

Galvanised M.S. Wire

PRODUCT CODE	: N.A.
QUALITY AND STANDARDS	: (i) IS 280 : 1977 (ii) IS 2629 : 1985 (iii) IS 2633 : 1986 (iv) IS 6745 : 1972
PRODUCTION CAPACITY	: 1160 Ton (per year)
MONTH AND YEAR OF PREPARATION	: February, 2003
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INTRODUCTION

Galvanized M.S. Wire has versatile use in producing different Engineering items such as Building Hardwares, barbed wires, Screens rivets etc. Special quality of wire is also required for producing special purpose fasteners, reinforcement wire etc.

The Galvanized M.S. Wire is a Mild Wire which is coated with a steel layer of Zinc. The coating of Zinc provides cathodic protection to underneath Steel surface. The Galvanised M.S. Wire offers better surface protection at lower cost in humid atmosphere.

MARKET POTENTIAL

The Galvanized M.S. Wire has very good demand for its versatile use in different applications. There is a large demand for this item from the down stream industries.

With the availability of appropriate technology, the activity is highly feasible in the small scale sector and marketing is generally not a problem.

BASIS AND PRESUMPTIONS

The profile is drawn on the basis of the following presumptions:

(1) Working hours/shift	: 8 hr. per day
(2) No. of Shifts per day	: One
(3) No. of working day/year	: 300
(4) Total no. of working hours	: 2400 hrs.
(5) Working efficiency	: 75%
(6) Time period for achieving maximum capacity utilization	: 3 years from the date on which production will be started
(7) Labour charges	: As per minimum wages Act.
(8) Rate of Bank Interest	: 18% per annum

The value of machinery and equipment is estimated on the basis of

prevailing market rates. It is expected that it may take about 8 to 9 months to complete all activities of the project, till commercial production is achieved. If the project is available with the promoter, a period of 8/9 months will be needed for site selection, Registration with DIC as SSI unit, Building construction, selection and purchase of plant and machinery, Loan sanction from financial Institution, Erection and commissioning of Project for trial run etc.

Quality Control and Standards

Standardizations parameters are as follows:

1. IS:280-1977 specification for Mild Steel wire for general purposes.
2. IS:2629-1985, IS:2633-1986, IS:6745-1972 to test the quality of galvanization.

Production Capacity (per year)

The production target of Galvanised M.S. Wire 1160 MT per year.

Quantity	: 1160 MT
Value	: Rs. 293.20 Lakhs.

TECHNICAL ASPECTS

Process of Manufacture

The production process of Galvanised M.S. Wire is as follows:

Pickling/Cleaning of the wire rod to remove surface oxides and impurities



Mechanical Scraping of the wire rod surface



Painting/Welding of Wire Rod



Drawing of wire at various stages



Annealing of wire if required



The final drawing in continuous wire drawing machine



Pre treatment of M.S. Wire cleaning and degreasing by special solvent like Sodium hydroxide solution and followed by pickling



Galvanizing of M.S. Wire by immersing of M.S. wire in the molten bath of Zinc followed by water quenching



Inspection of Galvanized M.S. Wire



Binding of wire coil, packing etc.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building (Rented)

Rent payable per month Rs. 5,000

(ii) Machinery and Equipments

Sl. No.	Name of Machinery and Equipment	Qty.	Amount (In Rs.)
1.	Heavy Duty Wire Drawing Bull Block intake capacity upto 10 mm of M.S. Wire rod with 660 mm Capstan and 40 HP motor complete with reduction gear box etc.	1 No.	2,60,000
2.	Electric Motor 40 HP Sliping type for the above complete with Switch gear Control panel, etc.	1 set	1,30,000
3.	Set of continuous Wire Drawing Machine Intake capacity for 6 mm of M.S. Wire with 550 mm Capstan and 25 H.P. Motor complete with reduction gear Box etc.	4 sets	6,50,000
4.	Set of Electric Motor of 25 HP for the above complete with Control Panel etc.	4 sets	2,60,000

5. Mechanical Desealer cap. Up to 10 mm of Wire rod complete with reduction gears Take off Drum and 10 HP motor and Electrical	1 No.	32,500
6. Wire pointing Machine with electric motor of 3 HP	1 No.	18,000
7. Wire Butt Welding Machine suitable to weld M.S. Wire up to 10 mm	1 No.	15,000
8. Electric Furnace Bell type for Annealing of Wire Coil rating 20 KW	1 No.	1,30,000
9. Hot Dipping galvanizing unit consist of Pickling, Washing Flux Tank, Diesel Furnace, Zinc Bath, Extraction unit and Pot	L.S.	4,00,000
10 Electric Hoist of 1 ton capacity	-	95,000
<i>Testing Equipment</i>		
11. Wire Testing Machine cap. 2 ton	L.S.	75,000
12. Equipment for coating test	L.S.	20,000
13. Gauges for Dimensional measurement of wire	L.S.	15,000
14. Electrification and Installation @ 10% of cost of Machinery and equipment	-	2,10,050
15. Cost of Dies of various sizes	-	50,000
16. Office equipment and furniture	-	30,000
17. Pre-operative Expenses	-	1,00,000
Total		24,90,550

B. Working Capital (per month)

(i) Staff and Labour

Administrative

Sl. Administrative No. Staff	No.	Salary (In Rs.)	Amount (In Rs.)
1. Manager	1	5,000	5,000
2. Supervisor	2	4,000	8,000
3. Clerk	2	3,000	6,000
4. Accountant	1	4,000	4,000
5. Peon/Watchman	2	1,500	3,000
<i>Workshop Staff</i>			
1. Skilled Workers	8	2,000	16,000

2. Unskilled Workers	8	1,500	12,000
3. Helper	5	1,500	7,500
Salary and Wages			61,500
Add perquisites @ 20% per annum			12,300
Total			73,800

(ii) Raw Material

Sl. No.	Particulars	Qty.	Rate (In Rs.)	Amount (In Rs.)
1.	Mild Steel Wire rod of 8, 9 and 10 mm Dia.	100 ton	15,000 per ton	15,00,000
2.	Zinc Ingot	5 ton	65,000 ton	3,25,000
3.	Acid Fluxes and other additives	L.S.	-	50,000
Total				18,75,000

(iii) Utilities

		(Rs.)
1) Power	L.S.	18,000
2) Water	L.S.	1,000
3) Fuel	L.S.	30,000
Total		49,000

(iv) Other Contingent Expenses

	(Rs.)
1. Rent	5,000
2. Postage and Stationery	1,000
3. Telephone	800
4. Consumable Store	15,000
5. Repair and Maintenance	8,000
6. Transport charges	10,000
7. Advertisement and Publicity	3,000
8. Insurance	1,000
9. Miscellaneous Expenses	1,000
Total	44,800

(v) Working Capital

	(In Rs.)
1. Raw material	18,75,000
2. Salary and Wages	73,800

3. Utilities	49,000
4. Other Contingent Expenses	44,800
Total	20,42,600

Working Capital (for 3 months) Rs. 61,27,800

C. Total Capital Investment

(i) Fixed Capital	Rs. 24,90,550
(ii) Working Capital	Rs. 61,27,800
Total	Rs. 86,18,350

FINANCIAL ANALYSIS

(1) Cost of Production (per year)	(Rs.)
(1) Total Recurring Cost	245,11,200
(2) Depreciation on Machinery and Equipment @ 10%	1,86,050
(3) Depreciation on furnace and Testing Equipment @ 20%	48,000
(4) Depreciation on office equipment @ 20%	6,000
(5) Depreciation on Dies @ 25%	12,500
(6) Interest on total capital investment @ 18%	15,51,303
Total	263,15,053

(2) Turnover (per year)

Sl. No.	Items	Qty.	Rate (In Rs.)	Amount (In Rs.)
1.	Galvanised M.S. Wire	1160 ton	25,000 per ton	290,00,000
2.	Scrap Wire	40 ton	8000 per ton	3,20,000
	Total			293,20,000

(3) Net Profit (per year)

Rs. 29320000 - 26315053 = **Rs. 3004947**

(4) Net Profit Ratio

$$\begin{aligned}
 &= \frac{\text{Net Profit per year} \times 100}{\text{Turnover per year}} \\
 &= \frac{3004947 \times 100}{29320000} \\
 &= \mathbf{10.2\%}
 \end{aligned}$$

(5) Rate of Return

$$\begin{aligned}
 \text{Rate of Return} &= \frac{\text{Net Profit per year} \times 100}{\text{Total Investment}} \\
 &= \frac{3004947 \times 100}{8618350} \\
 &= \mathbf{34.8\%}
 \end{aligned}$$

(6) Break-even Point (Rs.)

1) Total Depreciation	2,52,550
2) Rent and Insurance	72,000
3) Interest on total Capital Investment	15,51,303
4) 40% of Salary and Wages	3,54,240
5) 40% of other contingent expenses	1,86,240
Total	24,16,333

$$\begin{aligned}
 \text{B.E.P} &= \frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Profit}} \\
 &= \frac{2416333 \times 100}{2416333 + 3004947} \\
 &= \frac{2416333 \times 100}{5421280} \\
 &= \mathbf{44.5\%}
 \end{aligned}$$

Addresses of Machinery and Equipment Suppliers

1. M/s. Associated Machinery Mfg. Pvt. Ltd.
Bulandshahar Road, Industrial Area, Ghaziabad.
2. M/s. C.S. Wire Pvt. Ltd.
90-B, IDA., Jeedi Matha, Hyderabad.
3. M/s. Wire Machinery Mfg. Corporation
7 A, Ventinard Road, Kolkata.
4. M/s. Refrigeration and Machinery Corporation
Rajendra Prasad Road, Mumbai - 400080.

5. M/s. Design Engineering Co.
Wadala,
Mumbai - 400431.
6. M/s. Wesman Engineering Co. Pvt.
Ltd.
346, Pantheon Road,
Chennai.
7. M/s. Batliboi and Co.
R.P. Road,
Secunderabad.

8. M/s. United Agro Engineering Co.
R.P. Road,
Secunderabad.

Addresses of Raw Material Suppliers

- (i) M/s. Steel Authority of India Ltd.
- (ii) M/s. Tata Iron and Steel Co. Ltd.
- (iii) M/s. Hindustan Zinc Ltd.