

## **SECTOR B: ENGINEERING**

### **B-1: INTEGRATED LEVEL CONTROL SYSTEMS**

#### **1. TECHNOLOGY DESCRIPTION**

The technology is for design and manufacture of level control systems and tank inventory management system. The product has been developed indigenously and with continuous improvement through R&D and feedback from clients and end users. The products are extremely reliable.

#### **2. TECHNOLOGY STATUS**

The technology has been fully commercialized and the products are in use for the last 25 years in various cement plants, continuous process plants etc. Since the uses of these equipments are in Refinery and Oil sector, suitability for any developing country is assured.

### 3. COMPANY PROFILE

Company Name	SBEM Pvt. Ltd. (Formerly S B Electro-Mechanicals Pvt. Ltd.)
Address	39, Electronic Co-operative Estate, Pune-Satara Road, Pune 411009 Maharashtra (India) Tel: +91-20-422 0505/ 422 3375 Fax: +91-20-421 5670
Contact Person	Mr. N K Bedarkar, Managing Director
E-mail	<a href="mailto:sales@sbem.co.in">sales@sbem.co.in</a> <a href="mailto:sbemsales@vsnl.com">sbemsales@vsnl.com</a>
Web Site	<a href="http://www.sbem-india.com">http://www.sbem-india.com</a>
Year of Establishment	: 1974
Products manufactured	: Level gauges /controllers for solid and liquids and integrated systems.
Installed Capacity per annum	: 20,000 Nos. plus integrated systems
Production (2000-01)	: 12000 pieces plus integrated systems
Sales Turnover (2000-01)	: Rs. 45.00 Million [US \$ 0.90 Million]
Exports	: ---
Conformity to standards	: Indian standards
Compliance to ISO	: No
Foreign Collaboration	: None
Manpower Total	: 95
Tech. & Admin.	: 40

Raw Materials Used	:	Metal Parts, Cabinets, Electronic Components, Microprocessor chips
Effluent generated	:	Nil

#### 4. BROAD PROFILE OF EXPECTED PROJECT

<b>Project Features</b>		
Project	:	To manufacture Integrated Systems including level gauges /controllers for solid & liquids
Capacity	:	10,000 Nos. plus integrated systems
Land Requirements	:	6000 Sq. Ft. [557 Sq. Mtr.]
Building Requirements	:	3000 Sq. Ft. [279 Sq. Mtr.]
P & M and Test Equipment	:	Rs.15 Million [US \$ 0.30 Million]
Electrical Installation	:	100 KVA
Implementation Period	:	6-9 Months
Raw Materials Required	:	Metal Parts, Cabinets, Electronic Components, Microprocessor chips
Manpower	:	95 Total

<b>Financial Data</b>		
Total Project Cost	:	Rs. 25.00 Million [US \$ 0.50 Million]
Expected Annual Sales	:	Rs. 10.00 Million [US \$ 0.20 Million]
Profitability	:	15 to 20 %

<b>Target Market</b>	:	<b>African Countries, CIS Countries</b>
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### SECTOR B: ENGINEERING

## **B-2: NICKEL MICRO SCREENS**

### **1. TECHNOLOGY DESCRIPTION / APPLICATION**

Technology for manufacture of Nickel Micro Screens, used in sugar industries, is available. These screens are manufactured by electro forming which means a method of electro deposition on molds, dies or matrices. Using photographic techniques of reduction followed by etching produces a matrix. Highly accurate matrix having intricate slot shapes can be formed by this technology. These screens are made out of very high purity 99.99% Nickel having hard chromium plating. These screens are used in continuous centrifugal machines for separation of crystals. The screens manufactured by this technology are highly wear resistant, do not deform and ensure efficient crystal separation.

### **2. TECHNOLOGY STATUS**

The technology was developed through rigorous R&D and these nickel screens are very well accepted in Indian market, with a market share of almost 75%. These screens are now being exported to USA, Europe, Brazil, African and Asian countries and Australia. The screens manufactured out of this process have also been supplied in other industrial sectors like food processing, coffee machines, flour grinders, paint and chemical industries.

### 3. COMPANY PROFILE

Company Name		ATUL ELECTROFORMERS PVT. LTD.
Address		11, Kubera Estate, 408/14, CTS no. 10, Gultekadi Road, Pune 411037 Maharashtra (India) Tel: +91-20-427 0398 / 426 4589 Fax: +91-20-427 2835
Contact Person		Mr. Anil Deshpande, Executive Director
E-mail		<a href="mailto:atulefpl@vsnl.com">atulefpl@vsnl.com</a>
Web Site		<a href="http://www.atulscreens.com">http://www.atulscreens.com</a>
Year of Establishment	:	1972
Products manufactured	:	Nickel micro Screens for sugar industries
Installed Capacity	:	30,000 Sheets per Annum
Production (2000-01)	:	20,000 to 22,000 Sheets per Annum
Sales Turnover (2000-01)	:	Rs. 85 Million [US \$ 1.70 Million]
Exports	:	Rs. 21 Million [US \$ 0.42 Million]
Conformity to standards	:	Indian Standard Specifications
Compliance to ISO	:	Yes
Foreign Collaboration	:	None
Manpower Total	:	75 Nos.
Tech. & Admin.	:	20 Nos.
Raw Materials Used	:	Nickel, Chromium
Effluent generated	:	Negligible

### 4. BROAD PROFILE OF EXPECTED PROJECT

<b>Project Features</b>	
Project	: To manufacture Nickel screens for sugar industry, chemical industry, food processing, paints etc.
Capacity	: 9,000 Sheets per Annum
Land Requirements	: 7,000 Sq. Ft. [650 Sq. Mtr.]
Building Requirements	: 4,000 Sq. Ft. [372 Sq. Mtr.]
Plant & Machinery and Test Equipment	: Rs. 13 Million [US \$ 0.26 Million]
Electrical Installation	: 110 KVA
Implementation Period	: 9 – 12 Months
Manpower Required (Total)	: 40 Nos.
Raw Materials Required	: Nickel, Chromium

<b>Financial Data</b>	
Total Project Cost	: Rs. 20 Million [US \$ 0.40 Million]
Expected Annual Sales	: Rs. 25 Million [US \$ 0.50 Million]
Profitability	: 10% to 15%

<b>Target Market</b>	: <b>Brazil, Cuba, Mexico, Australia, Indonesia, Thailand, China, and African Countries</b>
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## **SECTOR B: ENGINEERING**

### **B-3: POWER TRANSMISSION SYSTEMS (SPEED REDUCERS)**

## **1. TECHNOLOGY DESCRIPTION**

The technology is for the product and process of manufacturing of mechanical power transmission system like speed reducers. These speed reducers offer unprecedented operating advantages like very high operating efficiency, space saving compactness, easy mounting, wide range of reduction ratios and almost maintenance free operation. The manufacturing process is based on the principle of cycloidal movement obtained by graphically superimposing the two movements of a planet, which produces a curve called cycloidal. The products are used in food processing, material handling, dairy equipment, pharma and chemical industries, textile industries, ash and coal handling and effluent treatment plants etc.

## **2. TECHNOLOGY STATUS**

The technology is well established and commercialized. Technology can be easily absorbed and has applications in many sectors of industries.

### 3. COMPANY PROFILE

Company Name		HYLO TRANSMISSION PVT. LTD.
Address		84, Shivajinagar, Juna Topkhana, Rasane Industrial Area Pune – 411005 Mah (India) Telefax: + 91-20-5536031
Contact Person		Mr. Arun Soman, M. D.
E-mail		<a href="mailto:arunsoman@hylospeedreducers.com">arunsoman@hylospeedreducers.com</a>
Web Site		<a href="http://www.hylospeedreducers.com">http://www.hylospeedreducers.com</a>
Year of Establishment	:	1985
Products manufactured	:	Mechanical Power Transmission System
Installed Capacity	:	1200 Nos.
Production (2000-01)	:	580 Nos.
Sales Turnover (2000-01)	:	Rs. 8.60 Million [US \$ 0.172 Million]
Exports	:	---
Conformity to standards	:	Indian Standard Specifications
Compliance to ISO	:	Yes
Foreign Collaboration	:	None
Manpower Total	:	10 Nos.
- Tech. & Admin.	:	2 Nos.
Raw Materials Used	:	Compacted Graphite Iron Ductile Iron Austempered Ductile Iron Steel Castings Carbon & Low-Alloy Steels Corrosion-Resistant Steels Heat-Resistant Steels Manganese & Wear-Resistant Steels
Effluent generated	:	NIL



#### 4. BROAD PROFILE OF EXPECTED PROJECT

<b>Project Features</b>	
Project	: To manufacture mechanical transmission system
Capacity	: 1000 Nos.
Land Requirements	: 5,000 Sq. Ft. [465 Sq. Mtr.]
Building Requirements	: 3,000 Sq. Ft. [279 Sq. Mtr.]
Plant & Machinery and Test Equipment	: Rs. 4.50 Million [US \$ 0.090 Million]
Electrical Installation	: 20 KVA
Implementation Period	: 6 - 12 Months
Manpower Required (Total)	: 10 Nos.
Raw Materials Required	: Compacted Graphite Iron Ductile Iron Austempered Ductile Iron Steel Castings Carbon & Low-Alloy Steels Corrosion-Resistant Steels Heat-Resistant Steels Manganese & Wear-Resistant Steels

<b>Financial Data</b>	
Total Project Cost	: Rs. 6.5 Million [US \$ 0.13 Million]
Expected Annual Sales	: Rs. 6.0 Million [US \$ 0.12 Million]
Profitability	: 10% to 12 %

<b>Target Market</b>	: <b>African Countries, CIS Countries</b>
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### SECTOR B: ENGINEERING

#### B-4: SEWAGE MAINTENANCE SYSTEM / DRAIN CLEANERS

## 1. TECHNOLOGY DESCRIPTION

Sewage Maintenance Systems / Drain Cleaners.

Employing a range of non-motorized / motorized / indoor & outdoor - Drain Cleaning Equipment are suitable for use in lines varying from 2" to 20" diameter.

The systems are widely used in Hotels, Hospitals, Industries, Utilities, etc.

The systems can be of trailer / chassis mounted vacuum loaders, jettors, combines, pneumatic plugs, gas monitors, safety equipment and other accessories.

The systems are used by a number of agencies such as Municipal Corporations, Autonomous Water Supply & Sewerage Boards, Municipal Councils, Public Health Departments, and Manufacturing

## 2. TECHNOLOGY STATUS

The products manufactured are being marketed all over India since 7 years as well as exported to many African countries.

## 3. COMPANY PROFILE

Company Name	KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.
Address	Office: Plot No. 2, Sr. No. 255/1 (Part), Village Hinjawadi, Tal. Mulshi, Dist. Pune 411027 Maharashtra India

		Tel.: +91-20-293 2101/ 293 2101 Fax: +91-20-293 2712
Contact Person		Mr. M Krishna, Managing Director
E-mail		<a href="mailto:query@kam-avida.com">query@kam-avida.com</a>
Web Site		<a href="http://www.kam-avida.com">http://www.kam-avida.com</a>
Year of Establishment	:	1994
Products manufactured	:	Complete Vehicles carrying Drain Cleaners and other systems (such as Hand Spinners, Non-motorized Outdoor Drain Cleaners, Trolley-mounted Cabling Machine, Trailer-mounted Vacuum Loaders and Jetting Systems, Chassis-mounted Vacuum Loaders, Jetting and Combination Systems) and related accessories (such as Hoses, Nozzles, Plugs, etc.) as specified by the customers.
Installed Capacity	:	70 Vehicles Per Annum These are made to order based upon customers' requirements and designs and use.
Production (2000-01)	:	50 Vehicles Per Annum
Sales Turnover (2000-01)	:	Rs. 100 Million [US \$ 2.00 Million]
Exports	:	Rs. 20 Million (SAARC Countries) [US \$ 0.40 Million]
Conformity to standards	:	Indian Standards
Compliance to ISO	:	No.
Foreign Collaboration	:	No.

Manpower Total (Nos.)	:	30
Raw Materials Used	:	Using ready-made prefabricated, bought-out material and assembling the sub-components to form the desired system as per customers' needs. Pre-fabricated Steel Parts (Cabinets, Nozzles), Electrical

		Components (Motors), Thermoplastics (Hoses), Custom Made Fabricated parts are prepared as per Customers' design and materials specified by them.
Effluent generated	:	Nil

#### 4. BROAD PROFILE OF EXPECTED PROJECT

<b>Project Features</b>		
Project	:	To manufacture and Market wide range of drain cleaners
Capacity	:	50 Vehicles Per Annum
Land Requirements	:	5,000 Sq. Ft. [465 Sq. Mtr.]
Building Requirements	:	2,000 Sq. Ft. [186 Sq. Mtr.]
Plant & Machinery and Test Equipment	:	Rs. 40 Million [US \$ 0.80 Million]
Electrical Installation	:	25 KVA
Implementation Period	:	6-9 Months
Manpower Required (Total)	:	30 Nos.
Raw Materials Used	:	Pre-fabricated Steel Parts (Cabinets, Nozzles), Electrical Components (Motors), Thermoplastics (Hoses), Custom Made Fabricated parts are prepared as per Customers' design and materials specified by them.

<b>Financial Data</b>		
Total Project Cost	:	Rs. 60 Million [US \$ 1.20 Million]
Expected Annual Sales	:	Rs. 100 Million [US \$ 2.00 Million]
Profitability	:	10 % to 15 %

<b>Target Market</b>	:	<b>Neighboring SAARC Countries, African Countries, CIS Countries</b>
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## **SECTOR B: ENGINEERING**

### **B-5: TELECOM EQUIPMENT (EPABX)**

#### **1. TECHNOLOGY DESCRIPTION**

EPABX Systems are now becoming major office components of modern offices. The EPABX has made the mundane job of handling daily calls simple and automated today. Thus, one can efficiently handle the daily calls/ requests made, smoothly ensuring customer effectiveness. EPABX system has found applications at diverse places like offices, banks, hospitals, institutions, manufacturing industries, and homes.

## **2. TECHNOLOGY STATUS**

The EPABX Systems (upto 16 to 20 lines) manufactured with this technology are in use in various Market segments (as mentioned above) all over the country and have performed very well. The product is used necessarily for communication purpose and shall have continuous demand in the coming decades.

### 3. COMPANY PROFILE

Company Name		LEGEND COMMUNICATIONS PVT. LTD.
Address		3, D M Plaza, Sitabaug Colony, Opposite Parwati Water Works, Sinhagad Road, Pune 411030 Tel: +91-20-433 5411 / 433 6307 Fax: +91-20-433 0078
Contact Person		Mr. Makrand Joshi, Director Mr. P M Pandit, Sr. Marketing Executive
E-mail		<a href="mailto:legendco@pn2.vsnl.net.in">legendco@pn2.vsnl.net.in</a>
Web Site		<a href="http://www.legendcom.com">http://www.legendcom.com</a>
Year of Establishment	:	1990
Products manufactured	:	Microprocessor based EPABX System
Installed Capacity per annum	:	200-250 EPABX Systems per month
Production (2000-01)	:	200-250 EPABX Systems per month
Sales Turnover (2000-01)	:	Rs. 28 Million [US \$ 0.56 Million]
Exports	:	---
Conformity to Standards	:	TEC DOT Approved*
Compliance to ISO	:	No
Foreign Collaboration	:	None
Manpower Total	:	100
Tech. & Admin.	:	70 & 30
Raw Materials Used	:	Electronic Components (Resistors, Capacitors, PCBs, ICs, Transistors.
Effluent generated	:	Nil

\*TEC – Telecommunication Engineering Centre,  
DOT- Dept. of Telecommunications

#### 4. BROAD PROFILE OF EXPECTED PROJECT

<b>Project Features</b>		
Project	:	Microprocessor based EPABX System
Capacity	:	200-250 EPABX Systems per month.
Land Requirements	:	10,000 Sq. Ft. [929 Sq. Mtr.]
Building Requirements	:	4,000 Sq. Ft. [372 Sq. Mtr.]
Plant & Machinery and Test Equipment	:	Rs. 3.00 Million [US \$ 0.060 Million] (Wave Soldering Machine, Signal Generator, Signal Oscillator, CRO, Noise Meter, dB Loss Meter, Dial Pulse Meter, Power Supply, etc.)
Electrical Installation	:	20 HP (15 KVA)
Implementation Period	:	5-8 Months
Manpower	Total	100
Technical	:	70
Administrative	:	30
Raw Materials Required	:	Electronic Components (Resistors, Capacitors, PCBs, ICs, Transistors, etc.)

<b>Financial Data</b>		
Total Project Cost	:	Rs. 6.00 Million [US \$ 0.12 Million]
Expected Annual Sales	:	Rs. 12.00 Million [US \$ 0.24 Million] (At 40% capacity utilization)
Profitability	:	15% to 20%

<b>Target Market</b>	:	<b>African Countries, CIS Countries</b>
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#### SECTOR B: ENGINEERING

#### B-6: TACTILE & MEMBRANE SWITCHES, DIALS & STICKERS, SECURITY CARDS & SMART CARDS



## **1. TECHNOLOGY DESCRIPTION**

Printed plastic products viz. tactile & membrane switches, dials & stickers, security cards & smart cards have been successfully developed. These products are available for technology transfer with detailed know-how for manufacture and testing of products. The products have been developed indigenously and are in use for the past 15 years.

The Mahavir Group of Industries was set up in 1987 and is a pioneer in printed plastics. Within a short span of time, Mahavir has achieved Market leader status and is today among the leading manufacturers of printed plastics for the consumer electronic industries, telecom, automotive companies, banking, process control industries, industrial electronics and instrumentation companies in India.

The Mahavir Group was accredited with an ISO 9002 certification in 1996. Our Quality System was further upgraded to an ISO 9001:2000 certification in June-2002.

The Golden Élan award for phone card design awarded by ICMA, USA in September-2002 is the latest addition to this list.

## **2. TECHNOLOGY STATUS**

The products have been in commercial use in industries such as home appliances, process industries, private organizations, research & development firms, govt. organizations, etc. The products are manufactured by a simple process although stringent quality control and testing procedures are to be adopted.

The product range includes Labels, Stickers, Dials, Flexible Speaker Grills, Membrane Switches and Security Cards. The Mahavir Group was awarded the ISO 9002 certification in 1996.

These products have substantial demand all over the world.

### 3. COMPANY PROFILE

Company Name		MAHAVIR GROUP OF INDUSTRIES
Address		Mahavir Chambers, 12, Premanand Society Pune Satara Road, Balajinagar, Pune-411043 Tel: +91-20-437-6223 / 437-3323 Fax: +91-20-437-2849
Contact Person		Mr. V M Gandhi, Managing Director Mr. M S Bhagwat, Director (Technical)
E-mail		<a href="mailto:vmgandhi@mahavirindia.com">vmgandhi@mahavirindia.com</a> <a href="mailto:msbhagwat@mahavirindia.com">msbhagwat@mahavirindia.com</a>
Web Site		<a href="http://www.mahavirindia.com">http://www.mahavirindia.com</a>
Year of Establishment	:	1987
Products manufactured	:	Tactile & Membrane Switches Dials & Stickers Security Cards & Smart Cards
Installed Capacity	:	---
Production (2000-01)	:	Tactile & Membrane Switches [Rs. 70 Million] Dials & Stickers [Rs. 200 Million] Security Cards & Smart Cards [Rs. 30 Million]
Sales Turnover (2000-01)	:	Rs. 300 Million [US \$ 6.0 Million]
Exports	:	Rs. 50 Million [US \$ 1.0 Million]
Conformity to standards	:	Indian Standard Specifications
Compliance to ISO	:	Yes
Foreign Collaboration	:	None
Manpower Total	:	250 Nos.

Raw Materials Used	:	<ul style="list-style-type: none"> <li>▪ Various grades of plastics [viz., PVC, Vinyl, Polyester, Poly Carbonate, etc.].</li> <li>▪ Aluminum Sheets</li> <li>▪ Metalised Foils</li> </ul>
Effluent generated	:	NIL

#### 4. BROAD PROFILE OF EXPECTED PROJECT

Project Features		
Project	:	To manufacture Tactile & Membrane Switches, Dials & Stickers, Security Cards & Smart Cards
Capacity	:	Tactile & Membrane Switches [Rs. 30 Million] Dials & Stickers [Rs. 100 Million] Security Cards & Smart Cards [Rs. 10 Million]
Land Requirements	:	10,000 Sq. Ft. [929 Sq. Mtr.]
Building Requirements	:	4,000 Sq. Ft. [372 Sq. Mtr.]
Plant & Machinery and Test Equipment	:	Rs. 70 Million [US \$ 1.40 Million]
Electrical Installation	:	150 KVA

Implementation Period	:	12 –15 Months
Manpower Required (Total)	:	100 Nos.
Raw Material Required	:	<ul style="list-style-type: none"> <li>▪ Various grades of plastics [viz., PVC, Vinyl, Polyester, Poly Carbonate, etc.].</li> <li>▪ Aluminum Sheets</li> <li>▪ Metalised Foils</li> </ul>

<b>Financial Data</b>		
Total Project Cost	:	Rs. 70 Million [US \$ 1.40 Million]
Expected Annual Sales	:	Rs. 140 Million [US \$ 1.80 Million]
Profitability / ROI	:	Net 15% to 20%

<b>Target Market</b>	:	<b>South Africa, Central Asian Countries</b>
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