PROJECT REPORT

Of

ELECTRICAL DOOR CHIMES

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Electrical Door chimes.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

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ELECTRICAL DOOR CHIMES

INTRODUCTION:

A doorbell is a signaling device typically placed near a door to a building's entrance. When a visitor presses a button the bell rings inside the building, alerting the occupant to the presence of the visitor. Although the first doorbells were mechanical, activated by pulling a cord, modern doorbells are generally electric switch. This doorbell chime project provides the schematic and the parts list needed to construct a very simple wired doorbell alarm that you can place on the door of your house. It is a very low cost and affordable project that every beginner to electronic design cans hands on.

Door chime, is a simple electric circuit containing a battery, a switch, and an electric motor standing on a large cardboard box. When a caller pressed the switch, the battery fed power to the motor and made it spin around with a buzzing noise (a bit like the vibrating alert on a cellphone or pager). Standing on the box, the motor made a reasonably audible but rather dull humming noise. Real electric doorbells aren't that different. Instead of using an electric motor and a cardboard box, they use an electromagnet (a temporary magnet whose magnetism can be turned on and off instantly by electricity) to make a more attractive sound, either with an electric bell, a buzzer, or chime bars struck by a magnetic hammer.

PRODUCT & ITS APPLICATION:

- ***Wired doorbells***

In most wired systems, a button on the outside next to the door, located around the height of the doorknob, activates a signaling device (usually a chime, bell, or buzzer) inside the building. Pressing the doorbell button, a single-pole, single-throw (SPST) push button switch momentarily closes the doorbell circuit. One terminal of this button is wired to a terminal on a transformer. A doorbell transformer steps down the 120 or 240-volt AC electrical power to a lower voltage, typically 10 to 20 volts. The transformer's other terminal connects to one of

three terminals on the signaling device. Another terminal is connected to a wire that travels to the other terminal on the button. Some signaling devices have a third terminal, which produces a different sound. If there is another doorbell button (typically near a back door), it is connected between the transformer and the third terminal. The transformer primary winding, being energized continuously, does consume a small amount (about 1 to 2 W) of standby power constantly; systems with lighted push button switches may consume a similar amount of power per switch.[3] [4] the tradeoff is that the wiring to the button carries only safe, low voltage isolated from earth ground. A common signaling device is a chime unit consisting of two flat metal bar resonators, which are struck by plungers operated by two solenoids. The flat bars are tuned to two pleasing notes. When the doorbell button is pressed, the first solenoid's plunger strikes one bar, and when the button is released, a spring on the plunger pushes the plunger up, causing it to strike the other bar, creating a two-tone sound ("ding-dong"). If a second doorbell button is used, it is wired to the other solenoid, which strikes only one of the bars, to create a single-tone ("ding") sound.

- ***Wireless doorbells***

In recent decades, wireless doorbell systems that do not require wall wiring have become popular. The doorbell button contains a built-in radio transmitter powered by a battery. When the button is pushed, the transmitter sends a radio signal to the receiver unit, which is plugged into a wall outlet inside the building. When the radio signal is detected by the receiver, it activates a sound chip that plays the sound of gongs through a loudspeaker—either a two-note "ding-dong" sound or a longer chime sequence such as *Westminster Quarters*. To avoid interference by nearby wireless doorbells on the same radio frequency, the units can usually be set by the owner to different radio channels. In larger metropolitan cities, a trend has developed over the past decade that uses telephone technology to wirelessly signal doorbells as well as to answer the doors and remotely release electric strikes. In many cities throughout the world, this is the predominant form of doorbell signaling.

- ***Musical and continuous power doorbells***

As with wireless doorbells, musical doorbells have also become more common. Musical and continuous power doorbells serve as an attempt to bridge the gap between newer digital circuitry and older doorbell wiring schemes. A major difference between the standard set up of a wired doorbell and a musical doorbell is that the musical doorbell must maintain power after the doorbell button is released to continue playing the doorbell song. This can be achieved in one of two ways. For simple single-pole, single-throw doorbell buttons, the chime device employs a rectifier diode and ballast capacitor at the voltage input stage of the circuit. Upon pressing the doorbell button, power is connected through the rectifier diode or series of rectifier diodes called a full wave rectifier, which allows the current to flow in only one direction, into the ballast capacitor. The ballast capacitor charges at a rate far greater than the rest of the circuit needs to complete a given song. Once the button is released, the capacitor retains the charge and maintains power for a short duration to the rest of the circuit.

For mixed wireless and wired input doorbells, a special doorbell button is needed to maintain power continuously to the doorbell chime. The circuit is similar to the one above, except that the rectifier diode is now moved into the doorbell button housing. Pressing the doorbell button allows both negative and positive sides of the AC power signal to flow into the circuit, while releasing the button only allows either the positive or negative side to flow into the circuit. By differentiating the full and half wave signals, the doorbell is able to function as it does in the previous wired case, while also providing continuous power to the doorbell for other purposes, such as receiving wireless doorbell button input.

DESIRED QUALIFICATIONS FOR PROMOTER:

Promoter for this project may have any graduation plus background of electronics or electrical maintenance knowledge or experience. Although wiring a door bell involves purely electrical knowledge, working with the present theory will require some basic knowledge of electronics.

INDUSTRY LOOK OUT AND TRENDS

This doorbell chime project provides the schematic and the parts list needed to construct a very simple wired doorbell alarm that you can place on the door of your house. It is a very low cost and affordable project that every beginner to electronic design can hand on.

Constructing this project will help the beginners to electronics to understand one of the applications of 555 timers that is configured in an astable mode. This project uses a 555 timer integrated circuit, a speaker, 5 resistors, 4 electrolytic capacitors, 1 ceramic capacitor, 3 diodes, 1 push-button switch and 9 V batteries as power supply

MARKET POTENTIAL AND MARKETING ISSUES:

Door bells are perhaps among the most commonly and cheaply available electrical device available in the market, and there are hundreds of varieties to choose from. However with many companies joining the fray, the competition has become fierce, due to which the overall quality of such items has deteriorated with time. Initially these gadgets seem to work very fine, but pretty soon they just stop working and call for a replacement. The Indian middle class is prospering and even the 20% of the Indian population which is considered as the middle class constitute a huge market for any product/service. India's urban population is the second largest in the world, greater than the combined urban populations of all countries except China, the US and Russia. Most of the doorbell manufacturers in India are from the un-organized sector. The Indian chimes industry, fueled by the vast domestic market, has now turned its attention to global markets and is fast gearing up to meet international demands. The strong points of Indian chimes industry are skilled workforce, diverse range, focus on innovation and creativity. Indian manufacturers are catering to both large and small volume requirements and exporting too few of the most developed nations. Indian chimes industry set to grow at 25% in the coming years.

REQUIREMENTS – Material/Equipment:

Constructing this project will help the beginners to electronics to understand one of the applications of 555 timers that are configured in and a stable mode. This project uses a 555 timer integrated circuit, a speaker, 5 resistors, 4 electrolytic capacitors, 1 ceramic capacitor, 3 diodes, 1 push-button switch and 9 V batteries as power supply.

555 Timer Configuration: A stable timer operation is achieved by configuring the circuit in such a way that its output will be triggered continuously. The result of the output is a stream of clock pulses with a fixed pulse width and duty cycle determined by the resistors and capacitor connected to the IC. In the eternal discharging Tr. turns off and the VC1 increases by exponential function with the timetable operation, the trigger terminal and the threshold terminal are connected so that a self-trigger is formed, operating as a multi vibrator. When the timer output is high, its ine constant (RA+RB) *C. When the VC1, or the threshold voltage, reaches 2Vcc/3, the comparator output on the trigger terminal becomes high, resetting the Flip/Flop and causing the timer output to become low. This in turn turns on the discharging Tr. and the C1 discharges through the discharging channel formed by RB and the discharging Tr. When the VC1 falls below Vcc/3, the comparator output on the trigger terminal becomes high and the timer output becomes high again. The discharging Tr. turns off and the VC1 rises again. Although a bit elaborate, the proposed design of a musical doorbell circuit provides some useful features like a built-in timer and a pleasing, replaceable audible note. Moreover, unlike conventional units, the present design is highly reliable and permanent in its operation.

Machinery and equipment are Digital Multimeter, Temp Controlled Soldering Unit, LCR Meter, Drilling machine, Analog Multimeter, Tool Kit, Electronic screw driver & screw feeder, Combined Soldering De soldering Station, High speed mini drill set, Digital Storage Oscilloscope 60 MHz, Personal Computer with UPS and Printer, Tools, Dies and Equipment’s,

MANUFACTURING PROCESS:

The radio-controlled chimes have four main parts: Transmitter – The transmitter sends radio waves to the receiver. Receiver - An antenna and circuit board inside the doorbell receives signals from the transmitter and activates motors inside the chimes as commanded by the transmitter. Motor(s) - The transmitter sends a control signal to the receiver using radio waves, which then drives a motor, causing a specific action to occur. The motor in chimes may cause the music. Power source, the power source is typically a rechargeable battery pack, but sometimes it's just normal batteries. Manufacturing process involves the assembly of electronic circuits, electro mechanical hardware parts, Mechanical assembly and other sub assembly parts as per the design. Subsequently, the electronics assembly - the ICs, transistor, diodes, resistors, capacitors, coils, electromagnetic relays, are assembled on PCBs as per design. The assembled PCBs are tested for the desired sound and music. The electronics assembly along with electro mechanical assembly, hardware such as connectors/switches, mechanical assembly and light emitting diodes are assembled and housed in a fiber / plastic case.

Slightly more sophisticated electric doorbell, dating from the early 20th century, uses two interlinked circuits. The first one connects a pressure switch, battery, and lamp. The switch is placed under a doormat so it closes, operates the circuit, and lights the lamp whenever someone approaches the house. The lamp is meant to be placed right next to the push-button doorbell switch, perhaps even to shine right through it, so it indicates what the caller should press when he or she arrives in the dark. When the switch is pressed, it breaks the circuit and operates the one instead. Now power from the batteries energizes the electromagnet, bringing the bell clapper, repeatedly in contact with the bell itself.

PROJECT AT A GLANCE

1	Name of the Entreprenuer		XXXXXXX		
2	Constitution (legal Status)		XXXXXXX		
3	Father's/Spouce's Name		XXXXXXXX		
4	Unit Address	:	XXXXXXXX		
			Taluk/Block:		
			District :	XXXXX	
			Pin:	XXXXX	State:
			E-Mail :	XXXXX	
			Mobile	XXXXX	
5	Product and By Product	:	**Electric Door Chimes**		
6	Name of the project / business activity propose		**Electric Door Chimes**		
7	Cost of Project	:	Rs14.59lac		
8	Means of Finance				
	Term Loan		Rs.10.8 Lacs		
	KVIC Margin Money	-	As per Project Eligibility		
	Own Capital		Rs.1.46 Lacs		
	Working Capital		Rs.2.33 Lacs		
9	Debt Service Coverage Ratio	:	2.43		
10	Pay Back Period	:	5	Years	
11	Project Implementation Period	:	6	Months	
12	Break Even Point	:	33%		
13	Employment	:	5	Persons	
14	Power Requirement	:	7.00	HP	
15	Major Raw materials	:	**Printed circuit boards**		
16	Estimated Annual Sales Turnover	:	19.44	Lacs	
16	Detailed Cost of Project & Means of Finance				

COST OF PROJECT

(Rs. In Lacs)

Particulars	Amount
Land	Rented/Owned
Building & Civil Work (5000 Sq Ft)	5.00
Plant & Machinery	5.50
Furniture & Fixtures and computer	1.00
Pre-operative Expenses	0.50
Working Capital Requirement	2.59
Total	**14.59**

MEANS OF FINANCE

Particulars	Amount
Own Contribution @10%	1.46
Term Loan	10.80
Workign Capital Finance	2.33
Total	**14.59**

	General	**Special**
Beneficiary's Margin Money (% of Project Cost)	10%	5%

PLANT & MACHINERY

PARTICULARS	QTY.	RATE	AMOUNT IN RS.
Digital Multimeter	1	60,000.00	60000.00
Temp Controlled Soldering Unit	1	65,000.00	65000.00
LCR Meter, Drilling machine	1	100,000.00	100000.00
Other machineries.	1	150,000.00	150000.00
Testing Equipments	1	50,000.00	50,000.00
Installation, Electrification, taxes and transportation.	1	125,000.00	**125,000.00**
Total			550,000.00

x

PROJECTED CASH FLOW STATEMENT

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
SOURCES OF FUND					
Share Capital	1.46	-			
Reserve & Surplus	3.74	5.36	7.05	8.81	10.49
Depriciation & Exp. W/off	1.38	1.25	1.09	0.95	0.83
Increase in Cash Credit	2.33	-	-	-	-
Increase In Term Loan	10.80	-	-	-	-
Increase in Creditors	0.19	0.03	0.03	0.03	0.03
Increase in Provisions	0.36	0.04	0.04	0.04	0.05
TOTAL :	**20.25**	**6.68**	**8.21**	**9.83**	**11.40**
APPLICATION OF FUND					
Increase in Fixed Assets	11.50	-	-	-	-
Increase in Stock	2.13	- 0.65	0.21	0.21	0.21
Increase in Debtors	0.65	0.22	0.08	0.12	0.12
Increase in Deposits & Adv	2.50	0.25	0.28	0.30	0.33
Repayment of Term Loan	-	2.70	2.70	2.70	2.45
Taxation	-	0.54	1.41	1.76	2.10
TOTAL :	**16.78**	**3.06**	**4.68**	**5.10**	**5.21**
Opening Cash & Bank Balance	-	3.47	7.09	10.62	15.36
Add : Surplus	3.47	3.62	3.53	4.74	6.18
Closing Cash & Bank Balance	**3.47**	**7.09**	**10.62**	**15.36**	**21.54**

PROJECTED BALANCE SHEET

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
SOURCES OF FUND					
Capital Account	1.46	1.46	1.46	1.46	1.46
Retained Profit	3.74	8.57	14.20	21.25	29.64
Term Loan	10.80	8.10	5.40	2.70	0.25
Cash Credit	2.33	2.33	2.33	2.33	2.33
Sundry Creditors	0.19	0.22	0.25	0.28	0.32
Provisions & Other Liab	0.36	0.40	0.44	0.48	0.53
TOTAL :	**18.88**	**21.07**	**24.08**	**28.51**	**34.53**
APPLICATION OF FUND					
Fixed Assets (Gross)	11.50	11.50	11.50	11.50	11.50
Gross Dep.	1.38	2.62	3.71	4.66	5.48
Net Fixed Assets	10.13	8.88	7.79	6.84	6.02
Current Assets					
Sundry Debtors	0.65	0.87	0.95	1.07	1.19
Stock in Hand	2.13	1.48	1.69	1.90	2.12
Cash and Bank	3.47	7.09	10.62	15.36	21.54
Deposits & Advances	2.50	2.75	3.03	3.33	3.66
TOTAL :	**18.88**	**21.07**	**24.08**	**28.51**	**34.53**
	-	-	-	-	-

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
A) SALES					
Gross Sale	19.44	26.10	28.62	32.22	35.82
Total (A)	**19.44**	**26.10**	**28.62**	**32.22**	**35.82**
B) COST OF SALES					
Raw Mateiral Consumed	8.10	9.45	10.80	12.15	13.50
Elecricity Expenses	0.60	0.70	0.80	0.90	1.00
Repair & Maintenance	-	0.26	0.29	0.32	0.36
Labour & Wages	2.77	3.05	3.35	3.69	4.06
Depriciation	1.38	1.25	1.09	0.95	0.83
Consumables and Other Expense	0.39	0.52	0.57	0.64	0.72
Cost of Production	13.24	15.23	16.90	18.66	20.46
Add: Opening Stock /WIP	-	1.73	1.01	1.15	1.30
Less: Closing Stock /WIP	1.73	1.01	1.15	1.30	1.44
Cost of Sales (B)	11.51	15.95	16.76	18.51	20.32
C) GROSS PROFIT (A-B)	7.93	10.15	11.86	13.71	15.50
	41%	**39%**	**41%**	**43%**	**43%**
D) Bank Interest (Term Loan)	0.93	1.13	0.82	0.50	0.20
Bank Interest (C.C. Limit)	0.23	0.23	0.23	0.23	0.23
E) Salary to Staff	2.64	2.90	3.19	3.51	3.87
F) Selling & Adm Expenses Exp.	0.39	0.52	0.57	0.64	0.72
TOTAL (D+E)	**4.19**	**4.78**	**4.82**	**4.90**	**5.01**
H) NET PROFIT	3.74	5.36	7.05	8.81	10.49
I) Taxation	-	0.54	1.41	1.76	2.10
J) PROFIT (After Tax)	3.74	4.83	5.64	7.05	8.39

COMPUTATION OF MANUFACTURING OF Electric Door Chims

Items to be Manufactured **Electric Door Chimes**

Manufacturing Capacity per day	-	60.00	Pcs
	-		
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		18,000.00	Pcs
Year		Capacity	Pcs
		Utilisation	
IST YEAR		60%	10,800
IIND YEAR		70%	12,600
IIIRD YEAR		80%	14,400
IVTH YEAR		90%	16,200
VTH YEAR		100%	18,000

COMPUTATION OF RAW MATERIAL

Item Name		Quantity of Raw Material Sets	Recovery	Unit Rate of /Piece	Total Cost Per Annum (100%)
Raw Material electro mechanical partsAverage rates	100%	18,000.00	100%	75.00	13.50
			Total (Rounded off in lacs)		13.50
Annual Consumption cost	(In Lacs)				13.50

Raw Material Consumed	Capacity Utilisation	Amount (Rs.)
IST YEAR	60%	8.10
IIND YEAR	70%	9.45
IIIRD YEAR	80%	10.80
IVTH YEAR	90%	12.15
VTH YEAR	100%	13.50

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
Finished Goods					
(15 Days requirement)	1.73	1.01	1.15	1.30	1.44
Raw Material					
(15 Days requirement)	0.41	0.47	0.54	0.61	0.68
Closing Stock	**2.13**	**1.48**	**1.69**	**1.90**	**2.12**

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars			Total
			Amount
Stock in Hand			2.13
Sundry Debtors			0.65
		Total	2.78
Sundry Creditors			0.19
Working Capital Requirement			**2.59**
Margin			0.26
Working Capital Finance			**2.33**

BREAK UP OF LABOUR

Particulars		Wages Per Month	No of Employees	Total Salary
Skilled Worker		8,000.00	2	16,000.00
Unskilled Worker		5,000.00	1	5,000.00
				21,000.00
Add: 10% Fringe Benefit				2,100.00
Total Labour Cost Per Month				23,100.00
Total Labour Cost for the year (In Rs. Lakhs)			3	2.77

BREAK UP OF SALARY

Particulars		Salary Per Month	No of Employees	Total Salary
Manager		12,000.00	1	12,000.00
Accountant		8,000.00	1	8,000.00
Total Salary Per Month				20,000.00
Add: 10% Fringe Benefit				2,000.00
Total Salary for the month				22,000.00
Total Salary for the year (In Rs. Lakhs)			2	2.64

COMPUTATION OF DEPRECIATION

Description	Land	Building/shed	Plant & Machinery	Furniture	**TOTAL**
Rate of Depreciation		**10.00%**	**15.00%**	**10.00%**	
Opening Balance	Leased	-	-	-	-
Addition	-	5.00	5.50	1.00	11.50
	-	5.00	5.50	1.00	11.50
Less : Depreciation	-	0.50	0.83	0.05	1.38
WDV at end of Ist year	-	4.50	4.68	0.95	10.13
Additions During The Year	-	-	-	-	-
	-	4.50	4.68	0.95	10.13
Less : Depreciation	-	0.45	0.70	0.10	1.25
WDV at end of IInd Year	-	4.05	3.97	0.86	8.88
Additions During The Year	-	-	-	-	-
	-	4.05	3.97	0.86	8.88
Less : Depreciation	-	0.41	0.60	0.09	1.09
WDV at end of IIIrd year	-	3.65	3.38	0.77	7.79
Additions During The Year	-	-	-	-	-
	-	3.65	3.38	0.77	7.79
Less : Depreciation	-	0.36	0.51	0.08	0.95
WDV at end of IV year	-	3.28	2.87	0.69	6.84
Additions During The Year	-	-	-	-	-
	-	3.28	2.87	0.69	6.84
Less : Depreciation	-	0.33	0.43	0.07	0.83
WDV at end of Vth year	-	2.95	2.44	0.62	6.02

REPAYMENT SCHEDULE OF TERM LOAN 11.5%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	Cl Balance
IST YEAR	Opening Balance						
	Ist Quarter	-	10.80	10.80	-	-	10.80
	Iind Quarter	10.80	-	10.80	0.31	-	10.80
	IIIrd Quarter	10.80	-	10.80	0.31	-	10.80
	Ivth Quarter	10.80	-	10.80	0.31	-	10.80
					0.93	-	
IIND YEAR	Opening Balance						
	Ist Quarter	10.80	-	10.80	0.31	0.68	10.13
	Iind Quarter	10.13	-	10.13	0.29	0.68	9.45
	IIIrd Quarter	9.45	-	9.45	0.27	0.68	8.78
	Ivth Quarter	8.78		8.78	0.25	0.68	8.10
					1.13	2.70	
IIIRD YEAR	Opening Balance						
	Ist Quarter	8.10	-	8.10	0.23	0.68	7.43
	Iind Quarter	7.43	-	7.43	0.21	0.68	6.75
	IIIrd Quarter	6.75	-	6.75	0.19	0.68	6.08
	Ivth Quarter	6.08		6.08	0.17	0.68	5.40
					0.82	2.70	
IVTH YEAR	Opening Balance						
	Ist Quarter	5.40	-	5.40	0.16	0.68	4.73
	Iind Quarter	4.73	-	4.73	0.14	0.68	4.05
	IIIrd Quarter	4.05	-	4.05	0.12	0.68	3.38
	Ivth Quarter	3.38		3.38	0.10	0.68	2.70
					0.50	2.70	
VTH YEAR	Opening Balance						
	Ist Quarter	2.70	-	2.70	0.08	0.68	2.03
	Iind Quarter	2.03	-	2.03	0.06	0.68	1.35
	IIIrd Quarter	1.35	-	1.35	0.04	0.55	0.80
	Ivth Quarter	0.80		0.80	0.02	0.55	0.25
					0.20	2.45	

CALCULATION OF D.S.C.R

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
CASH ACCRUALS	5.11	6.07	6.72	8.00	9.22
Interest on Term Loan	0.93	1.13	0.82	0.50	0.20
Total	6.04	7.20	7.54	8.50	9.42
REPAYMENT					
Instalment of Term Loan	2.70	2.70	2.70	2.45	2.45
Interest on Term Loan	0.93	1.13	0.82	0.50	0.20
Total	3.63	3.83	3.52	2.95	2.65
DEBT SERVICE COVERAGE R	**1.66**	**1.88**	**2.14**	**2.88**	**3.56**
AVERAGE D.S.C.R.			**2.43**		

COMPUTATION OF SALE

Particulars	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
Op Stock	-	1,080	630	720	810
Production	10,800	12,600	14,400	16,200	18,000
	10,800	13,680	15,030	16,920	18,810
Less : Closing Stock	1,080	630	720	810	900
Net Sale	9,720	13,050	14,310	16,110	17,910
Sale Price per MT	200.00	200.00	200.00	200.00	200.00
Sale (in Lacs)	**19.44**	**26.10**	**28.62**	**32.22**	**35.82**

COMPUTATION OF ELECTRICITY

(A) POWER CONNECTION				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	7	
Load Factor			0.7460	
Electricity Charges		per unit	8.00	
Total Working Days			300	
Electricity Charges (8 Hrs Per day)				100,262.40
Add : Minimim Charges (@ 10%)				
(B) D.G. SET				
No. of Working Days			300	days
No of Working Hours			1	Hour per day
Total no of Hour			300	
Diesel Consumption per Hour			-	
Total Consumption of Diesel			-	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			-	
Add : Lube Cost @15%			-	
Total			**-**	
Total cost of Power & Fuel at 100%				1.00
Year		**Capacity**		**Amount**
				(in Lacs)
IST YEAR		60%		0.60
IIND YEAR		70%		0.70
IIIRD YEAR		80%		0.80
IVTH YEAR		90%		0.90
VTH YEAR		100%		1.00

BREAK EVEN POINT ANALYSIS

Year	I	II	III	IV	V
Net Sales & Other Income	19.44	26.10	28.62	32.22	35.82
Less : Op. WIP Goods	-	1.73	1.01	1.15	1.30
Add : Cl. WIP Goods	1.73	1.01	1.15	1.30	1.44
Total Sales	**21.17**	**25.38**	**28.76**	**32.36**	**35.96**
Variable & Semi Variable Exp.					
Raw Material & Tax	8.10	9.45	10.80	12.15	13.50
Electricity Exp/Coal Consumption at 85%	0.51	0.60	0.68	0.77	0.85
Manufacturing Expenses 80%	0.31	0.63	0.69	0.77	0.86
Wages & Salary at 60%	3.25	3.57	3.93	4.32	4.75
Selling & adminstrative Expenses 80%	0.31	0.42	0.46	0.52	0.57
Intt. On Working Capital Loan	0.23	0.23	0.23	0.23	0.23
Total Variable & Semi Variable Exp	**12.71**	**14.90**	**16.79**	**18.76**	**20.77**
Contribution	**8.45**	**10.48**	**11.98**	**13.60**	**15.19**
Fixed & Semi Fixed Expenses					
Manufacturing Expenses 20%	0.08	0.16	0.17	0.19	0.21
Electricity Exp/Coal Consumption at 15%	0.09	0.11	0.12	0.14	0.15
Wages & Salary at 40%	2.16	2.38	2.62	2.88	3.17
Interest on Term Loan	0.93	1.13	0.82	0.50	0.20
Depreciation	1.38	1.25	1.09	0.95	0.83
Selling & adminstrative Expenses 20%	0.08	0.10	0.11	0.13	0.14
Total Fixed Expenses	**4.72**	**5.12**	**4.93**	**4.79**	**4.70**
Capacity Utilization	**60%**	**70%**	**80%**	**90%**	**100%**
OPERATING PROFIT	**3.74**	**5.36**	**7.05**	**8.81**	**10.49**
BREAK EVEN POINT	**33%**	**34%**	**33%**	**32%**	**31%**
BREAK EVEN SALES	**11.81**	**12.39**	**11.84**	**11.40**	**11.14**

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