





# ANNA UNIVERSITY MADRAS INSTITUTE OF TECHNOLOGY 75<sup>th</sup> YEAR CELEBRATION OF MIT

DEPARTMENT OF RUBBER AND PLASTICS TECHNOLOGY

TWO-DAY NATIONAL CONFERENCE ON ADVANCES IN POLYMER COMPOSITES

APC'24
23-24 FEBRUARY,2024

CONFERENCE PROCEEDINGS





Moulding the future

# **GLOBAL LEADER IN COMPOSITE** NACELLE & ROTOR COVERS

A key player in manufacturing Nacelle and Rotor covers through the advanced Vacuum Infusion Process, Indocool has supplied thousands of composite products to customers worldwide.



25+ years
of Manufacturing Experience



60,000 Sq Mts Infrastructure Capacity



6 Countries
Exporting



10,000 MT
Production Capacity Per Annum





## A TRUSTED RELIABLE PARTNER FOR COMPOSITE PRODUCT









## Distributors for:



The chemistry inside innovation

Zytel® Nylon 6 & 66, Zytel®HTN, Crastin® PBT, Rynite® PET & Hytrel® TPEE

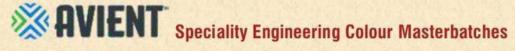
# **OUPONT**

Vespel® Polyimide Parts and Shapes & Kalrez® Perfluoroelastomer Parts (FFKM)

MOLYKOTE Lubricants for Industrial & Automotive applications

Delrin Homopolymer Polyacetal (POM)

MEGUM <sup>™</sup>-THIXON <sup>™</sup> Speciality Adhesives





**Customized Colouring & Speciality Polymer Compounds** 



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- Diamond Plaza, #995-P, 12th Main Road, 2nd Avenue, Anna Nagar, Chennai - 600 040.
- WORKS: Survey No.13, Tada Village & Mandal, Tirupathi Dist, Andhra Pradesh - 524401, India
- projects@extracocomposites.com
- www.extracocomposites.com
- +91 44 4269 3754 | +91 94440 91834

## EXTRA CO COMPLETE RANGE OF COMPOSITE PRODUCTS COMPANY PROFILE

Extraco Composites India Private Limited an ISO 9001:2015 Certified Company established in the Year 2009, has its state-of-theart factory located at Tada Village and Mandal, Tada, Andhra Pradesh.

The Design, Engineering and Manufacturing facility spread over an area of 75,000 Sq.ft dedicated facility with a total plant area of 7.15 Acres and with World Class Machineries backed by a team of experienced professionals in the field of Composites.

### **PRODUCTS**

- GRP/GRV/GRE Filament Wound Pipe and Fittings.
- Vertical / Horizontal GRP/GRV Filament wound Cylindrical tanks.
- Complete Range of GRP / GRV Sewerage & Drainage System.
- GRP/GRV / GRE Pultruded Profiles.
- GRP Bore well Casing Products.
- Lighting/Transmission Filament wound Poles.
- Abrasion Resistant Pipes and fittings.
- Customised products as per customer Specification.

## **APPLICATIONS**

- Water / Waste Water / Sewerage Applications.
- Chemical / Process lines.
- Oil and Gas sector.
- Steel / Cement / Mining industries.
- Power, Energy & Minerals
- Petrochemical
- **Building & Construction**
- Defence























## **ACCREDITATIONS**

Extraco has obtained the following accreditations.

- ISO 9001: 2015.
- PESO Approval for manufacturing FRP Underground Fuel (Single Wall/Double Wall) Storage Tanks of various capacities.
- UL 1316 2nd Edition Approval for FRP Underground Fuel Storage Tanks of various capacities.
- ANSI/AWWA C950-01 Approval from TUV India Pvt. Ltd for GRP/GRE/GRV Pipes & Fittings.



# **METRO COMPOSITES**

(A composite building material company)



"Metro composites" is a Polymer Composite based lightweight sandwich product making company founded in the year 2016 with a vision of serving nation with latest technology FRP products. The main products of metro composites is " light weight composite sandwich panels"

Light weight sandwich panel

# PVC core heavy duty panel

# PVC core light duty panel

# PET light duty panel

Thickness available: 6 to 40mm Sizes: 8x4 Ft, 4x2 Ft, 2x1 Ft

## **Business products**

Light weight FRP Roof & wall tiles

Thickness available: 5 to 20mm

Sizes: 1x2 Ft, 2x2 Ft, 1x1 Ft



## Metro Composite Research and Training Institute (MCRTI)

(A unit of metro composites)

Founded with a moto of offering theoretical & Industrial training to students & employee of composite industries. We offer various forms of skill development training courses authorized with Covernment of India, for the rural employment development

Courses offered

- -Certificate course on FRP layup technician -Certificate course on FRP mould technician
- -certificate course on FRP Lab technician

\*course duration: 14 days [Weekend classes also applicable]

(New batch starts in the month of Jun'24)

#### Research facilities

- # Hand lay-up technique
- # Compression moulding (RT & HT)
- # Vacuum bagging
- # Resin infusion
- # Additive manufacturing 3D printing-FDM
- # Hot air oven & incubator

- # Surface treatment Setup (Silane/Alkaline)
- # Prepreg (Natural fiber & Synthetic fiber)
- # Customized cellulose/biochar preparation
- # Nano material preparation
- # High temperature furnace up to 1800 C

## Metro composite Testing lab

We are the pioneer in testing Polymer Composites, FRP, Rubber, Thin films, wires and Sandwich Structures.

#### # MECHANICAL PROPERTIES TEST

- -Tensile test (RT & HT)
- -Flexural test (3 & 4 point bending)
- -Impact test (Izod & Charpy)
- -Compression test
- -Shear strength test (ILSS/Lap/Rail) to 300 deg)
- -Fracture toughess
- -Fatigue behaviour test
- -Creep test (up to 300 C)

- #TRIBOLOGY TEST
- -Pin-on-disc -Dry sliding (L-200 N)
- (Speed-2000 rpm)(Track radius-
- -Hardness test (Barcole/Shore-D/A) -Wear-Wet Sliding (with Lub)
  - -Wear test with pin heating system (up

  - SS304,EN31,Alumina, Cast iron counter disc available

- # SANWICH TEST
- -Flatwise tensile
- -Flatwise compression
- -Edgewise compression
- -Drum peal test
- -Mode-I peal off test
- # MISCELLANEOUS TEST
- -Flammability test (UL-94)
- -Thermal conductivity (LDM)
- -Hydrophobicity Test
- -Machinability studies (AJM)
- -FTIR analysis
- -XRD analysis
- -SEM analysis

Highlights: On time delivery; live proof testing; Periodically calibrated machines; Flexible payment terms; Postal sample collection & return

Email: md@metrocomposites.com / ho@metrocomposites.com Website: www.metrocomposites.com



# **JS ENTERPRISES**





**AUTOCLAVES** 



LAMINAR AIRFLOW CHAMBER



Co<sub>2</sub> INCUBATOR



ORBITAL SHAKING INCUBATOR



CENTRIFUGE



**BOX FURNACE** 



**TUBULAR FURNACE** 



**HOTAIR & VACUUM OVENS** 



**DIGITAL PH METER** 



**LABORATORY STIRRER** 



**HEATING MANTLE** 



**VACUUM PUMP** 



WATER AND OIL BATH CIRCULATOR



**SONICATOR BATH** 



LABORATORY CHILLER & ICE FLAKES MACHINE



LABORATORY FREEZERS

Contact Us

- 💡 2/926A, Ganesh Nagar Main Road, Thoraipakkam, Chennai 600 096
- ←91 98401 00702 | sales.jsep@gmail.com | https://www.jsep.in/



## M.N.POLYESTER (INDIA) PVT LTD

18, 7th Street, Tatabad, Coimbatore - 641 012. Ph: 0422-2492208 / 2492197 / 2496992

Cell: 94425 49200, 96552 28000 Telefax: 0422-2496085

Email: mnpolyester@gmail.com



# We are one of the Premium Quality UNSATURATED POLYESTER RESIN

Manufacturer in South India.
Our Product Range is as Follows.

- ► GP RESIN with and without UV Stabilization
- ► GP RESIN SUPERIOR with and without UV Stabilization
- ► GP GELCOAT only with UV Stabilization
- ▶ ISO RESIN with and without UV Stabilization
- ► ISO GELCOAT only with UV Stabilization
- ► ROOFLITE RESIN with and without UV Stabilization
- ► F.R.R RESIN with and without UV Stabilization







Standard Packing's 35 Kgs & 220 Kgs in brand New Packings



## COVALSEENU & COMPANY

18, 7th Street, Tatabad, Coimbatore - 641 012.

Phone: 0422 - 2492208, 2492197, Telefax: 2496085.

Mobile: 94432 49289, 93451 66444, 94875 09298, 96552 28000 Email: cvseenumd4@gmail.com



CSM - 180 GSM to 900 GSM Emulsion and Powder Bonded in the Width of ½ MTR, 1 MTR and 1.25 MTR.

### **WUNSATURATED POLYESTER RESIN PRODUCTS:**

GP Resin, GP Resin Superior, GP Gelcoat, ISO Phthalic Resin, ISO Phthalic Gelcoat and Rooflite Resins of Premium Quality With and Without UV Stabilization.

#### \* ADDITIVES:

Accelerators (COBALT OCTOATE – 2 & 6%), Catalyst – Methyl Ethyl Ketone Peroxide (MEKP) and Promoter.

#### **PIGMENTS:**

We Supply the Entire Range of Polyester & Epoxy Pigments of Premium Makes.

#### ACCESSORIES:

We Supply the Full Range of Accessories like Aerosil Powder, Chalk Powder, Silica Powder, Brush, Thinner etc...

























With Best Compliment from

Dr. K. Elamvazhuthi, BSc., B Tech., MBA., PhD

First Batch RTian (T No. 01602), 40th Batch MITian
Founder & Secretary, MITEA

Founder & CEO, YesLee Consultants & YesLee Exports, Salem
Prof & HOD, Dept of MBA, Excel Group Institutions



# YesLee Consultants & YesLee Exports

[ A Proprietorship Firm ]

73-1 Saraswathy Garden, Nagammal Thoattom, Peramanur Main Road, Salem - 636 007, TN, INDIA.

Email: yesleegroup@gmail.com | Mob: +91 97906 17957

MSME REGN NO: UDAYAM - TN - 20 - 0058815

GSTIN: 33AACPE7350F1Z7





## Company overview

Indutch Composites Technology Private Limited was founded in 2010 at Vadodara by Shri Binayak S Rath and Shri P L Sathinarayanan. Indutch is a leading manufacturer of highly engineered composite Patterns, Molds & Component for Original Equipment Manufacturer (OEM) customers in Wind Energy, Mass Transportation, and Industrial Equipment. Indutch itself distinguishes in the marketplace by its proven competitive advantages Product Excellence, **Process** Innovation, Speed to Market, and Superior Customer Service.

Indutch is headquartered in Vadodara, Gujarat, India, with more than 1300+ employees and over 150,000 square feet of total manufacturing capacity, located at GIDC Vadodara, Gujarat, India. More than 300 of our employees have an average of more than 5-year Composites tooling manufacturing experience in Design, Manufacturing, etc.

## Expertise

Our Team is having rich experience from 5- 20 years in the areas of Design, Engineering, and Manufacturing of various composite products in wind energy, railways, marine, industrial and architectural applications.

#### Our vision

Indutch Composites Technology Pvt. Ltd aims to be The Global player in Wind turbine Rotor Blade, nacelle cover/spinner Tooling, Manufacturing & Services for Indian and Global Wind energy organizations in next and 5 years.

In addition to wind energy, Indutch aims to be an active player (nearly 20 % of its capacity) in Automobile, Mass transit, and Defense for Composites Tooling and Process Design, Tooling, Manufacturing & support services.

#### Our mission

Indutch Composites Technology Pvt Ltd will Establish global tie-ups to improve exports apart from its present Indian market. Ensure products are of international quality standard.

Retain key personals and enhance our skills from time to time through better exposure to the latest technology and will attract new customers by establishing state-of-the-art factory and infrastructure.

Plot No. 187/P/1B-1, Waghodia Industrial Estate,

Pipalia - Waghodia Road,

Vadodara - 391760, Gujarat, India.

- 02668261200
- info@indutch.in

https://indutch.in/about-us/



## Meena Fiberglas Industries Pvt. Ltd.

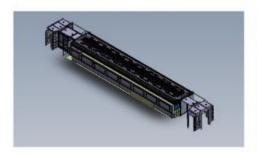
An ISO 9001 and IRIS certified company Manufacturer of all types of FRP Products



Design - Development - Tooling - Prototype -Manufacturing - Installation - After Sales Service











**FRP Pultruded Products** 



**FRP Doors** 



**FRP Bio Septic Tank** 



**FRP Manhole Covers** 







#### **List of Products**

- Interior Panelling for Rail Coaches
- Lavatory for Rail Coaches
- **FRP Pultruded Products**
- FRP Bio Septic Tank
- FRP Doors

- FRP BioSeptic Tank
- FRP Staircase
- FRP Truss and Purlin
- **FRP Tanks**
- Any custom-made FRP products

#### Addresses:

Unit 1: RS No.:151/3, Cuddalore Pondy Main Road, sales@meenafibres.com Kattukuppam, Puducherry - 607402

Unit 2: RS No.:55/5A, Cuddalore Panruti Road,, Sundaravandi, Cuddalore - 607401

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