

Registration Form

Particle & Powder Characterisation

Please complete the form below to express your interest in this course. We will keep you informed on when and where our next available course is being run.

Title:

Surname:

First name(s):

Company
or
Institute:

Address for correspondence:

Telephone number:

Fax number:

Email:

Venue and Fees

The course usually 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.



The course fees and venue will be confirmed when we get back in touch with you with further details.

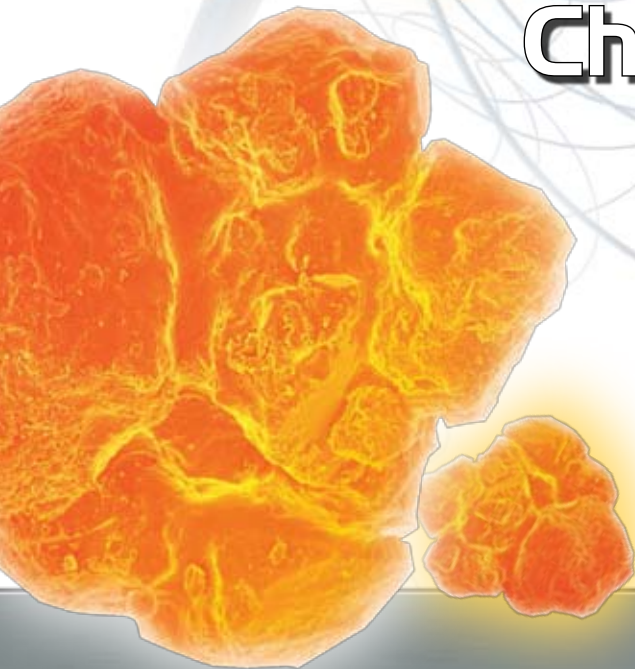
ParticlesCIC 

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Courses for Industrial Applications



Particle and Powder Characterisation





About the course

This course is relevant to employees using, producing or handling powders and particles in industry, and who need to know how to define, measure and use particle properties for quality assurance, improvement of processes and develop new product formulations and processes.

It is of particular interest for those involved in industries such as pharmaceutical, pigments, detergents, cosmetics, nuclear, plastics, food and general chemicals industries.

Learning objectives

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

- the relevance of particle size analysis and bulk powder measurement for characterising powder properties
- how to define, and measure particle size distribution and to evaluate results from particle size analysis
- how to choose between the many different instrumental methods for particle size analysis
- how to use simple overall bulk properties to classify different powders.

Course Description

Emphasis throughout is on the industrial application of basic principles of particle size analysis and bulk powder characterisation. Extensive interactive notes will be provided to participants and worked examples; case studies and theory will be introduced wherever relevant. The use of commercial particle size analysis instruments will be presented and the significance of each method discussed from a practical point of view.

As well as offering the opportunity to discuss specific problems during the course, the final afternoon is offered as an optional particle characterisation clinic or a visit to the characterisation facilities of the ParticlesCIC at the University of Leeds to see in action many of the particle characterisation methods presented during the course.

Course Director

John A. Dodds F.I.Chem E., F.R.Eng is professor of chemical engineering at the Ecole des Mines d'Albi, France, and Director of the CNRS industrial powder technology laboratory there. He is chairman of the working party on particle systems characterisation of the European Federation of Chemical Engineering and has been active in particle technology for over 30 years.



Powder Characterisation

Day One

Why measure particle size

- The importance of particle size for characterising powders

What is the size and shape of a particle?

- Definitions of equivalent sphere sizes
- Defining shape factors

Particle size distribution and mean particle sizes

- Division in size classes
- Distributions by number, surface, volume
- Graphical presentation of results
- Definitions of mean sizes
- Analytical distributions

Sampling for particle size analysis

Instrumental methods for particle size analysis

- Direct methods: image analysis, electrical resistance (Coulter)
- Classification methods: sieving, sedimentation
- Secondary methods: permeability, laser diffraction, time of flight

Course Dinner

Day Two

On-line measurements

Bulk powder properties

- Specific surface
- Porosity
- Apparent densities
- Angles of repose
- Flow and cohesion indices
- Avalanching, powder rheometry

Optional particle characterisation clinic or visit to the ParticlesCIC at the University of Leeds

ParticlesCIC
Houldsworth Building
Clarendon Road
Leeds LS2 9JT
United Kingdom

