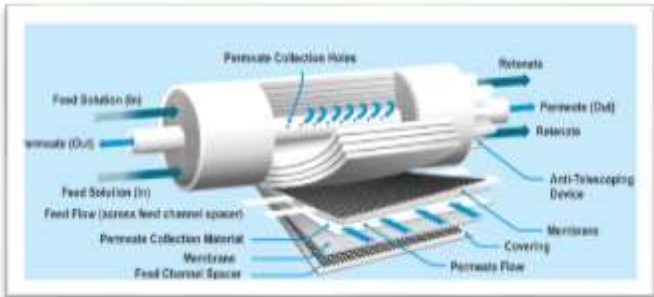




# ABS TUBE for Membrane

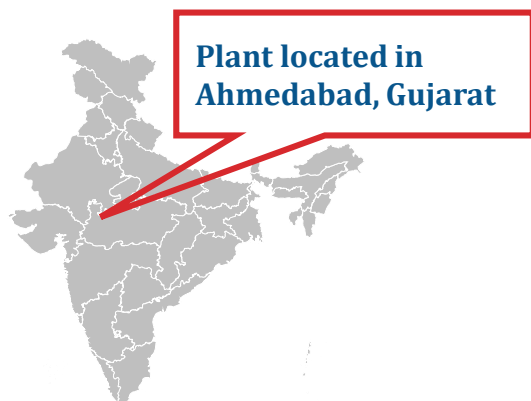


# About Samruddhi Engineering

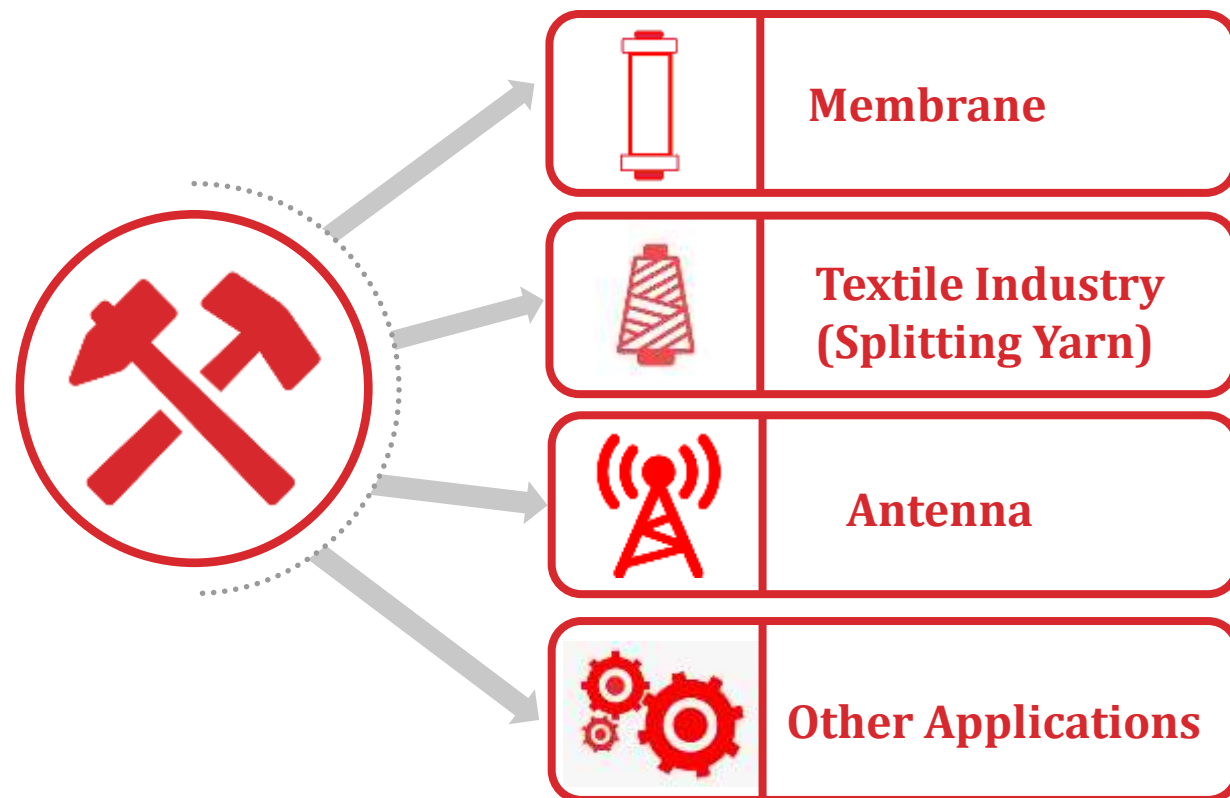
2+ decades of precision



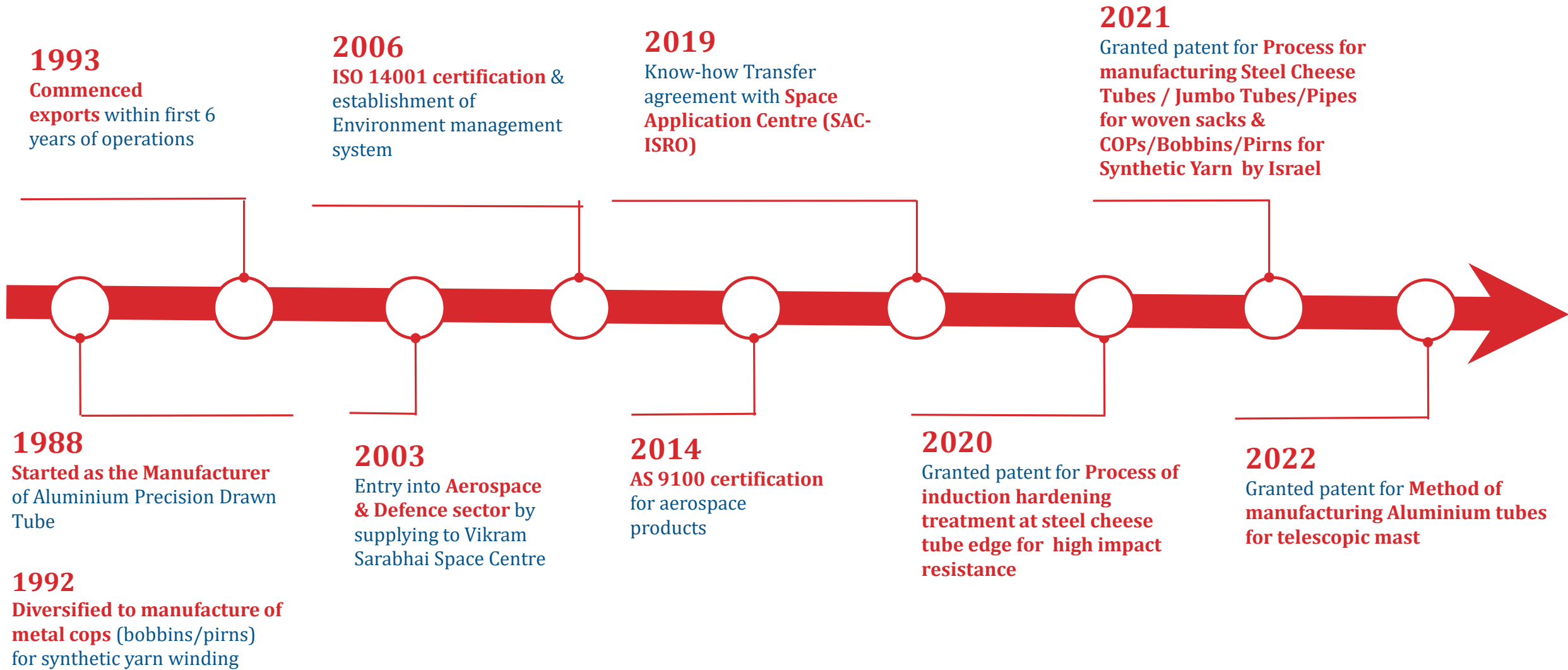
A leading manufacturer of world class **Metal COPs/Bobbins/Pirns, Acrylonitrile Butadiene Styrene - ABS (an Engineering Plastic) Sleeves & ABS Tubes.**



— Our products are used across multiple industries —



# Our innovation led Journey that aimed import substitution for India...



# Our manufacturing & quality assurance capabilities



Oven



Tube Measurement Machine



Universal Testing Machine



Hardness Tester



MFI Tester

# ..that helps us manufacture wide range of products



## Aluminium Precision Drawn Tubes



## Metal COPs & Accessories



## Aluminium & Steel Cheese Tubes



## ABS Tubes



**30 million mtrs  
Aluminium  
tubes delivered**



**15 million  
metal cops  
exported**



**ANTI-STATIC**



**HIGH IMPACT**



**UV STABLE**



**FIRE RETARDENT**



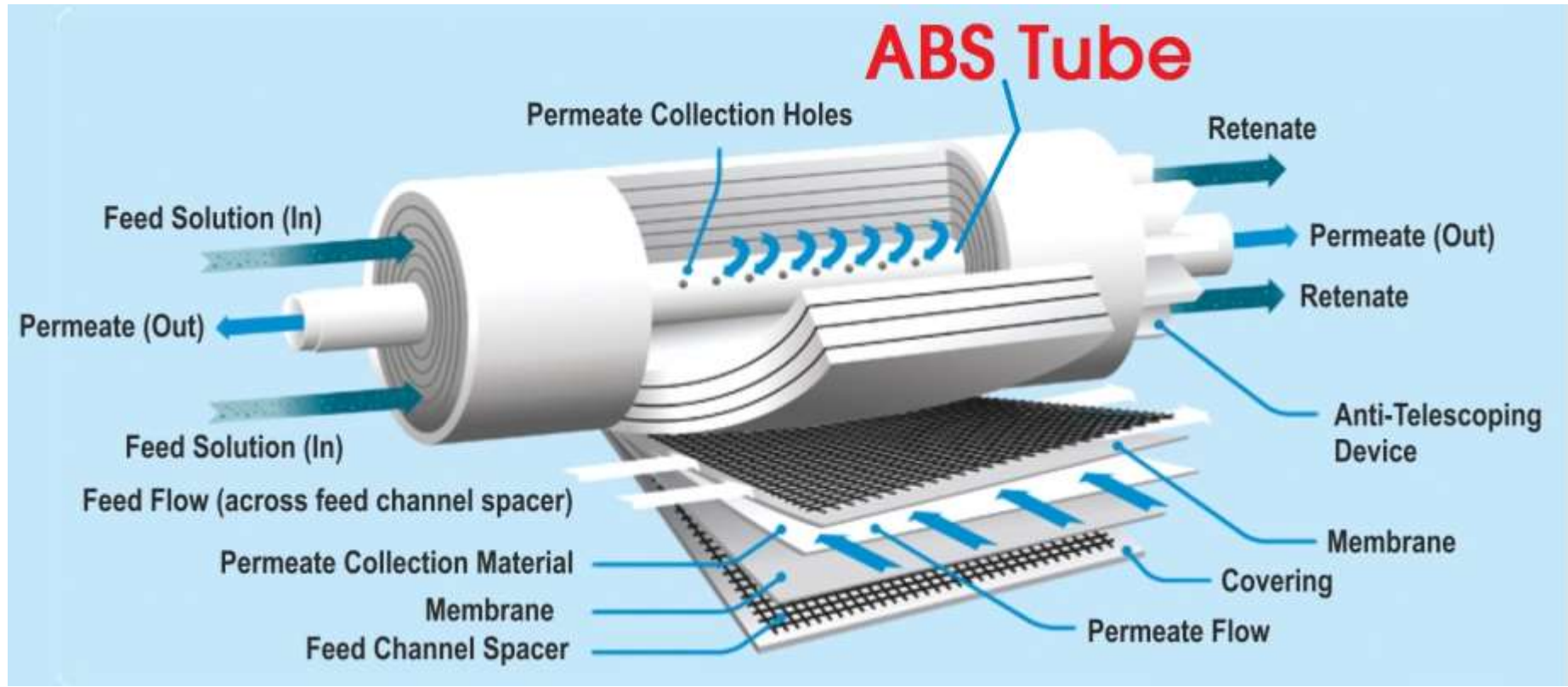
**HIGH TENSILE**



**GLASS FIBRE**

Grades of **ABS TUBES** available with **SAMRUDDHI ENGINEERING**

# What is Membrane?



**A membrane is a selective barrier; it allows some things to pass through but stops others. ABS Tube is used as Permeate Tube/Membrane Tube**

# ABS Tubes for Membrane- Range Options



Range			
Outer Diameter	Inner Diameter	Thickness	Length
12.0 mm	5.0 mm	3.50 mm	1000 mm
21.5 mm	13.5 mm	4.00 mm	545 mm
			1016 mm or 1020 mm

Colours Available			
Natural	Black	Blue	Green



# Membrane- Applications



**Dairy Industries**



**Electrocoat Industries**



**Oil and Gas**



**Bio Pharmaceutical Industries**



**Food and Beverages**



**Industrial Process & Waste water**



**Textile and Dye Industries**

# ABS TUBES OTHER APPLICATIONS

**ANTENNA**



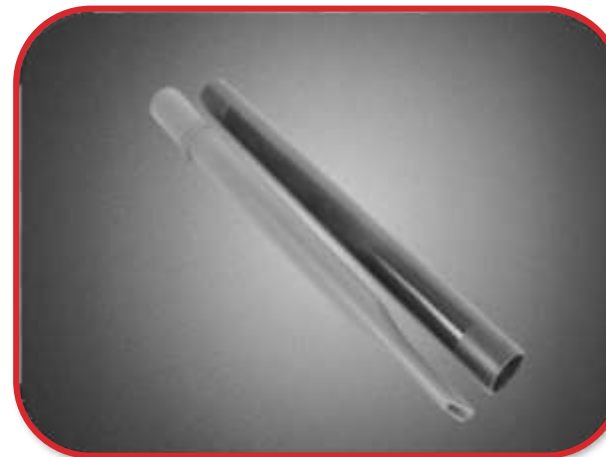
**PLAY HOUSE & TOYS**



**CHILLED  
WATER PIPE**



**VACUUM BLOW GUN**



**And many other industrial applications...**

# Awards & Certifications

## 50+ awards and counting

## Certifications



Export Excellence



Research & Development



Entrepreneurship



Banker's award



Make in India award



Gold Medals from SAME (2009, 2017)



AS 9100D  
ISO 9110:2015  
Quality Management



ISO 14001:2015  
Environment management

# 3 Patents Received

INDIA



Process of induction hardening treatment at steel cheese tube edge for high impact resistance

ISRAEL



Process for Manufacturing Steel Cheese tubes/ jumbo tubes/ pipes for woven-sacks and cops/ bobbins/ pirns for synthetic yarn

INDIA



Method of manufacturing Aluminium tubes for telescopic mast

4 applications are in process



India

Process for **manufacturing of Aluminium alloy cheese tube**, cheese pipe or bobbin for woven sack



India

Process for **manufacturing steel cheese tubes**, jumbo tubes, pipes for woven sacks and cops, bobbin, pirns for synthetic yarn



India

Process for **manufacturing of steel cops/ bobbins/ pirns** for synthetic yarn



India

A process for **Preventing Deformation** in the ends of **Jumbo Aluminium Tubes**

High focus on R&D and Innovations

Spends around **5%** of revenue on R&D

Why **Siddhi Group** is best suited partner for your business



**State-of-the-art manufacturing facility with robust quality management processes that ensures reliability and consistency**



**Our commitment to manufacture products that have enhanced features for higher functional performance**



**In-house product development capabilities & customization to embedded in strong in-house research and development**



**Our demonstrated success of delivery in import substitution in 30+ years**



**Our partnership centric approach with our customers to solve their deepest problem in cost-effective and efficient way (E.g. ISRO, DRDL, BAPL etc.)**

# Successful client case studies of co-development, innovation and problem solving



**Supporting SAC(ISRO)** to design and build efficient and cost-effective satellite payload systems

**Context:** SAC(ISRO) wanted low weight substitutes for Brass/Copper/Aluminium-based waveguide tube of thickness 1.2 mm

**Approach:** Siddhi Engineers innovated & developed 0.63 mm thick aluminium based waveguide tubes

**15-20%**



lower weight leading to saving satellite launching cost

**2 Gold Medals**



from Society of Aerospace Manufacturing Engineer (2009, 2017)



**Helping Israel-based** textile player in developing cost-effective bobbin to save reverse logistics cost

**Context:** Nilit used heavy metal cops that led to cost (reverse logistics) and supply chain hassles (inventory management, paper work, etc.)

**Approach:** Samruddhi Engineers re-designed & commercialized optimal grade steel tubes

**60%**



lower weight and zero reverse logistics

# 2 pronged approach to drive research and development within the group



## Collaboration and partnership with institutions to drive research and development



## Building culture of innovation and continual improvement



Monthly cadence of idea generation by involving shopfloor manpower (Karmayogi) to improve **product and processes**



Have developed **full time in-house innovation team** to drive change in equipment, process and products



Development of unique product features (light weight, better tolerance, optimal alloy composition, exceptional concentricity, etc.)

# Innovation and Culture Building Practices being adopted



**Daily Exercise, Prayer and Good News Sharing**



**Quarterly Karmayogi Meet**



**Graveyard for negative thoughts**



**Book distribution every month to all team members with their salary**



**Blood Donation & Dental Health check up Camps**





# Media Coverage

## Siddhi Engineers awarded for outstanding entrepreneurship

**BIG ON EXCELLENCE**

SME ENTERPRISES		RESEARCH & DEVELOPMENT	
Award Winner	Company	Award Winner	Company
Vishwanath Parikh	Shreevast Systems	Ghanshyam Dhokariya	Model Refrigerators
Satish Parwar	Energy Mission Engineers	Maganbhai Patel	Capitan Tractors
Maganbhai Patel	Capitan Tractors	Bhagat Patel	Techno Industries
Harish Patel	Vasu Healthcare	Bhagvat Patel	Siddhi Engineers
Bhagat Patel	Techno Industries	Harish Patel	Vasu Healthcare
Dinesh Daga	Shree Hans Alloys	QUALITY PRODUCTS	
Chandrabhai Kothiyar	Ganesh Chemicals	Award Winner	Company
Bhagvat Patel	Siddhi Engineers	Ramesh Kulkarniya	Capitan Polylast
Nitesh Shah	Sweet Sweets		

### 15 State-Based MSMEs Receive Awards From Centre For Innovation, Quality

Himanshu Dargi  
ANI/PTI

SMART is sometimes big. This is true for Kashi-based 84-year-old Siddhi Engineers, the recipient of national awards for micro, small and medium enterprises for outstanding entrepreneurship in New Delhi on August 26, 2011.

Siddhi Engineers manufactures aluminium pipes for aerospace industries and supplies them to Indian Space Research Organisation (ISRO) and Space Applications Satellite Centre (SAC), Ahmedabad. These pipes were originally imported from France. Now with Siddhi Engineers supplying these pipes, the only viable foreign exchange saving is not only at the cost of the pipes but also in the cost of the labour.

Appreciating the contribution in 84-year-old prime minister Manmohan Singh presented a award to Bhagvat Patel, chairman of the company, at New Delhi.

"We are honoured to be a small company, but we are

glad that GIC has been awarded by prime minister. ISRO is now starting aluminium pipes from us. It is much cheaper than the earlier ones imported from France. These pipes are being used for international communication with the satellite. We manufacture precision pipes in 20 different sizes. We have also bagged contracts from the defence sector," said Patel.

Along with Siddhi Engineers, a total of 15 MSMEs of Gujarat were awarded by the central government for their innovation, quality and entrepreneurship.

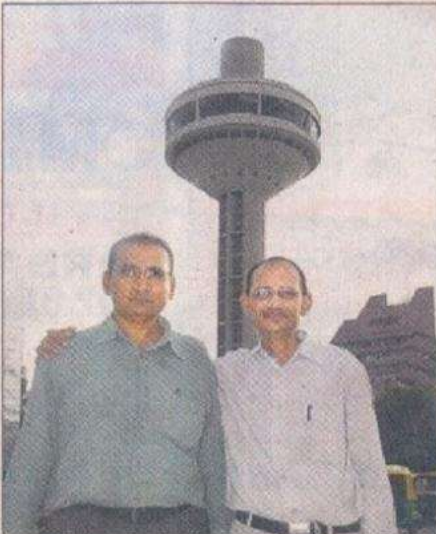
This is the first time that Gujarat-based industries have received awards to such a large number. Last year only three state-level companies were recipients of the prestigious award "Quality Promotions" by a government, who is a matter of great pride for us. This is a testimony to the entrepreneurship and innovative spirit of Gujarat's industries," said Gujarat State Small Industries Federation president Anil Rajani.



# Sky's the limit to their aspirations

Nayan Dave | TNN

**Ahmedabad:** During their college days in early 80s, these two roommates dreamt of reaching for the sky. Three decades on, the mechanical engineers have done it, literally. Siddhi Engineers, a firm promoted by Bhagavat Patel (50) and Prashant Gandhi (50) recently bagged an award from Union Ministry of Micro, Small & Medium Enterprises for designing high-precision tubes for Indian Space Research Organisation (ISRO). The space organisation will use these tubes to establish contact with GSAT-12, which is likely to be launched in 2010.



Prashant Gandhi (left) and Bhagavat Patel

After passing out from Birla Vishwakarma Mahavidyalaya in Vallabh Vidyanagar, both Patel and Gandhi worked for seven years in different companies. "It was our dream that brought us together again in 1988. We thought of doing something on our own and launched a partnership firm with an initial invest-

ment of Rs 40,000," said Patel. Soon, they started manufacturing aluminium tubes for television antenna. Gradually, they started supplying a variety of aluminium tubes for industrial use. Their big moment came in 2002. The

firm supplied fuel supply line to ISRO for GSLV F01 satellite. There has been no looking back since then. Today, the Rs 10-crore firm employs over 150 persons. "Scientists from Space Application Centre (SAC) wanted us to design a hollow aluminium rectangular tube, which is extremely lightweight and sturdy at the same time. Even a variation of 10 microns was not allowed. We took it as a challenge and succeeded," said Gandhi, talking about the award-winning product, which is used to manufacture 'Wave Guide', a crucial component for space-earth linkage. Siddhi Engineers managed to nudge out a large multinational giant to bag the project from ISRO.



## Contact details

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