

For Immediate release

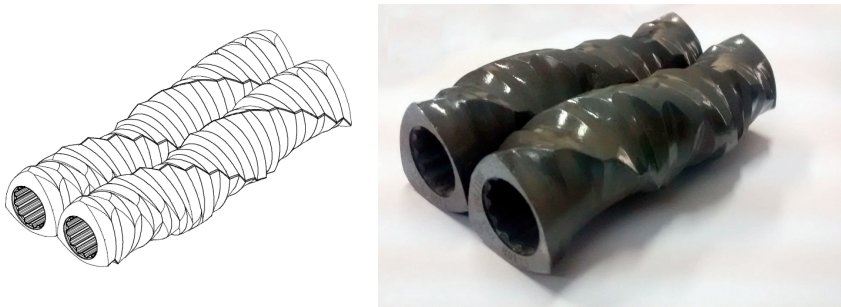
PRESS RELEASE

Announcing innovation

STEER Adds Melt Formation Elements (MFE) to its Special elements line up.

STEER eliminates the plastics compounder's most unresolved process challenges with introduction of MFE at the NPE, 2015

NPE 2015, Orlando – March 23, 2015 – STEER, today announced the launch of **Melt Formation Element (MFE)** at NPE for use in its **Fatigue Free technology**. This is in line with its endeavor to make continuous improvements to its **Mega and Omega co-rotating twin-screw platforms for delivering exceptional functionality and superior processing capability for plastics compounding**. The MFE is for improved reliability, reduced wear and increased uniformity of melting and mixing.



The MFE addresses **key problems** faced by the compounders of masterbatch, engineering plastics and difficult to process materials:

- High wear
- Degradation during melting
- Uncontrolled breakdown in the process and transmission section
- Improper material flow causing pressure peaks, which in turn leads to shear peaks which leads to torque instability and re-agglomeration

With this announcement, the Conventional Kneading blocks (Right handed, Left handed or Neutral) known for their ability to disperse, but too harsh for many applications, the kneading blocks present a perpendicular face to the flow causing melt stagnation and large pressure and shear peaks **during melting is replaced by the MFE.**

Dr Babu Padmanabhan, Managing Director & Chief Knowledge Officer, STEER, Said,

“The Melt Formation elements are **designed to create turbulence to the melt flow without stagnation.** They can replace conventional kneading blocks that suffer from lack of shear uniformity completely removing any right angled face to the melt flow.”

Hear his speech on STEER World You tube channel.

<https://www.youtube.com/watch?v=9RIEfaQcA4U>

According to the **STEER Application Development Center**, which works with customers to improve polymer compounding process using STEER technology found, a range of specific **mechanical energy input** at sub-enthalpy values for partial to complete melting was possible with polyolefins, polyamides and polycarbonates.

“Our elements portfolio is the most advanced and crafted to find answers to unresolved process and mechanical challenges faced by the plastics compounding producers.” **Said, Atanu Maity, CEO, STEER.** “The MFE adds to the lineup of STEER special EPZ elements of SFV, RFV, FKB, OSE, DSE, EME, FME, 3KB as part of our ongoing program to continuously evolve STEER Extruder platforms and make them more functional, efficient and address specific customer problems.”



About STEER:

STEER is a manufacturer and creator of specialized components, machine systems and platforms that effectively transforms and functionalizes materials in the fields of Polymers, Biopolymers, Pharmaceuticals and Food, using the core application of Co-rotating Twin Screw Extrusion

Founded in 1993 by Dr. Babu Padmanabhan with a vision to **steer a new world**, STEER today has 5 global offices and 10 satellite offices, serving over 35 countries and employs over 500 gifted engineers, scientists and technicians across the globe.

With many granted patents under its belt, STEER is committed to the creating new designs and technologies that enable our customers to produce the highest quality products, lower operational costs and innovate new products and processes that have the potential to improve the overall quality of human life. STEER's Application Development Centers (ADC's) in India, USA and Japan provides the customers with the appropriate environment to explore, develop and innovate with STEER technology. For more information, visit steerworld.com

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FAQ

— MELT FORMATION ELEMENTS (MFE) —

A. WHAT ARE THE PROBLEMS FACED WITH REGULAR KNEADING?

- High wear at melting and mixing zone.
- Harsh melting due to which degradation takes place. Besides dispersion will not be optimum.
- Due to speed, pressure build will be more, high shear peak, torque imbalance, re-agglomeration in process section.

B. WHAT ARE THE BASIC DIFFERENCES BETWEEN NORMAL AND FATIGUE-FREE EXTRUDERS?

- Thermoplastic compounding requires standard conveying, mixing or kneading elements to mix compounds, primarily through a folding mechanism. This 'melting and folding' mechanism results in breakage of elements and the shaft. Thus there is a need for an extruder that will allow for efficient wetting, melting and mixing of the plastic melt without causing breakage of elements — **Fatigue-Free Technology**.

C. CAN FATIGUE-FREE TECHNOLOGY BE IMPLEMENTED ON MY EXISTING TSE?

- Yes, it can be implemented on existing OMEGA extruders.

D. WILL FATIGUE-FREE TECHNOLOGY INCREASE OR DECREASE POWER CONSUMPTION?

- Fatigue-Free Technology will decrease power consumption.

E. WHAT WILL THE EFFECT OF FATIGUE-FREE TECHNOLOGY BE, ON THE QUALITY OF MY PRODUCT, IN TERMS OF MECHANICAL PROPERTIES AND COLOUR?

- Controlled melting to maintain quality and reduce degradation.

F. ADVANTAGES OF FATIGUE-FREE TECHNOLOGY

- Lowered barrel and screw wear
- Lowered energy consumption
- Higher quality of product
- Higher throughput

G. IS THIS TECHNOLOGY READILY AVAILABLE RIGHT NOW ?

- Yes, it is available for immediate use in OMEGA extruders.

H. DO YOU HAVE EXPERIMENTAL RESULTS AND DATA TO SUPPORT YOUR CLAIM?

- While we have some results, we are continuing to gather more information and data on F-F technology at our Application Development Center.

