PROJECT PROFILE ON PORTABLE JIB CRANE

PRODUCT	:	PORTABLE JIB CRANE
PRODUCTION CAPACITY	:	Quantity: 250 Nos. Value: Rs. 7500000
QUALITY & STANDARDS	:	AS PER IS: 4573-1968 & IS: 807-1976
MONTH & YEAR OF PREPARATION	:	October 2009
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INTRODUCTION

Portable Jib Crane is a small lifting, and material handling equipment used in engineering workshops as well as in Godowns & Ware houses. Jib Cranes can be used for lifting of different type of material in the segments where frequent lifting & handling of material activity is required. Portable Jib Cranes is manually operated. However, electrical power is sometimes required for lifting operation, according to the need. Special types of Jib Cranes are also used in positioning the Cameras in shootings.

According to the need Jib Cranes can be mounted on walls, Top Elevating etc with electric hoisting systems.

MARKET

Because of low cost and versatile use, there is a very good market, potential for this product. As described earlier portable Jib Cranes are used in Industrial Activity for material handling and lifting purposes, therefore the size of market is very big. The market is continuously increasing with the growth of Industrialization and Godowns, Warehouses etc. Since very few units are engaged in manufacturing of this product in this region, there is a bright market potential for Jib cranes in the indigenous market as well as in developing countries.

BASIS OF PRESUMPTIONS

1. The scheme is prepared on the basis of single shift and 300 working days in a year.
2. Max. 5 year period is envisaged for achieving full capacity utilization.
3. Lobour wages are based on the prevailing wages in the state.
4. Interest rate on fixed as well as on working capital is taken as 14%
5. Margin money is considered to depend on negotiations with financing institutions.
6. Estimated life of the project is about 20 years and normal loan repayment period is about 5 years.
7. Cost of machines and raw material prices are taken on the basis of current prices at the time of preparation of this profile.
8. Land & Building are taken on rental basis.

IMPLEMENTATION SCHEDULE

Project implementation will take a period of eight month from the date of approval of the scheme. Break up of activities with relative time for each activity is shown below:

S.No.	ACTIVITY	TIME PERIOD IN MONTH.
01	Project report preparation & approval	0-2 months
02	SSI provisional registration	0-1/2 months
03	Sanction of Loan	2-4 months
04	Recruitment of man power	
05	Placement of orders for machinery & other equipment	4-6 months
06	Installation of machinery	7-8 months
07	Power connection	6-7 months
08	Trial run & commencement of Production	8th Month onwards.

1.MANUFACTURING PROCESS:

The portable Jib Cranes are manufactured in different lift capacity from ½ Ton to 5 Ton capacity.

The Crane consists of different parts:-

(a) Structure or Body
(b) Wheels
(c) Pivot Wheel with handle
(d) Lifting mechanism (Chain pulley block)
(e) Hook

(a) STRUCTURE OR BODY:

Body or structure is made out of Seamless pipe or structural steel by welding. The dimensions are worked out on the basis of load bearing capacity, height, and width with handle in closed portion. Distance between base arms at wheel (inside), maximum lifting height from floor front & pillar, lifting arm length etc. These Dimensions are worked out as per the quality specification fixed by BIS.

After this necessary structural design the material is cut to length with the help of Gas Welding and Hacksaw machine. Then necessary machining work is done on shaping machine, Milling machine, Drilling machine. After machining the whole structure is welded properly.

(b) WHEEL

Steel forged wheels are readily purchased and machined on lathe machine.

(c) PIVOT WHEEL WITH HANDLE:

Already machined wheel is assembled with fabricated Handle and Body frame. For fabrication of Handle necessary pipe & structural steel is cut to size on

hacksaw machine and machined on Shaper & Lathe. Side Boring of bracket is done, fabricated and assembled.

(d) **LIFTING MECHANISM:**

Chain Pulley Block is readily purchased or made on Lathe & Milling machine. Heat treated from out side & assembled on main arm of Jib Crane.

(e) HOOK:

The Hook is readily purchased item and can be put on Lifting arm of the body, its seat is welded during fabrication of the main body. After fabrication machining & assembly of all components is done. The Jib Crane is painted to the recommended colour for lifting equipments by Industrial Department.

2. **QUALITY SPECIFIACTION/STANDARD SPECIFICATION:**

The Jib Crane, portable type should be manufactured strictly as per the BIS No. IS:4573-1968 &IS: 807-1976 for shaft and efficient service. All the material, geometry & dimensions should be maintained as specified to maintain the consistency and reliability after sales.

[3] PRODUCTION CAPACITY:

S. No.	Description	Quantity	Value (Rs.)
01.	Jib Crane of different capacity	250Nos.	75,00,000/-

[4] Approximate motive power requirement for overall project 35 H.P.

[5] POLLUTION CONTROL NEEDS:

The proposed product is mechanical in nature and does not pollute the environment. Still necessary exhaust and air circulator may be installed in the workshop.

[6] ENERGY CONSERVATION NEEDS:

Energy efficient electrical equipments and necessary capacitors may be used to conserve electrical energy.

(f). FINANCIAL ASPECTS

[1] Fixed Capital:

1. Land & Building:
Built up Area (Rented) - 500 sq.mts. @ Rs.30/- per sqM Rs.15,000/-

[2] Machinery & Equipment:

a. Production unit

Sl. No.	Description	Qty.	Value [Rs.]
01	Lathe machine AEC 1000mm Rajkot make with 3 HP motor.	2 Nos.	4,00,000/-
02	Milling machine universal type size 1 meter x 250mm (M2V model) Gujrat make with all standard accessories & motor with 5 HP	1 No.	3,50,000/-
03	Pillar Drill ¾" capacity with 1 HP motor	1 No.	50,000/-
04	Bench grinder 8" capacity with ½ HP motor.	1 No.	15,000/-
05	Power Hacksaw 12" capacity with 2 HP motor.	1 No.	75,000/-
06	Welding Transformer 300 Amp with Cable and other accessories.	1 No.	35,000/-
07.	Air compressor with Spray gun with 1 HP motor.	1 No.	35,000/-
08	Shaping machine 24" stroke with 5 HP motor, Sagar make	1 No.	1,75,000/-
	Total		**11,35,000/-**
B	Testing and Inspection equipments	L.S	**1,00,000/-**
C.	Cost of Power connection including transformer, if any		**50,000/-**
D.	Electrification and installation charges @ 10% of cost of machines & equipments.		**1,13,500,**
E.	Cost of Jigs & fixtures	L.S.	**1,00,000/-**
F	Cost of office equipments	L.S.	**50,000/-**
	TOTOAL		**15,48,500/-**
3.	**Pre-operated expenses (Project Cost) non refundable deposits) if any**		**25,000/-**
	TOTAL FIXED CAPITAL (1+2+3)		**15,73,500**
		SAY	**15,75,000/-**

[2] WORKING CAPITAL [PER MONTH]

[i] Personal Administrative /Supervisory

Sl. No.	Description / Designation	No.	Salary	Total
01.	Manager cum Foreman	1 no.	15000/-	15000/-
02.	Skilled worker	6 no.	4000/-	24000/-

03.	Un-Skilled worker	6 no.	3000/-	18000/-
04.	Salesmen	4 nos.	6000/-	24000/-
05.	Clerk-cum-storekeeper	1 no.	4000/-	4000/-
06	Peon / watchman	3 nos.	3000/-	9000/-
	Total Salary			**94,000/-**
	Add perquisites @ 15 % of salary			**14,100/-**
	Grand Total			**1,08,100/-**
	Say			**1,08,000/-**

[ii] Raw Material [Including Packaging material] (Per Month)

01.	Assorted M.S. sheets, rod Angle, Channels etc	1 MT	35000/- PMT	35,000/-
02.	Assorted M.S. Pipes heavy Gauge	250 mtrs.	300/- per mtr.	75,000/-
03.	Hardware & paint	LS		25,000/-
04.	Wheels, chain, gears, sprockets etc	LS		1,50,000/-
	Total			**2,85,000/-**

[iii] Utilities per month:

1.	Power 3927 units @ 7/- per unit	27,500/-
2	Water consumption expenditure	2,500/-
	Total	**30,000/-**

[iv]Other Contingent Expenses [per month]

Rent	15,000/-
Postage and stationery	3,000/-
Telephone /Internet	5,000/-
Consumable items	5,000/-
Repair and maintenance	5,000/-
Transportation	15,000/-
Insurance (0.5% of project cost)	1,000/-
Misc. expenses	2,000/-
Total	**51,000/-**

Total recurring expenses [per month] (i+ ii+ iii + iv)	**4,74,000/-**

Total Working Capital

Total Working Capital for 3 months	4,74,000x3 = **14,22,000/-**

Total capital investment

Fixed capital	15,75,000/-
Total Working capital for 3 months	14,22,000/-
Total	**29,97,000/-**

MACHINERY UTILIZATION

As the product is a low consumable one hence marketing efforts must be put very hard to achieve optimum utilization of machines.

FINANCIAL ANALYSIS

1. Cost of production [per year]

Total recurring cost per year	56,88,000/-
Depreciation of machinery & equipment @ 10 %	1,13,500/-
Depreciation on Jigs & fixtures@ 20 %	20,000/-
Dep. on Testing equipments @ 20 %	20,000/-
Depreciation on office equipments @ 25%	10,000/-
Interest on total investment @ 14 %	4,19,580/-
Total cost of production **Say**	62,71,080/- **62,71,000/-**

2. Turnover (per Year):

Portable Jib cranes 250Nos. @30,000 75,00,000/-

3. Net Profit Per Year:

75,00,000 – 62,71,000 = 12,29,000/-

4. Net Profit ratio :

$$\frac{\text{Net Profit X 100}}{\text{Turnover}} = \frac{12,29,000 \times 100}{75,00000} = 16.38\%$$

5. Rate of return:

$$\frac{\text{Net Profit x100}}{\text{Total Investment}} = \frac{12,29,000 \times 100}{29,97,000} = 41\ \%$$

6. BREAK EVEN POINT

Fixed Cost (Per Year)

Depreciation (on M/cs, fixtures & office equipments)	1,63,500/-
Rent	1,80,000/-
Interest on investment	4,19,580/-
40 % of salary and wages	5,18,400/-
40 % of other contingent expenses excluding rent and insurance	4,41,600/-
Insurance	12,000/-
Total fixed cost	**17,35,080/-**
Say	**17,35,000/-**

Net Profit per year

$$\textbf{B. E. P.} \quad \frac{\text{Fixed Cost X 100}}{\text{Fixed Cost + Profit}} = \frac{1735000 \text{ X } 100}{1735000 + 1229000}$$

$$= \frac{173500000}{2964000} = \textbf{58.53\%}$$

Additional information (if any):

Marketing efforts are required on very precise basis as product is not fast consumable

ADDRESS OF MACHINERY SUPPLIERS

1. M/s QUALITY MACHINE TOOLS,
   124, Jawahar Marg, Indore.

2. M/s BHARAT MACHINERY,
   Transport Nagar, Bhanwar Kua, Indore

3. M/s. MALWA ELECTRIC & ENGINEERING CORPN.
   Gas Housr Road, Indore.

4. M/s. DEEPAK TRADERS,
   Shastri Market, Indore.

ADDRESS OF RAW MATERIAL SUPPLIERS

LOCAL MARKET.

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