







Precision Cold Drawn Aluminium Tubes For Aerospace & Defence

Your Trustworthy Supplier for Precision Cold Drawn Aluminium Tubes for Different Applications for Aero Space and Defence.

About Siddhi Group

3+ decades of experience in Aluminum Precision Drawn Tubes & Metal Cops





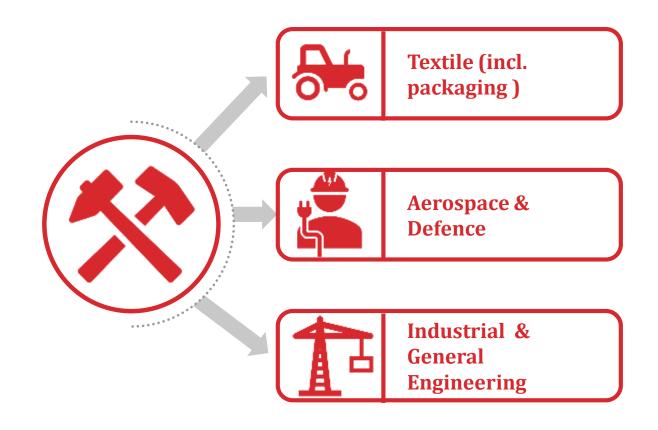
Diversified Group with 2 holding companies

- Siddhi Engineers: Manufacturer of Aluminum Precision Drawn Tubes from 20 different alloys since 1988
- Samrudhi Engineering: Engaged in manufacture of Metal Cops (bobbins/pirns) for synthetic yarn winding since 1992





Our products are used across multiple industries



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



1993

Commenced exports within first 6
years of operations

2006

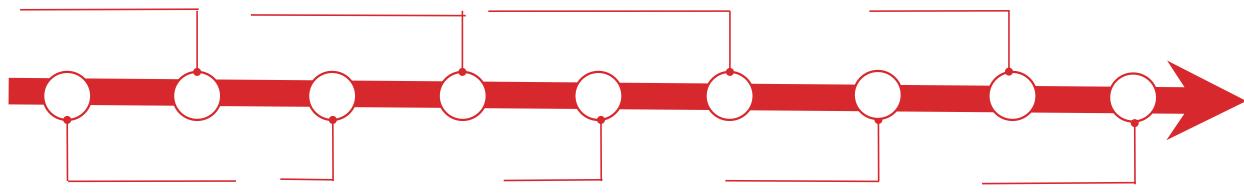
ISO 14001 certification & establishment of Environment management system

2019

Know-how Transfer agreement with **Space Application Centre (SAC-ISRO)**

2021

Granted patent for Process for manufacturing Steel Cheese Tubes / Jumbo Tubes/Pipes for woven sacks & COPs/Bobbins/Pirns for Synthetic Yarn by Israel



1988

Started as the Manufacturer of Aluminium Precision Drawn Tube

1992

Diversified to manufacture of metal cops (bobbins/pirns) for synthetic yarn winding

2003

Entry into Aerospace & Defence sector by supplying to Vikram Sarabhai Space Centre

2014

AS 9100 certification for aerospace products

2020

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

2022

Granted patent for **Method of manufacturing Aluminium tubes for telescopic mast**

Our manufacturing & quality assurance capabilities









Annealing Furnace



Straightening Machine



UTS Machine



Adapter Fitting Arrangement



Spindle Guide Fitting



Cop Assembly



Run-out Measurement Arrangement



Cop Vibration
Checking Arrangement

..that helps us manufacture wide range of products















tubes delivered



Plastic tubes & accessories





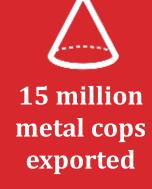














Our Strong Capabilities in Aerospace & Defence Sector

We have in-house capabilities to create customized solution from aluminium materials for AS&D sector





Rectangular Al Tubes 6061/6063



Waveguide Tubes
Ratio Between Inside Width
And Height (2:1 / 4:1)



AL. Seamless Tubes 2014





Al Tube Coil 1050



Vibration
Simulation of launch vehicle



Al Tubes 6082/6061



We have in-house capabilities to create customized solution from aluminium materials for AS&D sector





Al 7075 Tubes



70 mm Rocket



Al Tube 6082 Seamless

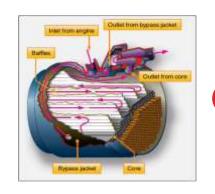




Al 5052 Tubes



Fuel Supply Lines for amphibian tank



Cooler Assembly for Helicopter



Al Tube 5 Series Alloy



Chaff Cartridge

We have strong clientele base that can vouch for our commitment & delivery standards

















"Siddhi Engineers uses its decades old experience and highly skilled work force to produce aluminiun profiles and sections of utmost quality and precision "

Managing Director, Deep Explo

"Siddhi Engineers truly partnered with us to help solve technical **Challenges** with positive attitude; good technical and manufacturing support provided by the firm"

Scientist, DRDL



Awards & Certifications



50+ awards and counting



Export Excellence



STATE BANK OF PRIDA

COMMITTEE WAS A STATE OF THE STATE O

Banker' award



Research & Development



Make in India award





Gold Medals from SAME (2009, 2017)

Certifications





AS 9100D ISO 9110:2015 Quality Management

ISO 14001:2015 Environment management

3 Patents Received



High focus on R&D and Innovations

Spends around 5% of revenue on R&D



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



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 varn



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



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





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

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





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

J. S.

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

15-20%

lower weight leading to saving satellite launching cost

2 Gold Medals



from Society of Aerospace Manufacturing Engineer (2009, 2017) 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



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

SMALL resometimes big. This is to exten Kalal-hased Reffmore Siddii Engineers the recovery of national awards for curry, small and mediumen recovers show a standing entre. We have also bagged contracts from the cremeurshing New Delhi on August 28, 2009.

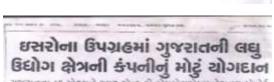
Siddrif Engineers menufactures aluminium pipes for aerospare Industries and supplies them to Indian Space Rea entigrant indictions allowing the ferrith of the constraints proceedings and in a contraligorise control grantism in 1800 in 40 Spart Approximation shading in societies, and the control from the control from

We are banaged that a small company located in Atal Kapan

Chhairal GIDC has been awarded by orime minister ISRO is now sourcing aluminium pipes from us. It is much cheaper than the earlier ones apposed from France These pipes are being unlised to time tradeout autofathon defence serior," said Mr Patel.

Along with Siddle Engineers, a total of 15 MSMEs of Caljural were awarded by the central government for their in-

Appreciating the corresponding to 84-0, prime immission, a matter of great grade losses. This is a testimony to the en-Mammolian Single presented if a award to Bhagwar Patel. Trepreneus and impostance sport of Gujerat's industries, said Gularat State Small Industries Federation president.



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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.

After passing out from Birla Vishwakarma Mahavidhyalay in Vallabh Vidyanagar, both Patel and Gandhi worked for seven years in difdream that brought us together again in 1988. We thought of



Prashant Gandhi (left) and Bhagavat Patel

ment of Rs 40,000," said Patel.

Soon, they started manuferent companies. "It was our facturing aluminium tubes for television antenna. Gradu- cial component for spaceally, they started supplying a doing something on our own variety of aluminium tubes neers managed to nudge out a and launched a partnership for industrial use. Their big large multinational giant to firm with an initial invest- moment came in 2002. The bagthe project from ISRO.

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 holaluminium rectangular tube. which is extremely lightweight sturdy at the same time. Even a variation of 10 microns was not allowed. We took it as a challenge and succeeded." said Gandhi, talk-

ing about the award-winning product, which is used to manufacture 'Wave Guide', a cruearth linkage. Siddhi Engi-



Key team & contact details



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Mr. Bhagwat Patel
Partner



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Partner



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