

# **AUTOMOTIVE CONTROL CABLES**



## **1. INTRODUCTION:**

Automotive control cables are the most imperative parts of the automotive industry.

These cables are used for control of mechanical movements in variety of machines/ systems including aerospace and vehicles. But maximum quantity is consumed by two wheeler segment in automobile sector.

## **2. PRODUCT & ITS APPLICATION:**

The control cables basically are stranded high tensile wires ropes and they are used for brake, gear and clutch etc. small movement control through levers/ handles. These wires are normally used with coiled wire casings and coated with PVC. As described above these products are essential for almost all two wheeler and other automobile systems. These products have specific life span and may break due to wear and tear in use. The range of products is as below:

Two Wheeler Cables for Motorcycles, Scooters, Electric Bikes and Mopeds, Three Wheeler Cables for Load Carriers and Passenger Carriers, Passenger Car Cables, Tractor Cables, Commercial Vehicle Cables for Light Commercial Vehicles, Buses and Trucks, Snowmobile Cables, Cables for Construction, Earth Moving and Material Handling Equipment: viz. Cranes, Vibratory Compactors, Backhoe Loaders, Front Loaders, Lorry Loaders, Forklifts and Excavators and Non-Automotive Cables:

Health Equipment Cables, Aircraft Cables, Marine Cables, Washing Machine Cables, Lawn Mower Cables.

Entrepreneur can look at popular products on internet produced by leading units all over the world to narrow down his product selection.

### **3. DESIRED QUALIFICATIONS FOR PROMOTER:**

The promoter with Graduates and ITI Pass (Mechanic) or Diploma holders and having experience in auto spares business will be able to be able to manage the project well.

### **4. INDUSTRY OUTLOOK/TREND**

Control Cables includes flexible control cables and flexible automation cables. These cables are supplied to a variety of industries and applications, including robotics, manufacturing, construction, power and distribution, and more. They are common in both commercial and industrial markets. However these control cables find application in large volumes mostly in automotive sector.

The Indian auto industry is one of the largest in the world. The industry accounts for 7.1 per cent of the country's Gross Domestic Product (GDP). The Two Wheeler segment with 80 per cent market share is the leader of the Indian Automobile market owing to a growing middle class and a young population. Moreover, the growing interest of the companies in exploring the rural markets further aided the growth of the sector. The overall Passenger Vehicle (PV) segment has 14 per cent market share. Production of passenger vehicles, commercial vehicles, three wheeler and two wheeler grew at 5.41 per cent in FY17 to 25,316,044 vehicles from 24,016,599 vehicles in FY16. The sales of passenger vehicles, commercial vehicles and two wheeler grew by 9.23 per cent, 4.16 per cent and 6.89 per cent respectively, during the period April-March 2017.

India is also a prominent auto exporter and has strong export growth expectations for the near future. In April-March 2017 exports of PV and Commercial Vehicles

(CV) registered a growth of 16.20 per cent and 4.99 per cent respectively, over April-March 2016. The Indian automotive spare component - aftermarket is estimated to grow at around 10-15 per cent to reach US\$ 16.5 billion by 2021 from around US\$ 7 billion in 2016. It has the potential to generate up to US\$ 300 billion in annual revenue by 2026, create 65 million additional jobs and contribute over 12 per cent to India's Gross Domestic Product

## **5. MARKET POTENTIAL AND MARKETING ISSUES. IF ANY:**

The Indian auto-components industry has experienced healthy growth over the last few years. Some of the factors attributable to this include: a buoyant end-user market, improved consumer sentiment and return of adequate liquidity in the financial system. The auto-component industry of India has expanded by 14.3 per cent because of strong growth in the after-market sales to reach at a level of Rs 2.92 lakh crore (US\$ 44.90 billion) in the year 2017. The auto-components industry accounts for almost seven per cent of India's Gross Domestic Product (GDP) and employs as many as 25 million people, both directly and indirectly. A stable government framework, increased purchasing power, large domestic market, and an ever-increasing development in infrastructure have made India a favorable destination for investment.

The Indian automotive aftermarket is expected to grow at a CAGR of 10.5 per cent and reach Rs 75,705 crore (US\$ 13 billion) by the year 2019-20, according to the Automotive Component Manufacturers Association of India (ACMA). These estimates are in sync with the targets of the Automotive Mission Plan (AMP) 2016-26.

Auto control cables are an important component for two-wheeler segment and shall have reasonable growth. A new unit ensuring range and quality will be having good market potential in replacement markets, exports and original equipment producers (OEM) like auto and equipment manufacturers. The unit can also add variety of steel wire products and coils for industrial use.

## 6. RAW MATERIAL REQUIREMENTS:

These products are made by wire drawing from wire rods. The main raw material is high tensile spring steels of different grades. Also for casing coating PVC / PP and other plastics are used.

## 7. MANUFACTURING PROCESS:

The HT and spring steel grades are produced from various wire rods of desired diameter which is a starting input material. These wire rods are then passed through wire drawing dies in various intermediate stages and then in a set of final finishing dies the desired diameter and finish is achieved. These wires are then heat treated and stranded to produce wire rope as per the design specified of control cables for different vehicles applications. These wire ropes are then treated to achieve desired properties viz. strength. These cables are having different end connections/ lug to connect with levers / handles. Casings or sleeves of these wires are produced from coiled wires to form hollow conduit to pass the control cables. These coiled sleeves/ conduits are normally coated with PVC plastic.

## 8. MANPOWER REQUIREMENT:

The unit shall require highly skilled service persons. The unit can start from 18 employees initially and increase to 33 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	15000	5	6	8	8	8
2.	Semi-Skilled/ Helpers	8000	10	12	16	20	20
3.	Supervisor/ Manager	25000	1	1	1	1	1
4.	Accounts/ Marketing	18000	1	1	2	2	2
5.	Other Staff	7000	1	2	2	2	2
	TOTAL		18	22	29	33	33

## 9. IMPLEMENTATION SCHEDULE:

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

The unit is based on selection of location, renting premises for the unit.

<b>Sr. No.</b>	<b>Activities</b>	<b>Time Required in Months</b>
1	Acquisition of Premises	2
2	Construction (if Applicable)	2
3	Procurement and Installation of Plant and Machinery	2
4	Arrangement of Finance	2
5	Manpower Recruitment and start up	1
	Total Time Required (Some Activities run concurrently)	6

#### **10. COST OF PROJECT:**

The unit will require total project cost of Rs 99.59 lakhs as shown below:

<b>Sr. No.</b>	<b>Particulars</b>	<b>In Lakhs</b>
1	Land	15.00
2	Building	35.00
3	Plant and Machinery	23.10
4	Fixtures and Electrical Installation	3.65
5	Other Assets/ Preliminary and Preoperative Expenses	3.00
6	Margin for working Capital	19.84
	TOTAL PROJECT COST	99.59

#### **11. MEANS OF FINANCE:**

The project will require promoter to invest about Rs 43.76 lakhs and seek bank loans of Rs 55.83 lakhs based on 70% loan on fixed assets.

<b>Sr No</b>	<b>Particulars</b>	<b>In Lakhs</b>
1	Promoters Contribution	43.76
2	Loan Finance	55.83
	TOTAL :	99.59

## 12. WORKING CAPITAL REQUIREMENTS:

Working capital requirements are calculated as below:

Sr. No.	Particulars	Gross Amount	Margin %	Margin Amount	Bank Finance
1	Inventories	6.24	40	2.50	3.74
2	receivables	14.67	50	7.33	7.33
3	Overheads	4.14	100	4.14	0.00
4	Creditors	14.67	40	5.87	8.80
	TOTAL	39.71		19.84	19.88

## 13. LIST OF MACHINERY REQUIRED:

The layout suitable for different activities is required to be planned to ensure smooth material and product flow.

Sr. No.	Particulars	UOM	Quantity	Rate	Total Value
	Main Machines/ Equipment				
1	Wire Drawing machine	Nos	2	80000	160000
2	Planetary stranding machine	Nos	2	200000	400000
3	Coiling /strip armoring machines	Nos	2	300000	600000
4	Plastic Extrusion Machine	Nos	1	500000	500000
5	Die casting unit for Handle/ Lugs	Nos	1	100000	100000
6	Assembly/ packing machine and conveyor	Nos	1	200000	200000
7	Testing machines	Nos	1	100000	100000
	subtotal :				2060000
1	Tools and Ancillaries				
Sr. No.	Particulars	UOM	Quantity	Rate	Total Value
2	Dies and Molds	LS	1	150000	150000
3	Other Tools	LS	1	50000	50000
4	Misc spares	LS	1	50000	50000
	subtotal :				250000
	Fixtures and Elect Installation				
	Storage racks	LS	1	50000	50000
	Other Furniture	LS	1	25000	25000

	Telephones/ Computer	LS	1	40000	40000
	Electrical Installation	LS	1	250000	250000
	subtotal :				365000
	Other Assets/ Preliminary and Preoperative Expenses	LS	1	300000	300000
	TOTAL PLANT MACHINERY COST				2975000

All the machines and equipment 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 designs. It may be worthwhile to look at reconditioned imported machines, dies and tooling. Some of the machinery and dies and tooling suppliers are listed here below:

1. Mayfair Machine Kraft Private Limited  
No. 5 A-9 Acre, Kothari Compound, SV Road, Thane-400610, Maharashtra, India
2. Shree Ramvijay Engineering & Brass Works  
Siddhant Panchal (Partner), Plot No. 229/230, G. I. D. C., Hansalpur, Viramgam, Ahmedabad - 382150, Gujarat, India
3. Swaraj Technocrafts Private Limited Plot No. 40, Sector- 2 District Dhar, Pithampur-454775, Madhya Pradesh, India
4. B.T.I. Machine Tools  
Plot No. XXIII-1943/9, 423, Kabir Complex, Industrial Area A Near Cheema Chowk, Ludhiana-141003, Punjab, India
5. Assomac Machines Ltd.  
26/2, SOUTH OF G.T.ROAD, B.S.ROAD INDL.AREA, SITE NO.1 Ghaziabad - 201001, Uttar Pradesh, India

#### **14. PROFITABILITY ESTIMATES**

Sr. No.	Particulars	UOM	Year Wise estimates				
			Year 1	Year 2	Year 3	Year 4	Year 5
1.	Sales	Rs Lakhs	88.00	110.00	132.00	154.00	176.00
2.	Raw Materials & Other Direct Inputs	Rs Lakhs	24.97	31.21	37.45	43.69	49.93
3.	Gross Margin	Rs Lakhs	63.03	78.79	94.55	110.31	126.07
4.	Overheads Except Interest	Rs Lakhs	33.12	33.12	33.12	33.12	33.12
5.	Interest	Rs Lakhs	6.70	6.70	6.70	6.70	6.70
6.	Depreciation	Rs Lakhs	6.48	6.48	6.48	6.48	6.48
7.	Net Profit Before Tax	Rs Lakhs	16.74	32.50	48.26	64.02	79.77

The basis of profitability calculation:

The Unit will have capacity of 1 Million meter control cables (about 1.35 million meters including conduit wires) per year of assorted types/ designs. The sales prices of control cables range from range from Rs 20 to Rs 25 per meter or more depending on type, wire strand construction, tensile strength and volumes. The raw material cost control cables ranges from 180 to 200 per kg for spring steel wires and that of carbon steel for conduits range from Rs 40 to 60 per Kg. The material requirements are considered with wastage/ scrap etc of 5 % of finished products. The unusable scrap is sold at @ Rs 18 ~ 25 per Kg. and the income of same is added. Energy Costs are considered at Rs 7 per Kwh and fuel cost is considered at Rs. 65 per liter. The depreciation of plant is taken at 10 % and Interest costs are taken at 14 -15 % depending on type of industry.

## 15. BREAK EVEN ANALYSIS

The project is can reach break-even capacity at 29.38 % of the installed capacity as depicted here below:

Sr. No.	Particulars	UOM	Value
1	Sales at Full Capacity	Rs Lakhs	220.00
2	Variable Costs	Rs Lakhs	62.42
3	Fixed Cost incl. Interest	Rs Lakhs	46.29



4	Break Even Capacity	% of Inst Capacity	29.38
---	---------------------	-----------------------	-------

## **16. STATUTORY/ GOVERNMENT APPROVALS**

The unit shall have to get state industrial unit registration from DIC, IEC Code for Export and local authority clearance. Depending on structure of finance the company shall need to register company with registrar of companies. The registration and approval for factory plan, safety for Fire etc requirement, registration as per Labour laws ESI, PF etc. shall be required as per rules and applicability. Before starting the unit, there is need for GST registration for procurement of materials as also for sale of goods. As such there is no pollution control registration requirement, however the unit will have to ensure safe environment as per rules of factory safety. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

Solid waste disposal shall have to meet the required norms.

## **17. BACKWARD AND FORWARD INTEGRATION**

The machines and equipment offer scope for diversification in to producing other consumer and industrial parts/ components wiz. Wire cloth, reed wires, nails, etc by using the spare capacities and machine capabilities. As such there is not much scope for organic backward or forward integration.

## **18. TRAINING CENTERS/COURSES**

There are no specific training centers for control cable design or production technology. Wire drawing technology and the dies and tools development courses run by several centers of excellence viz Indo German Tool Room at Ahmedabad, Rajkot, Chennai, and CTTC Bhubaneshwar etc 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.

Udyamimitra portal (link : [www.udyamimitra.in](http://www.udyamimitra.in) ) can also be accessed 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.

Source:- Udyami Mitra/Sidbi