

# Copper Strips

PRODUCT CODE	: N.A.
QUALITY AND STANDARDS	: As per BIS and Customers' Specifications
MONTH AND YEAR OF PREPARATION	: December, 2002
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## INTRODUCTION

Copper Strips and DPC/DCC strips are used in the Electrical Industries, Electroplating plants, Motors, Generators, Transformers, and Household Electrical Appliances due to its high conductivity which can not be replaced by any other non-ferrous material like copper because of good mechanical properties viz, good Malleability and formability, can be easily fabricated. Besides, it can also be easily welded and soldered.

## MARKET POTENTIAL

With the growth of industrialization as well as technological advancement, the demand of copper products such as wire, strip, flats, both bare and covered is increasing. Based on this trend of growing demand, there is scope for setting up SSI unit, in the area.

## BASIS AND PRESUMPTIONS

1. Working 8 hours per shift, one shift per day 25 working days per month, i.e. 300 days in a year.

2. Capacity utilization - 80%
3. Margin Money - 25%
4. Interest rate - 16% (per annum)

## IMPLEMENTATION SCHEDULE

<i>Activities</i>	<i>Period in Month</i>
1. Preparation of Project Report, Site Selection, Provision of SSI registration	0-1
2. Sanction of term loan	1-3
3. Purchase of Plant and Machinery	3-5
4. Erection of Machine and Electrification	5-6
5. Arrangement of Working Capital	6-7
6. Purchase of Raw Material	7-8
7. Selection of Staff and Workers	8-9
8. Commissioning and Trial Production	9-11
9. Permanent Registration	11-12
10. Commercial Production	12

## TECHNICAL ASPECTS

### Process of Manufacture

Copper Strips bare or covered, are basically manufactured using copper wire rod of required sizes. Wire rods are

converted into strips with the help of cold rolling mills mounted with rolls of different roll pass design as per size of the final product required.

DCC/DPC Copper strips are annealed through Electrical furnace and put into DCC/DPC Machine for covering with insulating paper or cotton as per requirement.

### Quality Control and Standards

Quality of copper strips covered and uncovered are maintained according to the standards laid down by Bureau of Indian Standards and as well as customers standards specifications.

### Production Capacity

- (a) Quantity : 233 MT  
(b) Value : Rs. 372.8 lakhs.

### Motive Power

80 kW.

### Pollution Control

The unit has to adopt necessary pollution control measures such as proper height of the work shed with sufficient ventilation outlets.

## FINANCIAL ASPECTS

### A. Fixed Capital

- (i) **Land and Building** Rs. 96,000  
30 × 20 meter (rented) (per annum)

#### (ii) Machinery and Equipments

Sl. No.	Description	Imp./ Ind.	Qty.	Amount (In Rs.)
1.	Four block vertical wire drawing machine complete with 24 H.P. Motor and accessories	Ind.	1	60,000
2.	Horizontal wire drawing Machine	Ind.	1	60,000

Sl. No.	Description	Imp./ Ind.	Qty.	Amount (In Rs.)
	24" complete with 20 H.P. Motor and accessories			
3.	Cold Rolling Machine complete with 15 H.P.	Ind.	1	80,000
4.	Cold Rolling Machine complete with 7.5 H.P. Motor and Accessories	Ind.	1	25,000
5.	Pointing Machine complete with 2 H.P. Motor	Ind.	1	10,000
6.	Die Polishing Machine, complete with 1/2 H.P. Motor	Ind.	1	5,000
7.	Butt Welding Machine up to 10 mm.	Ind.	1	10,000
8.	Rough Cold Rolling Machine with 10 H.P. Motor with accessories	Ind.	1	40,000
9.	DPC/DCC Machine for strips with 2 H.P. Motor	Ind.	1	40,000
10.	Electric operated 24 KW annealing furnace, complete with Control Panel	Ind.	1	85,000
11.	Pickling/rinsing/ washing unit	LS	-	40,000
	<b>Total</b>			<b>4,55,000</b>
12.	Cost of Electrification and installation @10%			45,500
13.	Cost of Dies/Fixtures and others	-		30,000
14.	Cost of office furniture and equipments	-		30,000
15.	Pre-operative Expenses	-		40,000
16.	Electrical connection security deposits	-		50,000
	<b>G. Total</b>			<b>6,50,500</b>

### B. Working Capital (per month)

(i) Raw Material		(Rs.)
1.	Copper wire rod 20 MT @ Rs. 1,35,000 per M.T.	27,00,000
2.	Insulating paper/cotton 0.3 MT @ Rs. 1,50,000	45,000
	<b>Total</b>	<b>27,45,000</b>

(ii) Utilities		(Rs.)
1. Power 9600 KWH @ Rs. 3.50 per unit		33,600
2. Water (L.S)		500
3. Acid/Lime other chemicals (L.S)		1,000
<b>Total</b>		<b>35,100</b>

(iii) Personnel	Nos.	(Rs.)
1. Manager	1	5,000
2. Supervisor	1	4,000
3. Clerk	1	3,000
4. Peon	1	1,500
5. Watchman	1	1,500
6. Skilled Worker	5	10,000
7. Semi Skilled Worker	5	7,500
<b>Total</b>		<b>32,500</b>
Add perquisites @ 15% of Salary		4,875
<b>Total</b>		<b>37,375</b>

(iv) Other Contingent Expenses		(Rs.)
1. Rent		8,000
2. Telephone		1,500
3. Advertisement and Publicity		1,000
4. Postage and Stationery		1,000
5. Transport charges		2,000
6. Repair and Maintenance		5,000
7. Miscellaneous		5,000
<b>Total</b>		<b>23,500</b>
<b>Working Capital (i + ii + iii + iv)</b>		<b>28,40,975</b>

### C. Total Capital Investment

(a) Fixed Capital	Rs. 6,50,500
(b) Working Capital (2 months)	Rs. 56,81,950
<b>Total</b>	<b>Rs. 63,32,450</b>

### MACHINERY UTILIZATION

With operation of wire drawing Machine, cold rolling and Annealing Furnace, the Machinery utilization can

be achieved to the extent of 80% and considered feasible for achievement of the project target capacity.

### FINANCIAL ANALYSIS

(1) Cost of Production (per year)		(Rs.)
a) Recurring cost		3,40,91,700
b) Depreciation on Machinery @ 10%		37,000
c) Depreciation on Furnace @ 25%		21,250
d) Depreciation on Dies @ 25%		7,500
e) Depreciation on furniture/office equipment @ 10%		3,000
f) Interest on Investment @ 16%		10,13,192
<b>Total</b>		<b>3,51,73,642</b>
<b>Or Say</b>		<b>3,51,74,000</b>

(2) Turnover (per year)		(Rs.)
(a) Copper Strips, DCC/ DPC Strips 233 M.T. @ Rs. 160/kg	-	3,72,80,000
(b) By Sale of Scrap, 4.8 M.T. @ Rs. 80/kg	-	3,84,000
<b>Total</b>		<b>3,76,64,000</b>

(3) Net Profit (per year) **Rs. 24,89,000**

#### (4) Net Profit Ratio

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

$$= \frac{2489000 \times 100}{37664000}$$

$$= 6.6\%$$

#### (5) Rate of Return

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

$$= \frac{2489000 \times 100}{6332450}$$

$$= 39.3\%$$

**(6) Break-even Point**

<b>(i) Fixed Cost</b>		<b>(Rs.)</b>
1. Depreciation on Machine and Equipments, Furnace, Dies Fixtures and furniture etc.	-	68,750
2. Rent	-	96,000
3. Interest on Investment	-	10,13,192
4. 25% of Salary and Wages	-	1,12,125
5. 25% of other expenses	-	46,500
<b>Total</b>		<b>13,36,567</b>

**(ii) Net Profit (per year)                      Rs. 24,94,358**

**B.E.P.**

$$\begin{aligned}
 &= \frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Profit}} \\
 &= \frac{1336567 \times 100}{1336567 + 2489000} \\
 &= \mathbf{34.8\%}
 \end{aligned}$$

**Addresses of Machinery and Equipment Suppliers**

1. M/s. Develop Engineering Corporation  
1/421, Street No. 6,

Friends Colony, Industrial Area,  
Shahdara, Delhi, 95.

*Wire Drawing Machine*

2. M/s. C. S. D. Technologies Pvt. Ltd.

47 A, Ist Class, HAL,  
3rd Stage,  
Bangalore - 560075.

*Cold Rolling Mills*

3. M/s. Pioneer Equipment Co. Pvt. Ltd.  
432, Padra Road,  
Baroda - 5.

*Annealing Furnace***Addresses of Raw Material Suppliers**

1. M/s. Hindustan Copper Limited.
2. M/s. Alcobax Metals Pvt. Ltd.  
Jodhpur.
3. M/s. Minerals and Metals Trading Corporation of India  
Bahadur Shah Zafar Marg,  
New Delhi-110002.