

Registration

2-day Training Course on

SLURRY HANDLING

**Nigel I Heywood and
Neil J Alderman**

2–3 June 2008

to be held at
Neotechnology Consultants Ltd
#430, 910 – 7th Avenue S.W.
Calgary, Alberta, Canada

Lecturers

Dr Nigel I Heywood is a chartered chemical engineer and Fellow of the Institution of Chemical Engineers. He graduated in chemical engineering from Imperial College, London University, and, after having obtained a MSc in Advanced Chemical Engineering, he researched the effects of air injection into slurry flow in pipes at the University of Wales. He continued research into multiphase pipeflow at the University of Toronto, Canada, before returning to England to work at Warren Spring Laboratory, and joined AEA Technology in 1994 and then Aspen Technology in 2002. He now provides consultancy, research and training courses at BHR Group, Cranfield, UK. He lectures on rheology, slurry handling, bulk solids handling, mixing and on-line instrumentation, has written over 100 articles and reports, and co-edited a book entitled 'Slurry Handling: Design of Solid-Liquid Systems'. He obtained an Executive MBA and DIC from Imperial College in 1996.

Dr Neil J Alderman obtained his PhD in Chemical Engineering in 1986 from the University of Bath. In 1986 he went to work for Schlumberger Cambridge Research Ltd. He joined Warren Spring Laboratory in 1991 to work on applied rheology. He now works at BHR Group, Cranfield, UK, providing pilot-plant and lab-based consultancy and research services. He lectures on rheology, slurry handling, bulk solids handling, mixing and on-line instrumentation and has published over 100 papers and reports.

COURSE OUTLINE

Monday, 2 June 2008

Slurry Flow Curve Measurement

Overview of various rheological techniques used for measurement and characterisation of suspensions and pastes.

Case Study 1: Viscosity Measurement and Flow Curve Model Fitting for Selected Slurries

Pipeline Transport of 'Non-Settling' Slurries

Estimating frictional pressure drop/flowrate relationships for pipe flow in laminar and turbulent regions from flow curve viscosity measurement or small-scale pipeflow data. Optimising pipe diameter for specified conditions.

Case Study 2: Pressure Change Calculations for Pipeflow of Selected Slurries

Wear in Slurry Systems

Describes wear mechanisms and test equipment and methods. Discusses wear minimisation in slurry handling systems by the correct selection of materials and operating conditions.

On-line Slurry Flow Measurement

Applicability, advantages and disadvantages of a wide variety of non-invasive flowmeters discussed and selection guidelines given.

On-line Slurry Density/Concentration Measurement

Applicability, advantages and disadvantages of density meters and selection guidelines given.

Discussion and End of Day 1

Tuesday, 3 June 2008

Slurry Physical Property Measurement

Techniques for laboratory measurement of slurry physical properties including solids concentration, settling rates under gravity and particle size distribution.

Pipeline Transport of Settling Slurries

Calculating pressure drop/flowrate relationships and deposit velocity (minimum transport velocity) for settling slurries in pipe flow. Discusses empirical correlations and two-layer model, and gives guidelines for pipe diameter and slurry flow velocity.

Centrifugal and Rotary Positive Displacement Slurry Pumps

Describes commercially-available centrifugal and rotary positive displacement pumps designed for slurry and paste pumping, together with their operating conditions.

Reciprocating Positive Displacement and Fluid Displacement Slurry Pumps

Describes commercially-available reciprocating positive displacement and fluid displacement pumps designed for slurry and paste pumping, together with their operating conditions.

Slurry Pumps: Selection and Sizing

Summarises selection methods for generic pump types, including centrifugal and positive displacement, based on key variables. Derating pumps when pumping Newtonian, non-Newtonian and settling slurries.

Valves for Slurry Pipelines

Describes the range of slurry valves available. Summarises advantages and limitations, application areas and operating conditions for generic types of slurry valves.

Pipe Clearing/Cleaning Methods and Systems

Describes options including different pig, brush and knife designs. Case studies in different industries discussed.

Discussion and End of Course

REGISTRATION

Short Course on

SLURRY HANDLING

Calgary, AB, Canada: 2–3 June 2008

Your details

Please complete in block letters ticking appropriate boxes

Prof Dr Mr Mrs Miss Ms

Surname

Forename

Position

Company

Address

Post/Zip Code

Country

Invoice Address (*if different from above*)

Post/Zip Code

Country

Telephone

Fax

Email

Signature

Date

**Please submit one Registration form for each attendee.
Complete the Payment form to cover all delegates and send the forms to:**

For US Dollar payments only

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