

MAJOR REPORT

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BM2C

A Report on the
Implementation of a
Computer-Managed Centralised
Stores Facility for the
Maintenance Department at

GEC ALSTHOM, STAFFORD

Major Summary Index

The following report is my interpretation of the development of a centralised, computer-managed maintenance stores facility. I was deeply involved in the project and was responsible for most of its execution.

As well as giving an account of the work that I have done, I have also tried to fully explain how I perceive the stores should be run and the procedures that should be followed.

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2. Schedule for the implementation of the stores
3. Initial exercises undertaken
4. Diagram of the layout of the maintenance stores
5. Appraisal of MECCA's stock control applications
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An Introduction to the Task

That I was Given to Undertake

In brief, the project which I was given to work on was to implement and develop a self-contained stores facility for use by the maintenance department. Each item held in the stores needed to be identified and recorded in an inventory to enable the parts to be located quickly and accurately.

Additionally, it was desired that carefully chosen items such as strategic spares and certain consumables be entered onto a specially tailored stores management computer package which was contained within GEC ALSTHOM's general works management computer application called 'MECCA' (Manufacturing, Engineering Cost Control Applications System). This facility enabled effective management of these critical items.

However, I did manage to sort out the majority of the problems which I encountered myself, through liaison with the maintenance personnel and members of other departments.

I believe that it was this aspect of the project, the total involvement in implementing the stores facility, and the freedom to solve problems encountered myself, developing my communication skills and relying on my sense of judgement as the most satisfying feature of my industrial training period.

My Position Within the Machinery

Maintenance Department

GEC ALSTHOM CURSINE GENERATORS LIMITED manufactures, assembles and supplies large generators for power stations both at home and abroad. The reason for GEC ALSTHOM's machinery maintenance department employing me was to give me the task of implementing a new machine maintenance stores facility.

The nature of the job in hand required that I was constantly liaising with the electrical and mechanical foremen to obtain information about the spares being moved from one store to another.

Regarding the actual procedures for implementation of the stores and gaining approval for the various stages of development of the facility, I was responsible to the machinery maintenance planning engineer who allowed me to use my initiative to implement my own ideas into the project as there were not any fixed guidelines on the institution of the stores facility. This enabled me to get on with the work in hand, and I would only seek his guidance when I had particular difficulty in developing a certain aspect of the stores implementation.

However, I did manage to sort out the majority of the problems which I encountered myself, through liaison with the maintenance personnel and members of other departments.

I believe that it was this aspect of the project, the total involvement in implementing the stores facility, and the freedom to solve problems encountered myself, developing my communication skills and relying on my sense of judgement is the most satisfying feature of my industrial training period.

ii) No inventory whatsoever is available for the various items held in the different stores.

Thus, it was established that a centralized stores facility near to the maintenance shop was needed, and strict control over the items held was of paramount importance to enable the stores to operate effectively.

Why the New Stores Facility was Required

of Obtaining and Storing Maintenance Items.

GEC ALSTHOM TURBINE GENERATORS LIMITED manufactures, assembles and supplies large generators for power stations both at home and abroad.

A significant proportion of the work carried out in the factory is the machining of medium and heavy components from steel, copper and aluminium for assembly in the generators, e.g. rotors, endbells, endshields, etc.

The machine tools which do this work are spread around several different locations within the factory. Some of these machine tools are very large and expensive and are of critical importance to the output of the factory. Many spare parts are needed to be held for these machines to minimise down time in the event of a breakdown and to facilitate preventative maintenance.

Unwittingly, over the course of time the spares for these large machines have been stored near to the machine tools themselves and no records have been made of what items are held for each machine. In the case of the smaller machines, the spares were held in yet another location, and again no records were held of what items were in the stores.

Two undesirable situations arise from the above circumstances:

- i) The spare parts used by the maintenance department are held in different locations, each a considerable distance from the maintenance shop.
- ii) No inventory whatsoever is available for the various items held in the different stores.

Thus, it was established that a centralised stores facility near to the maintenance shop was needed, and that strict control over the items held was of paramount importance to enable the stores to operate effectively.

Analysis of the Failings of the Old System
of Obtaining and Storing Maintenance Items.

When a new consumable or replacement part was required by the maintenance worker on that particular job, he would search through the different stores trying to find the item required. Failing this, he would contact the foreman who would then telephone the order through to the supplier if the part needed was urgent, or a purchase order was made out and sent to the supply department for the buyers to order on the maintenance departments behalf.

Invariably the foreman would order extra replacement parts to cover for further breakdowns. As a result of there being no guidelines for storing items in the stores, they were often put on a shelf and forgotten.

Consequently, when that part is required again in the future, the maintenance worker has been unable to find what he wants and takes the option of ordering them through the foreman again, hence more spares are piled up in the stores causing even more confusion.

Another failing of the system was that maintenance personnel often kept a lot of smaller consumable items in their workbench cupboards to save them from wasting their time having to regularly walk backwards and forwards to the different stores to withdraw small items.

So, as well as implementing a centralised stores facility and keeping an inventory of all the items held, it was obvious that a rigid set of procedures was needed to cover the operation of the stores.

Schedule of the Different Stages of Development
Outline of the Different Tasks
of the New Stores Facility
Involved in the Project

WEEKS 11 TO 8

Complete training on the use of GEC ALSTHOM's computer applications package 'MECCA'.

1. Complete Transfer of the Satellite Stores to stored into new centralised stores
2. Closing of Satellite Stores
3. Identification of all Items and Compilation of an Inventory and transfer of the new stores onto
4. Creation / Specification of Stores Operational Procedures Covering:-

WEEKS 9 TO 13

- a. Query Operations
- b. Material Receipts by the general stores
- c. Booking in/out of Components
- d. Creating New Bins for its disposal.

Close the general mechanical stores.

5. Logging of Specified Items onto 'MECCA'
6. Instruction of Maintenance Staff on the Understanding and Operation of the Stores Facility Operational procedures section for GEC ALSTHOM's Stores manual.
7. Specification of Training Profiles and Security Access

WEEKS 14 TO 17

Transfer all electrical items from the general stores into the new centralised stores

Close down general stores.

Close down all obsolete items on 'MECCA'

Log specified items transferred onto 'MECCA'

Arrange for the training of maintenance staff on the operation of the stores facility

FUTURE

Transfer items onto a keyword based location system on 'MECCA'.

Establish liaison between different GEC ALSTHOM companies to help in the obtaining of critical items required in cases of emergency breakdown.

Schedule of the Different Stages of Development

of the New Stores Facility

WEEKS 1 TO 8

Complete training on the use of GEC ALSTHOM's computer applications package 'MECCA'.

Transfer items from the different satellite stores into the new centralised stores.

Close down satellite stores.

Log specified items transferred into the new stores onto the MECCA system.

WEEKS 9 TO 13

Transfer all mechanical items from the general stores.

Identify obsolete stock and arrange for its disposal.

Close the general mechanical stores.

Log specified items transferred onto 'MECCA'.

Complete the maintenance stores operational procedures section for GEC ALSTHOM's procedures manual.

WEEKS 14 TO 17

Transfer all electrical items from the general stores into the new centralised stores.

Close down general stores.

Close down all obsolete bins on 'MECCA'.

Log specified items transferred onto 'MECCA'.

Arrange for the training of maintenance staff on the operation of the stores facility

FUTURE

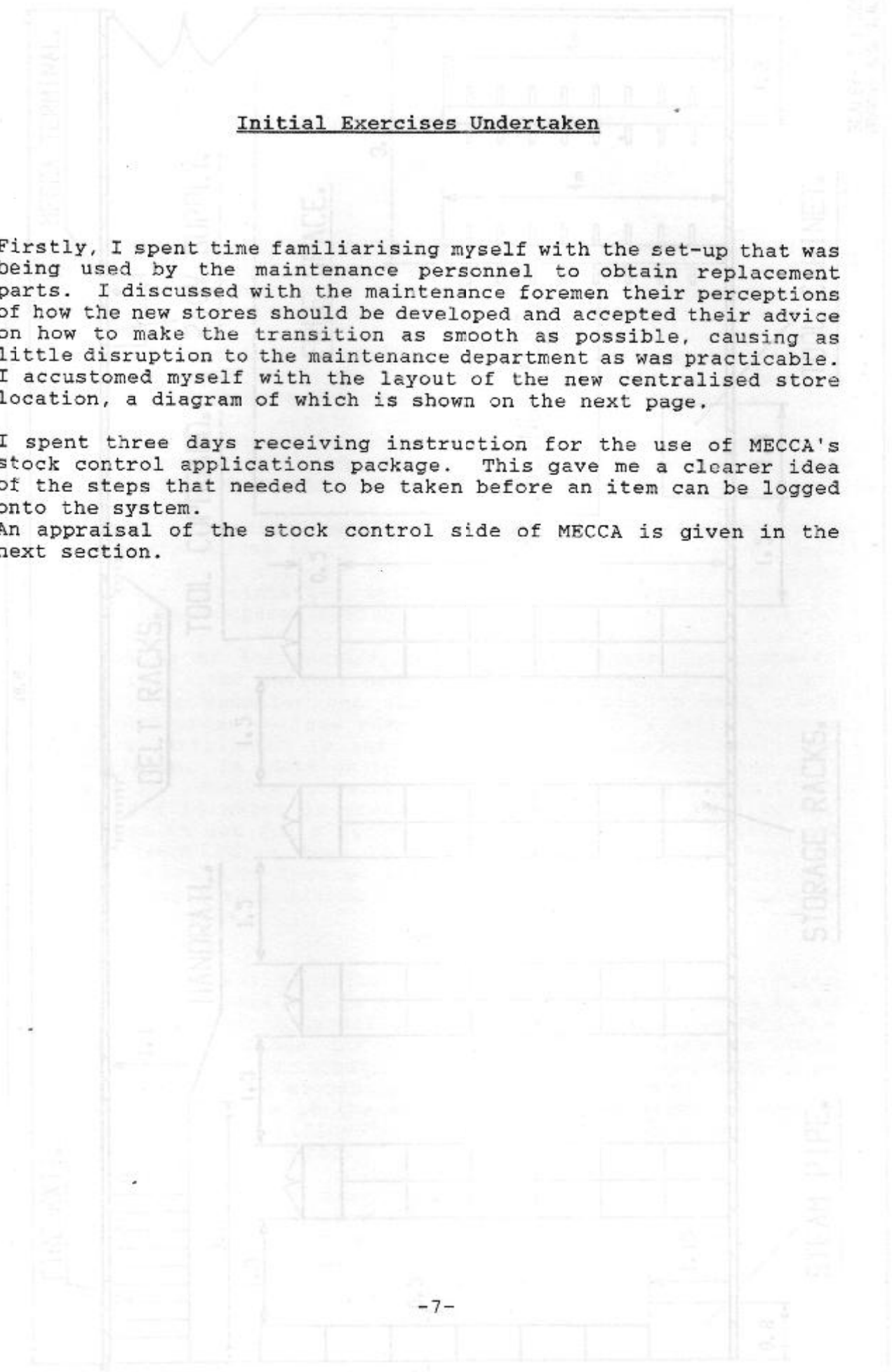
Transfer items onto a keyword based location system on 'MECCA'.

Establish liaison between different GEC ALSTHOM companies to help in the obtaining of critical items required in cases of emergency breakdowns.

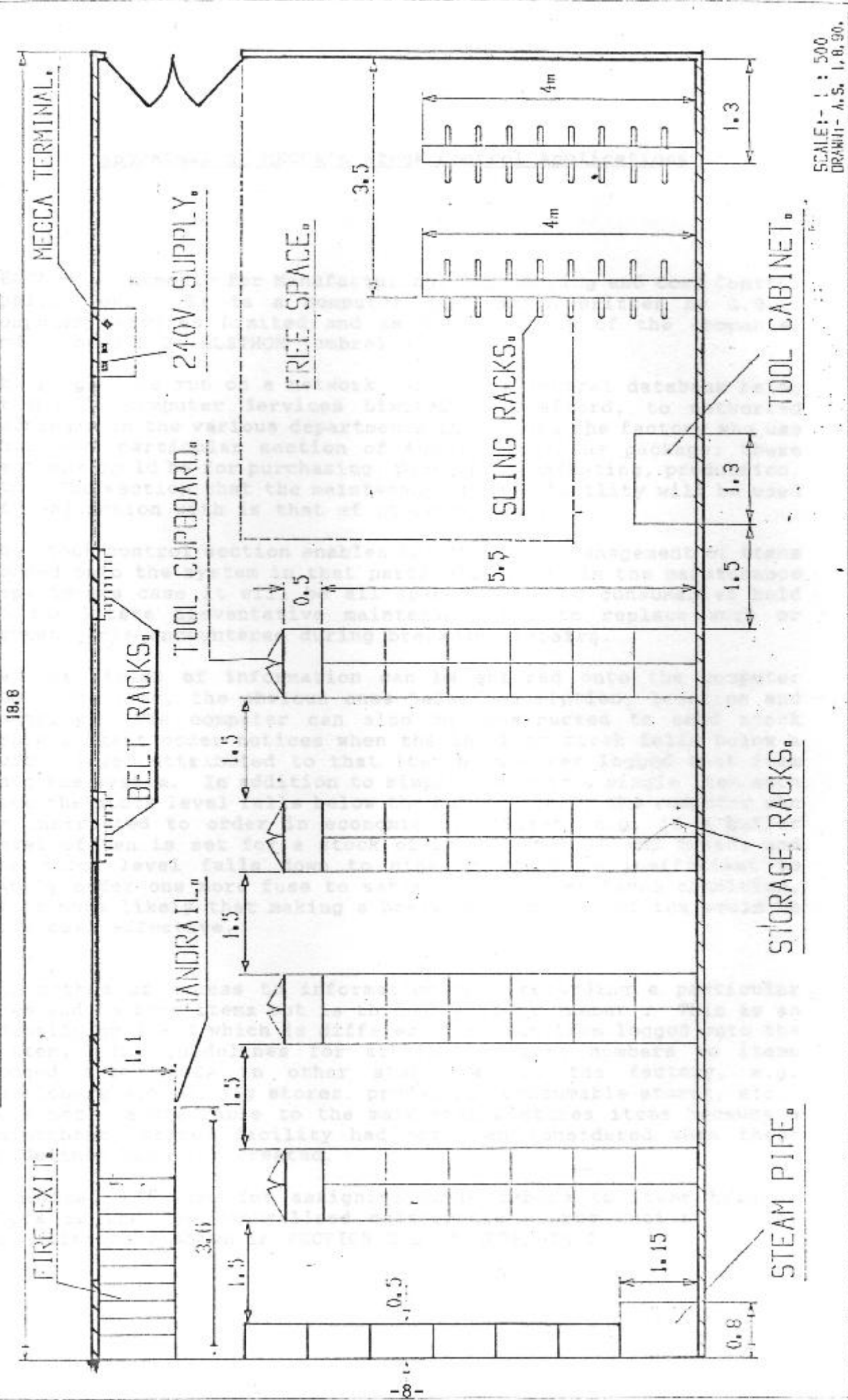
Initial Exercises Undertaken

Firstly, I spent time familiarising myself with the set-up that was being used by the maintenance personnel to obtain replacement parts. I discussed with the maintenance foremen their perceptions of how the new stores should be developed and accepted their advice on how to make the transition as smooth as possible, causing as little disruption to the maintenance department as was practicable. I accustomed myself with the layout of the new centralised store location, a diagram of which is shown on the next page.

I spent three days receiving instruction for the use of MECCA's stock control applications package. This gave me a clearer idea of the steps that needed to be taken before an item can be logged onto the system. An appraisal of the stock control side of MECCA is given in the next section.



LAYOUT OF THE MAINTENANCE STORES



SCALE:- 1 : 500
DRAWN:- A.S. 1.8.90.

Appraisal of MECCA's Stock Control Applications

Each time an item or items are booked out from the stores, using the part number for access to MECCA, the MECCA database is updated, and if the stock level is taken below the buffer level, re-order notices are sent to the maintenance foreman.

MECCA is a mnemonic for Manufacturing, Engineering and Cost Control Applications. It is a computer application written by G.E.C. Computer Services Limited and is used by many of the companies under the G.E.C. ALSTHOM 'umbrella'.

The program is run on a network basis, the central databank being at G.E.C. Computer Services Limited in Stafford, to networked terminals in the various departments throughout the factory who use their own particular section of the applications package; these sections could be for purchasing, personnel, marketing, production, etc. The section that the maintenance stores facility will be used in conjunction with is that of stock control.

The stock control section enables the efficient management of items logged onto the system in that particular area, in the maintenance departments case it will be all spare items and consumables held to facilitate preventative maintenance and to replace worn or broken parts encountered during breakdown repairs.

Various fields of information can be entered onto the computer about the item, the obvious ones being description, location and quantity. The computer can also be constructed to send stock replenishment order notices when the level of stock falls below a buffer level attributed to that item by whoever logged that item onto the system. In addition to simply ordering a single item each time the stock level falls below the buffer level, the computer can be instructed to order in economic quantities, e.g. if a buffer level of ten is set for a stock of bottle type 10 amp fuses, and the stock level falls down to nine it would be inefficient to simply order one more fuse to satisfy the buffer level condition, it is more likely that making a basis order number of ten would be more cost effective.

The method of access to information held regarding a particular item and to book items out is through a 'part number'. This is an identifying field which is different for each item logged onto the system. The guidelines for attributing part numbers to items logged onto MECCA in other stores within the factory, e.g. stationery stores, jig stores, production consumable stores, etc., were not transferrable to the maintenance stores items because a maintenance stores facility had not been considered when these guidelines had been created.

I devised a system for assigning part numbers to items held in stock in the new centralised maintenance stores facility. The guidelines are shown in SECTION 2.2 of APPENDIX 1.

Transfer of Stock From the

Each time an item or items are booked out from the stores, using the part number for access to MECCA, the MECCA database is updated, and if the stock level is taken below the buffer level, re-order notices are sent to the maintenance foremen.

More detail regarding the booking out of items from the stores is given in SECTION 3 of APPENDIX 1.

For this task I sought advice from both the maintenance foremen and the maintenance personnel, who were in a position to tell me if the machine that a particular item was intended for had been disposed of and had rendered the spare part obsolete. When this distinction had been made I arranged for maintenance workers to help in the physical transfer of all the stock from the satellite stores into the new centralized stores.

With all of the items laid out on the floor, I identified everything after advice from maintenance personnel. I then entered information and descriptions of the different stock onto a temporary inventory.

Once I had completed the inventory of all the stock transferred, I then had to establish which of the items would be suitable for logging onto MECCA and which items were not. These decisions were again arrived at following deliberations with the maintenance foremen, and some guidelines were created to make future negotiations more systematic, these are shown below.

Fully Identifiable

All items that are logged onto MECCA should contain comprehensive information that will enable the item to be ordered with as little complication as possible in the event of stock levels going below buffer levels.

1. Consumable - relatively fast moving items of stock such as filters, belts, bearings, seals, hoses, etc. These items frequently need replacing during breakdown repairs and in the process of preventative maintenance.

2. Strategic Spares - Some items of stock although not generally classed as consumable may be of critical importance in the event of a machine breakdown. Generally these items should only be held for the more expensive machine tools such as the Schieff, Kearns Richards, Inase, Innocenti, etc. Typical items could be PLC cards, hydraulic valves, nylon couplings, etc.

In most cases the parts are held in the new stores in plastic storage containers of the stackable variety placed on the shelves and given a location code. Details of how these location labels are created are given in SECTION 2.3 of APPENDIX 1.

Transfer of Stock From the

Satellite Stores

Rather than simply transfer all of the stock from the satellite stores, a list of which is given in APPENDIX 2, I decided that it would be a better idea to firstly sort through all of the different items and establish what was of use and what could be discarded. For this task I sought advice from both the maintenance foremen and the maintenance personnel, who were in a position to tell me if the machine that a particular item was intended for had been disposed of and had rendered the spare part obsolete. When this distinction had been made I arranged for maintenance workers to help in the physical transfer of all the stock from the satellite stores into the new centralised stores.

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The Formation of an Inventory

The Stores Facility

Partially as a result of there not being a full time storeman being assigned to the maintenance stores: the stores are not used frequently enough to justify this expenditure, a full comprehensive inventory of the items in stock was required. I decided that the format for the listings of the different items should be flexible and tailored to suit the particular group an item belongs to.

I decided that the most frequently encountered maintenance consumables, i.e. bearings, belts, filters and fuses, warranted being given their own sections within the inventory. However, with items that were dedicated to their own particular machine, I decided that the most practical solution was to list these parts under machine manufacturer's name. This is not an ideal situation, that would require every item being listed under the part's general classification, but with the cases such as gears and sprockets this would have been impractical since so many are unidentifiable, so I decided to use the method that would be the most effective: a flexible inventory with no restricting guidelines.

The actual physical inventory is contained on A4 paper with 'typed' descriptions and information held on the parts, these pages are placed inside polythene document holders for cleanliness and bound in an A4 ring binder.

Details on how the pages of the inventory are 'typed up' are given in SECTION 2.5 of APPENDIX 1.

I drew up a set of maintenance stores operational procedures for the maintenance stores, these procedures are to be found in APPENDIX 1.

Processes Involved in Developing
the Stores Facility

As well as the transfer of stock, other courses of action were needed to develop the stores.

I requested that extra heating be installed since the previous facilities were inadequate for such a large area.

I arranged for a large desk to be moved into the stores area as the desk already installed had the MECCA terminal on it which restricted working space.

I frequently discussed with the head of materials the difficulties that I was encountering with aspects of logging items onto MECCA. For instance I would often find on the MECCA stock inventory listings sent down from the materials department, items that should not be there. These may have been items that did not physically exist any more within the factory, but had not been deleted from the MECCA database. Usually erasing these items from MECCA was not straightforward since there was often a stock level left (according to MECCA) and also outstanding suspense or orders or invoices to be processed. To clear these problems up I had to liaise with members of the purchasing department and also members of the materials department. These type of problems had to be solved several times during the development of the stores facility.

I drew up a set of maintenance stores operational procedures for the maintenance stores, these procedures are to be found in APPENDIX 1.

Problems Encountered in Transferring
the Electrical Stock

Once all of the mechanical stock had been transferred into the new stores and thoroughly identified and logged onto MECCA if desired, the next items to be transferred were the electrical stock.

A significant amount of electrical items which were used exclusively by the maintenance department were held in store 18 (main production stores). These items were logged onto MECCA. The remaining stock was held in the general electrical stores, and a lot of this stock was identical to that in store 18. It was obvious that the best course of action would be to move both sets of stock simultaneously so that we could group all of the identical items together before logging them onto MECCA.

However, difficulties were encountered in gaining authorization for the transfer of electrical stock from store 18 and this caused the whole transferring process to grind to a halt. So I decided that it would be the simplest to move the items up from the general stores, sort them through and label them, but not to log them onto MECCA since there was the possibility then that the same part would be logged onto MECCA twice.

By transferring the stock from the general electrical stores to the centralised stores it allowed us to close the general stores completely.

State of the Stores at the Conclusion

Use of my Industrial Placement

Training Period

At the conclusion of my industrial placement at GEC ALSTHOM, the stores facility was running effectively for all of the mechanical stock transferred, however, the electrical stock still needed to be transferred from store 18.

Guidelines and procedures had been established for the operation of the stores which would make the transfer of the electrical stock as painless as possible.

The stock group on MECCA which contains all of the maintenance items had been streamlined, i.e. all obsolete items had been taken off the system and bugs and errors erased.

1. Devised a new part numbering system for maintenance items.
2. Entered consumables and strategic spares onto MECCA.
3. Closed down obsolete items on MECCA.
4. Created maintenance stores on MECCA.
5. Created an inventory using DRASWIT.

Summation of the Tasks that I have
Undertaken During my Industrial
Training Period

Although the stores are not fully operational as yet, the basis has been developed and it is now only a matter of time before all of the items are transferred and the stores are fully operational.

I believe that I have made a worthwhile contribution to the

1. Transferred all of the items from the mechanical/electrical store, Innse/Innocenti store, Schiess store, maintenance office and the mechanical items from store 18.

consider my placement to have been a personal success in that I have developed my communication skills and the pride in the amount

2. Identified all of the mechanical items moved into the new centralised stores.

that I would be simply going through the motions, so I am delighted that I have been able to bring my own initiatives and use my own judgement to solve problems and succeed.

3. Devised a new part numbering system for maintenance items.

that I now have a much better understanding of what is involved in working for a large company and I believe that I now

4. Entered consumables and strategic spares onto MECCA.

5. Closed down obsolete items on MECCA.

6. Created maintenance stores operating procedures.

7. Created an inventory using DBASEIII+.

Conclusions

Although the stores are not fully operational as yet, the basis has been developed and it is now only a matter of time before all of the items are transferred and the stores are fully operational.

I believe that I have made a worthwhile contribution to the machinery maintenance department by establishing the stores facility and that it was only lack of time that restricted me from fully implementing the project.

I consider my placement to have been a personal success in that I have developed my communication skills and took pride in the amount of responsibility that I was given. Before my placement I had perceptions of being given a task which was all 'planned out' and I that I would be simply going 'through the motions', so I am delighted that I have been able to pursue my own initiatives and use my own judgement to solve problems encountered.

Although I was at GEC ALSTHOM for only a short period of time I feel that I now have a much better understanding of what is involved in working for a large company and I believe that I now have more to offer a future employer.

Dave Smith

Head of Materials

Ray Lewis

Purchasing Department

Acknowledgements

I would like to thank the following people for their assistance and generosity towards me during my industrial training period at GEC ALSTHOM, Stafford.

Seamus Henry	Maintenance Planning Engineer
Graham Barlow	Maintenance Superintendent
Fred Clews	Maintenance Foreman (Electrical)
Mick Brady	Maintenance Foreman (Mechanical)
Laura Gray	Maintenance Office Clerk
Hassan Golchoobian	N.C. Engineer
Machinery Maintenance Personnel	
Dave Smith	Head of Materials
Roy Lewis	Purchasing Department

APPENDIX 1

Maintenance Stores Operating Procedures

When an item is received it is to be placed in the maintenance stores the GOODS INDEX book is to be signed by one of the maintenance staff, the pink copy is returned to the goods-in deck and a yellow copy filed by suppliers name alphabetical order in the appropriate file in the maintenance office.

1. Material Receipt
2. Entering a New Item of Stock onto MECCA
3. Issue of Stock received already has a part number assigned to it should be booked onto MECCA using item 10 (Process Stores)
4. Re-Ordering Procedures of a requisition note is shown in SECTION 1. The stores return form is to be filed in the
5. Proformas in the maintenance office.

Appendix

If the item received is totally new to the stores and does not have a part number assigned to it, the procedures described in SECTION 1 are to be followed.

STOCK RETURNS All unused stock that has previously been booked out and then returned to the stores should be booked in following the same procedures as SECTION 1.

Part Material Receipt of

Stock onto MECCA

1. When an item is received that is to be placed in the maintenance stores the GOODS RECEIPT NOTICE is to be signed by one of the maintenance staff, the pink copy is returned to the goods-in deck and the yellow copy filed in suppliers name alphabetical order in the appropriate file in the maintenance office.

1.1 If the item received already has a part number assigned to it, it should be booked onto MECCA using screen S06 (Process Stores Return Notes). A proforma of a stores demand note is shown in SECTION 5. The stores return note is to be filed in the appropriate file in the maintenance office.

1.2 If the item received is totally new to the stores and does not have a part number assigned to it the procedures described in SECTION 2 are to be followed.

1.3 STOCK RETURNS All unused stock that has previously been booked out and then returned to the stores should be booked in following the same procedures as SECTION 1.1.

The first field contains three numeric characters which are related to the item's general classification: CASAL = 35; COLTR2 = 15; FUSE = 47; etc.

The second field contains three numeric characters which are related to the name of the machine manufacturer which most items is intended for, i.e. ARCHDALE = 12; BOW = 21; BRIDGEPORT; etc. = NON-DESIGNATED (General item that is not intended for one particular machine)

The third field contains three numeric characters and is a simple identification facility.

So a typical part number could be 1325551

A full list of codes used in the stores system is given in APPENDIX 1 of the operating procedures.

Entering a New Item of

Stock onto MECCA

2. When it has been decided that an item is to be entered onto MECCA the following procedures should be followed.

2.1 A concise description of the part should be taken through inspection of the purchase order invoice or consultation with the maintenance foremen. A suitable minimum buffer level should be established and if necessary an economic re-order quantity through deliberation with the maintenance foremen.

2.2 A part number must be assigned to the item, this is built up of three different identifying fields as shown below:-

(i) The second field 12 345 XX 345 numeric characters which correspond to the shelf number within the stock where the item is to be located.

(i) (ii) (iii)

(i) The first field contains two numeric characters which are related to the item's general classification. i.e. SEAL = 35; FILTER = 15; FUSE = 47; etc.

(ii) The second field contains two alpha characters which are related to the name of the machine manufacturer which that item is intended for. i.e. ARCHDALE = AR; BG = BRIDGEPORT; XX = NON-DESIGNATED (General item that is not intended for one particular machine).

(iii) The third field contains three numeric characters and is a simple indexing facility.

So a typical part number could be 15BG001

A full list of codes used in the first two fields is given in APPENDIX 1 of these operating procedures.

2.3 A prime location must be established for the item in the maintenance stores. It is obviously advantageous to locate the item with other similar items, be it by part classification groupings, i.e. filter, bearing, belt, etc. or if more practical, by machine manufacturer grouping, i.e. Cincinatti, Bridgeport, Craven, etc.

The location label is a 4 character code which is created using the following simple scheme:-

 A 01 B
 (i) (ii) (iii)

(i) The first field contains a single alpha character which corresponds to the row in the stores where the item is to be located.

(ii) The second field contains two numeric characters which correspond to the shelf number within the row where the item is to be located.

(iii) The third field contains a single alpha character which corresponds to the position on the shelf where the item is to be located.

So a typical location code could be C17F corresponding to:

ROW C; SHELF 17; POSITION F

2.4 Having accomplished the preceding conditions the item is now prepared for logging onto MECCA. This should be done by a suitably trained member of the maintenance department. The guidelines for logging items onto MECCA are described in Volume 1 of the MECCA stock control manual.

The following information is given as a supplement to the instructions given in the manual:-

(Creating a Bin on Mecca)

Issue of Stock

S08

PART TYPE : Stores Demand-Note (a copy of which is shown in
STOCK GROUP : 21 received, the following procedures should be
PRICING TYPE : 2
PI INDICATOR : 0
PI TOLERANCE : 1
RE-ORDER CODE : H
FORECAST CODE : B
RA SENS : 4 Verify the working number and stock type.
(Must be that of a maintenance superintendent)

EKO

TRACE FLAG : 1 Doc:1 out using MEOCA
BORROW MARKER : 0 Mar:0 the reverse of the ending and
year and similarly "P&P"

S28

ROW : ST14 stores demand notes are to be retained and filed in the
appropriate file in the maintenance office

2.5 Having followed the previous steps it is now required to update the inventory.

The inventory is held on a commercially available database package: DBASEIII+ by Ashton Tate and run through an IBM PC using MS-DOS.

Groupings of items as described before: bearings, filters, Cincinnati, etc. are each given a file of their own.

When a new item is to be added, the appropriate file must be accessed and can then be appended. (Information required may be part number, location, description, machine, keyword, etc.) After a period of, say one month, the appended files should be printed out and replace the old listings in the inventories.

Similarly, if an item is no longer to be held in the stores, then the reference in the inventory must be deleted by deleting the reference in the appropriate database file.

Issue of Stock

3. When a Stores Demand Note (a copy of which is shown in SECTION 5) is received, the following procedures should be followed. A re-order point is automatically generated by the maintenance department. The procedures for dealing with the RON is shown below:-

- 3.1 (i) Verify the working number and signature.
(Must be that of a maintenance foreman or superintendent)
- (ii) Trace part number by referring to the inventory list.
- (iii) Book out using MECCA screen S07.
Mark the reverse of the note with the week ending and year and similarly "PROCESSED"

3.2 All stores demand notes are to be retained and filed in the appropriate file in the maintenance office.

3.3 Write down the details of the order in the purchase order book in the maintenance office.

3.4 File the RONs in the appropriate file in the maintenance office.

Re-Ordering Procedures

4. When the booking out of an item on MECCA takes the stock level below the buffer level, a re-order notice (RON) is automatically directed to the maintenance department. The procedures for dealing with the RONS is shown below:-

4.1 Gain approval from the appropriate maintenance foreman whether the part needs to be re-ordered and if so, how many need to be ordered.

4.2 Process the RON on MECCA screen S12.

4.3 Mark the RON with the requisition number given by MECCA and similarly week ending and year.

4.4 Write down the details of the order in the purchase order book in the maintenance office.

4.5 File the RONS in the appropriate file in the maintenance office.

SECTION 5 - PROFORMAS

STORES DEMAND NOTE

GEC ALSTHOM LARGE GENERATORS LTD

STORE	PART NUMBER	QUANTITY	UNITS	SHOP/DEPT	WORKING NUMBER

DESCRIPTION

AUTHORISED BY	DATE RETURNED

SS 410 C ALL ENTRIES TO BE WRITTEN LEGIBLY, ONE ITEM ONLY PER NOTE

INSPECTORS STAMP

STORES RETURN NOTE

GEC ALSTHOM LARGE GENERATORS LTD

STORE	PART NUMBER	QUANTITY	UNITS	SHOP/DEPT	WORKING NUMBER

DESCRIPTION

GOOD STOCK
SCRAP

AUTHORISED BY	DATE RETURNED

SS 414 E ALL ENTRIES TO BE WRITTEN LEGIBLY, ONE ITEM ONLY PER NOTE

INSPECTORS STAMP

APPENDIXFIRST TWO CHARACTERS OF PART NUMBER
(KEYWORD RELATED)

KEYWORD	NUMBER		
ADAPTOR	01	SPROCKET	39
AIRTOOL	02	SWITCH	40
AMPLIFIER	46	THERMOCOUPLE	58
BEARING	99	THERMOSTAT	59
BELT	98	TIMER	45
BLADE	03	TRANSFORMER	60
BRUSH	04	VALVE	41
BULB	49	WHEEL	42
BUSH	05		
CABLE	06		
CHAIN	07		
CHUCK	08		
CLUTCH	09		
COIL	50		
COLLET	10		
CONNECTOR	11		
CONTROLLER	52		
COUPLING	12		
DIAPHRAGM	13		
DIODE	53		
ELEMENT	54		
ENCODER	55		
FAN	14		
FILTER	15		
FITTING	16		
FLANGE	17		
FUSE	47		
GAUGE	18		
GEAR	20		
GEARBOX	21		
GUARD	19		
HOSE	22		
LIFTING	23		
LOCK	24		
LUBRICATION	25		
MANIFOLD	26		
MISCELLANEOUS	43		
MOTOR	27		
NUT	28		
PACKING	29		
PIPE	30		
PLUG	31		
PULLEY	32		
PUMP	33		
RECTIFIER	56		
RELAY	48		
RESISTOR	57		
SCREW	34		
SEAL	35		
SHAFT	36		
SLEEVE	37		
SPRING	38		

SECOND TWO CHARACTERS OF PART NO.
(MACHINE MANUFACTURER RELATED)

MACHINE ABBREVIATION

APPENDIX 2

ARCHDALE
ASQUITH
BENTLEY
BERRY
BEVLIEG
BLISS
BOXFORD
BRIDGEPORT
BUTLER
CHURCHILL
CINCINNATI
COLCHESTER
CRAVEN
DEAN
EDWARDS
ENERPAC
GRINDMASTER
HARDINGE
HAUSER
HERBERT
HUBER
INNOCENTI
INNSE
JONES
KEARNS
KITCHEN
MARTONAIR
MASKEL
MICAFIL
MONARCH
MOORE
MORANDO
POLLARD
POWELL
RICHARDS
RIDGEWAY
ROCKWELL
SCHIESS
SCHLIEFF
SWIFT
TAKISAWA
TANGYE
TAYLOR
WADKIN
WALTHER
WARD
WEINGARTEN
WICKSTEAD
WILKINS
WOHNLENBERG

AR
AQ
BE
BR
DB
BL
BO
BG
BU
CH
CI
CO
CR
DE
ED
EN
GM
HA
HS
HE
HU
IC
IS
JS
KE
KI
MA
MS
MI
MR
ME
MC
PL
PO
RD
RI
RO
SC
SF
SW
TK
TG
TA
WK
WA
WD
WG
WI
WL
WH

SATELLITE STORES AND LOCATIONS

LOCATIONS

Stores receiving

Direct Mailings 40 DPO

Office of the Sales Manager, Baker St.

Stores / Belts Filters

Main office, Baker St.

APPENDIX 2

LIST OF SATELLITE STORES AND LOCATIONS

<u>STORE TYPE</u>	<u>LOCATION</u>
General Maintenance Store	Outside deck 9 goods receiving
Schiess Store	Directly behind Schiess 40 DFG
Innse / Innocenti Store	Off 101 side gallery (Baker St.)
Bearings / Belts / Filters	Store 18
Miscellaneous	Maintenance shop and office