

EFCE Spotlight Talks

Working Party on Mixing

26 April
2022

15:00 • 17:20

CEST

Overcoming challenges in mixing processes with evolving rheology



Processes with evolving viscosity or rheology during product manufacturing are encountered readily in diverse industries, such as foods, personal care, pharmaceuticals, paints, lubricants, polymers and plastics. Rheology, and therefore apparent viscosity, can change during the manufacturing of such products due to the creation of complex microstructures and/or chemical reaction. Evolving rheology presents a number of challenges in mixing operations because it very often results in a change of flow regime, transitioning from turbulent to laminar or vice versa. This brings about a number of questions on the local flow behavior and mixing mechanisms of such systems and how equipment should be designed to accommodate for flow changes.

This webinar aims at addressing some of the challenges that can be experienced when mixing fluids with evolving rheology. In particular, we will look at why mixing in such systems can be so complex, how we can better understand the flow behavior through experiments and simulation, as well as the challenges associated with these methods, and what is the best way to design mixing equipment to ensure effective mixing.

PROGRAM

- 15:00 **Welcome and introduction**
Joelle Aubin, Chair WP Mixing, University of Toulouse - France
Jarka Glassey, EFCE Executive Vice-President
- 15:10 **Mixing challenges in the formulation of complex microstructured products**
Prof Mark Simmons, University of Birmingham - United Kingdom
- 15:40 **Measuring mixing in viscous and evolving rheology fluids**
Dr Tom Rodgers, University of Manchester - United Kingdom
- 16:10 **Simulations of viscous thixotropic liquids and the way they respond to agitation**
Prof Jos Derksen, University of Aberdeen - United Kingdom
- 16:40 **Industrial Processes and Equipment to Handle Fluids with Complicated Rheology**
Dave Dickey, Mixtech, USA
- 17:10 **Conclusion**
Joelle Aubin, University of Toulouse - France
Claudio Fonte, University of Manchester - United Kingdom

Registration

free of charge but mandatory

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