



Transforming Materials. Transforming Lives.

STEER A NEW WORLD

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Overview



Our vision is to **STEER A NEW WORLD**. One that is driven by **Intelligent Technology,** paving the way for a simpler, better, more evolved tomorrow. Technology that accelerates the research and development of advanced materials, helping create products that improve the quality of life and enable quantum leaps in the way we live, work, play and stay healthy.



STEER Journey



1993 Formation of STEER Engineering at Bangalore, India

1998 Fractional Lobe introduced

2003 Invention of OMEGA Extruder

Platform & Continua Spline

2004 STEER Coimbatore plant commenced Developed Microgenic Tool Steel

2005 Formation of STEER Japan

2006

Formation of STEER America





2008 Formation of STEER China

2009 Polymer Science & Diagnostic Centre (PSDC) started.

2010 OMICRON 12 (Lab Extruder)

2011 OMEGA PC - Powder Coating Extruder



2012 OMICRON 10 (World's smallest HME)



2013

Pharmaceutical Development Centre (PDC) started.

MEGA Special Premium & Plus

2014 OMEGA 40P GRANULATOR for Pharma

2015 "Fractional Lobe Processor" introduced Incorporation of STEER LIFE company

2016 OMEGA 110J B2C system for Food

2018 GLASS REINFORCED PVC Pipe Technology using co-rotating twin



2019 Launch of Integraal All-in-one true

continuous processor



Successfully installed extruders for processing Soy (10 tons per hour) and Sorbitol (1 ton per hour)





STEER Strength & Core Technologies



Metallurgy

Deep knowledge on Material of Construction for Processing different applications in Polymer , Food, Pharma & Bio-material

"we make our own steel"



Twin screw Continuous process

Effectively transform and functionalize materials Energy Efficient, Least deterioration in material properties

"Intelligent Compounding"



Machine Engineering

Precision Engineering , Robust performance Superior Performance



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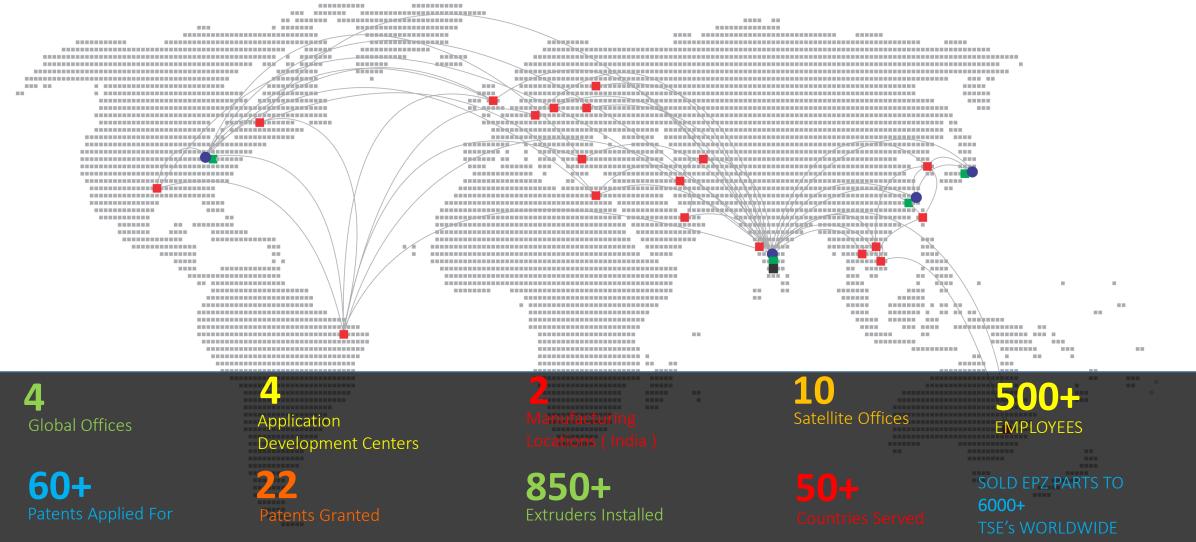
Customer segments we serve





STEER

STEER Global Presence





Global Offices Channel Partners Application Development Centers Manufacturing Facility





Effectively managing Plastics Waste in the Post Pandemic 21st Century



~50%

plastics used just once and disposed

~10-20%

ends up in oceans

~5.6

MMT waste generated by India/ year



of the waste the world generates



plastic is disposed of in landfills

Enough plastic is thrown each year to circle the earth

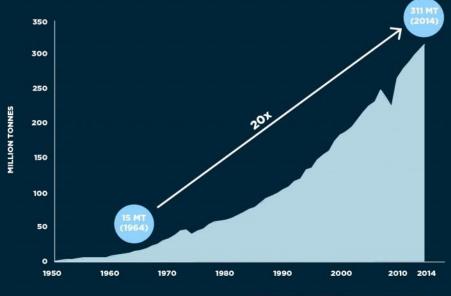
~4times

~15,342.6

tonnes/day from 60 cities in India

XASTEER

PLASTICS PRODUCTION INCREASED TWENTY-FOLD OVER THE LAST 50 YEARS



WORLD ECONOMIC FORUM, ELLEN MACARTHUR FOUNDATION, MCKINSEY & COMBAI A NEW PLASTICS ECONOMY: RETHINKING THE FUTURE OF PLASTICS (20 HTTP://WWW.WEFORUM.ORG/REPOR

NOTE: Production from virgin petroloum-based feedstock only (does not include bio-based, greenhouse gas-based or recyclied feedblock) SOURCE: PlasticsEurope, Plastics - the Facts 2015 (2015); PlasticsEurope, Plastics - the Facts 2015 (2015).

CURRENT METHODS (Not efficient / cumbersome)



	ASTM DD5033 definitions	Equivalent ISO 15270 (draft) definitions	Other equivalent terms
	Primary recycling	Mechanical Recycling	Closed-loop recycling
	Secondary recycling	Mechanical Recycling	Downgrading
the second se	Tertiary recycling	Chemical Recycling	Feedstock recycling
	Quaternary recycling	Energy Recovery	Valorization
	Plastic Recycling Plant layout		
	Plastics recycling plant		0
	1. Inspection 2. Chopping		200
	3. Washing 4. Flotation-separation		
	5. Drying 6. Melting		The second secon
	7. Filtration 8. Pelletizing		
	9. Packaging 10. Plant heating, lighting		



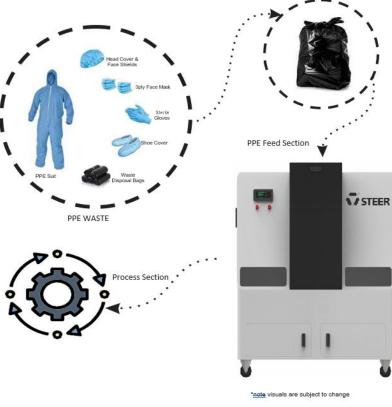
STEERtechnology is simple and efficient backed by 25 years of development. Provides the ability to process mixed plastics waste streams (unsorted thin / multi-layer plastic film, fabrics, laminates without any restriction on polymer) Into usable plastics raw-material for a variety of applications making all available plastics ready for second use







Comprehensive Solution: SAFE RECYCLING at Source of waste generation





SAFER*e*CYCLER Infinity BK1.20 can process all types and combination of thin walled /multi-walled plastic materials (films / fabrics / laminates) that are in PPEs and other Packaging materials.

Ange

SAFEReCYCLER converts **unsorted**, **non-segregated**, **not-cleaned mixed plastics waste** streams consisting of PPE, multi-layer plastic film, fabrics, laminates with mixed polymers such as EVA, PET, PP, PE, PC, PU, Nylon, PVC etc into valuable raw-material. The output material is certified pathogen free with no risk of exposure during operation.

Complete recycling plant in a Single Portable Equipment





"First of a Kind" Features & Advantage

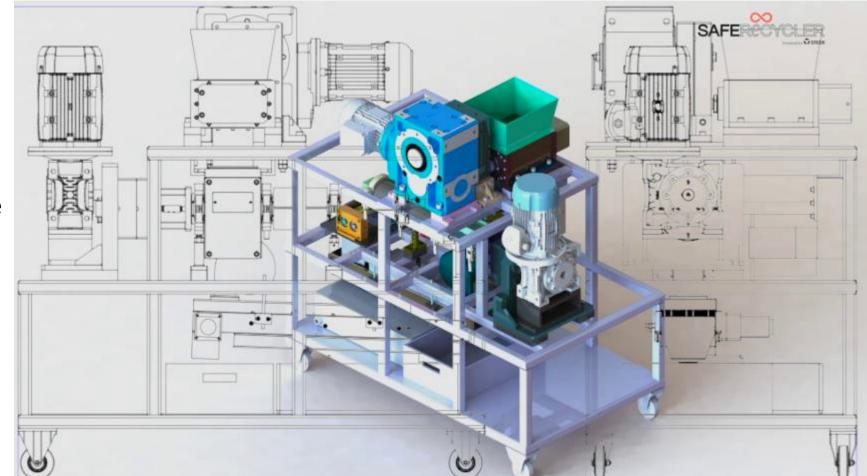


Features

- High degree of efficiency
- Fully self-contained
- Highest levels of safety
- Suitable for round the clock production
- Works on 2x15 AMP power source
- Footprint of just 1.20 sq. m

Advantages

- Fully automatic operation with Plug and Play concept
- Recycle at the source of waste generation
- 5-Year guarantee





Versatile Usage









Partnership

Promote technology for its faster adaption in waste management Health Care High traffic Communities Airports Schools & Universities Manufacturing plants and more

Tie-up with Organizations, Communities & Industry bodies Deploy at the source of high traffic waste creation

Processed waste sourced to create recycled meaningful commercial solutions





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Recycled Application Process and its usage

In-line Extrusion @ dedicated plant





Converts recycled mixed plastics waste material into varied extruded sections such as rounds, hollow pipes, rectangular profiles with ~4x improved stiffness by reinforcing with natural fiber and glass fiber.



STIFFNESS – a key to design



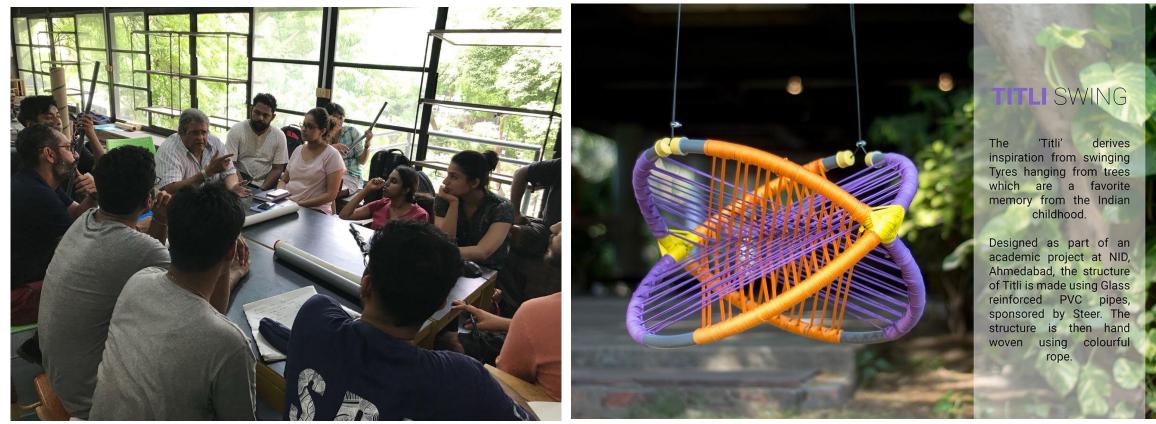


- STEER has the technology to reinforce plastics with long-fiber (natural fibers such as jute or long-fiber) in one step using in-line compounding.
- Typically, the stiffness of the resulting sections are a minimum of 4x higher.
- Some examples of materials with exceptional stiffness are shown here



Enabling Design of many forms





Furniture development project session at the National Institute of Design



MORE EXAMPLES OF IDEAS AND APPLICATIONS







WEIGHT ADVANTAGE + LOW MAINTENANCE = BUSINESS OPPORTUNITY





STEER is building an ecosystem of Fabricators, Women Entrepreneurs and specific application domains to use the converted material into products for consumers

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Effectively Managing Plastics Waste

in the Post Pandemic 21st Century







"If you want to change the world be that change" - Mahatma Gandhi

Thank You