



<http://www.bomsr.com>

Email:editorbomsr@gmail.com

RESEARCH ARTICLE



INVENTORY CONTROL USING ABC ANALYSIS

K. KARPAGAM¹, KEERTHANA²

^{1,2}PG & Research Department of Mathematics, Sri Ramakrishna College of Arts & Science,
Coimbatore, Tamil Nadu-641006.

Email:kkarpagam@srcas.ac.in¹, 20pgmat06@srcas.ac.in²

DOI:[10.33329/bomsr.11.2.138](https://doi.org/10.33329/bomsr.11.2.138)



ABSTRACT

In this paper a new class of continuous functions called faintly αg^*s -continuous functions and relationship among faintly αg^*s -continuous functions and αg^*s -connected spaces, αg^*s -compact spaces and αg^*s -regular spaces have been investigated and their properties are obtained.

Keywords and Phrases: αg^*s -closed sets, αg^*s -connected spaces, αg^*s -compact spaces, αg^*s -continuous spaces.

AMS Subject Classification: 54C08, 54C10.

INTRODUCTION

Operation Research mostly deals with optimization. It is a scientific approach to decision making. It is the Mathematical study of resource allocation problems, decisions, games, uncertainty, scheduling and optimization. Application of the scientific and especially Mathematical methods to the study and analysis of problems involving complex systems.

Inventory is the stock of goods, kept for future use which has some Economic value.

Inventory control or stock control can be broadly defined as “the activity of checking a shop’s stock”. It is the process of ensuring that the right amount of supply is available within a business. The Inventory may be kept in any one of the following forms:

- Raw material Inventory: Raw material which are kept in stock for using in production of goods.
- Work-in process Inventory: Semi-finished goods which are stored during production

process.

- Finished goods Inventory: Finished goods awaiting shipments from the factory.

PRELIMINARIES

1 TYPES OF INVENTORIES:

Definition 1.1 Fluctuation Inventories

In real-life problems, there are fluctuations in the demand and lead times that affect the production of the items. Such types of safety stock are called fluctuations Inventories.

Definition 1.2 Anticipated Inventories

These are built up in advance for the season of large sales, a promotion programme or a plant shut down period. Anticipated Inventories keep men and machine hours for future participation.

Definition 1.3

Lot-size Inventories

Generally, rate of consumption is different from rate of consumption is different from rate of production or buying. Therefore, the items are produced in larger quantities, which result in lot-size Inventories.

2 Cost Involved in Inventory Problems

Definition 2.1

Holding Cost (C_1)
The cost associated with carrying or holding the goods in stock is known as holding cost (or) carrying cost per unit per unit of time. Holding cost is assumed to directly vary with the size of inventory as well as the time the item is held in stock. The following components constitute holding cost.

- Interested capital cost: This is the interest charge over the capital invested.
- Record keeping and administrative cost.
- Handling cost: These include costs associated with movement of stock, such as cost of labor etc.
- Storage costs.
- Depreciation costs.
- Taxes and Insurance costs.
- Purchase price or production costs.

Purchase price per unit item is affected by the quantity purchased due to quantity discounts or price breaks. If P is the purchase price of an item and I is the stock holding cost per unit time expressed as a fraction of stock value (in rupees), then the holding cost $C_1 = IP$.

Definition 2.2 Shortage Cost (C_2)

The penalty costs that are incurred as a result of running out of stock (i.e., shortage) are known as shortage or stock-out costs. These are denoted by C_2 . In case where the unfilled demand for the goods may be satisfied later, these costs are assumed to vary directly with both the shortage

quantity and the delaying time. On the other hand, if the unfilled demand is lost (no backlog case) shortage costs become proportional to shortage quantity only.

Definition 2.3 Set-up Cost (C3)

These costs are associated with obtaining goods through placing an order or purchasing or manufacturing or setting up a machinery before starting production. So, they include costs of purchase, requisition, follow-up receiving the goods, quality control etc. These are called ordering costs or replenishment costs, or set-up cost usually denoted by C3 per production run (cycle). They are assumed to be independent of the quantity ordered or purchased.

3 Basics Definitions

Definition 3.1 Lead Time

Elapsed time between the placement of the order and its receipts in inventory is known as lead time.

Definition 3.2 Reorder level

This is the time when we should place an order by taking into consideration the interval between placing the order and receiving the supply.

For e.g., we would like to place a new order precisely at the time when inventory level reaches zero.

Definition 3.3

Economic order quantity (EOQ)

This is the size of order which minimizes total annual cost of carrying inventory and the cost of ordering under the assumed conditions of certainty and that annual demands are known.

4 ABC Analysis

(ABC = Always better control) ABC analysis based on cost criteria. It helps to exercise selective control when confronted with large number of items it rationalizes the number of orders, number of items and reduce the inventory.

Category 'A' Items

- The most important items of the company.
- Accounts for only 10 to 25 % of the total inventory items.
- Accounts for 70 to 80 % of the annual consumption value of the company. (Which is the highest value)
- Have very Tight Inventory Control.
- Managed by top level management.

Category 'B' Items

- Less important items than 'A' items but more important than 'C' items of the company.
- Accounts for 25 to 30 % of the total inventory items.
- Accounts for 15 to 25 % of the annual consumption value of the company.
- Have Intermediate Inventory control.
- Managed by middle level management.

Category 'C' items

- Marginally important items of the company.
- Accounts for 45 to 50 % of the total inventory items.
- Accounts for 5 to 10 % of the annual consumption value of the company.
- Have low inventory control.
- Managed by middle and lower-level managements.

ABC Analysis

| S.No | Name of the parts | Annual requirements in units | Unit price | Annual Consumption | Ranking |
|------|-------------------------------|------------------------------|------------|--------------------|---------|
| 1 | M12 Hinged foot | 1835 | 262 | 4,80,770 | 7 |
| 2 | D58 Damping ring | 1615 | 81 | 1,30,815 | 19 |
| 3 | M16 Hinged foot | 24 | 246 | 5904 | 51 |
| 4 | D90 Damping ring | 37 | 124 | 4588 | 54 |
| 5 | Profile bracket 45*45 | 424 | 82 | 34,768 | 39 |
| 6 | Profile bracket 90*90 | 139 | 282 | 39,198 | 37 |
| 7 | Cover cap 30*30 | 528 | 22 | 11,616 | 47 |
| 8 | Cover cap 45*45 | 5173 | 27 | 1,39,671 | 17 |
| 9 | Cover cap 45*90 | 303 | 104 | 31,512 | 40 |
| 10 | Cover cap 60*60 | 208 | 51 | 10,608 | 48 |
| 11 | Cubic connector 30*30 | 858 | 394 | 3,38,052 | 8 |
| 12 | Cubic connector 45*45 | 2442 | 291 | 7,10,622 | 4 |
| 13 | T_NUT_M5 for 8MM SLOT | 4850 | 19 | 92,150 | 23 |
| 14 | T_NUT_M5 for 10MM SLOT | 17623 | 19 | 3,34,837 | 9 |
| 15 | T_NUT_M8 for 10MM SLOT | 47327 | 16 | 7,75,232 | 2 |
| 16 | T_NUT_M5 for 10MM SLOT | 47482 | 16 | 7,59,712 | 3 |
| 17 | Profile variofix_45*45 | 14558 | 92 | 13,39,336 | 1 |
| 18 | Profile variofix_30*30 | 537 | 82 | 44,034 | 35 |
| 19 | T_NUT_M6 for 8MM SLOT | 6891 | 19 | 1,30,929 | 18 |
| 20 | T_NUT_M4 for 8MM SLOT | 1265 | 19 | 24,035 | 43 |
| 21 | T_NUT_M4 for 10MM SLOT | 179 | 19 | 60,401 | 29 |
| 22 | Cover cap 90*90 | 261 | 78 | 20,358 | 45 |
| 23 | Swivel bearing standard_45*90 | 148 | 751 | 1,11,148 | 22 |
| 24 | Connector 30*30 | 277 | 104 | 28,808 | 41 |
| 25 | 45*45 Bracket | 59 | 158 | 9,322 | 49 |
| 26 | 60*60 Bracket | 25 | 195 | 4,875 | 53 |
| 27 | 30*30 Bracket | 32 | 124 | 3,968 | 57 |
| 28 | 90*90 Bracket | 5 | 450 | 2,250 | 62 |
| 29 | 30*45 Hinge | 191 | 1360 | 2,59,760 | 10 |

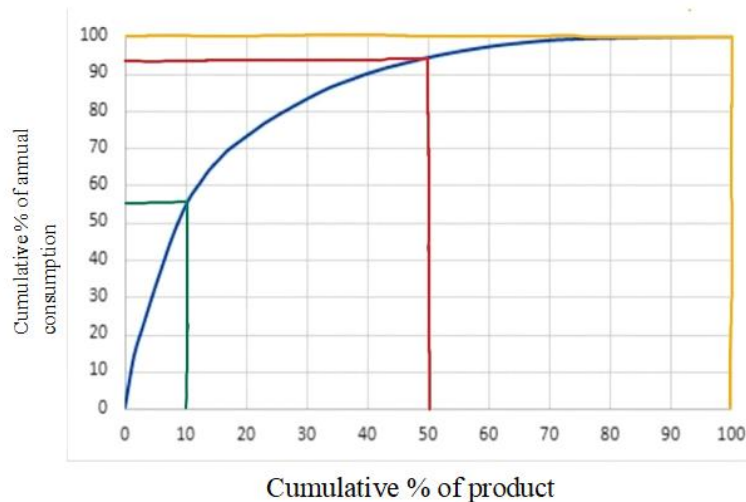
| | | | | | |
|----|---------------------------------|------|------|----------|----|
| 30 | 40*40 Hinge | 25 | 1556 | 38,900 | 38 |
| 31 | 45*45 Hinge | 378 | 450 | 1,70,100 | 15 |
| 32 | Handles | 1704 | 342 | 5,82,768 | 6 |
| 33 | DYSC-4-4-Y1F Shock Absorber | 169 | 4088 | 6,90,872 | 5 |
| 34 | DYSC-5-5-Y1F Shock Absorber | 34 | 2546 | 86,564 | 24 |
| 35 | DYSC-7-5-Y1F Shock Absorber | 20 | 2823 | 56,460 | 32 |
| 36 | Coupler KSG-M12*1.25 | 69 | 1247 | 86,043 | 25 |
| 37 | Cylinder ADN-50-30-A-P-A | 35 | 2059 | 72,065 | 28 |
| 38 | Rod clevis SG-M4 | 59 | 86 | 5,074 | 52 |
| 39 | Coupling piece KSG-M10*1.25 | 88 | 1348 | 1,18,624 | 21 |
| 40 | Coupler KSG-M16*1.5 | 156 | 1569 | 2,44,764 | 11 |
| 41 | Coupling piece KSG-M20*1.5 | 47 | 3635 | 1,70,845 | 14 |
| 42 | Coupling piece KSZ-M8 | 35 | 1650 | 57,750 | 31 |
| 43 | Coupling KSZ-M10*1.25 | 77 | 784 | 60,368 | 30 |
| 44 | ROD EYE SGS-M16*1.5 | 268 | 674 | 1,80,632 | 12 |
| 45 | Foot mounting HP-25 | 256 | 196 | 50,176 | 34 |
| 46 | Foot mounting HP-32 | 114 | 752 | 85,728 | 26 |
| 47 | MOM COM, DARD-L1-32-S | 57 | 2211 | 1,26,027 | 20 |
| 48 | Moment compensator DARD-L1-40-S | 48 | 3589 | 1,72,272 | 13 |
| 49 | Distributor block FR-8-1/4 | 58 | 400 | 23,200 | 44 |
| 50 | Distributor block FR-4-3/8-B | 89 | 810 | 72,090 | 27 |
| 51 | Distributor block FR-4-1/4-C | 142 | 172 | 24,424 | 42 |
| 52 | Branch module FRM-D-MIDI | 159 | 58 | 9,222 | 50 |
| 53 | Push-in fitting_QS-1/8-4-I | 78 | 40 | 3,120 | 59 |
| 54 | Push-in fitting_QS-G1/8-6-I | 56 | 70 | 3,920 | 58 |
| 55 | Push-in fitting_QSL-3/8-16 | 9 | 328 | 2,952 | 60 |
| 56 | Push-in fitting_QSLV-M5-6 | 18 | 123 | 2,214 | 63 |
| 57 | Push-in fitting_QST-12 | 27 | 166 | 4,482 | 55 |
| 58 | Push-in fitting_QST-16 | 159 | 319 | 50,721 | 33 |
| 59 | Push-in fitting_QSY-16-12 | 45 | 400 | 18,000 | 46 |
| 60 | Push-in fitting_CRQS-1/4-6 | 65 | 675 | 43,875 | 36 |
| 61 | Flow count val_CRGLA-1/4-B | 78 | 1851 | 1,44,378 | 16 |
| 62 | Blanking plug_B1/8 | 92 | 19 | 1,748 | 64 |
| 63 | Push-in fitting_QS-1/8-8 | 32 | 43 | 1,376 | 65 |

| | | | | | |
|----|---------------------------|----|----|-------|----|
| 64 | Push-in fitting_QS-¼-4 | 56 | 51 | 2,856 | 61 |
| 65 | Push-in fitting_QS-G1/8-4 | 80 | 50 | 4,000 | 56 |

| Rank | Name of the part | Cumulative % of product | Annual consumption | Cumulative annual consumption (Rs) | Cumulative % of annual consumption |
|------|---------------------------------|-------------------------|--------------------|------------------------------------|------------------------------------|
| 1 | Profile variofix_45*45 | 1.53 | 13,39,336 | 13,39,336 | 14.23671601 |
| 2 | T_NUT_M8 for 10MM SLOT | 3.07 | 7,75,232 | 21,145,68 | 22.47718578 |
| 3 | T_NUT_M5 for 10MM SLOT | 4.61 | 7,59,712 | 28,74,280 | 30.55268288 |
| 4 | Cubic connector 45*45 | 6.15 | 7,10,622 | 35,84,902 | 38.10636889 |
| 5 | DYSC-4-4-Y1F Shock Absorber | 7.69 | 6,90,872 | 42,75,774 | 45.45011868 |
| 6 | Handles | 9.23 | 5,82,768 | 48,58,542 | 51.6447573 |
| 7 | M12 Hinged foot | 10.76 | 4,80,770 | 53,39,312 | 56.7551896 |
| 8 | Cubic connector 30*30 | 12.30 | 3,38,052 | 56,77,364 | 60.34857492 |
| 9 | T_NUT_M5 for 10MM SLOT | 13.84 | 3,34,837 | 60,12,201 | 63.90778581 |
| 10 | 30*45 Hinge | 15.38 | 2,59,760 | 62,71,961 | 66.66895205 |
| 11 | Coupler KSG-M16*1.5 | 16.92 | 2,44,764 | 65,16,725 | 69.27071558 |
| 12 | ROD EYE SGS-M16*1.5 | 18.46 | 1,80,362 | 66,97,087 | 71.18790631 |
| 13 | Moment compensator DARD-L1-40-S | 20 | 1,72,272 | 68,69,359 | 73.01910292 |
| 14 | Coupling piece KSG-M20*1.5 | 21.53 | 1,70,845 | 70,40,204 | 74.83513097 |
| 15 | 45*45 Hinge | 23.07 | 1,70,100 | 72,10,304 | 76.64323991 |
| 16 | Flow count val_CRGLA-1/4-B | 24.61 | 1,44,378 | 73,54,682 | 78.17793216 |
| 17 | Cover cap 45*45 | 26.15 | 1,39,671 | 74,94,353 | 79.6625905 |
| 18 | T_NUT_M6 for 8MM SLOT | 27.69 | 1,30,929 | 76,25,282 | 81.05432416 |
| 19 | D58 Damping ring | 29.23 | 1,30,815 | 77,56,097 | 82.44484603 |
| 20 | MOM COM, DARD-L1-32-S | 30.76 | 1,26,027 | 78,82,124 | 83.78447299 |
| 21 | Coupling piece KSG-M10*1.25 | 32.30 | 1,186,24 | 80,00,748 | 85.04540841 |
| 22 | Swivel bearing standard_45*90 | 33.84 | 1,11,148 | 81,11,896 | 86.22687632 |
| 23 | T_NUT_M5 for 8MM SLOT | 35.38 | 92,150 | 82,04,046 | 87.20640153 |
| 24 | DYSC-5-5-Y1F Shock Absorber | 36.92 | 86,564 | 82,90,610 | 88.12654934 |
| 25 | Coupler KSG-M12*1.25 | 38.46 | 86,043 | 83,76,653 | 89.04115909 |
| 26 | Foot mounting HP-32 | 40 | 85,728 | 84,62,381 | 89.95242048 |
| 27 | Distributor block FR-4-3/-B8 | 41.53 | 72,090 | 85,34,471 | 90.71871427 |
| 28 | Cylinder ADN-50-30-A-P-A | 43.07 | 72,065 | 86,06,536 | 91.48474231 |
| 29 | T_NUT_M4 for 10MM SLOT | 44.61 | 60,401 | 86,66,937 | 92.12678575 |
| 30 | Coupling KSZ-M10*1.25 | 46.15 | 60,368 | 87,27,305 | 92.7684784 |
| 31 | Coupling piece KSZ-M8 | 47.69 | 57,750 | 87,85,055 | 93.38234255 |
| 32 | DYSC-7-5-Y1F Shock Absorber | 49.23 | 56,460 | 88,41,515 | 93.9824944 |
| 33 | Push-in fitting_QST-16 | 50.76 | 50,721 | 88,92,236 | 94.52164251 |
| 34 | Foot mounting HP-25 | 52.30 | 50,176 | 89,42,412 | 95.05499744 |
| 35 | Profile variofix_30*30 | 53.84 | 44,034 | 89,86,446 | 95.52306487 |
| 36 | Push-in fitting_CRQS-1/4-6 | 55.38 | 43,875 | 90,30,321 | 95.98944217 |
| 37 | Profile bracket 90*90 | 56.92 | 39,198 | 90,69,519 | 96.40610446 |
| 38 | 40*40 Hinge | 58.46 | 38,900 | 91,08,419 | 96.81959909 |
| 39 | Profile bracket 45*45 | 60 | 34,768 | 91,43,187 | 97.18917188 |

| | | | | | |
|----|------------------------------|-------|--------|-----------|-------------|
| 40 | Cover cap 45*90 | 61.53 | 31,512 | 91,74,699 | 97.52413443 |
| 41 | Connector 30*30 | 63.07 | 28,808 | 92,03,507 | 97.83035431 |
| 42 | Distributor block FR-8-1/4 | 64.61 | 24,424 | 92,27,931 | 98.08997367 |
| 43 | T_NUT_M4 for 8MM SLOT | 66.15 | 24,035 | 92,51,966 | 98.34545808 |
| 44 | Distributor block FR-4-1/4-C | 67.69 | 23,200 | 92,75,166 | 98.59206671 |
| 45 | Cover cap 90*90 | 69.23 | 20,358 | 92,95,524 | 98.80846578 |
| 46 | Push-in fitting_QSY-16-12 | 70.76 | 18,000 | 93,13,524 | 98.99980006 |
| 47 | Cover cap 30*30 | 72.30 | 11,616 | 93,25,140 | 99.12327444 |
| 48 | Cover cap 90*90 | 73.84 | 10,608 | 93,35,748 | 99.23603411 |
| 49 | 45*45 Bracket | 75.38 | 9322 | 93,45,070 | 99.33512401 |
| 50 | Branch module FRM-D-MIDI | 76.92 | 9222 | 93,54,292 | 99.43315094 |
| 51 | M16 Hinged foot | 78.46 | 5904 | 93,60,196 | 99.49590858 |
| 52 | ROD clevis SG-M4 | 80 | 5074 | 93,65,270 | 99.54984359 |
| 53 | 60*60 Bracket | 81.53 | 4875 | 93,70,145 | 99.60166329 |
| 54 | D90 Damping ring | 83.07 | 4588 | 93,74,733 | 99.65043227 |
| 55 | Push-in fitting_QST-12 | 84.61 | 4482 | 93,79,215 | 99.69807451 |
| 56 | Push-in fitting_QS-G1/8-4 | 86.15 | 4000 | 93,83,215 | 99.74059324 |
| 57 | 30*30 Bracket | 87.69 | 3968 | 93,87,183 | 99.78277182 |
| 58 | Push-in fitting_QS-G1/8-6l | 89.23 | 3920 | 93,91,103 | 99.82444017 |
| 59 | Push-in fitting_QS-1/8-4-l | 90.76 | 3120 | 93,94,223 | 99.85760478 |
| 60 | Push-in fitting_QSL-3/8-16 | 92.30 | 2952 | 93,97,175 | 99.8889836 |
| 61 | Push-in fitting_QS-¼-4 | 93.84 | 2856 | 94,00,031 | 99.91934197 |
| 62 | 90*90 Bracket | 95.38 | 2250 | 94,02,281 | 99.94325876 |
| 63 | Push-in fitting_QSLV-M5-6 | 96.92 | 2214 | 94,04,495 | 99.96679287 |
| 64 | Blanking plug_B1/8 | 98.46 | 1748 | 94,06,243 | 99.98537356 |
| 65 | Push-in fitting_QS-1/4-4 | 100 | 1376 | 94,07,619 | 100 |

ABC GRAPH



ABC CLASSIFICATION

A- CLASS ITEMS

| Name of the part | Annual requirement in units | Unit price | Annual consumption |
|-----------------------------|-----------------------------|------------|--------------------|
| Profile variofix_45*45 | 14558 | 92 | 13,39,336 |
| T_NUT_M8 for 10MM SLOT | 47327 | 16 | 7,75,232 |
| T_NUT_M5 for 10MM SLOT | 47482 | 16 | 7,59,712 |
| Cubic connector 45*45 | 2442 | 291 | 7,10,622 |
| DYSC-4-4-Y1F Shock Absorber | 169 | 4088 | 6,90,872 |
| Handles | 1704 | 342 | 5,82,768 |

B- CLASS ITEMS

| Name of the part | Annual requirement in units | Unit price | Annual consumption |
|---------------------------------|-----------------------------|------------|--------------------|
| M12 Hinged foot | 1835 | 262 | 4,80,770 |
| Cubic connector 30*30 | 858 | 394 | 3,38,052 |
| T_NUT_M5 for 10MM SLOT | 17623 | 19 | 3,34,837 |
| 30*45 Hinge | 191 | 1360 | 2,59,760 |
| Coupler KSG-M16*1.5 | 156 | 1569 | 2,44,764 |
| ROD EYE SGS-M16*1.5 | 268 | 674 | 1,80,362 |
| Moment compensator DARD-L1-40-S | 48 | 3589 | 1,72,272 |
| Coupling piece KSG-M20*1.5 | 47 | 3635 | 1,70,845 |
| 45*45 Hinge | 378 | 450 | 1,70,100 |
| Flow count val_CRGRLA-1/4-B | 78 | 1851 | 1,44,378 |
| Cover cap 45*45 | 5173 | 27 | 1,39,671 |
| T_NUT_M6 for 8MM SLOT | 6891 | 19 | 1,30,929 |
| D58 Damping ring | 1615 | 81 | 1,30,815 |
| MOM COM, DARD-L1-32-S | 57 | 2211 | 1,26,027 |
| Coupling piece KSG-M10*1.25 | 88 | 1348 | 1,186,24 |
| Swivel bearing standard_45*90 | 148 | 751 | 1,11,148 |
| T_NUT_M5 for 8MM SLOT | 4850 | 19 | 92,150 |
| DYSC-5-5-Y1F Shock Absorber | 34 | 2546 | 86,564 |
| Coupler KSG-M12*1.25 | 69 | 1247 | 86,043 |
| Foot mounting HP-32 | 114 | 752 | 85,728 |
| Distributor block FR-4-3/-B8 | 89 | 810 | 72,090 |
| Cylinder ADN-50-30-A-P-A | 35 | 2059 | 72,065 |
| T_NUT_M4 for 10MM SLOT | 179 | 19 | 60,401 |
| Coupling KSZ-M10*1.25 | 77 | 784 | 60,368 |
| Coupling piece KSZ-M8 | 35 | 1650 | 57,750 |
| DYSC-7-5-Y1F Shock Absorber | 20 | 2823 | 56,460 |

C - CLASS ITEMS

| Name of the parts | Annual requirement in units | Unit price | Annual consumption |
|----------------------------|-----------------------------|------------|--------------------|
| Push-in fitting_QST-16 | 159 | 319 | 50,721 |
| Foot mounting HP-25 | 256 | 196 | 50,176 |
| Profile variofix_30*30 | 537 | 82 | 44,034 |
| Push-in fitting_CRQS-1/4-6 | 65 | 675 | 43,875 |
| Profile bracket 90*90 | 139 | 282 | 39,198 |

| | | | |
|------------------------------|------|------|--------|
| 40*40 Hinge | 25 | 1556 | 38,900 |
| Profile bracket 45*45 | 424 | 82 | 34,768 |
| Cover cap 45*90 | 303 | 104 | 31,512 |
| Connector 30*30 | 277 | 104 | 28,808 |
| Distributor block FR-8-1/4 | 142 | 172 | 24,424 |
| T_NUT_M4 for 8MM SLOT | 1265 | 19 | 24,035 |
| Distributor block FR-4-1/4-C | 58 | 400 | 23,200 |
| Cover cap 90*90 | 261 | 78 | 20,358 |
| Push-in fitting_QSY-16-12 | 45 | 400 | 18,000 |
| Cover cap 30*30 | 528 | 22 | 11,616 |
| Cover cap 90*90 | 208 | 51 | 10,608 |
| 45*45 Bracket | 59 | 158 | 9322 |
| Branch module FRM-D-MIDI | 159 | 58 | 9222 |
| M16 Hinged foot | 159 | 58 | 5904 |
| Rod clevis SG-M4 | 59 | 86 | 5074 |
| 60*60 Bracket | 25 | 195 | 4875 |
| D90 Damping ring | 37 | 124 | 4588 |
| Push-in fitting_QST-12 | 27 | 166 | 4482 |
| Push-in fitting_QS-G1/8-4 | 80 | 50 | 4000 |
| 30*30 Bracket | 32 | 124 | 3968 |
| Push-in fitting_QS-G1/8-6I | 56 | 70 | 3920 |
| Push-in fitting_QS-1/8-4-I | 78 | 40 | 3120 |
| Push-in fitting_QSL-3/8-16 | 78 | 40 | 2952 |
| Push-in fitting_QS-¼-4 | 56 | 51 | 2856 |
| 90*90 Bracket | 5 | 450 | 2250 |
| Push-in fitting_QSLV-M5-6 | 18 | 123 | 2214 |
| Blanking plug_B1/8 | 92 | 19 | 1748 |
| Push-in fitting_QS-1/4-4 | 32 | 43 | 1376 |

Conclusion

This study on industrial application of Inventory Control has given a better Control Policy on the different types of Inventory existing in this manufacturing industry. This has helped to classify the inventory into 3 classes, namely A, B, C. According to the study nearly 10% of the total items fall under A – class items, 40% of the items fall under B – class items and the rest of 50% comes under C – class items. Based on the classification the inventory in each class can be controlled as per the guidelines given by the ABC classification.

References

- [1]. Keskin, Gulsen & Ozkan, Coskun. (2013). Multiple criteria ABC analysis with FCM clustering. *Journal of Industrial Engineering*. 2013. 10.1155/2013/827274.
- [2]. Ravinder, Handanhal and Ram B. Misra. "ABC Analysis For Inventory Management: Bridging The Gap Between Research And Classroom." *American Journal of Business Education* 7 (2014): 257-264.
- [3]. Ramakrishnan Ramanathan, (2006), ABC inventory classification with multiple-criteria using weighted linear optimization, *Computers & Operations Research*, Volume 33, Issue 3, Pages 695-700

- [4]. Rohan Nadkarni, Dr. Asita Ghewari (2020),An Inventory Control using ABC Analysis and FSN Analysis.International Journal of Engineering, Business and Enterprise Applications (IJEBA), 16-124, page 24-28
- [5]. Marin Rusaneseu, “ABC analysis, Model for classifying inventory”, Magazine of Hydraulics, Pneumatics, Tribology, Ecology, Sensorics, Mechatronics, “HIDRAULICA” (No.2/2014).
- [6]. Hamdy A. Taha , Operations Research: An Introduction: United States Edition, 1996,Pearson; 6th edition