



ANJUMAN-I-ISLAM'S KALSEKAR TECHNICAL CAMPUS NEW PANVEL

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SCHOOL OF ENGINEERING & TECHNOLOGY
SCHOOL OF PHARMACY
SCHOOL OF ARCHITECTURE

Tenders
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PROF: RAJ MHATRE

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TENDER

- Whenever a client wants certain works to be done, services to be rendered or any purchases to be made, they float tenders in order to get the work done at competitive prices.
- Calling for tenders and entrusting the works based on these tenders, enables the owner/client to get the work done at least cost.
- Also, the selection of the contractor can be based on his experience and capacity. By this method of awarding works, personal interest, prejudices, preferences and partiality can be avoided..

- **Before tenders are invited for construction work, the following requirements are to be met with:**
- Necessary sanctions/ clearances for the project have to be obtained of.
- Estimation and costing to be done.
- Notice inviting tender is drafted.
- Standard for of tender document is ready along with general and special conditions if any.
- Schedule of quantities of work.
- Drawings
- Specifications
- Site of work is available and in possession.

Classification of tenders:-

1. Open tender— An oral talk or written document between the Engineer and the Contractor for certain small jobs to be performed. Sometimes it is advertised.
2. Sealed tender—Invited for important or huge projects; wide publicity is given; always written documents are made.

3. Limited tender—Only a selected no. of contractors are invited to quote their rates
4. Single tender—Invitation is given to only one firm to render a service by quoting their rates. If the quoted rates are high, it will be negotiated prior to the agreement of the contract.
5. Rate contract—usually adopted for supply of materials, machine, tools & plant, etc. (items to the store). It specifies the supply at a fixed rate during the period of contract. The quantities are not mentioned in type of contract and the contractor is bound to accept any order which would be placed before him.

For a CONTRACT to be valid, there must be an offer from the owner in the form of tender notice to get some specified work to be executed and there must be an acceptance from the contractor to execute the work, both the offer and the acceptance must be definite and legal.

Procedure for inviting tender:-

1. Preparation of tender documents
2. Issue of notice inviting tender or tender call notice
3. Submission and opening of tenders and their scrutiny
4. Acceptance of tender and award of contract

Information to be given in a tender notice :-

1. Name of the department inviting tender
2. Name of work and location
3. Designation of officer inviting tender
4. Last date and time of receipt of tender
5. Period of availability of tender document
6. Cost of tender document
7. Time of completion and type of contract
8. Earnest Money Deposit to be paid
9. Date, time and place of opening the tender
10. Designation of the officer opening the tender

Information to be given in a tender document:-

1. General conditions of tender
2. Schedule of items of work with clear specifications
3. Special conditions

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1. The notice inviting tender in specified form like PWD 6
2. Layout plan, location of work
3. Division in which location is situated
4. Schedule of quantities of work
5. Nearest road/railway link
6. Set of drawings including working drawings
7. Availability of materials in the vicinity
8. Detailed specifications or reference to standard specifications for each item of work
9. Complete architectural and structural drawings

contd.....

10. Schedule of stores to be issued by the owner of the project indicating the rates and their place of supply
11. Schedule of tools & plant and other facilities to be made available by the owner, indicating the conditions, hire charges and place of delivery
12. Rate of supply of power and the point of supply
13. Location of water supply point
14. Time for completion and the progress to be made at intervals of time
15. Conditions regarding employment of technical personnel
16. Weather conditions in the area
17. Amount of EMD and the form in which it is to be paid

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18. Insistence on Income tax and sales tax clearance certificate
19. Amount of Security deposit to be paid/ deducted from running bills of contractors should be notified in the tender call notice
20. Mode of payment for work done
21. Power to reject tenders without assigning reasons
22. Penalty conditions for slow progress and delay in the completion of work
23. Designation of arbitration authority in case of disputes

Short Tender Notice

When work is to be completed very quickly or no contractor prefers to accept the work

(THE TENDER IS FLOATED),

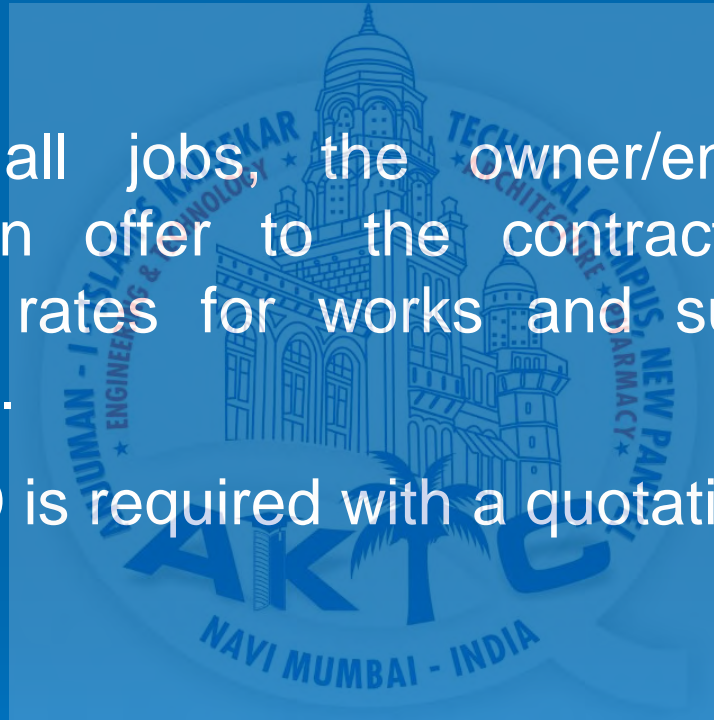
then a notice with short duration is again published by the client. Such a tender notice is called “SHORT TENDER NOTICE”.

The terms and conditions remain the same as that for ordinary tender notice.

QUOTATION

For small jobs, the owner/engineer gives an offer to the contractor for quoting rates for works and supplies required.

No EMD is required with a quotation.



EARNEST MONEY DEPOSIT

It is the amount of money to be deposited along with the tender document to the department by the contractors quoting a tender. This money is a guarantee against the refusal of any contractor to take up the work after the acceptance of his tender. In case of refusal, this amount is forfeited.

EMD of contractors whose tenders are not accepted will be refunded.

1% - 2% of the estimated cost of work is the Earnest Money Deposit.

LIQUIDATED DAMAGES

It is an amount of compensation payable by a contractor to the owner due to delayed construction. This amount of compensation is not related with real damage. This does not relieve the contractor from his obligations and liabilities under the contract. In case if a part of the project or premise is used by the owner before its completion, the amount to be paid is reduced in proportion to the value of the part that has been utilised, after issuing the certificate of occupancy.

UNLIQUIDATED DAMAGES

It is an amount of compensation payable when a contract is broken. The party who suffers such a breach is entitled to receive this amount from the party who has broken the contract.

FIRM PRICE & FIRM PERIOD

Sometimes owner award the work at a **firm price or fixed rate**. As the labour wages and materials cost increases, it is advisable to provide escalation and over run compensation.

Firm period is the duration of time over which the firm price is valid.

CONTRACT DOCUMENTS

When the tender of a contractor is accepted, an agreement between the contractor and the owner takes place and the documents defining the rights and obligations of the owner and the contractor are attached to the agreement bond and this is called a contract document. Each page of the contract document bears the signature of the contractor and the accepting authority and any correction in it is initialed.

The contract document must contain

1. Title page – name of work, name of owner, name of contractor, contract agreement no., contents, etc.
2. Index page – contents of the agreement with reference pages
3. Tender notice – brief description of work, estimated cost of work, date and time of receiving tender, amount of EMD and security deposit, time of completion, etc.

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4. Tender form – the bill of quantities, contractor's rate, total cost of work, time of completion, amount of security deposit, etc.
5. Schedule of issue of materials – list of materials to be issued by the owner/department to the contractor with the rates and place of issue.
6. Drawings – complete set of drawings including plan, elevation, sections, detailed drawings, etc. all fully dimensioned.
7. Specifications – (a) General Specifications which specify the class and type of work, quality of materials, etc. (b) Detailed specifications – detailed description of each item of work including material and method to be used along with the quality of workmanship required.

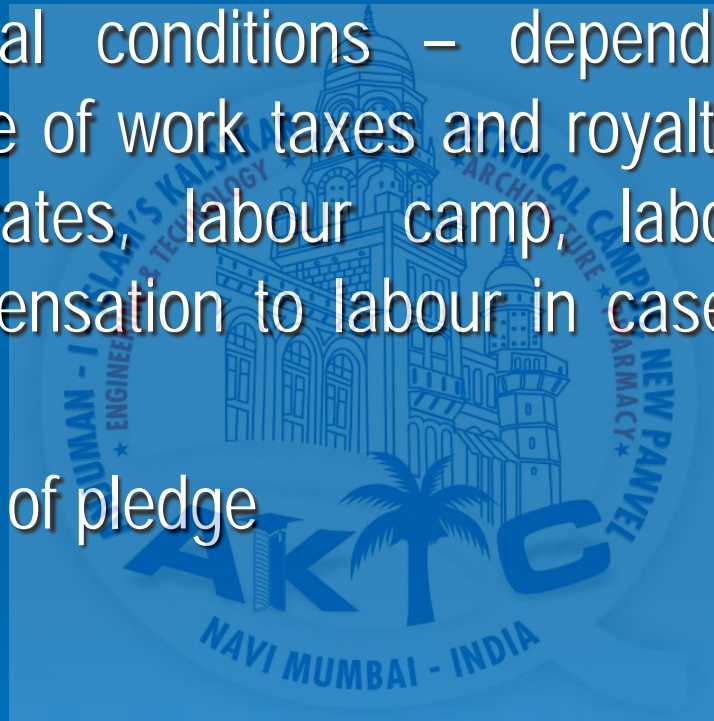
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8. Conditions of contract

- a) Rates of each item of work inclusive of materials, labour, transport, plant/equipment and other arrangements required for completion of work
- b) Amount and form of earnest money and security deposit
- c) Mode of payment to contractor including running payment, final payment and refund of security money, etc.
- d) Time of completion of work
- e) Extension of time for completion of work
- f) Engagement of sub contractor and other agencies at contractor's cost and risk
- g) Penalty for poor quality and unsatisfactory work progress
- h) Termination of contract
- i) Arbitration for settlement of disputes

contd....

9. Special conditions – depending upon the nature of work taxes and royalties included in the rates, labour camp, labour amenities, compensation to labour in case of accidents, etc.
10. Deed of pledge



Classification of Contracts

1. Lump-sum contract
2. Cost plus a fixed percentage contract
3. Cost plus a fixed fee contract
4. Target contract
5. Percentage rate contract (B1 system)
6. Item rate contract (B2 system)
7. Labour contract
8. Joint venture contract
9. Turn-key contract
10. Indirect lump-sum contract for flats or bungalows
11. BOT system

1. Lump-sum contract

In this system, the contractor undertakes the execution of a specific work for a definite lump-sum amount within a specified time period. On completion of the work, it is checked as per drawings and specifications and if approved the amount is paid to the contractor.

The quantities of various items is not measured.

For the construction of sculptures and decorative works this system is adopted.

2. Cost plus a fixed percentage contract

Under this system, the contractor furnishes labour and materials and completes the work for the actual total cost plus an agreed percentage of it as the profit of the contractor.

The speed and quality of work is maintained in this system but there is always tremendous wastage of materials as the contractor's aim is to increase the total cost of the work.

This system is adopted only in the case of emergency works.

3. Cost plus a fixed fee contract

In this system a fixed fee is given as contractor's profit irrespective of the total cost of work. This is to control the tendency of the contractor to increase the cost of the project unnecessarily. Smaller the completion time more is the profit and hence the contractors hurry to complete the work and the quality of workmanship is not maintained.

This system is not generally used.

4. Target contract

The contractor is paid a fixed fee on a prime cost basis for the work performed under the contract and in addition he receives a percentage on the savings effected against either a prior agreed estimated total cost or a target value arrived without changing the specification.

It was presumed that by proper management of the work, the contractor can reduce the cost of work. But due to tremendous increase in the cost of materials it never materialise and hence this system is not getting popularity.

5. Percentage rate contract (B1 system)

In this system the contractors are required to quote single percentage either higher or lower at which he wants to execute the job. Here scrutiny of the tenders become easier and as cement and steel is usually supplied by the department chances of manipulation is less. This the most commonly adopted system of contract in the different departments of our state.

6. Item rate contract (B2 system)

Here the contractor gets the payment depending on the rate at which he has quoted every item of the work. It was rather difficult to scrutinise the tenders submitted by various bidders and the system was hence modified and now the department quotes the items of work along with their quantities and the bidders are required to quote the percentages at which he can execute the various items.

7. Labour contract

This is the most commonly adopted system for the construction of private individual buildings in small cities. The contractor arranges all necessary labour, tools & plant and equipments required. The materials are supplied by the owner and he appoints an Engineer to supervise the work to maintain the quality and economy in construction.

This system is suitable in the works of Govt. departments as they are in a privileged position to buy large quantities of materials at cheap rates.

8. Joint venture contract

In case of huge important projects the construction works can be categorised into different parts and each part can be given to a specialised contractor in that field. This method improves the quality of work and the project can be completed within a short period of time.

Thus the project works can be divided among different contractors and hence joint venture system of contract developed.

9. Turn-key contract

In this system all the works related to a project including designing, planning, execution etc. are to be done by the contractor. Once the project is completed it is handed over to the owner. The owner has to complete the transaction works and occupy the structure by simply **turning the key**, ie. opening the door.

10. Indirect lump-sum contract for flats or bungalows

In this system the rate of construction per sq.m. of plinth area is jointly fixed by the contractor and owner which includes contractor's profit also. Once this agreement is made the contractor starts the work and receives payment at regular intervals during the different stages of work. Sometimes the specifications, drawings are prepared by the builder.

11. BOT system

Build operate and transfer is a new system in which the land is acquired by the Govt. and the contractor is asked to build the structure and then operate it until he collects the money he had spent for the construction, as fees from the users. Once the construction cost is recovered, the structure is handed over to the owner. No payment is made to the contractor by the owner/Govt.

Security is provided to the builder by the Govt. regarding law and order problems if any.

Bridges and roads are usually constructed by adopting this system of contract. Toll is collected from the users/vehicles passing over it by the contractor to recover the construction cost.

SECURITY DEPOSIT

Security deposit is the amount the contractor has to deposit with the owner before awarding a work, after his tender is accepted. This amounts to generally 5% to 10% of estimated cost of the project and is inclusive of the EMD already deposited by the contractor along with the tender. This will be refunded to the contractor after the completion of the project. No interest is paid on SD.

The contractor has to fulfill all the terms and conditions laid down in the contract and maintain quality and speed satisfactorily. If he fails to do so, a part or whole of the SD is forfeited by the department. If there is any fault in the construction and the contractor refuses to demolish and reconstruct then the department will carry out that work using the SD.

If the cost of the project is a huge amount, the contractor is made to deposit only 50% of the amount in the initial stage and then the rest of the SD is deducted in installments from the running bills of the contractor.

SD is not collected in the case of a contract for supply of materials, as the supplied materials become the security.

QUALIFICATIONS OF THE CONTRACTORS

Registration of contractors:-

The contractor must get himself registered in the departments (or Government - govt. Contractor) for which he is interested to take up works.

Government contractors are entitled to do govt. jobs if awarded.

Contractors are classified according to the registration and registration fees and depending on this they can undertake works up to certain amount.

To get a contractor to be registered under certain class, he has to apply to the competent authority.

The application should contain the following documents:

1. Current income tax certificate
2. Work certificates for all the works performed during the last three years and those in progress
3. Solvency certificate for an appropriate amount
4. Attested copy of deed of partnership and power of attorney on stamp paper if needed
5. Undertaking for employment of the Class I & II staff
6. Application in duplicate with all documents
7. Attested photos of all the partners if any

Pre-qualification of contractors

Sometimes works are awarded on the basis of quotations invited from a group of 'selected tenderer' (a group of known reputed contractors) who are considered suitable for that job. This method is known as 'pre-qualification' and saves a lot of time.

In the advertisement itself it must be mentioned that only contractors having experience in the particular work should submit the tender.

1. Quality characteristics

This include the characteristics and properties of the materials, machines, man power, etc. used for the work.

For example if the material used is concrete, slump, strength, water cement ratio, etc. are checked frequently.

Quality control in construction

The basic elements of quality are:

1. Quality characteristics
2. Quality of design
3. Quality of conformance

1. Quality characteristics

This include the characteristics and properties of the materials, machines, man power, etc. used for the work.

For example if the material used is concrete, slump, strength, water cement ratio, etc. are checked frequently.

2. Quality of design

No design can produce perfect results. Hence the desired standards that define a material such as dimension, strength, etc. and the tolerances, the acceptable variations from the standards are also specified.

For example if the material used is concrete, in addition to specifying the required compressive strength, the range of variation permitted, viz. no more than 20% of the sample can have value less than the one specified.

If very high standards of quality and stiff tolerance limits are set, then this will increase the cost of the project.