Wrought Iron Furniture

PRODUCT CODE	:	342001000
QUALITY AND STANDARDS	:	No Standard Specifications available Manufacturers', own specifications
PRODUCTION CAPACITY	:	Qty. i) 1500 Nos. of Wrought Iron Chairs. ii) 1500 Nos. of Wrought Iron Tables. iii) 1500 Nos. of Wrought Iron Sofa. iv) 1500 Nos. of Wrought Iron Bed. Value : Rs. 105 Lakhs (per annum)
MONTH AND YEAR OF PREPARATION	:	April, 2003
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Introduction

Wrought iron articles in furniture industry are becoming more popular. The articles like chairs, sofas, tables and beds are made in quite attractive models with different designs on their arms and backs. Wooden furniture after some period, is worn out due to defects in wood quality and normal wear and tear. Due to elegant appearance, durability and innovative designs, wrought iron furniture is becoming popular in modern society. They are fast replacing the conventional wooden tables, chairs, sofas, beds.

Market Potential

With increase in the population and overall development that has taken place in the country, the number of educational institutions, hospitals, commercial establishments and offices are widely using chairs, tables, sofas and beds. This is creating good market potential in urban and semi-urban areas. As already explained, due to certain specific advantages, wrought iron furniture is fast replacing conventional wooden items. Apart from the domestic market, there is also export market for quality wrought iron furniture.

Basis and Presumptions

1) The cost of machinery and equipment is for particular make and prices are approximate.

2) All the operations involved in manufacturing wrought iron

furniture will be undert taken in Industrial Workshop of the unit.

3) This project profile is prepared on the basis of single shift for 8 hours of working in a day. Total working days in a year have been assumed to be about 300 and efficiency 75%.

4) The skilled and semi-skilled workers in line are available in the local area.

5) The rental value of the land and built up area has been stipulated on the basis of rate prevailing in the industrial area. It may vary from place to place.

6) Rate of interest has been calculated @ 16% per annum. However, this figure is likely to vary depending on the financial outlay of the project and location of the unit.

7) The provisions made in other respect viz; personnel, utilities, raw material and over head expenses etc. are based on the prevailing market rates.

8) All the machinery, raw material would be available from indigenous sources.

9) The break-even point has been calculated on envisaged capacity utilisation basis.

10) The operative period of this project is estimated to be about ten years, considering technology obsolescence.

IMPLEMENTATION SCHEDULE

Sl.No. Activity	Period
1. Preparation of project report	1 Week
2. Provisional registration from DI/DIC of the area for getting assistance/ financial help	2 Weeks
3. Location of work shed with necessary infrastructure in industrial Area before ordering the Plant and Machinery	2 Weeks
4. Placement of order for plant and machinery	3 Weeks
5. Recruitment of Staff	2 Weeks
6. Installation of plant and machinery	2 Weeks
7. Time allotted for other misc. work	2 Weeks
8. Trial Production	Two Weeks

Total time required to start commercial production is estimated to be about four months.

TECHNICAL ASPECTS

Process of Manufacture

In the open market, plenty of raw material of wrought iron in the shape of round, square, iron rods, square pipes and also in other sectional forms is available. Wrought iron is having its own property of "malleability," it can withstand the load without cracking.

Chairs, tables, sofas and beds used in offices, factories, houses and hospitals are made from light wrought iron sheets, strips and tubular wrought iron. The sheets, strips and tubular wrought iron are cut to required sizes and pressed to shape, bent in a press brake for sides and drawers. Pipes of wrought iron for chairs, tables, sofas and beds can also be bent according to

design. Backs of chairs, sofas and beds consist of decorative designing of various kind of flowers and leaves etc. For this, design can be made on pressing machine on the strips of wrought iron of different sizes. Then the sides and backs of wrought iron furniture are welded. Holes are made by drilling, wherever necessary for fitting screws.

Fixing of doors, hinges, assembly, cleaning, pickling and drying are to be done before painting. The spray painted articles are to be stove enamelled.

Quality Control and Standards

There is no quality standard. It is only fabrication of wrought iron steel with various self made designs. The attractive designs thus put lot of cheeriness in the products of wrought iron furniture.

Production Capacity

It is proposed to manufacture 1500 Chairs, tables, sofas and beds each per annum assuming their weight to be 7.5 Kg., 15 Kg, 22 Kg and 30 Kgs. respectively of wrought iron steel viz. rods, pipes and strips of various sizes.

Motive Power 10 HP.

Pollution Control

No pollution control device is necessary for this project. However, spray painting will cause pollution to some extent which can be minimised by installing exhaust fans in painting room.

Energy Conservation

No specific energy conservation system is required. Energy conservation can be done by saving single phase power connections as much as possible. General awareness is to be created for economic utilisation of energy at all points as far as practical.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building	(In Rs.)
Covered area of 200 sq. meter in which 50 Sq. meter room should be prepared for pickling of wrought iron furniture parts, where exhaust fans on top of room should be provided. Another 30 sq. meter room must be provided for painting of furniture items of wrought iron.	8,000 (per month)

(ii) Machinery and Equipments

Sl. No.	Description	Ind./ Imp.	Qty.	Total (In Rs.)
1.	Tredle Guillotine shearing M/c. 48" width	Ind.	1	42,000
2.	Power Press 25 Tonne capacity	-do-	1	40,000
3.	Hand operated brake press machine capacity 14 SWG x 1800 mm (Sheet Bending)	-do-	1	30,000
4.	Spot Welding machine 10 SWG with Accessories	-do-	1	15,000
5.	Hand operated hydraulic pipe bending machine 25 mm, 36 mm, capacity with all dies	-do-	1	15,000
6.	Drilling machine 1½"	-do-	1	12,000
7.	Air Compressor with (1 HP) motor and Spray Gun	-do-	1	15,000
8.	Oxy-acetylene gas welding set	-do-	1	7,000
9.	Pickling Tanks (Lead-lined)	-do-	7 Nos.	14,000
10.	Power Hacksaw machine 6" Jaw Capacity	-do-	1 No.	15,000
11.	Stoving Chamber (8' x 4' x 4') fabricated	-do-	1	15,000
		Total		2,20,000

Sl. No.	Description	Ind./ Imp.	Qty.	Total (In Rs.)
	Tools and Dies			20,000
	Furniture and Office equipments			10,000
			Total	2,50,000
(iii)	Pre-operative Expenses			12,000
	Total Fixed Capital (ii+iii)			2,62,000

B. Working Capital (per month)

(i) Staff and Labour

Sl. No.	Designation	Nos.	Salary (Rs.)	Total (In Rs.)
	(a) Administrative Staff			
1.	Sales-cum-Marketing Manager	1	8,000	8,000
2.	Accountant-cum Store Keeper	1	5,000	5,000
3.	Clerk-cum-Typist	1	4,000	4,000
4.	Peon/chowkidar	1	2,500	2,500
5.	Sweeper (Part-time)	1	800	800
	(b) Technical Staff			
1.	Foreman/Supervisor	1	6,000	6,000
2.	Skilled Workers	4	4,000	16,000
3.	Semi-skilled Workers	2	3,000	6,000
4.	Welders	2	2,500	5,000
5.	Helpers	2	2,000	4,000
			Total	57,300
	Add Perquisites @ 15% of salary			8,595
			Total	65,895
			Say	65,900

(ii) Raw Material

Sl. No.	Description	Qty.	Rate (Rs.)	Total (In Rs.)
1.	Wrought iron pipes of different Dia. sizes	5 Tonnes	30,000	1,50,000
2.	Wrought iron strips in 2 mm 3 mm, 6 mm and 10 mm thickness	2.4 Tonnes	28,000	67,200
3.	Angle Irons and Rounds in different sizes	2	28,000	56,000
4.	Seating Material for Chairs and Sofas	500 Nos.	400	2,00,000
5.	Coir Foam Sheets for beds	125 Nos.	1000	1,25,000
6.	Bought out components such as nuts, bolts, rivets, Welding Rods and Paints etc.			50,000
			Total	6,48,200
			Say	6,48,000

(iii) Utilities	(In Rs.)
Electricity and Water charges	5,000

(iv) Other Contingent Expenses	(In Rs.)
1. Rent	8,000
2. Insurance Expenses	3,000
3. Advertisement/Publicity charges	5,000
4. Travelling Expenses	5,000
5. Consumable stores such as oil, lubricants and Cotton waste etc.	3,000
6. Repair and maintenance	2,000
7. Transport and packaging charges	4,000
8. Postage and stationery	3,000
9. Telephone Expenses	1,500
10. Miscellaneous Expenses	1,500
Total	36,000

(v) Total Recurring Expenditure (per month)	(In Rs.)
1. Personnel	65,900
2. Raw Material	6,48,000
3. Utilities	5,000
4. Other Contingent Expenses	36,000
Total	7,54,900
Say	7,55,000

(vi) Total Working Capital *(for 3 Months)*

Rs. 75,50,000 x 3 = Rs. 22,65,000

C. Total Capital Investment

(1) Fixed Capital	Rs. 2,62,000
(2) Working Capital (for 3 months)	Rs. 22,65,000
Total	Rs. 25,27,000

MACHINERY UTILISATION

The number of machines to be installed has been determined in such a way, that planned scheduling of jobs will not cause any bottleneck in operation during bulk production. As such, the unit will make utilisation of machines as envisaged, without any bottleneck.

FINANCIAL ANALYSIS

(1) Cost of Production (per annum)		(In Rs.)
i)	Total recurring cost	90,60,000
ii)	Depreciation on Machine Equipment @ 10%	20,000
iii)	Depreciation on Furniture and Office Equipment @ 20%	2,000
iv)	Depreciation on Tools and Dies @ 25%	5,000
v)	Interest on total investment @ 16%	4,04,320
	Total	94,91,320

(2) Turnover (per year)		(In Rs.)
i)	By sale of 1500 Nos. of Wrought iron Chairs @ Rs. 500 each	7,50,000
ii)	By sale of 1500 Nos. of Wrought Iron Tables @ Rs. 1500 each	22,50,000
iii)	By sale of 1500 Nos. of Wrought Iron Sofas @ Rs. 2000 each	30,00,000
iv)	By sale of 1500 Nos. of Wrought Iron Bed @ Rs. 3000 each	45,00,000
	Total	1,05,00,000

(3) Net Profit (per year)

Rs. 1,05,00,000 - 94,91,320 = Rs. 10,08,680

(4) Profit Ratio

$$= \frac{\text{Net Profit per year} \times 100}{\text{Turnover per year}}$$

$$= \frac{10,08,680 \times 100}{1,05,00,000}$$

$$= 9.5\%$$

(5) Rate of Return

$$= \frac{\text{Net Profit/year} \times 100}{\text{Capital Investment}}$$

$$= 39.9\%$$

(6) Break-even Point

(i) Fixed Cost (per year)		(In Rs.)
a)	Depreciation on machinery, Office Furniture, Tools and Dies etc.	27,000
b)	Rent	96,000
c)	Insurance	36,000
d)	40% of Salaries and Wages	3,15,120
e)	40% of Contingent expenses other than Rent and Insurance	1,20,000
f)	Interest on total investment	4,04,320
	Total	9,98,440

(ii) Net Profit (per year) Rs. 10,08,680

B.E.P.

$$= \frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Net Profit}}$$

$$= \frac{9,98,440 \times 100}{9,98,440 + 10,08,680}$$

$$= 49.7\%$$

Addresses of Machinery and Equipment Suppliers

(For Treadline Guillotine m/c.)

1. M/s. Ganesh Engg. Works
   A-287, Okhla Indl. Area,
   Phase–I,
   New Delhi-110020.
2. M/s. Lamba Press and Shears
   6/10, Kirti Nagar Indl. Area,
   New Delhi–110015
3. M/s. Om Mechanical Works
   Plot No. 5, Gali No. 4,
   New Rohtak Road Indl. Area,
   New Delhi-110005.
4. M/s. United Engg. Corporation
   B-96, Mayapuri, Phase-I,
   Rewari Line,
   New Delhi-110064.

For Power Press

1. M/s. Lamba Bros (P) Ltd.
   6/10, Kirti Nagar Indl. Area,
   New Delhi–110015.

2. M/s. Sonar Machine Tools
Near Kishan Cold Storage,
Dr. Vikram Sarabhai Marg,
Gondal Road,
Rajkot–360004.
3. M/s. Vishwakala Machine Tools
Gondal Road,
Near S.T. Workshop,
Rajkot - 360 004.
4. M/s. Vankes and Company
13/1, Indl., Estate, Patliputra,
Patna - 800 013.

For Hacksaw Machines

1. M/s. Sagar Heavy Engg. (P) Ltd.
G.T. Road, Nand Pur P.O.,
Near Sannewal,
Ludhiana.
2. M/s. Vee Kay Industries
S-B, Textile Colony, Indl. Area, A
Ludhiana.
3. M/s. Jaswant Engg. Works
G.T. Road, Millar Gang,
Ludhiana.

For Hand Operated Brake Press

1. M/s. Modgil Co.
G.T. Road,
Batala - 143505.
2. M/s. Sonar Machine Tools
Near Kishan Cold Storage,
Dr. Vikram Sarabhai Marg,
Gondal Road,
Rajkot - 360 004
3. M/s. Khalsa Engg. Works
B-226, Naraina Indl. Area,
Phase-I,
New Delhi - 110028.

For Drilling Machine

1. M/s. Modern Tools Manufacturers
B-118, Phase-I,
Mayapuri Indl. Estate,
New Delhi.
2. M/s. Paul and Co.
24, Najafgarh Road,
New Delhi-110015
3. M/s. Shree Mahalaxmi Engg. Works
27, DLF Indl. Area,
Najafgarh Road (Moti Nagar)
New Delhi-110 015.

For Welding Sets

1. M/s. Kukreja Welding Equipments
A-63, G.T. Karnal Road,
Indl. Area, Delhi-110 033.
2. M/s. Sham Ravinder and Co.
23, New Qutab Road,
Opp. Telewara,
Delhi - 110 006.
3. M/s. Berco Welding and Electricals (P) Ltd.
G.T. Road By Pass,
Near Indl. Estate,
Jullunder City (Punjab).

For Pickling Plants

1. M/s. Govan Indl. Corporation
29-R/2, Indl. Area,
New Rohtak Road,
New Delhi.

For Air Compressor

1. M/s. Indoon Projects and Equipments
D-170, Okhla Indl. Area, Phase-I,
New Delhi-110020.
2. M/s. Three-F-Filters (P) Ltd.
C-110/1, Naraina Indl. Area, Phase-I,
New Delhi-110028.
3. M/s. Hydraulic Machine Tools
S/228, Indl. Area,
Jallandar City.

Raw Material Suppliers

Raw material is available in the local markets.