

# 14th ANNUAL FOUR DAY COURSE ON The Design of Slurry Pipeline Systems

*Presented by:*

PATERSON & COOKE

**MARCH 2009**

*Held at:*

THE BREAKWATER LODGE, VICTORIA & ALFRED WATERFONT, CAPE TOWN, SOUTH AFRICA



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## The Design of Slurry Pipelines

Slurry pipelines are widely used in industry and mining operations. However, slurry pipeline systems are frequently characterised by operational problems and high running and maintenance costs. This is often due to inadequate design associated with a lack of understanding of the flow behaviour of two phase solid liquid mixtures.

The implementation of a reliable slurry pipeline system requires that all parties involved have a sound understanding of the underlying flow mechanisms of the slurries. This course addresses this need and provides delegates with a working knowledge of slurry pipe flow theory.

### Objectives

The aim of the course is to introduce delegates to the fundamental concepts of solid-liquid flows in pipelines and to apply these concepts to the design of slurry pipeline systems.

### Content and Programme

The intensive four day course consists of twelve lecture sessions, three design sessions and slurry flow behaviour demonstrations. Scientific or engineering calculators are required

for the design sessions. The programme and course content are detailed overleaf.

### Notes

Each delegate is issued with a comprehensive set of reference notes covering the topics discussed.

### Presenters

The course is presented by Dr Robert Cooke, Dr Angus Paterson, Mr Graeme Johnson and Mr Peter Goosen of Paterson & Cooke.

### CPD credits

The Slurry Pipeline Design Course is accredited for four ECSA Continuing Professional Development (CPD) credits by the South African Institute of Mining and Metallurgy (SAIMM).

### Who Should Attend?

The course is aimed at all professionals involved in solids handling in the mining, chemical, industrial and engineering fields. These include:

- Mechanical Engineers
- Mineral Process Engineers
- Mine Engineers and Metallurgists
- Consulting Engineers
- Manufacturers and Suppliers.



## The Design of Slurry Pipeline Systems

### Dates and Venue

Two identical courses will be held in March 2009 at the Graduate School of Business, The Breakwater Lodge, Victoria & Alfred Waterfront, Cape Town, South Africa. The course dates are:

**Course 1:** Tuesday 3 March - Friday 6 March 2009

**Course 2:** Tuesday 10 March - Friday 13 March 2009

### Fee

The course fee of R 14 000 per person including V.A.T. must accompany the registration form to confirm registration.

Registrations with payments received before 3 December 2008 are entitled to a 10% discount. A cancellation fee of 25% will be charged for written cancellations received before 3 February 2009. No fees will be refunded for cancellations after this date.

### Registration

The course registration form is to be submitted electronically from our web page at [www.PatersonCooke.com](http://www.PatersonCooke.com). We will post you an invoice and confirmation of registration on receipt of the form and course fee payment.

### Accommodation

Delegates are responsible for their own accommodation. Please contact us for a list of suggested hotels.

### Contact

If you have any queries, please contact Terry Carolin at: (021) 683 4734, fax: (021) 683 4168 or e-mail: [TerryC@PatersonCooke.com](mailto:TerryC@PatersonCooke.com)

## The Design of Slurry Pipeline Systems 2009 COURSE PROGRAMME

**COURSE 1: 3-6 MARCH • COURSE 2: 10-13 MARCH**

Session	Tuesday	Wednesday	Thursday	Friday
07:45 – 08:00	Tea / Coffee	Tea / Coffee	Tea / Coffee	Tea / Coffee
08:00 – 10:00	Registration (Till 8.30) Introduction Water pipeline hydraulics	Settling slurries	Rheology and non-Newtonian slurries	Mixed regime slurries Slurry system applications
10:00 – 10:30	Morning Tea	Morning Tea	Morning Tea	Morning Tea
10:30 – 12:00	Pump types Centrifugal pump characteristics	Slurry pipeline hydraulics	Rheology and non-Newtonian slurries	Slurry system applications
12:00 – 13:00	Lunch	Lunch	Lunch	Lunch
13:00 – 14:30	Introduction to slurry flow	Pump station design	Pipeline design	Rheology measurement review Case studies Closure
14:30 – 15:00	Afternoon tea	Afternoon tea	Afternoon tea	
15:00 – 17:00	<i>Design Session 1</i> <i>Water pipeline system</i>  <i>Demonstration 1</i> <i>Hydraulic grade line, settling slurries</i>	<i>Design Session 2</i> <i>Process balance and settling slurry system</i>	<i>Design Session 3</i> <i>Non-Newtonian slurry systems</i>  <i>Demonstration 2</i> <i>Rheology measurement</i>	
Evening	Free Evening	Boat Cruise	Free Evening	