

DI04006021: Estimation & Costing

Lecture 44: Transportation and Hire Charges

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Transportation Charges of Materials

Transportation constitutes a major part of the cost of heavy materials like aggregates, sand, and bricks.

- **Modes:** Trucks, tractors, or head load for short distances.
- **Calculation Base:** Usually calculated per Ton-km or per cubic meter per km.
- **Loading/Unloading:** Charges for loading and unloading must be included in the transport cost.

$$\text{Rate} = (\text{Base Cost of Material at Source}) + (\text{Transportation Cost})$$

Hire Charges of Machineries

Modern construction relies heavily on machinery.

Types of Charges

- **Per Day / Per Hour:** Hire charges are usually fixed per 8-hour shift.
- **Inclusions:** Hire charges generally include fuel, lubricants, and operator wages (Dry hire vs. Wet hire).
- **Mobilization/Demobilization:** Cost of transporting the machinery to the site and back.

Machinery Examples

Excavator
(Earthwork)

Concrete Mixer
(Concreting)

Adding machinery reduces labor cost and speeds up work, but increases capital outlay. The balance is found through careful rate analysis.