

Seamless Pipe Fittings

PRODUCT CODE	: 340401001
QUALITY AND STANDARDS	: As per IS 6398:1991, IS 6394 :1991, IS 7304:1992, IS 6631:1988, IS 3989:1991 and customers requirements.
PRODUCTION CAPACITY	: Quantity :2,00,000 Nos. pieces of assorted seamless sockets. Value : Rs. 90,00,000 (per annum)
MONTH AND YEAR OF PREPARATION	: June, 2002
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INTRODUCTION

There are numerous types of pipe fittings available in the market today like elbows, tees, sockets, etc.,. This project profile deals with the manufacture of Seamless M.S. sockets only. Seamless M.S. sockets are used to join pipes in laying for carrying fluids under pressure. The maximum size proposed to be manufactured is 100mm diameter sockets made out of seamless pipes.

MARKET POTENTIAL

There is a substantial market for seamless M.S. pipe fittings all over the country and abroad because of the increasing demand by chemical and process industries, fertilizer units, petrochemical industries, ship-building and repair, oil installations etc. Seamless

pipe fittings have an edge over welded pipe fittings, since there is no welding joint leading to nil losses in transmission lines as well as leakage losses and hence maintenance costs are lower. There is a vast scope for setting up such units. The item has also a good export potential.

BASIS AND PRESUMPTIONS

1. The profile has been prepared on single shift basis of 8 hours per day and 300 working days per year, achieving near about full capacity utilization after five years of commencement of commercial operations.
2. The salaries and wages, cost of raw material, utilities, rent of the shed etc. are based on the prevailing rates in and around

local region hence cost factor is likely to vary with the location of the unit.

3. Interest on term loan and working capital has been taken at the rate of 19.5% on an average. The rate may vary depending upon the policy of the financial institutions and agencies from time to time.
4. The cost of machinery and equipment refers to a particular make/model and the prices are approximate to those ruling at the time of preparation of the scheme.
5. The project preparation cost, non-refundable deposits may be considered under the head of pre-operative expenses.
6. A rented covered shed of 300 sq. mtr. on monthly rent of Rs. 25,000 per month is considered.
7. Power at the rate of Rs. 3.80 Kwh is taken.
8. Margin money requirement is taken at average of 25% of total capital investment.

IMPLEMENTATION SCHEDULE

The implementation schedule for the project will be as under:

1. DIC Registration, Project report preparation, application for land and finance—2 Months.
2. Receipt of loan, modification/ construction of shed, procurement of machinery and its installation, including clearances from the Pollution Control Board etc. and other-Agencies/Govt. Deptts.—8 Months.

3. Recruitment of Staff and labour, and trial production—2 Months.

Total time may be taken as one year approximately. However, the project can be successfully implemented within one year of conception, provided adequate finance in time is available and correct planning and speedy execution is resorted to by the entrepreneur.

TECHNICAL ASPECTS

Process of Manufacture

Seamless pipe fittings are made out of seamless pipes as the base raw material. The pipes are first cut to different sizes and shapes as desired by customer specifications and requirements. The cut pieces then undergo the processes of bending, rough-turning of OD and facing, boring of inside diameter, hot-dip galvanizing if necessary (which can be sub-contracted), internal-threading, finish tapping and inspection and quality control before packing and despatch.

1. The quality standards maintained are as per IS; and as per customer design and requirements.
2. The estimated production capacity is taken as 2,00,000 nos. assorted sizes seamless pipe fittings per year of 300 working days.
3. The motive power requirement is around 60 H.P.
4. There is almost no pollution in the production, yet the entrepreneur is advised to obtain NOC from the Central/State Pollution Control Board. Also good cross ventilation of the working area is advised.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building	Amount (In Rs.)
Rented covered shed of floor area of about 300 sq. mtr.	25000

(ii) Plant and Machinery

Sl. No	Description	Ind/Imp	Qty.	Rate (In Rs.)	Amount (In Rs.)
1.	Guillotine shearing Machine 1250mm × 4mm capacity with all standard accessories and electrical - 7.5 HP	Ind	1	2,00,000	2,00,000
2.	Hand Operated shearing machine, lever type 30 cm size	Ind	1	50,000	50,000
3.	Power Press, 75 tonnes capacity, pillar type C.I. Body complete with electric motor, switch, starter etc.-7.5HP	-do-	1	1,75,000	1,75,000
4.	Power Press, 50 tonnes capacity, pillar type C.I. Body complete with electric motor, switch, starter etc.-5 HP	-do-	1	1,40,000	1,40,000
5.	Electric Arc Welding Set-350 Amps. Capacity	-do-	1	40,000	40,000
6.	Special purpose production lathe, 900 mm bed complete with electrical	-do-	6	12,00,000	12,00,000
7.	Tapping Machine up to 100 mm Dia capacity complete with electrical	-do-	2	1,50,000	1,50,000
8.	Power Press 10 ton cap. With 2 HP Motor	-do-	1	50,000	50,000
9.	Power Hacksaw machine 18" size	-do-	2	30,000	30,000
10.	Bench type Drilling Machine up to 3" capacity.	-do-	2	40,000	40,000
11.	Bench-Grinder	-do-	1	14,000	14,000
12.	Tools, Tackles, and Fixtures and Misc. Tools. and Measuring Tools	-do-	L.S	60,000	60,000
13.	Portable Hand-Drilling M/c 1/2" cap.	-do-	2	16,000	16,000
14.	Universal Bending Machine complete with electricals	-do-	1	1,60,000	1,60,000
15.	Double ended Grinding Machines 1/2 HP Motor	-do-	2	36,000	36,000
16.	Office Equipments and Furniture etc.	-do-	L.S.	60,000	60,000
17.	Laboratory Equipments and Chemicals	-do-	L.S.	2,00,000	2,00,000
18.	Electrification and Installation at 10% of cost of above	-do-	L.S.	2,36,100	2,36,100
19.	Pre-operative Expenses	-do-	L.S.	60,000	60,000
			Total		29,17,100

Total Fixed Capital Requirement Rs. 29,17,100
(i.e. Total Fixed Capital)

B. Working Capital (per month)

(i) Staff and Labour (per month)

Sl. No.	Designation	Number	Salary (In Rs.)	Amount (In Rs.)
1.	Plant Manager	1	8,000	8,000
2.	Supervisor (Technical)	1	6,000	6,000
3.	Skilled workers	4	3,000	12,000
4.	Semi skilled workers	6	2,500	15,000
5.	Unskilled workers	6	1800	10,800
6.	Accountant	1	4,000	4,000
7.	Store Keeper	1	3,000	3,000
8.	Office Assistants	2	2,500	5,000
9.	Peon	1	1,800	1,800
10.	Watchman	2	1,800	3,600
11.	Sales Officer	1	7,000	7,000
12.	Chemist	1	6,000	6,000
Total			82,200	
<i>Add perquisites @ 15%</i>			12,330	
Grand Total			94,530	
or Say			95,000	

(ii) Raw Materials (per month)

Sl. No.	Description	Quantity	Rate (In Rs.)	Amount (In Rs.)
1.	M.S. Seamless Pipes of assorted lengths and diameters	5000 Kgs.	40/kg	2,00,000
2.	Misc. consumables stores like grease, oil, lubricants and packing materials	L.S.		40,000
Total				2,40,000

(iii) Utilities (per month)

i) Electricity @ Rs. 3.80 for 25,000 Units	Rs. 95,000
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(iv) Other Contingent Expenses (per month) (Rs.)

i. Rent	25,000
ii. Postage and stationery	3,000
iii. Insurance and Taxes	5,000
iv. Telephone	5,000
v. Repair and Maintenance	5,000
vi. Publicity and Advertisement	5,000
vi. Travelling and Transport	15,000
vii. Renewal and Replacement	5,000
Total	68,000

(v) Working Capital (per month)

1) Staff and Labour	95,000
2) Raw Material	2,40,000
3) Utilities	95,000
4) Other Contingent Expenses	68,000
Total	4,98,000

(vi) Total Working Capital Requirement for 3 Months

Rs. 4,98,000 × 3	Rs. 14,94,000
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C. Total Capital Investment

i. Total Fixed capital	Rs. 29,17,100
ii. Working capital for 3 Months	Rs. 14,94,000
Total	Rs. 44,11,100

FINANCIAL ANALYSIS

(1) Cost of Production (per annum) (Rs.)

i. Total Recurring Cost (4,98,000×12)	59,76,000
ii. Depreciation on Machinery @ 10%	2,30,100
iii. Depreciation on Tools and Equipment @ 25%	15,000
iv. Depreciation on Furniture and Office Equipments @ 20%	10,000
v. Interest on Total Capital investment @ 19.5%	8,65,039
Total	70,96,139

(2) Sales (per annum)

Sale of 2,00,000 Nos. Seamless M.S Pipe Fittings (Sockets) of assorted sizes @ average price of Rs. 45 per unit	Rs. 90,00,000
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(3) Net Profit (per annum) (Before Income Tax)

Sales – Cost of Production

90,00,000–70,96,139 **Rs. 19,03,861****(4) Net Profit Ratio**

$$= \frac{\text{Net Profit per annum} \times 100}{\text{Sales per annum}}$$

$$= \frac{19,03,861 \times 100}{90,000,000}$$

$$= 21.15\%$$

(5) Rate of Return

$$= \frac{\text{Net Profit per annum} \times 100}{\text{Total Capital Investment}}$$

$$= \frac{19,03,861 \times 100}{44,36,100}$$

$$= 42.91\%$$

(6) Break-even Point

Fixed cost (per annum)	(Rs.)
i. Rent (25,000 × 12)	3,00,000
ii. Depreciation on Machinery @ 10%	2,30,100
iii. Depreciation on Tools and Equipment @ 25%	15,000
iv. Depreciation on Furniture and Office Equipment @ 20%	10,000
v. Interest on total capital investment @ 19.5%	8,65,039
vi. 40% of salary and wages	4,56,000
vii. 40% of utilities and other expenses (excluding rent)	7,82,400
Total	26,58,539

B.E.P.

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

$$= \frac{26,58,539 \times 100}{26,58,539 + 19,03,861}$$

$$= \frac{26,58,539 \times 100}{45,62,400}$$

$$= 58.27\%$$

Addresses of Machinery Suppliers

1. M/s. H. P. Singh Machinery (Pvt.) Ltd.
75, Ganesh Chandra Avenue,
Kolkata- 700013
2. M/s. Nandy and Co.
125 Belilious Road,
Howrah - 711101
3. M/s. Turnwell Machine Tools
16, Ganesh Chandra Avenue,
Kolkata - 700013
4. M/s. Turner and Tools,
15, Ganesh Chandra Avenue,
2nd Floor,
Kolkata - 700013
5. M/s. Pathak Machine Tools Pvt. Ltd.
116, G.T. Road, Salkia,
Howrah - 711106
6. M/s. Goliya Electrical Pvt. Ltd.
Plot no. 64, G.I.D.C. Estate,
Phase I, Opp. Sunita Textiles,
Vapi - 396195.
Distt. Bulsar, Gujarat.
7. M/s. Goliya Instrument Pvt. Ltd.
311, Bharat Industrial Estate,
T.J. Road, Sewree,
Mumbai - 400015.
8. M/s. Bengal Trading Co.
Sevoke Road,
P.O. Siliguri,
District Darjeeling - (W.B.).
9. M/s. Bumra Mechanical Works
258, Indl. Area,
Ludhiana - 141003
10. M/s. Singh Engg. Works
G.T. Road, Miller Gang,
Ludhiana.

11. M/s. Industrial Gas Ltd.
138, Canning Street,
Kolkata

12. M/s. Basant Presses (India)
721, Industrial Area- B,
Ludhiana - 141003.

**Addresses of Raw Material
Suppliers**

1. Open Market.

2. M/s. Beekay Hardware
Tadong, Gangtok,
Sikkim - 737102.

3. M/s. STCS, Deaorali, Gangtok,
Sikkim.

4. M/s. Vinod Enterprise
Near Convey Ground,
Tadong, Gangtok,
Sikkim - 737101.