Materials Classification and Codification

TOPICS COVERED

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- Objective of Materials Codification
- Principles of Materials Classification/Codification
- Materials Classification groups
- Steps involved in Materials Classification
- Types of Materials Codification
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  - Numeric
  - Alpha-numeric
  - Decimal, Brisch and Kodak
- Advantages of Materials classification and Codification

Materials Classification

- The materials procured by a firm must be classified and coded before the materials are inspected, accounted in stores ledgers and stored.
- Materials are broadly classified according to their nature, use and service before codification is taken up.

Materials Codification

- This is the system adopted for accurate identification of materials by allotting a alphabets, numerical or alpha-numeric number for each item procured and stored.
- Systematic concise representation of raw materials, components, spares and tools etc.

Objectives of Materials Codification

- To bring all similar items together under one classification or group
- To classify an item according to its nature or characteristics
- To avoid duplication and confusion
- To fix essential parameters to specify an item

Principles of Materials Classification/Codification

- Code should be compact, concise and Consistent
- Code should be unique.
- Code should be Comprehensive
- Code should be sufficiently flexible to meet future requirement
- Code should be simple to understand
- Easily adoptable and implementable

Materials Classification Groups

- Raw Materials (RM)
- Components
- Consumables
- Spare Parts
- Supplies
- Tools
- Packing Materials
- Work-in-process (WIP) items
- Finished Goods (FG)
- Hardware items
- Fasteners
- Subcontracted items
- Wires and cables
- Paints and chemicals
- Petroleum, oil & lubricant (POL)

Steps involved in Materials Codification System

- The large number of items of different varieties comprising the inventory needs to be classified under major groups known as "Generic groups".
- Further divide into distinct subgroups according to the type of material.
- Further listed in alphabetical order and then according to the size, characteristics, function.

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Types of Materials Codification System

- Alphabetic system
- Numeric system
- Alpha-Numeric system
- Decimal system
- Brisch or British system
- Kodak System
- Mnemonic System
- Block system

1. Alphabetic coding system

- Alphabets are used as codes allocated to materials which have no relation with number
- Each materials analysed from point of view of codification and is grouped according to nature, use etc.

Alphabetic coding system example

Raw Materials	CODES
IRON	IN
Iron sheet Iron Bars Iron steel	IN-ST IN-BA IN-S
STAINLESS STEEL	IF
SS-2 mm	IF-SA
SS-5 mm	IF-SB

2. Numeric coding system

Numeric codes are allocated to materials. (0-9).

1. **Simple number**:

- Each item allotted a number. Some numbers are kept for future expansion.

2. Block Number: (group of number)

- Items of similar nature grouped together
- A block number is allotted to one group which may be further sub-divided as per need.

3. **Dash or Stroke Number**:

- In between digit a stroke or dash is put to describe varying characteristics of materials.

Numeric coding system example

Materials	Simple Number	Block Number	Dash or Stroke
Raw Materials	01	Block of 1-100	17
Iron sheet	05	1-10	17-1 or 17/1
Iron bars	06	11-20	17-2 or 17/2
Iron steel	07	21-30	17-3 or 17/3
Stainless Steel	11	200-250	20
ss-2 mm (diff width)	12	201-205	20-2
ss-5 mm	13	206-210	20-3

3. Alpha-Numeric coding system

- A mix of alphabetical and numeric allocated to materials.
- Materials are grouped together and group is allocated a code.
- Numbers are assigned based on block system or dash/stroke system

Alpha-numeric coding system example

Materials	Main	Sub-I	Full Code
Sulphur	SP		
Sulphuric acid		11	SP-11
Sulphur Oxide		12	SP-12
Packing Material	PM		100-999
Packing box size 18”		101	PM-101
Packing box size 24”		102	PM-102
Packing box size 56”		103	PM-103

4. Decimal coding system

- The decimal system uses decimal in coding .
- The system divides into three category
  - First Category:

    Main classification such as RM, FG etc.
  - Second Category:

    Divides first category into different sub-classification according to nature, use, quality, characteristics etc.
  - Third category:

    Further divides second category into different materials such its component, quality etc.

Decimal coding system example

	Main	Sub I	Sub II	Full Code
Stationary	47			
Pencil		01		47.01
Pen		02		47.02
Paper		03		47.03
PENCIL		01		
Lead			51	47.01.51
Blue			52	47.01.52
Red			53	47.01.53

5. Brisch coding system

- It is named after UK prominent consulting engineer.
- Based on numbers 0-9
- Consist of blocks separated by decimal.
- Similar to decimal system.
- Example: 12. 01.15

5. Kodak coding system

- Developed by Eastman Kodak
- Based on numeric and hyphen
- It is 10-digit numeric code.
  - First Two digit: 82-85 : Fuel stock
  - Sub-Class: 001 Diesel
- 002 Petrol
  - Diesel sub class: 601 Normal Diesel
- 602 High speed diesel

Example: 602-001-82 High speed diesel of major fuel category

Advantages of Classification & Codification

- Systematic grouping for correct identification of similar items.
- Avoids duplication stocks of same items.
- Reduction in sizes and varieties.
- Helps in standardization of materials.
- Avoid long description.
- Accurate and logical identification.
- Ensures accuracy in correspondence, records and postings of receipts and issues in appropriate records.
- Helps in efficient purchasing.
- Helps in efficient warehousing.
- Ease of computerisation
- Ease of pricing
- Ease in physical locating the items
- Helps in efficient inspection
- Helps in planned production