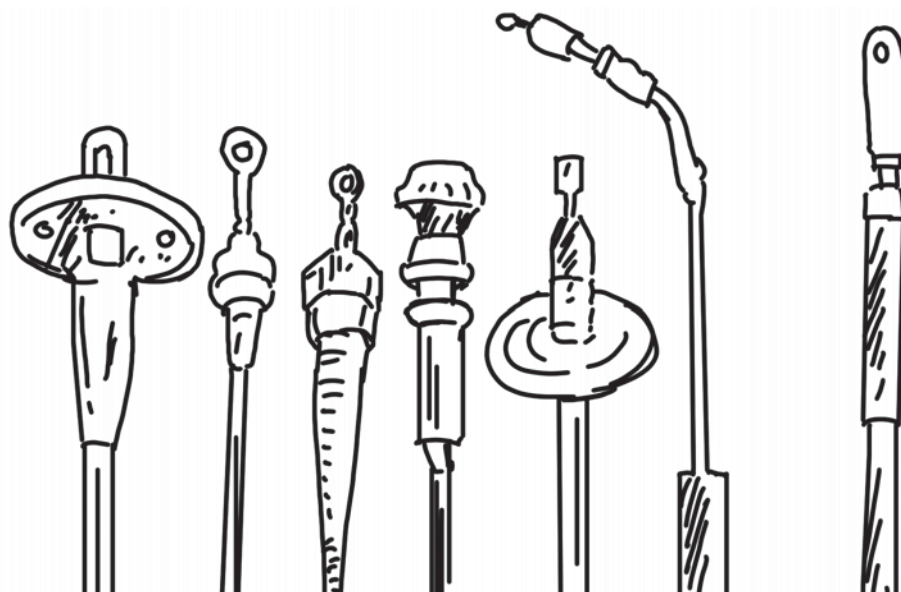


AUTO CONTROL CABLES



1.0 INTRODUCTION

Auto control cables are widely used in various controls of two/three wheel vehicles. Twisting of desired/required number of S.S. wires, of standard wire gauge and of different diameter into one cable makes these. The numbers of S.S. wires of standard gauge depends upon the end use of the auto control cables like brake wire, clutch wire, accelerator wire etc. Each type of cable is of different size depending upon the specific purpose of the cable. The auto control cables are put to frequent use during motion and also while starting and stopping. Due to frequent use, these are replaced often because of wear and breakage.

This project profile is for setting up of Auto Control Cables manufacturing unit with installed capacity of 7.20 lakhs numbers of cables per annum based on single shift of 8 working hours per day and 300 working days per annum.

2.0 MARKET POTENTIAL

Auto control cables have a wide and never ending replacement market, as the various control cables have to be replaced in any Scooter, Motorcycle, Auto Rickshaw,

Moped etc. These are always required by Mechanics and Service stations. Different cables for different end use are packed in printed poly bags and marketed in dozen packing through the Auto part dealers/shops.

3.0 PROCESS DETAILS

S.S. wire of required standard wire gauge are reeled into the bobbins on the reel winder and loaded onto the bobbins holder of the wire twisting machine. With the help of wire twisting machine the required number of S.S. wires are twisted and converted into a single stranded wire of continuous length. The number of S.S. wires and gauge depend upon the type and use of Auto control cable to be made.

The stranded/twisted cable thus made is cut with the help of wire cutting machine into the required size. One end of this wire is butted and dipped into molten Zinc to avoid opening of strands of the cable. At the other end of the cable a zinc stopper of required design/size is fixed with the help of a die on a die-casting Machine. The cables thus made are checked/inspected and packed in printed poly bags for marketing.

4.0 COST OF THE PROJECT

The estimated project cost is given below.

Particulars	Amount (Rs lacs)
Land & Site Development	-
Building & Civil Works	5.04
Machinery & Equipment	3.20
Misc. Fixed Assets	0.20
Preliminary & Pre-operative Expenses	0.75
Working Capital	1.08
TOTAL	10.27

4.1 Land & Site Development: No. cost has been considered for land & site development. It is assumed that the unit will be set up in own land.

4.2 Building & Civil Works: Details of building & civil works are given below.

Particulars	Area (Sqm)	Rate (Rs)	Amount (Rs)
Work Shed (Open shed, CGI sheet roof, Concrete Floor)	60	3500	210000
Store room & office (Brick wall, CGI sheet roof, Concrete Floor)	40	6000	240000
Sub total			450000
Add: Electrification, water supply, etc @ 12%			54000
TOTAL			504000
Say (Rs. in lacs)			5.04

4.3 Machinery & Equipment: Details of machinery & equipment are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Wire twisting machine (19 bobbins - 1 hp motor)	4	25000	100000
Pressure Die Casting machine	1	45000	45000
Air Compressor (1 hp motor)	1	20000	20000
Wire stretching machine	1	28000	28000
Size cutter	1	2500	2500
Flower machine	1	5000	5000
Hand cutter	2	1000	2000
Hand press	1	3000	3000
Reel winder	1	4000	4000
Grinder	1	4000	4000
Dies for die casting	5	8000	40000
Shearing machine	1	1500	1500
Small bobbins	100	15	1500
Big bobbins	20	100	2000
Poly bags sealing machine	2	600	1200
Miscellaneous items	LS	LS	10000
Sub total			269700
Add: Transportation, installation, etc @ 15%			40455
TOTAL			320155
Say (Rs. in lacs)			3.20

4.4 Misc. Fixed Assets: Details of miscellaneous fixed assets are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Furniture & fixtures	LS	LS	10000
Miscellaneous items	LS	LS	10000
TOTAL			20000
Say (Rs. in lacs)			0.20

4.5 Preliminary & Pre-operative Expenses: Details of preliminary & pre-operative expenses are given below.

Particulars	Amount (Rs lacs)
Travelling expenses	0.20
Fees	0.20
Interest during implementation	0.25
Miscellaneous expenses	0.10
TOTAL	0.75

4.6 Contingencies & Escalation: Contingencies & escalation has been assumed at 3% of the cost of building & civil works, machinery & equipment and miscellaneous fixed assets.**4.7 Working Capital:** Details of working capital are given below.

	Period (months)	Amount (Rs lacs)		
		Yr 1	Yr 2	Yr 3
Raw Materials & Consumables	1	0.89	1.07	1.25
Salary	1	0.40	0.40	0.41
Finished Goods	0.5	0.67	0.76	0.86
Receivables	0.5	0.75	0.90	1.05
Total		2.71	3.14	3.57
Working Capital Margin in Year 1 (40%)	1.08			

5.0 MEANS OF FINANCE

The means of finance for the project is estimated as below.

Particulars	Percent	Amount (Rs lacs)
EQUITY		
A. Equity from Promoters	40%	4.11
B. Subsidy from Central/State Govt.	-	
DEBT		
Term Loan from Banks/FIs	60%	6.16
TOTAL	100%	10.27

6.0 PROFITABILITY STATEMENT

(Rs. in lacs)

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
A. INCOME					
Production capacity (sets of auto control cables/ annum)	60000	60000	60000	60000	60000
Capacity utilisation	50%	60%	70%	70%	70%
Production/annum at capacity utilisation	30000	36000	42000	42000	42000
Average price (Rs/set)	60	60	60	60	60

Total income/annum	18.00	21.60	25.20	25.20	25.20
B. OPERATING EXPENSES					
Raw Materials & Consumables	10.69	12.83	14.97	14.97	14.97
Power	0.21	0.25	0.29	0.29	0.29
Salary	4.80	4.85	4.90	4.95	4.99
Repair & Maintenance	0.08	0.09	0.10	0.11	0.12
Selling Expenses	0.18	0.22	0.25	0.25	0.25
Miscellaneous Expenses	0.09	0.11	0.13	0.13	0.13
Total Operating Expenses	16.06	18.35	20.64	20.70	20.76
Less: operating expenses capitalised	1.08	0.00	0.00	0.00	0.00
Operating profit	3.03	3.25	4.56	4.50	4.44
C. FINANCIAL EXPENSES					
Depreciation	0.41	0.41	0.41	0.41	0.41
Interest on Term Loan	0.49	0.41	0.29	0.18	0.06
Interest on Working Capital Loan	0.26	0.30	0.34	0.34	0.34
Net Profit	1.87	2.13	3.52	3.57	3.63
Net cash accruals	2.28	2.54	3.92	3.98	4.04
Principal Repayment	0.36	1.45	1.45	1.45	1.45

6.1 Estimation of Production Capacity: Production of sets of auto control cables at installed capacity is estimated as below.

Rated Plant Capacity (No. of auto controls cables in single shift per annum)	720000
No. of sets (12 nos/set)	60000

6.2 Raw Materials & Consumables: Expenses on raw materials & consumables at installed capacity is estimated as below.

Particulars	kg/dozen	Quantity required (kg)	Rate (Rs)	Amount (Rs)
SS wire	0.36	21600	80	1728000
Zinc alloy	0.03	1800	120	216000
			Sub total	1944000
Add: Consumables, packing materials, etc @ 10%				194400
Expenses on raw materials & consumables at installed capacity (Rs)				2138400

6.3 Power: Expenses on power at installed capacity is estimated as below.

Connected load (kw)	5
Avg. load factor	70%
Hrs/day	8
Days/annum	300
Rate per unit (Rs)	5
Expenses on power at installed capacity (Rs)	42000

6.4 Salary: Expenses on salary in the 1st year is estimated as given below. It is assumed that salary expenses will increase @ 1% every subsequent year.

Particulars of Employees	Numbers	Salary/Month (Rs)	Cost/annum (Rs)
Manager (Self)	Self	-	-
Skilled workers	3	8000	288000
Semi skilled workers	2	5000	120000
Helpers	2	3000	72000
Expenses on salary in the 1st year (Rs)			480000

6.5 Repair & Maintenance: Expenses on repair & maintenance in the 1st year is estimated as given below. It is assumed that expenses on repair & maintenance will increase @ 10% every subsequent year.

Particulars	Cost (Rs)	Rate	Amount (Rs lacs)
Building & Civil works	5.04	1%	0.05
Machinery & Equipment	3.20	1%	0.03
Misc. Fixed Assets	0.20	1%	0.00
Expenses on repair & maintenance in the 1st year (Rs)			0.08

6.6 Selling Expenses: Selling expenses have been assumed at 1% of sales.

6.7 Miscellaneous Expenses: Miscellaneous expenses have been assumed at 0.5% of sales.

6.8 Depreciation: Depreciation has been calculated by straight line method. The details of calculation are given below.

Description	Cost (Rs)	Rate	Amount/annum (Rs lacs)
Building & Civil works	5.04	3.34%	0.17
Machinery & Equipment	3.20	7.07%	0.23
Misc. Fixed Assets	0.20	6.23%	0.01
TOTAL	8.44		0.41

6.9 Interest on Term Loan & Principal Repayment: Interest rate has been assumed at 8% per annum. Duration of Loan repayment has been considered for a period of 5 years including moratorium period of 9 months with equal monthly instalments. The details of calculation are given below.

(Rs in lacs)

Month	Year	1	2	3	4	5
Month 1	Opening balance	6.16	5.80	4.35	2.90	1.45
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest (8%)	0.04	0.04	0.03	0.02	0.01
	Closing balance	6.16	5.68	4.23	2.78	1.33
Month 2	Opening balance	6.16	5.68	4.23	2.78	1.33
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.04	0.03	0.02	0.01
	Closing balance	6.16	5.56	4.11	2.66	1.21
Month 3	Opening balance	6.16	5.56	4.11	2.66	1.21
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.04	0.03	0.02	0.01
	Closing balance	6.16	5.44	3.99	2.54	1.09
Month 4	Opening balance	6.16	5.44	3.99	2.54	1.09
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.04	0.03	0.02	0.01

	Closing balance	6.16	5.32	3.87	2.42	0.97
Month 5	Opening balance	6.16	5.32	3.87	2.42	0.97
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.04	0.03	0.02	0.01
	Closing balance	6.16	5.20	3.75	2.30	0.85
Month 6	Opening balance	6.16	5.20	3.75	2.30	0.85
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.02	0.01
	Closing balance	6.16	5.08	3.63	2.18	0.73
Month 7	Opening balance	6.16	5.08	3.63	2.18	0.73
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	6.16	4.95	3.50	2.05	0.60
Month 8	Opening balance	6.16	4.95	3.50	2.05	0.60
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	6.16	4.83	3.38	1.93	0.48
Month 9	Opening balance	6.16	4.83	3.38	1.93	0.48
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	6.16	4.71	3.26	1.81	0.36
Month 10	Opening balance	6.16	4.71	3.26	1.81	0.36
	Repayment	0.12	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	6.04	4.59	3.14	1.69	0.24
Month 11	Opening balance	6.04	4.59	3.14	1.69	0.24
	Repayment	0.12	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	5.92	4.47	3.02	1.57	0.12
Month 12	Opening balance	5.92	4.47	3.02	1.57	0.12
	Repayment	0.12	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	5.80	4.35	2.90	1.45	0.00
Principal Repayment		0.36	1.45	1.45	1.45	1.45
Interest		0.49	0.41	0.29	0.18	0.06

7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5	TOTAL
Profit After Tax (Net Profit)	1.87	2.13	3.52	3.57	3.63	
Depreciation	0.41	0.41	0.41	0.41	0.41	
Interest	0.49	0.41	0.29	0.18	0.06	
Total	2.77	2.95	4.22	4.16	4.10	18.19
Interest	0.49	0.41	0.29	0.18	0.06	
Loan repayment	0.36	1.45	1.45	1.45	1.45	
Total	0.85	1.86	1.74	1.63	1.51	7.60
DSCR	3.24	1.59	2.42	2.55	2.71	

Average DSCR = 2.39

8.0 BREAK EVEN POINT (BEP)

(Rs. in lacs)

Year	1	2	3
A. Net sales	18.00	21.60	25.20
B. Variable cost			
Raw Materials & Consumables	10.69	12.83	14.97
Power	0.21	0.25	0.29
Selling Expenses	0.18	0.22	0.25
Miscellaneous Expenses	0.09	0.11	0.13
Interest on Working Capital Loan	0.26	0.30	0.34
Total variable cost	11.43	13.71	15.98
C. Contribution (A-B)	6.57	7.89	9.22
D. Fixed & Semi-fixed Costs			
Salary	4.80	4.85	4.90
Repair & Maintenance	0.08	0.09	0.10
Interest on Term Loan	0.49	0.41	0.29
Depreciation	0.41	0.41	0.41
Total fixed cost	5.78	5.76	5.70
E. BREAK EVEN POINT	88.04%	72.97%	61.85%
F. BEP at operating capacity	44.02%	43.78%	43.29%
G. Cash BEP	40.92%	40.68%	40.20%

9.0 INTERNAL RATE OF RETURN (IRR)

(Rs. in lacs)

Year	0	1	2	3	4	5
CASH OUTFLOW						
Capital Expenditure	8.44	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	2.71	0.43	0.43	0.00	0.00
Total (A)	8.44	2.71	0.43	0.43	0.00	0.00
CASH INFLOW						
Profit After Tax		1.87	2.13	3.52	3.57	3.63
Add: Depreciation		0.41	0.41	0.41	0.41	0.41
Add: Interest		0.49	0.41	0.29	0.18	0.06
Add: Salvage Value						
Total (B)	0.00	2.77	2.95	4.22	4.16	4.10
NET FLOW (B-A)	-8.44	0.06	2.52	3.79	4.16	4.10

IRR = 17%

MACHINERY SUPPLIERS

- (a) Upkar Engineering Works
No. 19/174, Sarai Rohilla, Old Rohtak Road, New Delhi - 110 035, Delhi, India
- (b) Sant Engineering Industries
No. 580, Main Faiz Road, Street No.17, Karol Bagh, New Delhi - 110005, Delhi, India
- (c) Akash Industries
Plot No. 915, Gali No. 5, Krishna Vihar Industrial Area, Sewa Dham, Mandoli Road,
Ghaziabad - 201 001, Uttar Pradesh, India