Materials Management System

Definition

Definition

Material Management is concerned with planning, organizing and controlling the flow of materials/items from their initial purchase through internal operations to the service point through distribution.

OR

Material management is a scientific technique, concerned with Planning, Organizing &Control of flow of materials, from their initial purchase to destination.

Aim & Purpose

Aim

- The Right quality
- Right quantity of supplies
- At the Right time
- At the Right place
- For the Right cost

Purpose

- To gain economy in purchasing
- To satisfy the demand during period of replenishment
- To carry reserve stock to avoid stock out
- To stabilize fluctuations in consumption
- To provide reasonable level of client services

Basic Principles

- Effective management & supervision – like planning, organizing, budgeting etc.

- Sound purchasing methods

- Skillful & hard poised negotiations

- Effective purchase system

- Should be simple

- Must not increase other costs

- Simple inventory control program

Application Overview

Overview

- An solution framework which can be customized to cater to the need of small & medium sized business organizations

- A comprehensive, powerful application for streamlining and coordinating an organization's procurement, purchase & stores processes and functions

- Addressing the needs of small and medium-scale enterprises, the solution is unique, customized and tailor-made for individual business needs.

Overview…

- Is web-based, scalable and user-friendly

- Modular design in which modules requiring special development could be quickly built and easily integrated with the core product

- The most demanding and diverse needs of organizations can be easily met.

- Helps small and middle-scale enterprises to embrace the Internet and e-commerce with ease

Core Features

- **Database strength:** Built on a RDBMS like MySQL, this offer the best possible storage system for larger transactions.

- **Higher degree of complexity handling:** Can handle a higher number of complex day-to-day activities, such as purchase order processing, sales and distribution and networking.

- **Higher degree of integration:** Integrates a large number of modules transparently to give an enterprise access to a wide variety of information from various systems and modules.

- **Extensibility:** Solutions grow with the company. The architecture of the database and the open system approach allows in-house MIS departments to easily generate information as required.

Key Features

- Infinite user license for single site installation

- Open Source Approach - Source Code is part of the deliverable

- Complete Customization based on Gap Analysis

- Comprehensive implementation strategy

- Multi Organization Multi Unit compatibility

- Real-time stock level down to organization-unit-location-rack

- Parameterized vendor rating (Overall rating and with respect to materials)

Technology

- Three-tier web based application built on J2EE framework

- Front End: JSP, JavaScript, HTML 5

- Middle Tier: Servlets, Java Beans, JDBC

- Database on MySQL

- Application Server: JBoss

- Reporting Tool: Jasper Report which has enables better export & charting functionalities to the application

- AJAX is used for enhanced user experience

Application Benefits

Key Benefits

- Business Processes Automation - More functional coverage through Information Systems

- Integration - Integrate the various functions like Procurement, Purchase, Store etc. for efficiency enhancement

- Cost Reduction –
  - Do away with paper intensive reporting
  - Just-in-time inventory management

Key Benefits…

- Real time collaboration across departments, across locations – Relevant information available to users directly

- Accuracy -
  - Improved Quality of Management Information through standardization and integration
  - Measuring business performance

- Foundation for Business Intelligence and other futuristic applications

Functional Benefits

- Better control on inventory, cost, account payable, account receivable & quality

- Increased transparency of business performance and strategic success factors

- Accelerated response to market changes

- Better utilization of resource

- Complete data integrity

User Benefits

- For Top Management
  - Strategic Decision Making
  - Environment Scanning

- For Functional Managers/ Middle Management
  - Better control
  - Availability of critical reports in time
  - Quick and appropriate Response to Situations

- For Data Population Group/ Lower Management
  - Availability of daily reports
  - Flexibility of the application

Functionalities

The Materials module covers the Procurement Management, Inventory Management and the Sub-Contracting modules. The Procurement incorporates a complete Procurement Management system. This monitors the procurement of goods from Vendors, right from the requisition stage. The Inventory Management incorporates a comprehensive stock control and inventory management system. This covers stock control; right from the shipment advice from the vendor up-to the issue & return of goods. The Sub-Contracting is geared to handle the outsourcing of work to Vendor/Contractor, as well as, the material flow and the current stock positioning.

Key Areas

- Generic Information Flow , Multiple-Unit of Measurement

- Maintenance of stock by grades / condition of item, Seamless integration with financial accounting

- Provides for the purchase, sale and tracking of both stock & non-stock items and/or services items

- Provides for user-defined transactions for generic transaction types

- On-line update (posting) of stocks , Automatic generation of financial entries in financial accounting for the stores transactions document by document or batch posting

Key Areas…

- Grouping of items by item Group/Sub-Group or by Item Types/Sub-Type , Suppliers and Clients can be grouped geographically by area, country and region

- Materials received in stores can be immediately issued without waiting for the costing of the goods to be completed , Generalized stock error checking facility

- At the time of entry of issues, parameter setups determine whether negative stock is permitted

- Elimination of data redundancy, Multiple delivery schedules for purchases

Key Areas…

- Landed cost calculations by Weight, by Volume, or by Value, Stock valuation by weighted average cost (WAC) , First in First Out (FIFO), Last in Fast Out (LIFO), Batch wise methods

- Parameterized Credit Control at various stages in the sale and distribution process.

- Maintenance of multiple Jobs and Job related data.

- Material Issues & Returns against each Job, Requisition

- Automatic WIP to Actual A/C's transfer on Closing of Job.

Processes and Functionalities

- Raise PI by user department and review purchase indent to raise purchase order by Materials Department

- Cross-reference materials by code no, stock position, manufacturer, vendors, equipment, rates and purchase orders

- New item coding

- Maintenance of vendor register

- Create tender to request quotation of materials from multiple vendors

- Convert quotes to comparative statement and purchase orders

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Processes and Functionalities…

- Create, amend and delete purchase orders

- Maintain separate purchase indent and purchase order records

- Convert multiple purchase indents to a single purchase order

- To calculate the average lead-time required from purchase indent to issue of materials for each item stepwise

- Allow users with appropriate authorization levels to approve indents, tenders, purchase order, inspection note, GRN, requisition, gate pass, MRN etc.

- Create gate pass

Processes and Functionalities…

- Seamlessly integrate materials with purchase orders

- Record delivery of materials that were ordered through a purchase order and follow up of ordered materials through Reminders

- Generation of arrival cum inspection note

- Automatically charge materials to PO/GRN upon their arrival and acceptance

- Payment of bill details

- Automatic vendor rating

Processes and Functionalities…

- Transfer materials between stockrooms with a complete trail

- Easily track the locations of materials inventory and codification of materials

- Create an unlimited number of stores locations

- Create requisition and issue stock to departments/projects maintaining cost centers

- Easily locate where materials are utilized

- Receive back materials through Materials Return Note

Processes and Functionalities…

- Update and adjust stock

- Revenue/ capital pricing of stock

- Reservation of stock for selected items against specific Project/Jobs.

- Review of slow moving, non-moving items

- Salvage items and their disposal

- Maintain Minimum Stock Level, Maximum Stock Position and Reorder Level and create review indent against stock in quarterly basis

Processes and Functionalities…

- Generate pricing of GRN, MRN and Requisition

- Preparation of Stores Ledger

- Intimation letter for all items under Capital Budget

- Various analysis and generation of ledgers, Issue Register, Return Register, Cost Centre Register, Receipt Register etc., reports for management information including ABC, XYZ, FSN Analysis etc.

Audit, Compliance and Security

- Multiple levels of security

- User Access – User Rights & Password policy

- Role based security

- Enables preventive (exception handling) and detective (inquiry, reports, audit trails etc.) controls

- Complete Audit Trail, with changes to the Masters and Transactions logged with User Id, data & time stamps.

- Localization infrastructure for regulatory reporting

Few Screen Captures

SICGIL Welcome SUPPORT DEMO VADODARA FACTORY SICGIL Industrial Gases Limited

Change Password Logout

Masters −
- Vendor Master
- Material Group master
- Material Master
- Department Master
- Project Master
- Store Location Master
- Unit Wise Current Stock Entry
- Bill of Materials
- Payment Terms

Notice Inviting Quotation +
- Enquiry
- Enquiry Transportation
- Enquiry Cancelation

Quotation +
- Quotation Material Procurement
- Quotation Job
- Quotation Transportation

Vendor Finalization +
- Material Rate Details

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Material Master

Select Material Group

Select All ☐	Name
☐	SPECIAL SERVICE TYPE MATERIAL
☐	STATIONERY
☐	LOGISTICS
☐	TESTMG
☐	CCCCCCCC
☐	Service Item
☐	COMPRESSOR
☐	MECHANICAL
☐	GENERAL
☐	ELECTRICAL
☐	CYLINDER
☐	VALVE

Material Code *
Material Name *

Material Type *   ⦿ Consumable   ◯ Capital
Critical Spare   ◯ Yes   ⦿ No
Maintenance Spare   ◯ Yes   ⦿ No
Size   0
Specification *   0
Purchase UOM *   View
Stores UOM *   View
Conversion Factor *
Material Usage Type   Select Usage Type ▼
Lead Time *   Days
Reorder Level   0
Min. Order Level   0
Max. Order Level   0
Chapter
Head
Sub Head

List of defined Materials on the Selected Material Group

Show 20000 ▼ entries   Search:

Name	Select
Name	

No data available in table

Showing 0 to 0 of 0 entries   Previous Next

SICGIL Welcome SUPPORT DEMO VADODARA FACTORY SICGIL Industrial Gases Limited

Change Password Logout

Masters +
Notice Inviting Quotation +
Quotation +
Vendor Finalization +
Rate Contracts +
Orders +
Material Receives +
- MRIR
- Inspection
- Goods receipt note (GRN)
- Cancelation of GRN
- Purchase Return

Requisitions +
Material Reservations +
Material Issues +
Inward Bill +
Statutory Credits +
Stocks +
Bills Approval +
Process +
Register +

MRIR (Material Receipt for Inspection Record)

Unit   DEMO VADODARA FACTORY
Select MRIR Type *   Against Job Order Fabrication ▼
MRIR No. *   View
MRIR Date *   15/09/2016
Gate Pass Entry No.*
Gate Pass Entry Date *
Vendor Challan No. *
Vedor Challan Date *
Consignment / RR No.
Consignment / RR Date

Select Order No.   View
Order Date
Supplier Code and Name *   View
Select Delivery Challan No   View
Delivery Challan Date
Select Mode of Transport *   Select ▼
Vehicle / Vessel / Flight / Train No.
Vendor Bill / Invoice No. *
Vendor Bill / Invoice Date *
Re-enter Vendor Bill / Invoice No. *
Vendor Bill / Invoice Value *

View for Attached Invoice

Attached the scan copy of Invoice *   Attach

Material Details

Add Material

Material Code *	Material Name *	UOM	Pending Order Quantity	Receipt Quantity*	Per UnitRate (INR) *	in(%)
				0.000	0.000	0.000

MATERIAL MANAGEMENT SYSTEM   Developed by Comtel Technologies Pvt. Ltd.

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Inspection

Masters +
Notice Inviting Quotation +
Quotation +
Vendor Finalization +
Rate Contracts +
Orders +
Material Receives +
- MRIR
- Inspection
- Goods receipt note (GRN)
- Cancelation of GRN
- Purchase Return
Requisitions +
Material Reservations +
Material Issues +
Inward Bill +
Statutory Credits +
Stocks +
Bills Approval +
Process +
Register +

Field	Value		Field	Value
Unit	DEMO VADODARA FACTORY		Order No.	PO-DMO-VAD-L-15-16-0001
Inspection No. *	INSP-DMO-VAD-15-16-0001	View		
Inspection Date. *	04/05/2015		Order Date	04/05/2015
Select MRIR Type *	Against Purchase Order Local		Vendor Code and Name	HQ000007
MRIR No. *	MRIR-DMO-VAD-15-16-0001	View		ARASAN FUEL SERVICE STATION
MRIR Date *	04/05/2015			
Gate Pass Entry No.	ad123		Delivery Challan No	
Gate Pass Entry Date	03/05/2015		Delivery Challan Date	
Vendor Challan No.	143			
Vedor Challan Date	03/05/2015			
Consignment / RR No.			Vendor Bill / Invoice No.	1234
Consignment / RR Date			Vendor Bill / Invoice Date	03/04/2015
			Vendor Bill / Invoice Value	34148.562

View for Attached Invoice

Material Details

Material Code *	Material Name *	UOM *	Order Quantity *	Receipt Quantity *	Accepted Quantity *	Concession Quantity	Reje
EGEN180	UNDER VOLTAGE COIL FOR ACB 220	NOS	4.000	4.000	4.000	0.000	
EACC359	ACB PANEL 4000 A 4TP4	SET	3.000	3.000	3.000	0.000	

Goods Receipt Note (GRN)

Masters +
Notice Inviting Quotation +
Quotation +
Vendor Finalization +
Rate Contracts +
Orders +
Material Receives −
- MRIR
- Inspection
- Goods receipt note (GRN)
- Cancelation of GRN
- Purchase Return
Requisitions +
Material Reservations +
Material Issues +
Inward Bill +
Statutory Credits +
Stocks +
Bills Approval +
Process +
Register +

Field	Value		Field	Value
Unit	DEMO VADODARA FACTORY		Vendor Code and Name	HQ053795
GRN No. *		View		United Compressor Corporation
GRN Date. *	15/09/2016		Vendor Challan No.	43
Select Inspection No. *	INSP-DMO-VAD-15-16-0019	View	Vendor Challan Date	21/01/2016
Inspection Date	21/01/2016		Vendor Bill / Invoice No.	43
MRIR No.	MRIR-DMO-VAD-15-16-0021		Vendor Bill / Invoice Date	21/01/2016
MRIR Date	21/01/2016		Vendor Bill / Invoice Value	6749.600
Order No.	PO-DMO-VAD-L-15-16-0012			
Order Date	20/01/2016			View for Attached Invoice
Gate Pass Entry No.	32			
Gate Pass Entry Date	21/01/2016		Inspected By	SUPPORT
Material Request for *		View		
(Job / Project)				

Material Details

Material Code	Material Name	UOM	Order Quantity	Receipt Quantity	Accepted Quantity	Concession Quan
Z133	PISTON RINGS	NOS	2.000	2.000	2.000	0.0
PRG054	0 TO 25 KG/CM2 PRESS	NOS	2.000	2.000	2.000	0.0
EACC180	0-10 A AMMETER	NOS	4.000	4.000	4.000	0.0

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Screen 1:

SICGIL | Welcome SUPPORT | DEMO VADODARA FACTORY | SICGIL Industrial Gases Limited | Change Password | Logout

Left Menu:
- Masters +
- Notice Inviting Quotation +
- Quotation +
- Vendor Finalization +
- Rate Contracts +
- Orders +
- Material Receives −
  - MRIR
  - Inspection
  - Goods receipt note (GRN)
  - Cancelation of GRN
  - Purchase Return
- Requisitions +
- Material Reservations +
- Material Issues +
- Inward Bill +
- Statutory Credits +
- Stocks +
- Bills Approval +
- Process +
- Register +

Order Date: 20/01/2016
Gate Pass Entry No.: 32
Gate Pass Entry Date: 21/01/2016
Material Request for *: [ ] View
(Job / Project):

View for Attached Invoice

Inspected By: SUPPORT

Material Details

...ession Quantity	Rejected Quantity	Concession Note Number	Comments for Concession	Reason for Rejection	Location *		Storage Place
0.000	0.000					View	
0.000	0.000					View	
0.000	0.000					View	

Prepared By: SUPPORT
Approved / Rejected By: SUPPORT
Approved / Rejected On: 15/09/2016
Comments for Rejection:

[Save] [Cancel] [Exit] [Approve] [Reject] [Info]

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Screen 2:

SICGIL | Welcome SUPPORT | DEMO VADODARA FACTORY | SICGIL Industrial Gases Limited | Change Password | Logout

Left Menu:
- Rate Contracts +
- Orders +
- Material Receives +
  - MRIR
  - Inspection
  - Goods receipt note (GRN)
  - Cancelation of GRN
  - Purchase Return
- Requisitions −
  - Purchase Requisition
  - Material Requisition
- Material Reservations +
- Material Issues −
  - Material Issue
  - Material Return Against Issue
  - Delivery Challan
- Inward Bill +
- Statutory Credits +
- Stocks +
- Bills Approval +

Material Issue

Unit: DEMO VADODARA FACTORY
Issue No. *: [ ] View
Issue Date *: 15/09/2016
Select Issue Type *: Select Any
Requisition Against Reserved Stock *: ( ) Yes (•) No
Select Reference No. *: [ ] View
Requisition Date: [ ]

Reservation Request from (Department):
Reservation for (Job / Project):

Material Details

Check Box	Material Code *	Material Name	UOM	Total Current Stock	ReOrder Level	Inspection Qty	Reserved Stock	Quantity Requ...
☐								

Location wise Stock Issues of the selected Material

Check	Stores Location	Rack No.	Stock	Quantity Issue

Prepared By: SUPPORT
Approved / Rejected By: SUPPORT
Approved / Rejected On: 15/09/2016
Comments for Rejection:

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Min/Max Level Report Of Materials For Financial Year   2015-2016
DEMO ORGANIZATION
DEMO VADODARA FACTORY

SL NO.	Material Group Code	Material Group Name	Material Code	Material	Purchase UOM	Stores UOM	Current Stock	ReOrder Level	Available Stock	Minimum Quantity	Maximum Quantity
1	COM	COMPRESSOR	AC0001	O' RING - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
2	COM	COMPRESSOR	AC0002	O' RING - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
3	COM	COMPRESSOR	AC0003	O' RING - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
4	COM	COMPRESSOR	AC0004	O' RING FOR ANGLE VALVE - ALFA	NOS	NOS	0.0	0.0	0.0	0.0	0.0
5	COM	COMPRESSOR	AC0005	O' RING FOR ANGLE VALVE - ALFA	NOS	NOS	0.0	0.0	0.0	0.0	0.0
6	COM	COMPRESSOR	AC0006	TYRE COUPLING - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
7	COM	COMPRESSOR	AC0007	DISH VALVE SPRING - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
8	COM	COMPRESSOR	AC0008	DISH VALVE PLATE - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
9	COM	COMPRESSOR	AC0009	DISH VALVE PLATE - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
10	COM	COMPRESSOR	AC0010	DISH VALVE PLATE - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
11	COM	COMPRESSOR	AC0011	TEFLON SEAL RING - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
12	COM	COMPRESSOR	AC0012	TEFLON SEAL RING - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
13	COM	COMPRESSOR	AC0013	TEFLON SEAL RING - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
14	COM	COMPRESSOR	AC0014	TEFLON SEAL RING - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
15	COM	COMPRESSOR	AC0015	TEFLON SEAL RING - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
16	COM	COMPRESSOR	AC0016	TEFLON RING - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
17	COM	COMPRESSOR	AC0017	CARBON TEFLON RING - ALFA COMP	NOS	NOS	0.0	0.0	0.0	0.0	0.0
18	COM	COMPRESSOR	AC0018	ALU. GASKET - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
19	COM	COMPRESSOR	AC0019	ALU. GASKET - ALFA COMP.	NOS	NOS	0.0	0.0	0.0	0.0	0.0
20	COM	COMPRESSOR	AC0020	ALU. GASKET - ALFA COMP.	NOS	NOS					
21	COM	COMPRESSOR	AC0021	ALU. GASKET - ALFA COMP.	NOS	NOS					
22	COM	COMPRESSOR	AC0022	REED VALVE COMPLETE - ALFA COM	NOS	NOS					

DEMO ORGANIZATION
DEMO ADDRESS
TAMIL NADU DEMO 0
Phone : Fax :

SERVICE TAX NO : AAACP3131EST001
CST NO : 24691900132
TIN NO : 24191900132
Excise Reg : 0

PURCHASE ORDER

PURCHASE ORDER NO : PO-DMO-VAD-L-15-16-0015
VENDOR :ANUSUYA ENGINEERING WORKS HQ000005
MADRAS MADRAS

TAMIL NADU MADRAS 0
Phone :11111

PO DATE : 29/01/2016
BILLING ADDRESS : DEMO VADODARA FACTORY
PLOT NO.3, GIDC RANOLI,
Gujarat VADODARA 391350

DELIVERY ADDRESS:
Please Refer To Next Page For Delivery Details

PAYMENT TERMS:
100.0% Advance Payment   Against Corporate Guarantees

DESPATCH INSTRUCTION:
By any reliable transport. To be informed prior despatch.
QUOTATION REF :

Please supply goods or service as detailed below and in accordance with Instructions and conditions set-out in attached file.

SL	Item	Qty	UOM	Date	Unit Price INR	Excise Duty	Discount Amt	Insurance (in Amt.)	Freight	Handilling Charge	Other	VAT Amount	Basic Amount INR	Total INR
1	SOFT BROOM NA	2.00	NOS	05/02/2016	1240.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	2480.00	2480.00

PURCHASE ORDER TOTAL : 2480.00

For and on behalf of DEMO ORGANIZATION

Authorised Signatory

Kindly acknowledge the receipt of orders with order confirmation.This is a computer generated document and hence no signature required.
SPECIAL INSTRUCTIONS:

MATERIAL /TEST/GUARANTEE CERTIFICATES
Should confirm to specification of purcahase order and furnished
DOCUMENTATION REQUIRED - FOR INDIGENOUS SUPPLIES:
Original Invoice, Duplicate Invoice, Triplicate Invoice, Two copies of Delivery Challan, Cenvat/Excise Duty Gate Pass if any etc.To be sent along with the consignment to our Factory (Delivery To address) indicating the Purchase Order reference number, for settlement of your bills.
PENALTY CLAUSE:
That in the event you fail to execute the order & commissioning within the stipulated time subject to Force Majeaure conditions you will be liable to pay, Liquidated damages at the rate of 0.5% of the value of order per week of delay subject to a maximum of 10% of the value.

SIL/P/PUR/7.4/04/03

Conclusion

Material management is an important management tool which will be very useful in getting the right quality & right quantity of supplies at right time, having good inventory control & adopting sound methods of condemnation & disposal will improve the efficiency of the organization & also make the working atmosphere healthy any type of organization, whether it is Private, Government ,Small organization, Big organization and Household.

Even a common man must know the basics of material management so that he can get the best of the available resources and make it a habit to adopt the principles of material management in all our daily activities