Gajra Gears Private Limited

INTRODUCTION

GAJRA GEARS PRIVATE LIMITED was started in 1962 as a small-scale gear manufacturing unit.

It progressed rapidly and is now one of the largest gears manufacturing unit for automobile gears and is the leader in the field in India.

The manufacturing unit of the company is situated in Dewas (Madhya Pradesh) in central part of India.

The Company is equipped with about 250 Nos. machine tools. Many of these machine tools are Automatic/C.N.C. The plant is also equipped with heat treatment facilities.

The range of products includes :

- Transmission Gears.
- Spline Shafts & Axles
- Engine Gears
- Gear Box Assembly
- Planetary Assembly etc.

For Commercial Vehicles, Passenger Cars, Tractors, Engines and Snowmobile.

SIZE OF GEARS & SHAFTS

- Gears upto 8.0 module and 400mm diameter.
- Shafts 700mm long.

The Company has an R & D Deptt. and its activities have been granted recognition by the Department of Science & Technology, Government of India, since April 1979.

The R & D activity of the company has resulted in the development of Gear Cutting Tools. The Company has received **"IMPORT SUBSTITUTION AWARD"** for development of Gear Shaving Cutter.

The R & D Deptt. is also engaged in process planning and designing of process, tooling, jigs & fixtures, inspection gauges etc. to develop the product as per customer's drawing or samples. The R & D Deptt. is equipped with known state of the art CAD facility. It has capability of developing 10 to 12 Nos. of new products every month, which gives strength to grow faster and be competitive.

The Company has separate Cutting Tools Manufacturing Division equipped with about 20 Nos. sophisticated machine tools including Optical Profile Grinder, CNC Shaving Cutter Grinder and High Speed Steel Heat Treatment Facility. The cutting tools manufactured in the division include Gear Shaper Cutters, Gear Hobs, Gear Shaving Cutters, Master Gears, Broaches, Spline Milling Cutter etc.

The Company has a full-fledged Tool Room capable of manufacturing precision Jigs, Fixtures and Gauges required for manufacturing of the products.

- The Company has a full-fledged Inspection & Quality Control Department including Standard Room. The calibration activity is being done in-house. Following modern testing equipment are also available in the Company.

THE COMPANY IS ACREDITED WITH FOLLOWING CERTIFICATES.

01:- THE COMPANY HAVE BEEN AWARDED "IMPORT SUBSTITUTION AWARD" BY " THE HONOURABLE PRESIDENT OF INDIA" FOR DEVELOPING SHAVING CUTTER.

02:-ISO-9002 QUALITY MANAGEMENT SYSTEM (BY B.V.Q.I.) SINCE DECEMBER 1998.

03:-QS-9002 QUALITY CERTIFICATION (BY B.V.Q.I.) SINCE MAY 2001.

04:-ISO-14001 ENVOIREMENT MANAGEMENT SYSTEM (BY B.V.Q.I.) SINCE MAY 2003.

05:- THE COMPANY IS ON THE WAY TO GET OHSAS-18001 IN THE YEAR 2004.

05:-THE COMPANY ALSO PARTICIPATED IN "CII-ACMA CLUSTER PROGRAMME" FOR THREE YEARS (FROM JANUARY 2001 TO DECEMBER 2003)

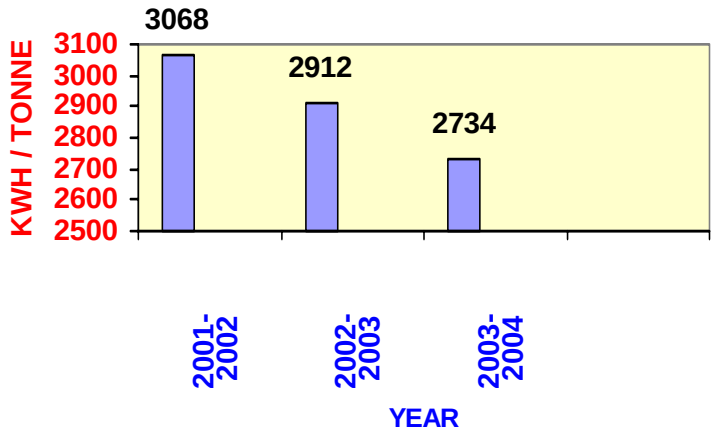
06:-THE COMPANY ALSO SEND NOMINATION OF WORKER FOR " PRIME MINISTER'S SHRAM AWARD-2004"

07:-THE COMPANY IS ALSO PERMITTED FOR "SELF CERTIFICATION FOR QUALITY OF OUR PRODUCTS" FROM OUR O.E. CUSTOMER

ENERGY CONSUMPTOION

YEAR	SPECIFIC ENERGY CONSUMPTION IN (Lakhs kwh / tonne)	ENERGY COST AS A% OF MANUFACTURING COST
2001-02	3068	29.56 %
2002-03	2912	27.63 %
2003-04	2734	28.22 %

SPECIFIC ENERGY CONSUMPTION



Remark :- The energy consumption has reduced every year but energy cost as percentage of manufacturing cost has different figuer due to increase in tariff by M.P.S.E.B.

ENERGY CONVSERSATION COMMITMENT

CONTINEOUS POSITIVE EFFORTS TO CONSERVE ALL TYPE OF ENERGY (viz. electricity / air / fuel / water).

ENCON POLICY

1:TOP MANAGEMENT COMMITTEE FIXES "CORPORATE OBJECTIVE" EVERY YEAR FOR ENERGY BY COMPARING PERFORMANCE WITH "PREVIOUS YEARS' BEST RESULTS" AS "BENCH MARK" FOR NEXT YEAR, & TARGETING FOR "HIGHER ACHIEVEMENT" NEXT YEAR.

2:THE MAIN OBJECTIVE IS TO OPERATE MOST "COST EFFEVTIVE" "ENERGY EFFICIENT" & "ENVIORNMENTAL FRIENDLY" PLANT.

3:CONTINEOUS IMPROVEMENT IN WORKING & ALSO CLOSE MONITORING THROUGH ENERGY MANAGEMENT SYSTEM.

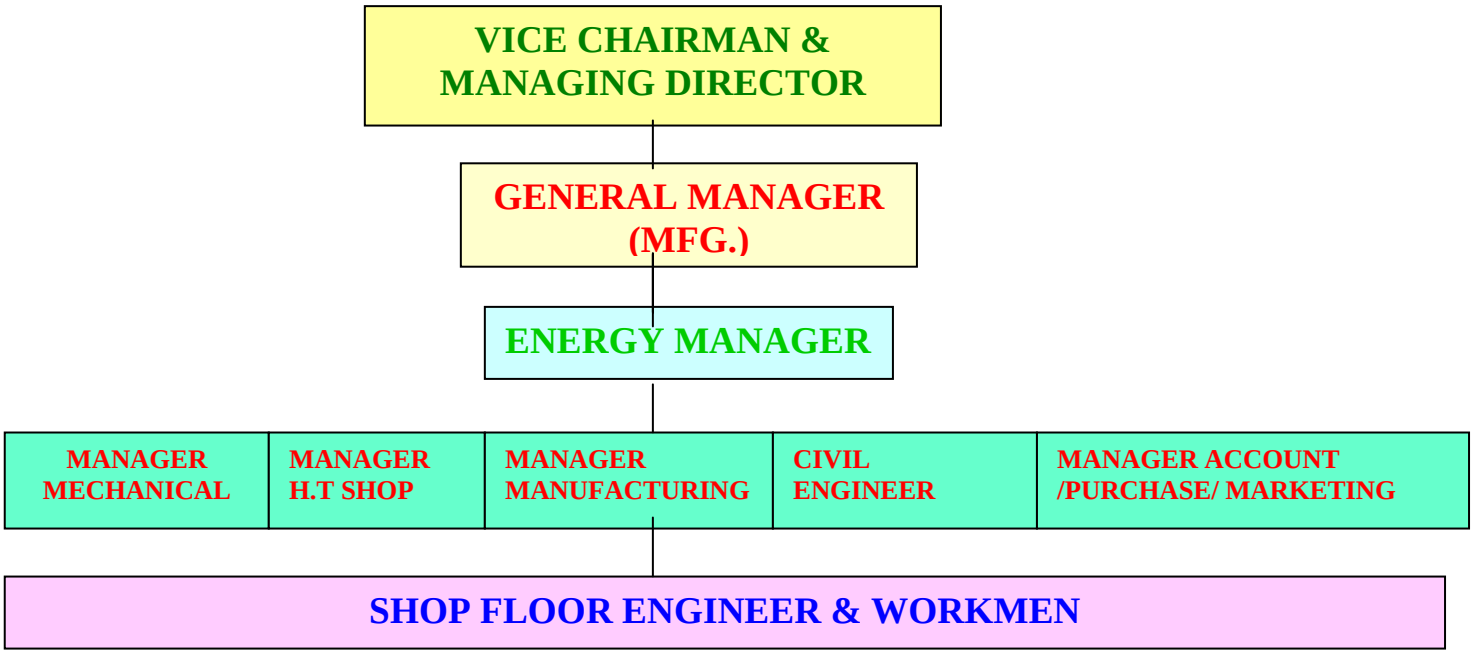
4:ENERGY AUDIT & EFFECIENCY ASSESSMENT IS "BUILT-IN QUALITY",

5:HELP FROM "ENVIRONMENT" AND "TPM " POLICY TO BE TAKEN.

6:AWARENESS OF ENERGY CONSERVATION AT ALL LEVELS & IS TO BE REFLECTED & RESULTED IN CONTINOUS REDUCTION OF CONVERSION COST OF THE ITEMS PRODUCED YEAR TO YEAR.

(S.C. GANDHI)
V.C. & MANAGING DIRECTOR

ORGANIZATION SET UP



IV. ENERGY CONSERVATION ACHIEVEMENT

ENERGY CONSERVATION PLAN	SAVINNG IN ENERGY LAKHS	INVESTMENT (LAKHS)	IMPLRMENTATION YEARA
1. IMPROVEMENT IN POWER FACTOR (FROM 96% POWER FACTOR IN THE YEAR 2001,WE ACHIEVED 100% POWER FACTOR & IS MAINTAINED CONTENEOUSLY 100% FOR LAST 29 MONTHS)	5.96	0.5	2001
2.. REPLACING COPPER CHOKE & CONVENTIONAL TUBE ROD BY ELECTRONIC BALLAST & LUMILUX TUBE ROD	1.21	Nil	2002
3. REDUCING LOADING DELAY ON FURNACES FROM 200Hrs TO 100Hrs	0.21	Nil	2003
4..USE OF DAY LIGHT BY PROVIDING TRANSPERENT SHEET ON ROOF OF MACHINE SHOP	0.44	0.27	2003
5. IDLE RUNNING OF MOTOR STOPPED BY CIRCUT MODIFICATION & IDLE MOTOR TAKEN OUT FROM MACHINE	0.21	Nil	2003
6. 90 KW EACH REFRACTORY (GAS CARBURISING) FURNACES (04 Nos.) CONVERTED INTO 72 KW EACH CERAMIC BRICK LINING WITH THERMAL BLANCKET (GAS CARBURISING) FURNACES	2.81	3.2	2003
7. REDUCING 66% LIGHTING DURING LUNCH BREAK & SHIFT CHANGE IN 2nd & 3rd SHIFT	0.355	Nil	2003
8. REDUCTION IN COMPRESSOR RUNNING HRS . REDUCTION IN COMPRESSOR LOADING HRS	0.91	Nil	2003
9. REDUCTION IN REJECTION DURING HEAT TREATMENT	1.35	Nil	2003
10. 250 WATT MERCURY VAPOUR LAMPS REPLACED BY LOCAL TUBE-LIGHTS	0.17	0.12	2003
11. REDUCTION IN REJECTION DURING MACHINING	0.161	Nil	2003
12. REPLACEMENT OF CONVENTIONAL WOODEN COOLING TOWER BY FRP COOLING TOWER.	0.003	0.5	2004
13. DISCONNECTING EXTRA LIGHTING FIXTURES IN WORK-SHOP	0.61	Nil	2003

VI. PLAN & TARGET

PLAN FOR ACHIEVING THE TARGET

01:-THE COMPANY HAD DECIDED BEFORE 04 YEARS TO REDUCE SPECIFIC ENERGY CONSUMPTION BY 25% IN 05 YEARS.

02:-THE SPECIFIC ENERGY CONSUMPTION IHAS ALREADY REDUCED BY 20% IN LAST 04 YEARS.

03:-FOR ACHIEVING THE BALANCE TARGETS IN YEAR 2004-05 THE COMPANY IS GOING TO INSTALL VOLTAGE CONTROLLER FOR ALL MACHINE SHOPS.

04:-THE COMPANY IS ALSO GOING TO CONVERT 04 Nos. OF "REFRACTORY BRICK-LINED" 90 K.W. GAS CARBURISING FURNACES IN TO "CERAMIC BRICK-LINED(WITH THERMAL BLANCKET)" 72 K.W. GAS CARBURISING FURNACES.

AS PREVIOUSLY MENTIONED, THE COMPANY IS TARGETTING 5% IMPROVEMENT EVERY YEAR, & FOR ACHIEVING THIS TARGET, THE COMPANY ALSO DECIDED FOR ADDITIONAL ACTIVITIES, FOR ENERGY CONSERVATION, TO BE TAKEN UP NEXT YEAR.

SOME OTHER TECHNIQUES ARE:-

A:-TO EXAMINE EACH & EVERY ACTIVITY FROM ENERGY CONSERVATION POINT OF VIEW

B:-TO EXAMINE POTENTIAL OF POSSIBLE ENERGY COSERVATION IN EACH & EVERY ACTIVITY / PROCESS.

C:-THE COMPANY IS ALSO RUNNING "TOTAL EMPLOYEES INVOLVEMENT SCHEME",IN WHICH SUGGESTIONS ARE INVITED FOR ENERGY CONSERVATION (i.e. ENCON).AFTER VARIFYING THE VIABILITY OF THE SUGGESTIONS,ACTIONS ARE INITIATED FOR SUCCESSFUL IMPLEMENTATION OF SUCH VIABLE "ENCON" SUGGESTIONS. EMPLOYEES GIVING SUCH VIABLE SUGGESTIONS ARE AWARDED/ REWARDED.

D:- THE COMPANY IS ALSO EXAMINING THE POSSIBILITY OF "CHANGE IN PROCESS" / "IMROVEMENT IN PROCESS", BY WHICH WE CAN CONSERVE THE ENERGY WITHOUTEFFECTING THE QUALITY OF PRODUCT.

E:- THE COMPANY IS ALSO ADOPTING "SIX SIGMA APPROACH" FOR ENERGY MANAGEMENT. (SIX SIGMA TOOLS, viz. DEFINE—MEASURE--ANALYZE--IMPROVE--CONTROL—SUSTAIN ARE CONTINEOUSLY UTILIZED FOR " SIX SIGMA APPROACH") FOR THIS, THE COMPANY IS DOING IN HOUSE ENERGY AUDIT, IDENTIFICATION & PLUGGING OF WASATGE OF ENERGY BY ADOPTING DIFFERENT WAYS & MEANS.

F. FOR SUSTAINING THE ACHIEVMENT,

- **Sr. MANAGER ELECTRICAL MAINTENANCE (ENERGY MANAGER) IS CONTINEOUSLY MONITORING DAILY POWER CONSUMPTION & DAILY POWER FACTOR.**
- **WEEKLY REVIEW IN ENERGY MEETING (WHICH IS A PART OF CII- ACMA CLUSTER ACTIVITY REVIEW MEETING) ON EVERY MONDAY BY GENERAL MANAGER(MFG) & BY THE DIRECTOR(TECHNICAL)**
- **MONTHLY REVIEW IN K.R.A. (KEY RESULT AREA)MEETING BY VICE-CHAIRMAN & MANAGING DIRECTOR.THE PROGRESS, ON EACH & EVERY ENERGY CONSERVATION PROJECTS, IS REVIEWED IN MONTHLY K.R.A.MEETING.IN SHORT, AS PER COMPANY'S DECISION OF THE YEAR 2001 "TO REDUCE ENERGY CONSUMPTION BY 20%, WITH IN NEXT 04 YEARS", THE COMPANY IS,AT PRESENT, RIGHT ON THE WAY. " THE COMPANY HAS ALREADY REDUCED POWER CONSUMPTION BY 14.3% TILL THE END OF YEAR 2003-04" (AS COMPARED TO POWER CONSUMPTION IN2000-01) & THE COMPANY HOPES TO ACHIEVE THE DECIDED TARGET IN YEAR 2004-05.**

(VI) ENEVIRONMENT & SAFETY

ENVIORMENTAL IMPROVEMENT

1. EFFECTIVE TREATMENT OF SEWAGE WATER(AS PER NORMS FIXED BY STATE & CENTRAL POLLUTION CONTROL BOARDS NORMS). SEWAGE REATMENT PLANT IS UPGRADED WHICH RESULTED IN BETTER QUALITY OF TREATED WATER.(EXPENDITURE INVOLVED Rs.3,00,000/-)

2. ALL WASTE PROCESSED WATER ROUTED THROUGH "EFFLUENT TREATMENT PLANT." UPGRADATION OF "EFFLUENT TREATMENT PLANT" IS ALSO IN PROGRESS

3. NO WATER IS DISCHARGED OUT SIDE THE COMPANY PREMISE.

4. WATER PURIFIRES (viz. AQUAGUARD) PROVIDED AT ALL DRINKING WATER/ WATER COOLER POINTS

5. STOPPED USE OF OZONE DEPLETING SUBSTANCES (viz.CARBON TETRA CHLORIDE ,REFRIGERENT GAS F-12 / R12 etc.)

6. ELIMINATION OF ACUUMULATION OF FUMES WITHIN THE WORKING ZONE OF H.S.S. HEAT TREATMENT PLANT BY PROVDING PROPER EXHAUST ARRANGEMENT (CHIMINY).

7. MINIMISING AIR POLLUTION DUE TO LEAKAGE OF DUST FROM SHOT BLASTING MACHINE BY PROVIDING "MANOMETERS" ON THE MACHINE.

8. PROVIDING PERSONNEL PROTECTIVE EQUIPMENT WHERE-EVER REQUIRED

9. COMPOSTING OF WASTE FOOD OF CANTEEN

10. COMPOSTING OF FALLEN LEAVES OF TREES

11. ADDITIONAL GREEN BELT 40,000 Sq. Ft. DEVLOPED. (TOTAL GREEN BELT IN THE ENTIRE COMPANY IS 1,30,000 Sq.Ft.

12.ELEMINATION OF AIR POLLUTION & LAND CONTAMINATION IN SCRAP YARD BY DAILY DISPOSAL OF WASTE FROM THE SOURCE OF GENERATION.

13. "FUMES ARRESTERS" ARE PROVIDED ON GEAR GRINDING MACHINES TO ARREST OIL MIST FUMES.

14. SAVING OF WOOD & PACKING BOXES BY MODIFYING DESIGN OF PACKING BOXES & BY DOING GROUP PACKAGING.

15. REDUCTION IN HYDRAULIC OIL & SOLUBLE CUTTING OIL CONSUMPTION.

16 . ELEMINATING LEAKAGE OF FUELS FROM PIPE LINE , PUMP, SERVICE DECANTING TANK AT FUEL STORAGE YARD.

17. FIXING OF GOOD QUALITY OF WATER METER ON ALL POINTS .

18. MINIMISE LEAKAGE OF OIL FROM PALLET TRAYS & MACHINES TO PREVENT LAND CONTAMINATION.

19. A:-ADDITIONAL EXHAUST FAN PROVIDED IN SHOP FLOOR & HEAT-TREATMENT AREA .
B:-COMPANY DID NEW EXPERIMENT, BY REMOVING NORTH -LIGHT GLASSES, BY MODIFYING THE SHED FOR EARLY REMOVAL FUMES & ALLOWING MORE DAY LIGHT & MORE FRESH AIR TO COME IN HEAT-TREATMENT SHOP.

DISPOSAL OF WASTE AS PER NORMS FIXED BY POLLUTION CONTROL BOARD

21. PERIODIC MONITERIONG AT WORK ZONE

A:- BY AIR MONITERING EMMISION OF D.G. SETS , FORKLIFTS

B:- BY NOISE MONITERING OF D.G. SETS AIR COMPRESSORS & MACHINES.

C:- FOR TREATED WATER QUALITY

22. A-- PREVENT SPLASING OF CUTTING OIL / COOLANT BY PROVIDIG LOCALIAZED GAURD ON THE MACHINES

B-- TO IMPROVE THE QUALITY OF COOLANT, THE COMPANY STARTED USING D.M.WATER INSTED OF ORDINARY WATER.

23. FOR AVOIDING LAND CONTAMINATION, R.C.C. FLOORING IS DONE AT IDENTIFIED AREAS.

24. REPLACEMENT / REPAIRING OF DAMAGED PIPE LINES IN THE FACTORY.

25. FOR CONTROLLING WASTAGE OF DRINKING WATER,

A:- PROVIDED SPRING RETURN TYPE TAPS.

B:- LEAKAGES ARE PLUGGED

C:-DIAMETER OF DRINKING WATER PIPE REDUCED AS & WHERE POSSIBLE.

26. SPECIAL CARE TAKEN TO PREVENT MIS-USE OF WATER IN CANTEEN AREA.

IMPROVEMENTS MADE FOR CONSERVATION OF AIR

FOR ENSURING SAFETY , FOLLOWING STEPS ARE TAKEN.

01:-SAFETY MANUAL IS PREPAIRED.

02:-SAFETY POLICY AND OBJECTIVES

Environmental, Occupational Health & Safety Policy

We at Gajra Gears Private Limited, Dewas, a premier automotive gear manufacturer of India, maintain that concern for the environment, occupational health & safety is an integral part of our corporate business strategy.We are committed to continual improvement of our EOH&S performance within our factory premises by:-

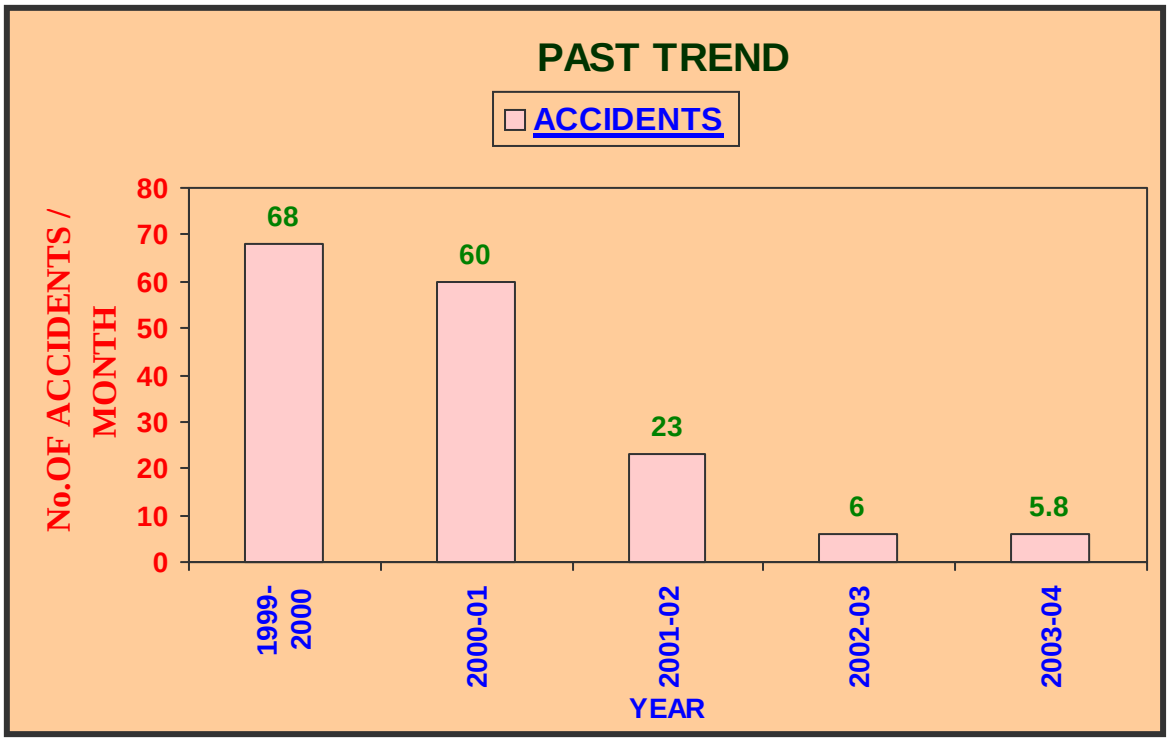
- **Complying with all current EOH&S legislation and other requirements to which the organisation subscribes.**
- **Conserving use of resources such as water, compressed air, electricity, wood, and oils.**
- **Prevention strategies for incidents, accidents and pollution**

- ❖ Ensuring proper disposal of wastes.
- ❖ Establishing a framework to implement and maintain the EOH&S Management System and striving to improve our EOH&S performance by periodically setting, achieving and reviewing objectives and targets.
- ❖Enhancing work environment through better house keeping practices.
- ❖ Creating awareness towards environment, occupational health & safety in all employees.

This policy shall be communicated to all employees and shall be made available to the public on request.

(S.C. GANDHI)
V.C. & MANAGING DIRECTOR

FINAL RESULT OF ALL EFFORTS TAKEN FOR REDUCING ACCIDENTS IN THE COMPANY IN LAST FOUR YEARS IS SHOWN IN FOLLOWING GRAPH:-



PROJECT 01:-

REDUCTION OF POWER CONSUMPTION IN HEAT TREATMENT

BACK GROUND

01:-IN H.T. SHOP, THE COMPANY IS HAVING VERY OLD PIT TYPE 20 Nos. GAS CARBURISING FURNACES.
02:-ALL THESE FURNACES ARE MADE BY REFRACTORY BRICKS..
03:-ALL THESE FURNACES ARE HEATED BY USING ELECTRICAL HEATING ELEMENTS.

OBSERVATIONS:-

01:-IT IS OBSERVED THAT THESE OLD DESIGNED FURNACES ARE HAVING MUCH HEAT LOSS.
02:-THEH WERE USING MORE ELECTRICAL POWER.

TECHNICAL & FINANCIAL ANALYSIS.

01:-THE POWER BILL WAS RISING HIGH.
02:-ONE PROJECT WAS MADE TO CONVERT EXISTING REFRACTORY BRICK FURNACES IN TO FURNACE WITH CERAMIC BRICK & THERMAL BLANCKET.
03:-DUE TO THIS NEW DESIGN, IT IS TO CONSUME LESS ELECTRICAL POWER & THEREFORE IT WAS DECIDED TO DESIGN NEW FURNACE FOR 72 KILLOWATT.
04:-THE PROPOSAL PUT UP TO MANAGEMENT.
05:-AS FININCIAL INVOLVEMENT PER FURNACE IS ALMOST 1.5 LACS, IT WAS DECIDED TO TAKE-UP CONVERSION WORK IN A PHASED MANNER.

IMPACT OF IMPLEMENTATION

01:-IN YEAR 2003-04 THE COMPANY HAS CONVERTED 04 Nos. FURNACES AS PER ABOVE DESIGN.
02:-POWER SAVING
(90-72)*12*362*4.6*4=Rs. 1438732 PER YEAR ON 04 FURNACES.

PROJECT B:- REDUCTION OF POWER CONSUMPTION IN HEAT TREATMENT

BACK GROUND

01. THE HEAT-TREATMENT TO THE DIFFERENT COMPONENTS ARE DONE AT HEAT-TREATMENT SHOP IN PIT TYPE GAS CARBURISING FURNACES.
02. EACH CARGE OF PRODUCT IS HEATED UP IN THESE FURNACES
03. AFTER ACHIEVING REQUIRED CARBON CASE DEPTH & TEMPRATURE, CHARGE IS TAKEN OUT FOR QUINCHING.
04. ANOTHER CHARGE IS LODED IN SAME FURNACE FOR HEATING.

OBSERVATION

01. SOMETIMES THE NEXT CHARGE IS NOT FOUND READY FOR LOADING IN THE FURNACE AS SOON AS PREVIOUS CHARGE IS TAKEN OUT
02. UNDER SUCH CIRCUMSTANCES, DURING PERIOD OF TAKINGOUT AND QUINCHING PREVIOUS CHARGE AND LOADING THE NEXT CHARGE . THE TEMPERATURE OF THE FURNACE FALLS DOWN.
03. THIS WILL AGAIN REQUIRE ADDITIONAL HEATING OF FURNACE FOR NEXT CHARGE & IS ULTIMATELY RESULTING INTO WASTE OF ADDITIONAL POWER.

TECHNICAL & FINANCIAL ANALISIS

01. **SUCH LOADING DELAY IN THE H.T. SHOP, IS TOO HIGH**
02. **WHIH IS OF THE ORDER OF APPROXIMATELY 200 Hrs EVERY MONTH.**
03. **DUE TO THIS LOADING TIME DELAY, THE ELECTRIC POWER IS WASTED FOR REHEATING THE FURNACE.**
04. **NO FINANCE IS REQUIRED FOR CONTROLING ABOVE PROBLEM .**

IMPACT OF IMPLEMENTATION

01. **INSTRUCTION IS PASSED TO KEEP CHARGE READY INTIME.**
02. **LOADING DELAY IS NOW REDUCED FROM 200Hrs / MONTH TO 100 Hrs / MONTH.(NEXT TARGET IS TO REDUCE IT TO 50 HOURS / MONTH.)**
03. **ENERGY REQUIRED FOR REHEATING OF THE FURNACE SAVED.**
04. **APPROX. SAVING PER YEAR IS 1.24 LACS.**
05. **NO FINANCE IS REQUIRED .**

SAVING = 1.24 Lakhs EVERY YEAR.

PROJECT C:- REDUCTION OF POWER CONSUMPTION IN ELECTRIC MOTORS

BACK GROUND

01. THE COMPANY HAVING VERY OLD MACHINES
02. THESE MACHINES WERE DESIGNED SOME 40 YEARS BACK.
03. ACTUAL CAPACITY FOR WHICH MACHINES WERE DESIGNED, IS NOT NECESSARY FOR PRESENT PROCESS IN THE COMPANY.

OBSERVATION

01. THESE MOTORS ARE DRAWING VERY HIGH CURRENT.
02. THIS WAS RESULTING IN TO VERY HIGH POWER CONSUMPTION.

TECHNICAL & FINANCIAL ANALISIS

01. **AFTER DETAILED STUDY, THE COMPANY HAS SELECTED BASED ON REQUIREMENT OF THE PROCESS.**

02. THE FULL LOAD CURRENT OF THESE MOTORS ARE REDUCED BY ADOPTING EITHER OF THE FOLLOWING OPTIONS.
   (A) CONVERTING DELTA RUNNING MOTOR IN TO STAR RUNNING MOTORS.
   (B) REDUCING HOURSE POWER OF THE MOTOR BY CHANGING WINDING DATA.
   (C) REPLACING HIGHER RATING MOTOR BY CURRECT RATING MOTOR

IMPACT OF IMPLEMENTATION

01. OVER ALL SAVING DUE TO ALL ABOVE EXREISE CAME TO 6.24 LACS kWh/YEAR AND BY MULTIPLYING THESE UNIT TO THE RATE OF ELECTRICITY PER UNIT IT COMES TO RUPEES 28.7 LACS.

PROJECT D:- REDUCTION OF POWER CONSUMPTION BY USING DAY LIGHT.

BACK GROUND

01. THE EXISTING SHEDS OF OUR SHOP FLOOR ARE OF VERY OLD DESIGN
02. AT SO MANY SHEDS DAY LIGHT WAS NOT AVAILABLE.

OBESERVATION

01. IN ORDER TO ARRANGE PROPER ILLUMINATION AT WORK TABLE/ WORK PLACE DURING DAY TIME, THE COMPANY HAD TO PROVIDE LIGHTING FIXTURES OF APPROPRIATE RATING.
02. THIS WAS RESULTING IN TO ADDITIONAL POWER CONSUMPTION DURING DAY TIME AND IT WAS ALSO REUSLTING INTO UNNECESSARY TENSION ON THE EYES OF EMPLOYEES.

TECHNICAL & FINANCIAL ANALISIS

01. IN ORDER TO ARRANGE PROPER DAY LIGHT IT WAS NECESSARY TO REPLACE EXISTING RCC SHEETS BY TRANSPARENT/ SEMI TRANSPARENT FIBER SHEETS.
02. IT WAS ALSO NECESSARY TO ARRANGE NORTH LIGHT AS AND WHERE POSSIBLE.
03. TOTAL EXPENDITURE INVOLVED FOR THIS ACTIVITY CAME TO RUPEES 27000/- (TWENTY SEVEN THOUSAND ONLY).

IMPACT OF IMPLEMENTATION

01. OVER ALL SAVING DUE TO ALL ABOVE EXERISE CAME TO 44000 kWh/YEAR AND BY MULTIPLYING THESE UNIT TO THE RATE OF ELECTRICITY PER UNIT IS COME TO RUPEES 202400/- EVERY YEAR RECURRING.
02. ALSO HEALTHY LIGHTING OF DAY LIGHT IS ARRANGED DURING THE WORK TO ANY EMPLOYEES DURING DAY TIME.