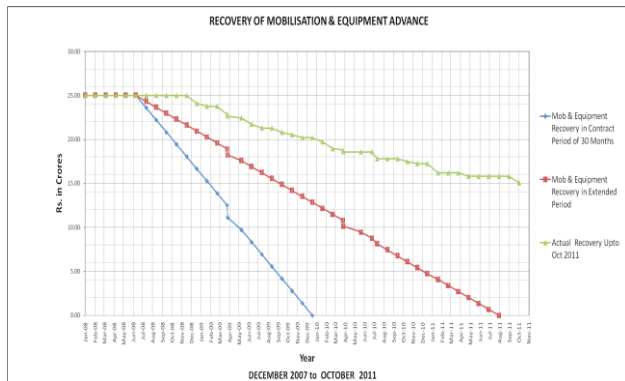


Figure 1: Recovery of Mobilisation and Equipment Advance.

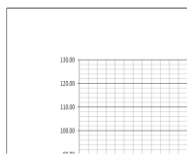


Figure 2: Targeted And Actual Progress Of Work



SLUM REHABILITATION PROJECT SITE