Presentation
On
“MATERIAL MANAGEMENT PRACTICES IN INDIA ”

न हि ज्ञानेन सदृशं पवित्रमिह विद्यते।

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Definition

- Material management is the concept requiring an organized structure which into one functional responsibility the systematic planning and control of all the material from identification of the need to the delivery to the customers.

(Ref- 2.1)

Aim Of Material Management

- **To get……**

1. The Right quality
2. Right quantity of supplies
3. At the Right time
4. At the Right place
5. For the Right cost

Purpose Of Material Management

- To gain economy in purchasing
- To satisfy the demand during period of replenishment
- To stabilize fluctuations in consumption
- To provide reasonable level of client services

Objective Of Material Management

- There are two types of objective.

1. **Primary** objective.

2. **Secondary** objective.

Primary objective :

- Low procurement
- High turnover
- Good information system

Secondary objective :

- Forecasting
- New materials & products
- Make or buy decision

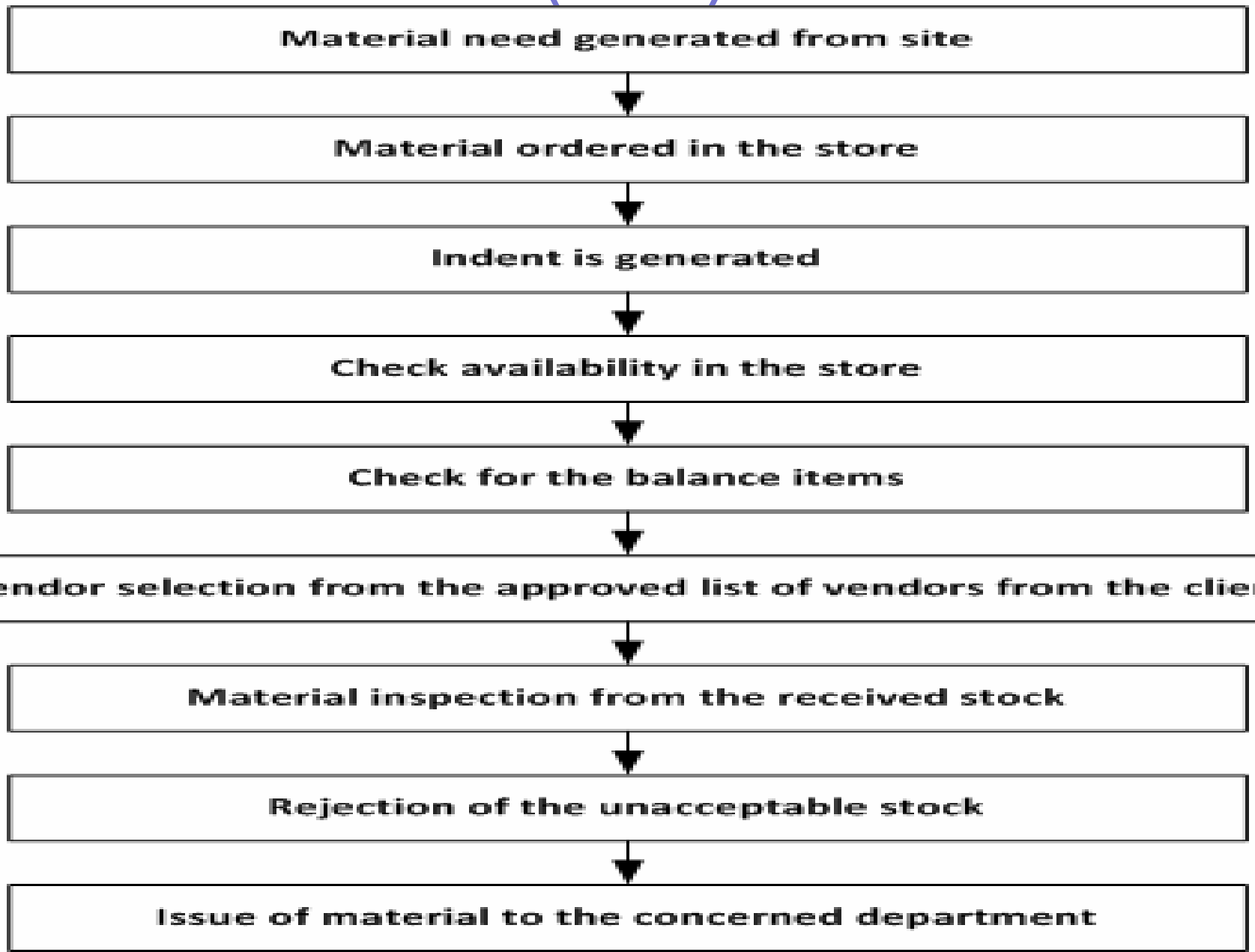
Importance Of Material Management

- Material management deals with managing of materials along with costs.
- Construction material and components contribute around 50-60% of the total value of construction.
- It is estimated that about 10% of all material delivered to site either and up waste removed during the construction phase.

(Ref- 4.2)

Process of Material Management :

(Ref-6.8)



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Material Management Phases

- **Material planning and control** : It requires foresight so that system does not stop working.
- **Corporate Policies**.
- **Storekeeping** : It involves receipt, storing and issue of material on the site.

Continued……

- **Transportation** : It involves both the inward and outward transportation.
- **Material handling** : Handling of material is done by different material handling device so as to maintain the quality of material.
- **Disposal of scrap** : It include the disposal of the scrap so as to achieve some resale value.
- **Monitoring** : Monitoring the actual receipts in terms of quantity, quality and time.

Function of Store

- Identification
- Inspection
- Stock records
- Stores accounting
- Stock Control
- Stock taking
- Storage

Objectives Inventory control

- Availability of materials.
- Minimizing the wastages.
- Better service to consumer.
- Optimum investment and efficient use of materials.
- Economy in purchasing.

Inventory control

- Inventory is the physical stock of items that business or production organization keeps in hand for efficient running of throug production, **inventories consist of raw materials.**

- In sample words inventory means 'stick items' or 'items in stock'.

Stock Control Card

Name Of Material	Code No.	Max. Level	Min Level	Re-Order Level	EOQ/Lot size	Units	Location

Date	Doc Ref	IN	OUT	Bal	Remark

Purchase

- **Basic Principles**

1. Ultimate aim: Right quality, right quantity, right prices, right source and at right time to the right place.
2. Centralize the purchase system.

Wastage

- Negative variation if any between the intended and actual consumption of an individual item or total-factor consumption of all inputs**.**

Construction wastage categories

- The Construction wastage five categories classify :

1. Material waste
2. Time waste
3. Labour waste
4. Process waste
5. equipment waste

Project Information in brief

- Project-1 (RESIDENTIAL FLATS)

- **Name Of Project** : Akshardham Township, Mehsana
- **Contractor** : Kamleshbhai Patel
- **Consultant** : Geotech soil Testing Laboratery,Ahmedabad
- **Type of contract** : Item rate Contract
- **Date of starting** : 16/07/2012

Project Information in brief

- Project-2 (RESIDENTIAL HOUSES)

- **Name Of Project** : Saundarya Silver , Mehsana
- **Contractor** : Sanjay Patel
- **Consultant** : Geotech soil Testing Laboratery,Ahmedabad
- **Type of contract** : Item rate Contract
- **Date of starting** : 6/08/2012

Total Material Consumption

- Project-1
  - Cement Consumption:- 10907Bags
  - Steel Consumption:- 230441Kg
  - Brick Consumption:- 176674Nos.
  - Aggregate Consumption:- 1740.01Ton
  - Sand Consumption:- 2087.07Ton

Continued……

- Project-2
- Cement Consumption:- 277550Bags
- Steel Consumption:- 94822Kg
- Brick Consumption:- 313350Nos.
- Aggregate Consumption:- 983.37Ton
- Sand Consumption:- 2454Ton

Disposal & Wastage

- Project -1
- Cement Wastage:-

- Theoretical Consumption of Cement till: 11100 bags (as per RA.Bill)
- Actual consumption of cement till: 10907 bags (as per cement register)

- **Actual Wastage :** 1.73%
- **Allowable Wastage:** 2%

Steel Wastage

- Actual Steel received at site till (A): 230.44 MT
- Theoretical Consumption of Steel till(B): 245.73 MT
- Steel Available at side(C):4MT
  (as per site engineer)
- Wastage of Steel = A-(B+C)
  =230.44-(245.73+4)
  =11.29MT

- **Wastage (%) =** 4.59%
- **Allowable Wastage:** 5%

Brick Wastage

- Theoretical Consumption of Brick till: 181000NO.(as per RA.Bill)
- Actual consumption of Brick till : 176674NO (as per cement register)

- **Actual Wastage :** 2.39%
- **Allowable Wastage:** 5%

Aggregate Wastage

- Course aggregate Received at site till (A): 1847.79TON
- Actual consumption of course Aggregate (B): 1740.01TON

- Wastage = (A - B): 107.78TON

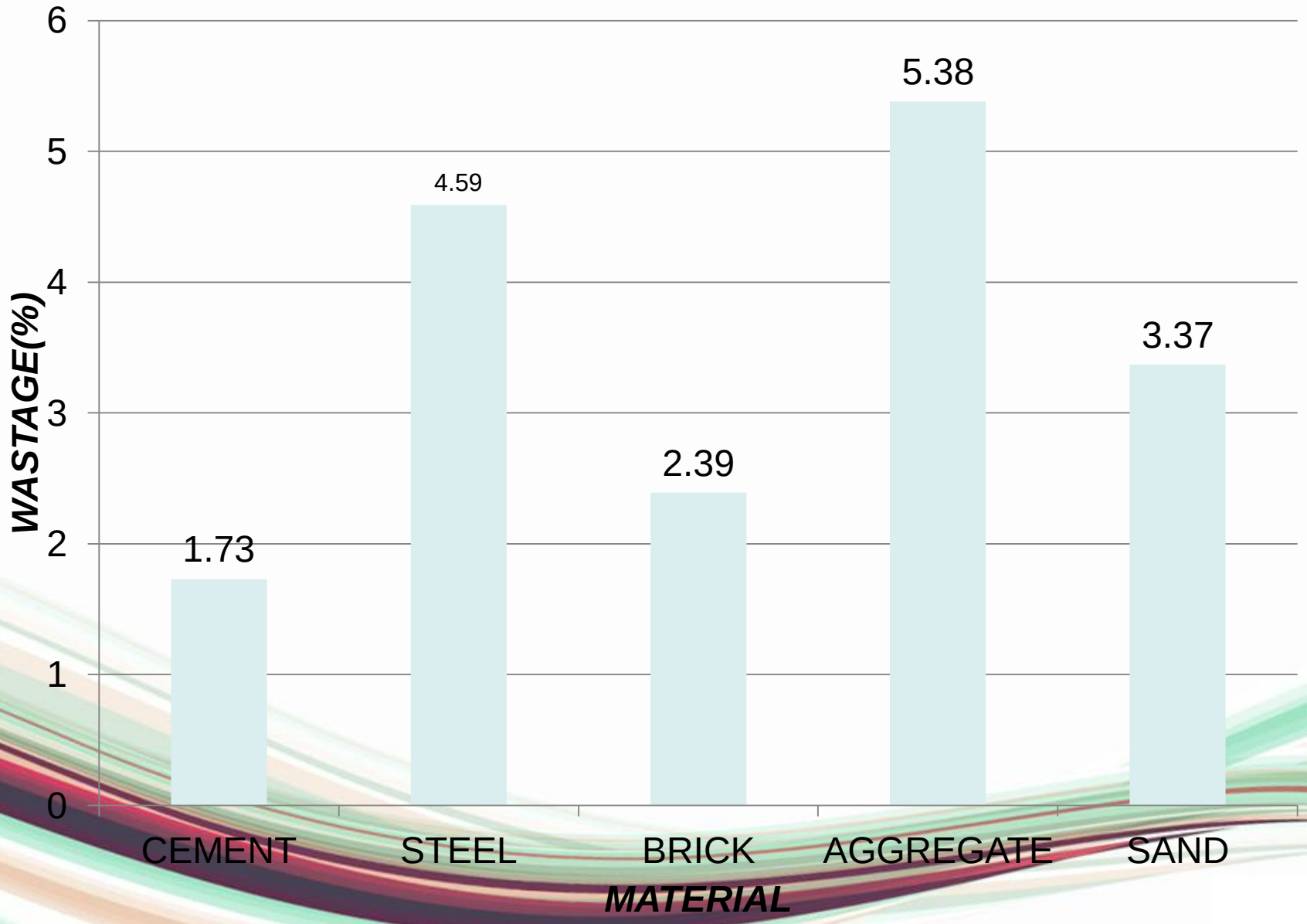
- **Wastage (%):**5.38%
- **Allowable Wastage: 5%**

Sand Wastage

- Fine Aggregate Received at site till (A): 2160.01TON
- Actual Consumption of Fine Aggregate (B): 2087.07TON
- Wastage = (A - B):72.94TON

- **Wastage (%):**3.37%
- **Allowable Wastage:** 10%

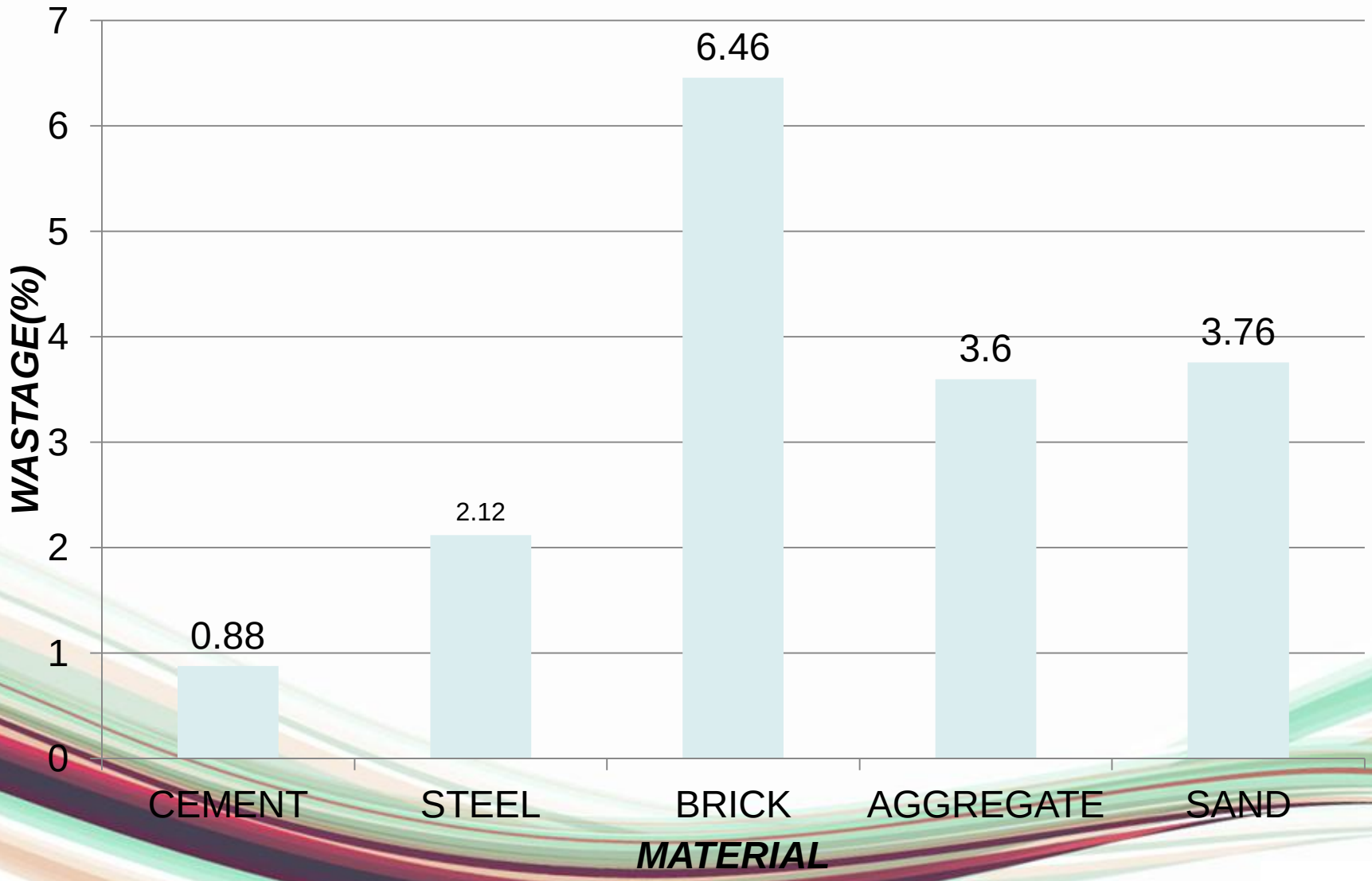
Wastage Chart Project-1



Project -2

- Cement Wastage:- 0.88%
- Steel Wastage:- 2.12%
- Brick Wastage:- 6.46%
- Aggregate Wastage:- 3.60%
- Sand Wastage:- 3.76%

Wastage Chart Project-2



Case study Analysis

Sr.No	Name of Material	Actual wastage		Allowable wastage	Avg. wastage
		Project 1	Project 2		
1	Cement	1.73%	0.88%	2%	1.30%
2	Steel	4.59%	2.12%	5%	3.35%
3	Brick	2.39%	6.46%	5%	4.42%
4	Course Agg.	5.38%	3.60%	5%	4.49%
5	Fine Agg.	3.37%	3.76%	10%	3.56%

Conclusion

- Material procurement schedule must be made.
- Computer Software's should be used at site to keep the information updated which is generally not used by middle level construction companies. The software which is used are Ms Project, primavera.
- Use of RMC and Precast concrete Structure which give better quality and reduce the cost of storage of material and wastage.

Thanks...