

A
PROJECT PROFILE
ON

MANUFACTURE OF STEEL FURNITURE FOR HOSPITALS

2020 - 2021



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STEEL FURNITURE for HOSPITALS

1. INTRODUCTION:

The outbreak of the COVID-19 pandemic has resulted in increased pressure on existing hospitals to keep adding beds/wards to provide effective treatment to infected patients. Construction of new Covid hospitals/health care facilities/testing labs etc to deal with abrupt surge in the number of Covid 19 positive patients is also under consideration. With the growing number of COVID-19 cases, the demand for medical/hospital furniture such as hospital beds, mobility equipment, and other support products is increasing significantly across the India.

The spread of the COVID-19 pandemic is expected to have a positive impact on the growth of the hospital/medical furniture's market. Hospital furniture market is segmented as below:

- i. Hospital Beds
- ii. Specialty Medical Chairs and Tables
- iii. Other support furniture like inspection tables, chair, stool, almirah, cupboard, racks etc

This project profile envisages production of third segment of other support furniture for hospitals like inspection tables, chair, stool, almirah, cupboard, racks etc. These items find their extensive use in other industrial, commercial and household activities also.

Furniture items are made from many materials, like traditional wood and stone to modern materials like metal, plastic, etc. Cast Iron/wrought iron is also used with decorative carving /engraving designs since centuries. But in modern times for mass requirements, metals like steel, stainless steel and plastics are used due to lower costs. Due to elegant appearance, durability and innovative designs, steel furniture is becoming popular in modern society. Steel furniture is preferred over other kinds of furniture due to its durability, fold ability (in many cases) and easy transportability. Steel Furniture is easy to make, aesthetic utilitarian furniture designs have evolved with the combination of other materials like mild steel, stainless steel, cast iron, glass etc.

These products will be varied in shapes and sizes as per the demand. Fabrications of steel related items are well established business and no sophisticated know-how is required. Though a number of units are carrying out the above activities, still there exists a gap in the demand supply curve.

2. DESIRED QUALIFICATIONS FOR PROMOTER:

Any ITI, Diploma or graduate preferably with fabrication or marketing experience.

3. INDUSTRY OUTLOOK/TREND of FURNITURE INDUSTRY

The outlook of furniture industry prospects remains optimistic, mainly driven by the demand from construction, household remodeling, and commercial sectors; due to recent economic and industrial policies and measures taken by government. The furniture market in India is highly fragmented with majority of the revenue being generated from the local players. The unorganized sector, which includes onsite carpenters, independent furniture manufacturers and domestic retailers have accounted for nearly 85% of the furniture market revenue in the country. In the recent years, moulded plastic, wrought iron, board and bamboo furniture have been widely purchased by the households in India.

New trend of readymade furniture modules for standard home formats are now being offered. In order to cater to the rising requirements, special Home décor show rooms and even online shopping is making inroads in the country. Number of companies has stepped up effort for mass produced modular steel and wood furniture market in the last few years.

.The economic growth and policies of house for all, huge infrastructure investments, etc is likely to see significant growth in next 5~7 year period. Heavy demand of household items including furniture and furnishing products from the urban class has historically been conducive to the growth of furniture market in India. This trend is expected stay in the future as well, as greater numbers of people are even in semi urban and rural areas are aspiring to achieve rise in the standard of living.

4. MARKET POTENTIAL AND MARKETING ISSUES. IF ANY:

The furniture market in India has historically witnessed a healthy boom in the country due to rapid urbanization in all the states across India. There are a number of factors which have led to a growth in furniture demand in the Indian households in the last few years. The growing economy of the country has boosted spending capacity of the people, young generation is adapting to modern living standards

demanding furniture items hitherto not used in past, and urban home designs are getting more and more standard including the standard set of furniture and interior furniture fitments. This trend in turn has impelled the sales of modular readymade furniture units offered by branded modular furniture manufacturers in the market.

The growing phase of infrastructure and real estate market has augmented the demand for furniture products in the country. In the organized retail segment, the market is occupied by leading companies such as Godrej Interior, Home centre, Nilkamal, Durian Furniture, Style Spa among others, which have over the years grabbed significant position in the domestic market. Furthermore, the entry of international brands like IKEA etc is likely to strengthen trend for modular design and brand awareness.

There is new as well as replacement / house remodeling demand for these items and its growth is linked with growth of residential, commercial, office building, hospitals/health care facilities/testing labs construction. The construction industry is growing at a rapid rate in the country. Therefore there is scope for these items. It is recommended to develop and produce aesthetic and modular design of furniture components with precision and good decor. The scope is good for furniture units in the recent that offer modular designs for furniture retailing in India.

5. RAW MATERIAL REQUIREMENTS:

The main Raw materials & consumables required for the unit are:

- Cold rolled & galvanizes steel sheets of various thickness
- Stainless steel square and round pipes of various sizes
- Structural steel sections like angles, channels etc
- Perforated sheets, wire mesh etc
- cutting blades,
- cutting fluid
- welding electrodes,
- Cast iron, Aluminum sections, brass, bronze and Glass panels may also be used in combination with traditional wood, plywood, particle board, laminates etc.
- Other materials like surface coating plating, paints, powder coating, and etc.

Above mentioned raw materials /consumables are easily available in general hardware markets.

6. MANUFACTURING PROCESS:

The process of manufacture involves operations as below.

- Cutting of material sheets, tubes, pipes, sections as per required dimensions in shear machine. Certain components like cast iron and steel rods may be machined.
- Bending twisting and of rods/ pipes and forming of sheets in bending machine, press brake or deep drawing as per need.
- Welding of sections, pipes and sheets
- Drilling and threading of components
- Pickling and surface treatment like phosphating, anodizing, hard chrome plating etc. to provide surface finish to components.
- Painting and polishing of components.
- Assembly of parts with fasteners.
- Inspection and packing for dispatch

The project should also focus on development of aesthetic designs of furniture for different uses in residential as well as commercial purposes. Also surface finishes viz anodizing, hard chrome plating, copper, brass, etc. in addition to paints, is important.

7. MANPOWER REQUIREMENT:

The unit shall require highly skilled service persons. The unit can start from 11 employees initially and increase to 26 or more depending on business volume.

Sr No	Type of Employees	Monthly Salary	No of Employees				
			Year 1	Year 2	Year 3	Year 4	Year 5
1	Skilled Operators	20000	3	4	6	6	8
2	Semi-Skilled/ Helpers	10000	6	8	10	12	12
3	Supervisor/ Manager	30000	0	0	0	1	1
4	Accounts/ Marketing	15000	1	1	2	2	2
5	Other helping staff	7000	1	2	2	3	3
	TOTAL		11	15	20	24	26

8. IMPLEMENTATION SCHEDULE:

The unit can be implemented within 6 months from the serious initiation of project work.

Sr No	Activities	Time Required in Months
1	Acquisition of Premises	1- 2
2	Construction (if Applicable)	1- 2
3	Procurement and Installation of Plant and Machinery	2
4	Arrangement of Finance	2- 4
5	Manpower Recruitment and start up	1
	Total Time Required (Activities run concurrently)	6 to 10 months

9. COST OF PROJECT:

The unit will require total project cost of Rs 72.79 lakhs as shown below:

Sr No	Particulars	In Lakhs
1	Land	25.00
2	Building	15.00
3	Plant and Machinery	20.84
4	Fixtures and Electrical Installation	1.05
5	Other Assets/ Preliminary and Preoperative Expenses	1.00
6	Margin for working Capital	9.90
	TOTAL PROJECT COST	72.79

10. MEANS OF FINANCE:

Option 1. - The project will require promoter to invest about Rs 18.19 lakhs and seek bank loans of Rs 54.59 lakhs based on 75% loan on fixed assets.

Sr No	Particulars	In Lakhs
1	Promoters Contribution	18.19
2	Loan Finance	54.59
	TOTAL:	72.79

Option 2- The project will require promoter to invest about Rs 11.94 lakhs and seek bank loans of Rs 35.54 lakhs based on 75% loan on fixed assets.(if land is taken on rent/lease)

Sr No	Particulars	In Lakhs
1	Promoters Contribution	11.94
2	Loan Finance	35.54
	TOTAL:	47.79

11. WORKING CAPITAL REQUIREMENTS:

Working capital requirements are calculated as below:

Sr No	Particulars	Gross Amount Rs. In lakh
1	Inventories	5.22
2	Receivables	5.09
3	Overheads	2.73
4	Creditors	7.63
	TOTAL	20.66

12. LIST OF MACHINERY REQUIRED:

Sr No	Particulars	UOM	Qty	Rate	Total Value
	Main Machines/ Equipment				
1	Rod/ flat strip Twisting machine	Nos	1	25000	25000
2	Hand Shear Machines	Nos	2	12000	24000
3	Mech Power Press	Nos	2	230000	460000
4	Press brake	Nos	2	300000	600000
5	Sheet Shearing Machine	Nos	1	25000	25000
6	Manual Sheet Folding Machines	Nos	2	30000	60000
7	Fly Press	Nos	3	25000	75000
8	Sand Blasting Facility	Nos	1	80000	80000
9	Pickling and Surface treatment	Nos	1	250000	250000
10	Spray / powder Painting Facility	Nos	2	50000	100000
11	Rod / Flat/ Pipe Bending Bench	Nos	2	20000	40000
12	Pillar Drill	Nos	1	30000	30000
13	Lathe	Nos	1	45000	45000
14	Spot /Seam/ TIG Welding Machine	Nos	4	30000	120000
15	Paint Baking oven	Nos	1	70000	70000
	Subtotal:				2004000
	Tools and Ancillaries				
1	Misc. equipment Dies tools etc.	LS	1	50000	50000
2	Hand Tools and gauges	LS	1	30000	30000
	Subtotal:				80000
	Fixtures and Elect Installation				
	Storage and transport bins	LS	1	10000	10000
	Office Furniture	LS	1	5000	5000
	Telephones/ Computer	LS	1	15000	15000

	Electrical Installation	LS	1	75000	75000
	Subtotal:				105000
	Other Assets/ Preliminary and Preoperative Expenses	LS	1	100000	100000
	TOTAL PLANT MACHINERY COST				2289000

All the machines and equipments are available from local manufacturers. The entrepreneur needs to ensure proper selection of product mix and proper type of dies and tooling to have modern and flexible utensil designs. It may be worthwhile to look at reconditioned imported machines, dies and toolings. Some of the machinery and dies and toolings suppliers are listed here below:

1. Yashwant Industries
440/7-A, G.I.D.C.,
Nr.Neptune Textile, Odhav, Ahmedabad - 382 415.
2. Amritsar Machine Tools
Plot No. 542, Part - A, M. I. E.,
Bahadurgarh-124507, Haryana, India
3. Arpan Machine Tools
No. 12/3, Atika Industrial Area, Near Jaydev Foundry
Atika Industrial Area, Rajkot- 360002 Gujarat, India
4. RAJESH MACHINE TOOLS PVT. LTD.
New Nehrunagar Main Road, 2 - Kailashpati Society, Plot No. 7, Dhebar Road (South),
"ATIKA" Industrial Area, Rajkot, Gujarat, India
<http://www.rajeshpowerpressindia.com>

The above list of machine supplier is illustrative. There are many machinery, dies and tools suppliers and consultants at several industrial clusters all over India where you may find suppliers of services and machineries for a chosen product mix.

13. PROFITABILITY CALCULATIONS:

Sr No	Particulars	UOM	Year Wise estimates				
			Year 1	Year 2	Year 3	Year 4	Year 5
1	Capacity Utilization	%	40	50	60	70	80
2	Sales	Rs. Lakhs	61.04	76.30	91.56	106.81	122.07
3	Raw Materials & Other Direct Inputs	Rs. Lakhs	41.74	52.18	62.61	73.05	83.48
4	Gross Margin	Rs. Lakhs	19.30	24.12	28.94	33.77	38.59
5	Overheads Except Interest	Rs. Lakhs	9.78	9.78	9.78	9.78	9.78
6	Interest	Rs. Lakhs	6.60	6.60	6.60	6.60	6.60
7	Depreciation	Rs. Lakhs	4.79	4.79	4.79	4.79	4.79
8	Net Profit Before Tax	Rs. Lakhs	-1.87	2.95	7.77	12.60	17.42

The basis of profitability calculation:

The Unit will have capacity of 15000 units of modular steel furniture items per year with product mix consisting of standard products with designs that use combination of stainless steel / carbon steel, aluminum, brass, particle board/ plywood, glass panel etc. The bulk /Distributor sales prices for average price range of product is taken at Rs 1000 to Rs 25000 depending type of module, size, design, materials, grade, etc. The raw materials used are mild steel, brass, aluminum, as well as particle boards, plywood, etc as per bulk order specified by retailers/hospitals. The direct costs of raw material costs and manufacturing for these products are taken at 65 ~ 75 %. The material requirements are considered with wastage/ scrap of 6 ~ 14 % of finished products, which can be sold at @ Rs 15 to 30 per Kg. and the income of same is added. Energy Costs are considered at Rs 7 per KHz. The depreciation of plant is taken at 10 % and Interest costs are taken at 09 -15 % depending on type of industry.

14. BREAK EVEN ANALYSIS

The project is can reach break-even capacity at 43.88 % of the installed capacity as depicted here below:

Sr No	Particulars	UOM	Value
1	Sales at Full Capacity	Rs. Lakhs	152.59
2	Variable Costs	Rs. Lakhs	104.35
3	Fixed Cost incl. Interest	Rs. Lakhs	21.17
4	Break Even Capacity	% of Inst Capacity	43.88

15. STATUTORY/ GOVERNMENT APPROVALS

The unit shall need industrial unit registration of state. The industry registration and approval for factory plan, safety for Fire requirement, registration as per Labor laws ESI, PF etc shall be required as per rules and applicability. Before starting the unit will also need GST registration for procurement of materials as also for sale of goods. There are no pollution control requirements, while unit will have to ensure solid waste/ scrap disposal in proper manner. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

16. BACKWARD AND FORWARD INTEGRATION

The machines and equipments offer scope for diversification in to producing tailor made products for consumer for their industrial parts/ components by using the spare capacities and machine capabilities which may be attempted. As such there is not much scope for organic backward or forward integration.

17. TRAINING CENTERS/COURSES

There are no specific training centers for this product design or production technology. However the dies and tools development courses run by several centers of excellence viz Indo German/Indo Danish Tool Rooms at Ahmedabad, Aurangabad, Jamshedpur etc and CTTC Bhubaneshwar shall be helpful. The most important scope of learning is in new product design and development by associating with

institutes like NID etc. Entrepreneur may also study the new product designs, product range, features and specifications of leading Brands / competitors across the world by scanning the Internet and downloading data. Viz. North American, Europe, China etc markets.

O/o DC MSME, New Delhi www.dcmsme.gov.in may be accessed to get address & contact details of wide network of MSME Development Institute, Technology Development Centers & Tool Rooms situated across India. Prospective as well as existing entrepreneurs can contact/visit to MSME offices for hand-holding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

Disclaimer:

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation. All financial figures are indicative. Project cost taken is also indicative. It may be vary on the basis of product profile, tools/ machinery used, place of operation, varied rate of land/building cost/lease/rent in various cities etc. This project may be started with few product mixes, less manpower & low investment cost.