

Registration Form

Industrial Powder Mixing

Thursday 10th – Friday 11th January 2008

The course fees are £600 plus VAT. *Early bird registration! Book by 31st October 2007 for the discounted rate of £550 plus VAT.*

Please complete the sections below and our finance department will be in touch.

Title:

Surname:

First name(s):

Company
or
Institute:

Address for correspondence:

Telephone number:

Fax number:

Email:

Venue and Fees

The course is held in the Novotel which is conveniently situated 2 minutes walking distance from the train station, and a short drive from Leeds-Bradford Airport.



Delegates requiring accommodation either before, during or after the course may do so at preferential delegate rates by making a booking via ParticlesCIC.

The course fees are £600 plus VAT (£550 plus VAT for bookings received by 31st October 2007).

The delegate fee includes course lunch and refreshments on each day, course dinner (Thursday), full course notes and a complimentary copy of Norman Harnby's book, **Mixing in the Process Industries** published by Butterworth-Heinemann.



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Courses for Industrial Applications



Industrial Powder Mixing

NOVOTEL
Whitehall Quay
Leeds
West Yorkshire
United Kingdom

10th – 11th January 2008



About the Course

This practical course on powder mixing has been a resounding success with participants since its launch in 2004. Now an established feature in the Centre's annual programme of events, we are pleased to offer the course again in January 2008.

The course is relevant to those concerned with quality assurance and improvement of existing processes and to those developing new product formulations and processes.

It is of particular interest to practitioners in the food, pharmaceutical, pigments, detergents, cosmetics, nuclear, plastics and general chemicals industries.

Learning Objectives

On completion of the course you will have an understanding of:

- the relevance of powder flow to the mixing process
- the concepts of free-flowing, cohesive, segregating, structured and coated powder systems
- how to practically and theoretically assess the quality of a powder mixture
- how to specify equipment fit for purpose.

Course Description

Emphasis throughout is on the industrial application of basic principles. Extensive interactive notes will be provided to participants and demonstrations, case studies and theory will be introduced wherever relevant. Powder flow and its significance in selecting the most appropriate mixers will be discussed.

Quality assurance, powder sampling techniques, a practical discussion of the statistics of mixing and the value of statistics at the formulation stage will be covered. The handling, packaging and marketing of powder products will also be discussed.

As well as offering the opportunity to discuss specific problems during the course, Friday afternoon is offered as an optional powder mixing clinic, or an opportunity to visit the characterisation facilities of the ParticlesCIC at the University of Leeds.

Course Director

Norman Harnby is a member of the School of Engineering at the University of Bradford and a visiting Professor at both the University of Leeds and Iowa State University.

He has been active in powder mixing research for over thirty years and in that time has been an active industrial consultant throughout Europe and the Americas.

Comments from previous participants include: *"Very good, with real life industry examples"* and *"Norman was a real joy to listen to!"*



PROGRAMME

Thursday 10th January 2008

- 09:00 – 09:30** Registration and welcome
- 09:30 – 11:00** Powder flow characteristics, free-flow, cohesion, segregation and structure
- 11:00 – 11:15** Refreshment break
- 11:15 – 12:45** The selection of a mixer
- 12:45 – 13:45** Lunch
- 13:45 – 15:15** Quality assurance of mixtures, scale of scrutiny, limiting mixture formulations
- 15:15 – 15:30** Refreshment break
- 15:30 – 17:00** The testing of mixers, sampling, laboratory procedures
- 18:30** Course dinner

Friday 11th January 2008

- 09:00 – 10:45** Cohesive powder mixing
- 10:45 – 11:00** Refreshment break
- 11:00 – 12:30** The handling of powders, mixer scale-up
- 12:30 – 13:30** Lunch
- 13:30 – 17:00** Optional powder mixing clinic or visit to the ParticlesCIC at the University of Leeds



ParticlesCIC

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