CHAPTER III

THEORITICAL BACKGROUND OF MASCHINENFABRIK POLYGRAPH (INDIA) Ltd. KOLHAPUR

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C H A P T E R -(III)

INTRODUCTION TO THE ORGANISATION

The Maschinenfabrik Polygraph (India) Limited is the Industry where the researcher collected the data for the his research project in "A Study of Manpower Planning and Recruitment Procedure".It is an engineering concern which is situated at M.I.D.C.Area,outside the City limits of Kolhapur.It is a growing complex of engineering - activities.Before going in details about the working and historical background of the unit of study it will be - more appreciable to peep into the subject of how - engineering Industry took its gigantic shape in India.

3-1. HISTORY & DEVELOPMENT OF ENGINEERING INDUSTRY IN INDIA :

Prior to the First World War,there were a few private firms which produced bridges and undertook - fabrication of general steel structure,wagon building and repairs and replacement of parts.Railway workshops also did produce some engineering goods and even their raw materials,had to be imported from abroad.In 1924, there were about 40 engineering firms with a total work--ing strength of 75,000/ persons.However,between 1929 and 1934,when general depression set in,the Industry

suffered a set back due to fall in demand by the Govt. and Railway.But after 1939,with the outbreak of Second World War,the Industry got a fillip the number of units increased to " 58 " and that of the workers to 84,000. In 1943, this number was " 87 " and 1,50,000 respecti--vely.There were most concentrated in and arround - Calcutta, Madras and Bombay.

Since Independence,there has been a phenomental progress in the engineering industries.India has made a great forword leap in the manufacture of a variety of machinery and equipments,ranging from pin to aircraft. In 1950-51, the production of machinery was of the value of Rs.4/- crores only.This increased to Rs.5,00/- crores.Production by 1965-66 the development has been do not only to the Industrial Policy,of the Government but also due to the enthusiasm enterpreneurs in private sector.

DEVELOPMENT DURING THE PLAN PERIOD :

In the first five year plan engineering Industries did not receive much attention.There was an emphasis on the development of agriculture.However,some progress was registered in the production of cotton textile machinery, manufacture of cement,jute and sugar machinery was also started on a modest scale.

In the Second five year plan greater emphasis was given on the development of the heavy and basic - Industries and so engineering Industry also get - priority,Workshops,heavy foundries,forges and structure shops were established and substantial progress was achieved in mechanical and electrical engineering Industries.However, the production of Industrial - machinery did increase but not as per expectations.

During the Third plan period,greater emphasis was given to the development of structural engineering - industry.Encouragement was given to the private - investors and in the public sector a number of projects were launched,such as the Hindustan Cables Ltd; Heavy pressures and pumps,Ball and Rollers Bearings,Precision instruments, factory in surgical instruments etc.During the plan period,substantial increase took place both in production of mechanical engineering and electrical engineering Industries.Compared to 1960-61,the - production of machine tools increased by more than two times,that of Sugar machinery about '8' times,Railway Wagons 3 times,Sewing machines by 1¼ times,Bicycles by about 1-1/3 times, Power Transpormers by about 3 times, Electric Motors by 2½ times and Radio Receivers by 3½ times.

During the Forth plan efforts would be made to

increase the fuller utilisation of the installed - capacity investment would be made primary for completion of the progress and also for the deversification in some of the existing units, like the HMT, Mining and Allied Machinery Corporation and Bharat Heavy - Electricals for filling in certain gaps. Besides, these, expansion in machine tool production, transport and communication equipments and agricultural machinery is envisaged.

EXPORT OF ENGINEERING GOODS :

With rapid increase in production India now exports variety of engineering goods to the foreign countries. India exports about 150 items to more than 100 countries.

T A B L E - NO. : (1) :

Following table shows the progress of export of Engineering goods :

YEAR.	VALUE IN CRORES OF Rs.
1956-57	5.4
1960-61	13.4
1965-66	26.2
1966-67	23.0

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1967-68	32.7
1968-69	67.4
1969-70	106.4
1973-74	225.4
1978-79	500.0

The Fourth plan target for the export of - Engineering goods is Rs.225/- crores by the end of 1973-74 and Rs.500/- crores by the end of 1978-79 and same the case was during years 1979-80. After tooking briefly towards development of Engineering Industries in India, we shall turn now towards the introduction to the organisation which is under study.

3.2. HISTORY OF MASCHINENFABRIK POLYGRAPH (INDIA) LTD. K O L H A P U R :

GENERAL :

M/s. MASCHINENFABRIK POLYGRAPH (INDIA) LTD; a public limited concern is registered in 1971 with the main objective of manufacture of printing and allied machinery,as stipulated in company's memorandum.

FACTORY LOCATION :

A very well designed and furnished factory is situated in M.I.D.C.,Shiroli Industrial Area,Kolhapur. They are also proposing to expand their factory in the near future to meet the need of greater volume - production.The company has their corporate Office at Bombay.

FACTORY LAYOUT :

The layout of factory is some what similar to their collaborator's " M/s. VEB POLYGRAPH,G.D.R." A big Assembly shop compared to all other production and service departments,is outcome of heavy and reliance in an ancillary units for manufacturing items.Well furnished departments,use of scientific approach and techniques in all activities,awareness of quality and economy at all levels distinguishes " M/s.MASCHINENFABRIK POLYGRAPH (INDIA) LTD; from many other bigger units in and around Kolhapur.

PRODUCTS :

"Automatic Cylinder Printing Machine-OM II" which rolled out in 1975 is a widely sought after printing machine,printing rate around 3600 s.p.h. A machine costing around Rs.2/- lakhs,has captured a major - Indian market or letter presses.About 270 machine are

so far sold which includes about 20 machines exported in developed countries like U.S.S.R. and Germany.

The second model " WEBFED OFFSET PRINTING MACHINE -RO 62 " which rolled out in 1976 in the first of its kind in India.It uses the sophisticated method of - Offset Printing and is considered ideal choice for magazine,calenders and text book printing speed of 15,000 s.p.h. or I.P.H.A machine which can be tailor made to suit customers requirement is a claimed as the major development in printing machines are so far sold in and outside India and is in heavy demand.

The Third model " GRAPHART AUTOMATIC PLATEN PRESS" is in initiation of famous Czech Machine " GRAFO " M/s MASCHINENFABRIK POLYGRAPH (INDIA) LIMITED have marched a step ahead in their expertuse by developing this machine without any assistance from outside - sources.A pilot batch of 5 Nos.was successfully - developed and the product is accepted all over to be of 4,500 to 5,000 I.P.H.About 60 nos.of machines are sold so far and it is having a tremendous market in and outside India due to its small size and less cost. It costs about Rs.1,00,000/- only.

The Fourth Model "PO 25" "SINGLE COLOUR SHEET FED OFFSET PRESS " . It ensures the perfect registration at a highest speed of 7,500 I.P.H. It's main - characterstics are increased productivity,flexibility of operation etc.

T A B L E - No. (2) :

Following Table shows the Production of Print Units.

TABLE SHOWING PRODUCTION OF PRINT UNITS.

YEAR.	PRODUCTION(UNITS)
1981	104
1982	178
1983	125
1984	183
1985	217

The above table shows the number of Print Units produced during the year.In 1981, the company has - produced 104 units and it has increased upto 217 in 1985.This was due to the introduction of new product in November,1984.

COLLABORATORS :

A Chezch firm M/s. KOVO are their collaborators for the model " GRAPHART ". And M/s. VEB POLYGRAPH, a world known firm in printing machines are their - collaborators for two models " OM-II " and " RO-62 ". Besides,offering the process techonology M/s.VEB POLYGRAPH have contributed in setting up a model factory by offering their best experts for guidance and trainning Maschinefabrik Polygraph (India) Ltd. Personnel in G.D.R.and offering 25 % parts in the initial stage of production and M/s.KOVO CHEZCHS for Graphart.

NEW PRODUCT POLICY :

Company has started the production of "Zircon 66-III" under the New Product Policy.This has been started in the year 1986.It has manufactured for the first time in India in collaboration with M/s.VEB POLYGRAPH,G.D.R.. This Machine is suitable for both single and multicolour jobs like posters,packaging material,books,periodicals etc.

3.3. WAGES AND ALLOWANCES :

All employees are graded into different grades according to skills.Pay scales are based on these - grades.Following are the grades and pay scales.

GRADE		PAY SCALE
I	:	235-4-255-5-280-6-310-7-345-8-385.
II-B	:	265-6-295-7-330-8-370-10-420-12-480.
II-A	:	280-6-310-7-345-8-385-10-435-12-495
III	:	300-8-340-10-390-12-450-15-525-18-615
IV	:	340-12-400-14-470-16-550-18-640-20--740.
V	:	375-10-455-18-545-20-645-22-755-25-880.
VI	:	410-18-500-20-600-22-710-25-835-27-970.
II-A.	:	300-12-360-15-435-18-525-20-625-22-735
I--A	:	340-12-400-15-475-18-565-20-665-22-775
B	:	420-18-510-20-610-25-735-30-885-35-1060.
C	:	535-25-660-30-810-35-985-40-1185-45-1410

All employees are entitled to D.A. as per Solapur index.

A) OVERTIME :

The workers is entitled to secure the payment for overtime, "Double Rate Wages" on hourly basis.

B) INCENTIVE :

To enhance the production, incentive is paid to the workers. First a standard in terms of minimum number of units to be produced in each week is fixed for each department. Incentive is paid on the basis of total - performance in terms of total production in Rupees. For example, for Rs.9/- Crores production, incentive is Rs.5/- lak. With more production the quality of product should also be checked. Thus incentive is paid only after the quality is approved by inspection department.

C) ATTENDANCE BONUS :

To ensure regularity in attendance, attendance bonus is paid, the worker who attended all the working days in a month is entitled to get an attendance bonus. The attendance bonus is presently Rs.15/- permonth.

D) ANNUAL BONUS :

20 % annual bonus is paid to workers including exgratia.

E) GRATUITY :

Company has introduced "Group Gratuity Scheme" under L.I.C.

F) STAFF BONUS :

It is a loan sanctioned to an employee for meeting medical expenses, marriage expenses and expenses - incurred for the education of children etc.No interest is charged on this loan and the amount of loan is - recovered through the monthly salary.

3-4. WORKERS WELFARE FACILITIES :

(A) CANTEEN :

Tea and eatables are made available to the - Employees at the nominal rates.

(B) UNIFORMS AND SHOES :

Every permanent worker is provided with a pair of uniforms and a pair of shoes each year.

(C) LEAVE :

Every employee is entitled to seven days casual leave and twelve days earned leave according to Factories Act.

Sick leave is sanctioned as per the provisions of E.S.I.with these there are seven days paid holidays - which includes Independence Day, Republic Day,Shiv-Jayanti, two days Diwali and two more days demanded by Union.

(D) SPORTS AND GAMES :

Employees are supplied with necessary materials for playing Cricket, Foot-ball, and Volly-ball.Company's Cricket and Foot-ball teams participate in many tournments. The members of the team are entitled to allowance in terms of hours for the purpose of practice.

(E) LIABRARY :

The company has provide the liabrary facility to Employees.Also facility of reading room has provided to Employee during the off hours.

(F) HOUSING LOAN :

The company sanctions loan to its employees for housing purpose.For this company provides maximum - Rs.4,000/- and 10 % interest charged on it.

(G) FACILITY FOR HIRE-PURCHASE :

The company provides the facility of Hire-purchase to employees by giving guarantee to bank.

(H) EMPLOYEES STATE INSURANCE SCHEME :

Employees are provided with facilities of E.S.I. Scheme.A regular monthly deduction is made for that purpose from salary.Employees are entitled to E.S.I. Leave.

(I) SHIFT ALLOWANCE :

Company provides a special allowance as shift Allowance for those employees who work in Second shift. For this those Employees who work in second shift are entitled to get Rs.1/- as shift allowance.And those Employees who work in third shift Rs.1=50 Ps. as shift Allowance.

(J) CONVEYANCE AND MEDICAL ALLOWANCE AND LEAVE TRAVEL

Company provides the famility of conveyance-Allowance and Medical Allowance.Aslo company provides a Special Allowance for Leave Travel to Employees.

(K) WELFARE CENTRE :

Recently company has started a Welfare Centre at village "Top" wherein of about 75 families of Employees are "living". This centre provides the facility of reading room, sports material etc.

3-5. ORGANISATION STRUCTURE :

M/s.MASCHINENFABRIK POLYGRAPH (INDIA) LIMITED is a public limited company.Its Head Office is situated at Bombay.Board of Directors is the highest Controlling authority.There is a Vice-Chairman and also two General Manager,one for Administration and Accounts and other for Marketing Division.These two General Manager are under the control of Vice-Chairman at Bombay level.

There is one General Manager for works at Kolhapur level.He is assisted by the following :

(i) Divisional Manager - Sheet-Feed,Offset.

(ii) Divisional Manager - Web Offset.

(iii) Divisional Manager - Machine Shop

(iv) Deputy Manager -

This includes Purchase,Inspection,Stores etc.

(v) Administrative Officer.

(vi) Chief Accountant.

The important Executives of the Company are -

(i) Manager - Management Service.

(ii) Assistant Manager -

This includes Design Development,Assembly, Machine Shop,Techonology,etc.

FUNCTIONS OF VARIOUS DEPARTMENTS.

1) INDUSTRIAL ENGINEERING DEPARTMENT :

(a) Time Studies :

This is one of the basic function of Industrial Engineering Department.It seems that the employees work for full working hours.It undertakes the time studies and thus set standard times for different operations.

(b) Suggestion Scheme :

They receives suggestions from the employees on which they make a through study and if they find the suggestion suitable,they accept it and reward the person who suggested that particular Scheme.

(c) Manpower Requirements :

The department looks after the Manpower requirements of the company.

(d) Trainee Engineers and Vocational Trainee :

This department provides trainning facilities to newly appointed engineers and Vocational Trainee.

2) PRODUCTION PLANNING AND CONTROL :

The planning of the production in the Machine Shop is done by this department.It estimates the demand for goods,prepare production plans,sets production rates

and control the production.

3) PRODUCTION DEPARTMENT :

As name indicates this department looks after the production.As per the instructions given by the - Production Planning and Control department this depart--ment arrange production.

4) CHIEF ENGINEERING :

This department is engaged in drawing and - designing of products,quality control,development of designs etc.

5) MAINTENANCE :

This department looks after the Security of the company's assets and employees.

6) COMMERCIAL DEPARTMENT :

This department looks after the purchase,sales, advertisements,sales promotion and customers service.

7) BUDGET DEPARTMENT :

This department is engaged with preparation of sales budget,production budget,etc.

8) PERSONNEL DEPARTMENT :

Personnel Department is engaged in the following functions :

(a) Recruitment.

(b) Supervision of Welfare Activities.

(c) Grivance Handling.

(d) Collective Bargaining and Discussion with Trade Unions.

(e) Discipline.

(f) Evaluation of Employees.

(g) Wage & Salary Administration.

(h) Promotion,Demotion,Transfer of the Employee.

(i) Maintaining Personnel Records.

3-6. MANPOWER PLANNING AND CONTROL IN MASCHINENFABRIK POLYGRAPH (INDIA) LIMITED ,K O L H A P U R :

Manpower planning has been recently started in the company.In this company the Personnel Department looks after the manpower planning aspect.The General Manager,Personnel Officer,and Plant Engineer looks after the overall planning,of the company.By taking into - consideration the Production Budget,also work load of each and every section as well as each department on the basis of time study and work load analysis.They determine the work force required to complete the - planned work load.They take into consideration the - existing work force and reduction overall wastage e.g.

absenteeism,transfer,etc.On that basis they recruit new employees or transfer some people to other department.

It is observed that the number of production of print units increased from 104 in the year 1981 to 217 in the year 1985.

TABLE NO.(III) :

TABLE SHOWING TOTAL NUMBER OF EMPLOYEES (1981-1985)

Sr.No.	Year.	Total Number of Employees
(1)	1981	483
(2)	1982	614
(3)	1983	689
(4)	1984	798
(5)	1985	959

The number of Employees were constantly increases due to increase in production.In the year 1981 the - number of Employees were 483,but the number of Employees were increased upto 959 in the year 1985.The number of Employees were increased from 1984 and 1985 because the company has begine from November 1984 the production of PO-25 Machine under the New Product Schem.

TABLE NO.: (IV)

TABLE SHOWING THE NUMBER OF EMPLOYEES UNDER EACH DEPARTMENT : (1981-1985) :

Sr. No.	Name of the Department.	YEARS 1981	1982	1983	1984	1985
1	2	3	4	5	6	7
1)	Administration	54	58	60	64	66
2)	Engineering Pool	5	5	6	9	9
3)	Stores	27	36	37	38	38
4)	Techonology	16	31	43	44	46
5)	Maintenance	18	28	36	48	51
6)	Inspection	36	41	49	55	60
7)	Tool Room	30	35	38	51	56
8)	Assembly	81	114	123	151	182
9)	Production	174	210	239	274	383
10)	Printing Fabri--cation.	17	24	26	27	27
11)	Security	12	18	18	23	26
12)	Industrial Engineering Dept.	4	5	5	5	5
13)	Pattern Shop	9	9	9	9	9
14)	Sales & Service	-	-	-	-	1
	TOTAL	483	614	689	798	959

This table shows, the total number of Employees under each Department. In Production Department the - number of Employees were increased from 174 to 383 in 1985. Whereas, in Assembly Department, the number of - Employees were increased from 81 to 182 in 1985. However, the total number of employees in all Departments together were increased from 483 to 959 in 1985, due to increase in production and introduction of the 'New Product - Scheme' in November 1984.

TABLE NO.: (V) :

TABLE SHOWING SHIFTWISE DISTRIBUTION OF EMPLOYEES

Sr.No.	Shift.	Number of Employees
(1)	First Shift : 7.00 A.M. To 3.30 P.M.	150
(2)	General Shift: 8.00 A.M. To 4.30 P.M.	350
(3)	Second Shift : 3.30 P.M. To 11.30 P.M.	150
(4)	Third Shift : 11.30 P.M. To 7.00 A.M.	150

This table shows that, the distribution of - employees according to shifts. Maximim Employees were

working in General Shift.Each shift is of '8' hours.

TABLE NO.(VI) :

TABLE SHOWING NUMBER OF EMPLOYEES APPOINTED UNDER EACH DEPARTMENT :

Sr. No.	Department.	YEARS 1981	1982	1983	1984	1985
1	2	3	4	5	6	7
1)	Administration.	4	4	2	4	2
2)	Engineering Pool	5	-	1	3	-
3)	Stores	9	9	1	1	-
4)	Techonology	1	15	12	1	2
5)	Maintenance	6	10	8	12	3
6)	Inspection.	7	5	8	12	3
7)	Tool Room	2	5	3	7	5
8)	Assembly	26	33	9	28	31
9)	Production.	31	36	29	35	109
10)	Printing Fabrication.	4	7	2	1	-
11)	Security	1	6	-	5	3
12)	Industrial	-	1	-	-	-
13)	Engineering Department.					
14)	Sales & Service.	-	-	-	-	1
	T O T A L :	98	131	75	109	159

This table reveals that there was an increase of an appointed staff for 96 in 1981 to 161 in 1985.The number of Employees in Production Department were - appointed 31 in 1981 but it has increased upto 109 in 1985 due to the adaption of new Production Scheme in November,1984.

The appointments were made in Techonology - Department were 15 and 12 in 1982 and 1983 respectively During these years,company is in need of Assistant Manager,Senior Engineers and Mechanical Draughtsman. However,there is an increase in the appointments from 1981 to 1985 except in 1983. In 1983 the appointments were mainly made in Production Department and Techonology Department.

TABLE NO. (VII) :

TABLE SHOWING DEPARTMENT-WISE DISTRIBUTION OF EMPLOYEES AS ON 31st OCTOBER 1986 :

Name of the Department.	No. of Employees.
ADMINISTRATION :	
Managerial	1
Clerical	8
Workers.	13

Name of the Department.	No. of Employees.
ACCOUNTS :	
Supervisory.	2
Clearical	13
PURCHASE :	
Managerial	1
Clearical	7
SUB-CONTRACT :	
Managerial	1
Supervisory	1
Clerical	9
Workers	1
STORES :	
Managerial	1
Supervisory	1
Clerical	13
Workers	27
TECHONOLOGY :	
Managerial	4
Supervisory	13
Clerical	5
Workers	23
INDUSTRIAL ENGINEERING :	
Supervisory	6
Clearical	4

Name of the Department	No.of Employees.
INSPECTION :	
Managerial	1
Supervisory	4
Clerical	1
Workers	40
TOOL ROOM :	
Supervisory	3
Clerical	7
Workers	42
PATTERN SHOP :	
Supervisory	2
Workers	8
PAINTING :	
Supervisory	1
Workers	18
BLACKING & FABRIK :	
Workers.	8
MAINTENANCE :	
Managerial	1
Supervisory	14
Workers	23
ASSEMBLY :	
Managerial	2

Name of the Department.	No.of Employees.
ASSEMBLY :	
Supervisory	24
Clerical	8
Workers.	108
PRODUCTION :	
Managerial	1
Supervisory	17
Clerical	5
Workers	262
SECURITY :	
Clerical	22

This table shows the Departmentwise Distribution of Employees as on 31st October 1986.

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Snehal/-(SAT-301186)

Polygraph (India) Limited
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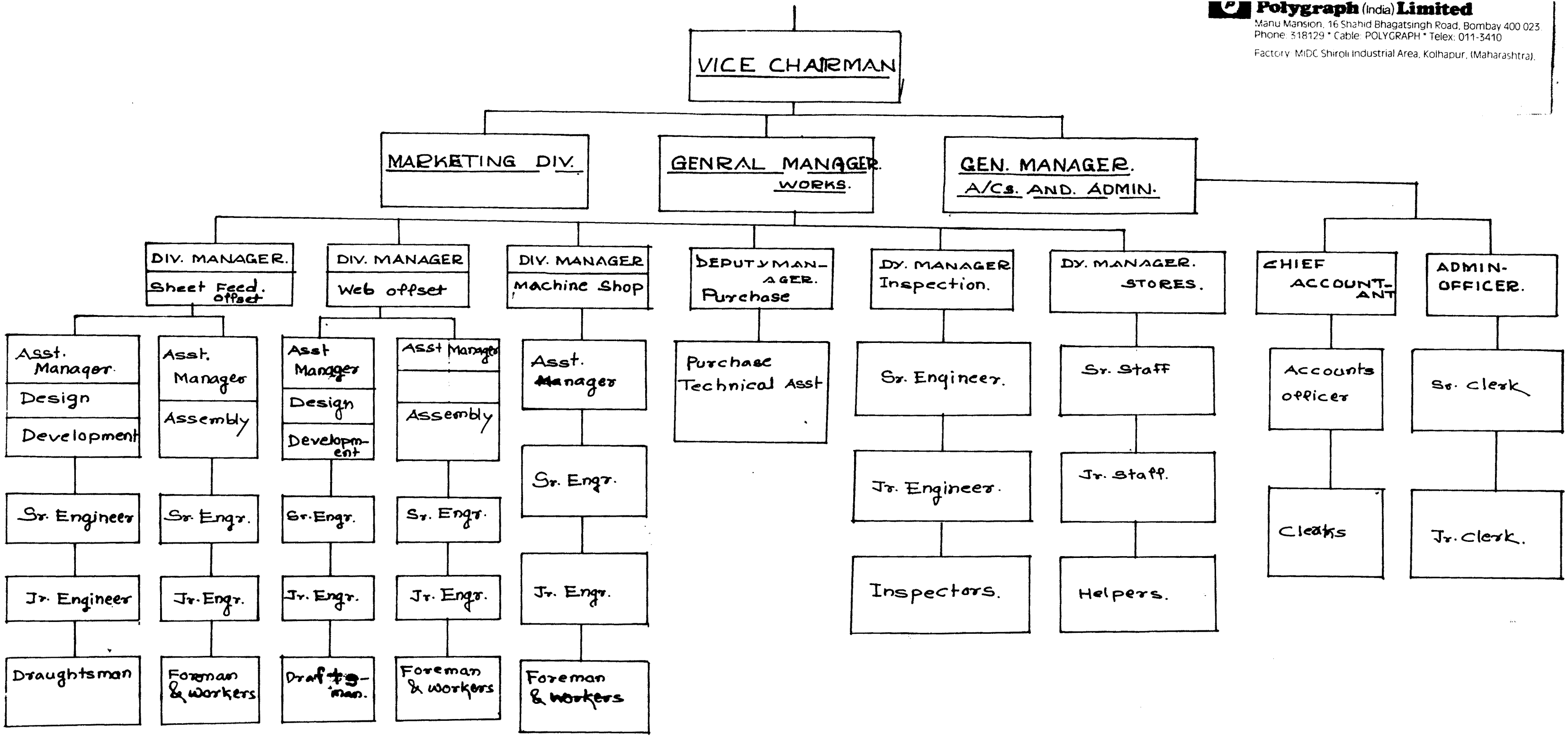

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