

# POLYMER COMPOSITE PRODUCTS MANUFACTURING TECHNOLOGY

DEVELOPED BY



BRANDED BY



**SALTECH DESIGN LABS PRIVATE LIMITED**

Office: PDPU Innovation & Incubation Centre, Pandit Deendayal Energy  
University, Raysan, Gandhinagar, Gujarat - 382007  
admin@saltech.co.in | +91-9106780580 | www.saltech.co.in

**TRANSFORMING SINGLE USE PLASTICS,  
INDUSTRIAL, CONSTRUCTION & DEMOLITION  
"WASTE"**



**INTO SUSTAINABLE ALTERNATIVE BUILDING  
MATERIAL PRODUCTS**

## STARTUP BRIEF

Saltech Design Labs Private Limited was founded with the objective of providing sustainable solutions through innovative design and engineering while utilising cutting-edge technologies. It was established in 2018 as a startup entity is recognised by Startup India (DPIIT) and the Inter-Ministerial Board (IMB) that is creating cutting-edge solutions in the waste to value sector. It creates circularity by deploying a close-loop patented advance recycling technology for transforming waste into polymer composite materials with high-performance at an affordable price

It holds 10+ IP's and 9+ Awards incubated at PDPU Innovation & Incubation Centre and supported from Government of Gujarat & Government of India. The start-up has been conferred National award from Hon. Prime Minister Shri. Narendra Modi for ASHA - India by Ministry of Housing & Urban Affairs (MoHUA), Government of India (2021).

### Key Achievements:

- Patents - 4 International, 1 PCT & 2 National (Granted)
- Awards - 9+ National & International
- Recognised - Startup India (DPIIT) & Inter-Ministerial Board (IMB)
- Winner - Global Housing Technology Challenge 2021 (HFA - Gol)
- Winner - Startup Grand Challenge 2022 (SBM Grameen - Gol)
- Winner - Swachhata Startup Challenge 2022 (SBM Urban - Gol)
- IP Portfolio Startup of the Year – IPR League 2022 (IPPO)

### TEAM ON MISSION



**ADITYA SHUKLA**  
**FOUNDER & CEO**

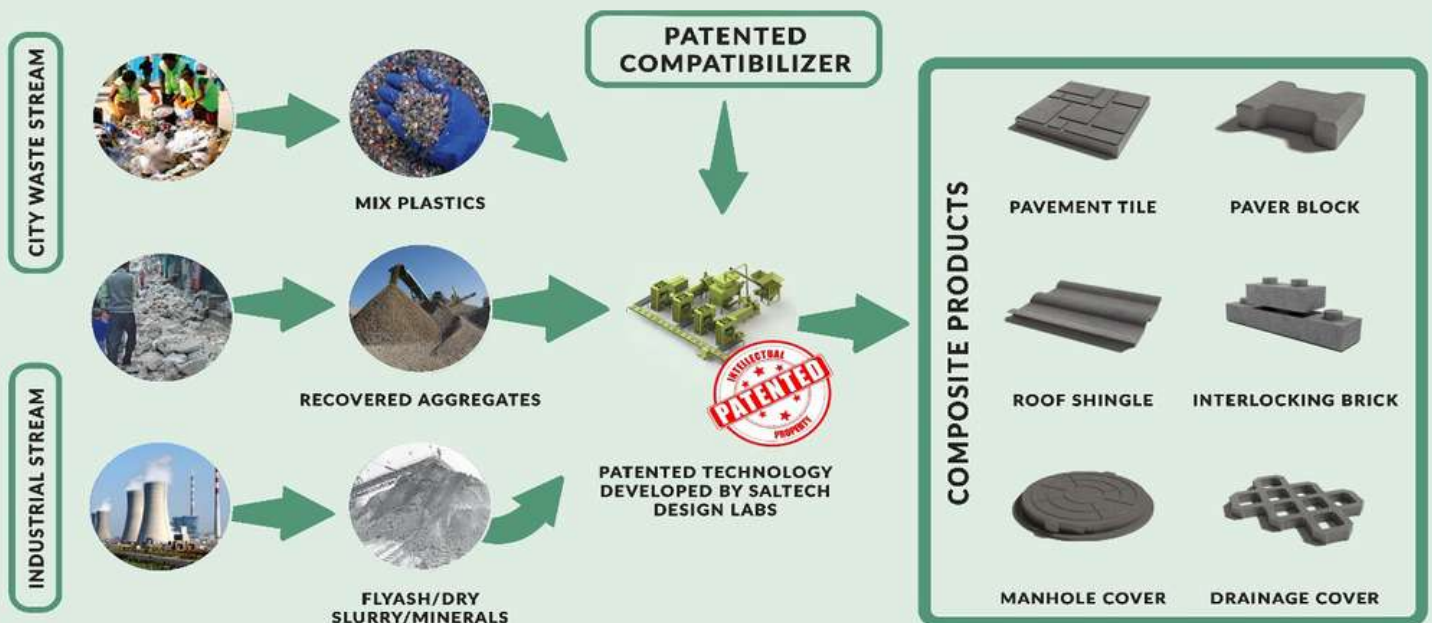


**SUDHIR SHUKLA**  
**CO-FOUNDER & CTO**

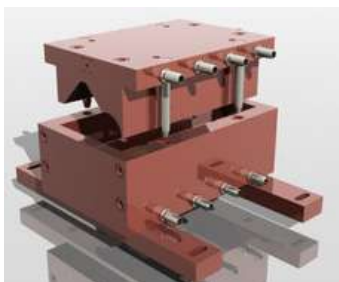


# PATENTED TECHNOLOGY

Our patented process transforms Single-Use Plastics, Construction & Demolition Waste, and Industrial Minerals / Aggregate / Fly Ash wastes into high-value alternative composite building materials. It is price competitive with traditional concrete while far better in performance properties and most suitable for precast products application such as paver, brick, block, roof shingle, and tile.

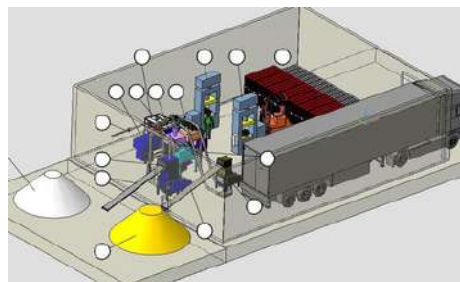


Our sustainable alternate building material is carbon negative than traditional concrete. By turning low-value waste into high-value materials we prevent emissions associated with waste disposal and reduce the depletion of natural resources happening due to the manufacturing of traditional materials such as cement, quarry, timber, clay etc.



## Technological design

Develop projects of any complexity, binding to new or existing applications.



## Turnkey Construction

Handover complete production line after construction and installation work, start-up, master-mounting.



## Project Support

Operational procedure and maintenance from the raw material to finish goods.

# POLYMER COMPOSITE MATERIAL

The polymer composite is an artificially created material that is not found in nature and combines qualities uncharacteristic of other materials. The material is produced as a result of uniform mixing of the main components (aggregate and polymer) at the specified temperature regime, resulting in polymer ingestion of each filler particle. In subsequent molding and hardening, the aggregate mass polymer forms a homogeneous monolithic structure with high strength.

## INDUSTRIAL WASTE & MINERAL AGGREGATE



Foundry Sand



Fly Ash



Eco-Dolomite



M Sand



C&D Waste



Quartz Sand



River Sand



Quarry Dust

## MIX PLASTICS



PE, PP, PS



PET, BOPP, PVC



MIX MLP



POLYESTER

## COMPATIBLIZER & PIGMENTS



PIGMENTS



RECYCLER COMPATIBILIZER+UV



COPOLYMER



# UNIQUE SELLING PROPOSITION



## Recycling Technology

- Reduced CO<sup>2</sup> emissions by 60-80%
- Reduced Water Usage by 90%
- Energy Efficient & Automated Processing
- Plastics & Industrial Waste Co-processing
- Lean Manufacturing for 50+ products



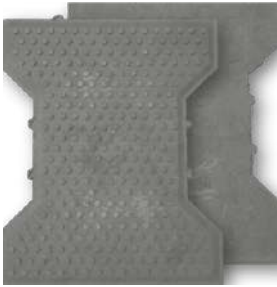
## Composite Products

- Excellent Performance Properties
- Economical & Cost Competitive
- Precast with Zero Curing Requirement
- Modular Designs & Rapid Installations
- Scalable for Mass Consumption

## OUR EARLY ADOPTERS



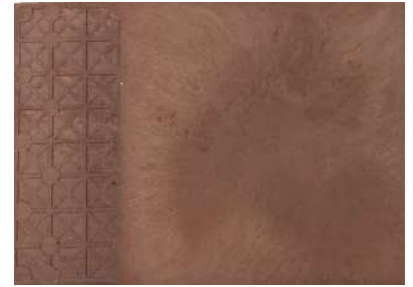
# COMPOSITE BUILDING PRODUCTS



**Paver Block**



**Paver Tile**



**Floor Tile**

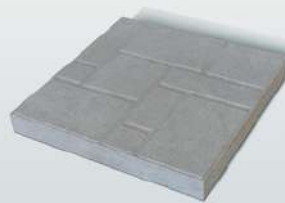
## PIPELINE



**Cobbles**



**Squares**



**Tiles**



**Kerbstone**



**Road slab**



**Road bumper**



**Slabs**



**Postcover**



**Roof tile**



**Lego brick**



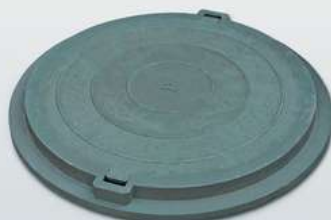
**Roof Shingle**



**Fencing pole**



**Drain Channel**



**Manhole cover**



**Drainage Grill**



**Grass Paver**



# AWARDS & ACHIEVEMENT



Global Housing Technology Challenge 2021  
(ASHA Awards – MoHUA, Govt. Of India)



Swachhata Startup Challenge 2022  
(SBM - U, MoHUA, Gol & AFD, France)



Startup Grand Challenge 2022  
(SBM - G, DDWS, Ministry of Jal Shakti, Gol)



Vibrant Gujarat Startup Summit 2018  
(GIDC - IC, Govt. of Gujarat)



UP Plasticathon 2022  
(DoEFCC, GoUP & Federal Ministry for the Environment, Germany )



IP Portfolio Startup – IPR League 2022  
IPPO - GCCI & CGPDTM, Govt of India

# OUR SUPPORTERS





# CONVERTING WASTE LIABILITIES TO VALUABLE ASSETS

*Our Installation at*  
**PDPU CAMPUS**  
BASKETBALL COURT HIGHRISE HOSTEL

8 DECENT WORK AND  
ECONOMIC GROWTH



9 INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



11 SUSTAINABLE CITIES  
AND COMMUNITIES



12 RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



13 CLIMATE  
ACTION



14 LIFE  
BELOW WATER



15 LIFE  
ON LAND

