

— A COMPREHENSIVE COURSE ON —
*Slurry Pipeline
Design & Operation*

May 11 – 14, 2010

Overview

Slurry pipeline transportation is a field that is not adequately covered in undergraduate engineering courses. Consequently, engineers are generally ill equipped when faced with the task of designing a slurry transportation system or troubleshooting an existing installation.

The Saskatchewan Research Council (SRC) and Paterson and Cooke (P & C) have joined forces to offer a comprehensive course in slurry pipeline design and operation. SRC has conducted hundreds of slurry pipeline R&D programs and developed a primarily mechanistic model describing the pipeline flow of settling slurries. P & C is an internationally recognized firm that has designed numerous slurry handling installations throughout the world.

The course focuses on applying the basic principles of slurry pipeline flows to actual design situations, including conventional slurry and thickened slurry (paste) systems. This course will provide an excellent opportunity for people involved in slurry transportation to meet in an informal environment, to share experiences, and to foster a uniform technical language and approach for slurry flow analysis.

A casual reception will be held at Rembrandt's in the Hotel Senator on Tuesday, May 11, 2010 from 7 to 9:30 p.m.



Website: www.src.sk.ca



Website: www.patersoncooke.com

Who should attend:

All professionals involved in solids handling in the mining, chemical, industrial and engineering fields, who have not previously taken the SRC Slurry Pipelining Course. Previous courses have been attended by: process engineers, equipment reliability & maintenance engineers, mining engineers, metallurgists, consulting engineers and equipment suppliers.

Course objectives:

Participants will learn about the principles governing the pipe flow of slurries and will be able to apply appropriate scale-up methods for the design of fine-particle (homogeneous) and coarse-particle (settling) slurry pipelines. This course is designed to offer a comprehensive overview of the key considerations for, and unique challenges encountered in the design, implementation and operation of slurry pipeline systems.

Course content:

- ◆ Rheology: Newtonian and non-Newtonian slurries
- ◆ Friction losses for fine-particle (homogeneous) slurries
- ◆ Friction losses for coarse-particle (settling) slurries
- ◆ Minimum operating velocities
- ◆ Use of the SRC Two-Layer Model for slurry flow calculations
- ◆ Design considerations for slurry handling installations
- ◆ Pump selection criteria
- ◆ Pump performance assessment
- ◆ Pipeline and pump wear
- ◆ Instrumentation for slurry flows
- ◆ Laboratory measurements and data analysis (conducted at the SRC Pipe Flow Technology Centre)
- ◆ Thorough review and discussion of selected case studies

A calculator is required for the design sessions.

A laptop computer would be useful, but is not mandatory.

Safety footwear is required for visiting the SRC facility.

Instructors:

Dr. Angus Paterson

Paterson & Cooke ♦ Cape Town, South Africa

Dr. Robert Cooke

Paterson & Cooke ♦ Denver, CO, USA

Dr. Sean Sanders

University of Alberta ♦ Edmonton, AB

Dr. Randy Gillies

SRC Pipe Flow Technology Centre ♦ Saskatoon, SK

Registration Fee **\$2,500 + 5% GST**

Discounts are available for qualified students. Contact Dr. Gillies (306-933-5473; gillies@src.sk.ca) for details.

To Register:

Complete the attached registration form and fax (or e-mail a scanned copy) to Leanne Crone at 306-933-7446 (crone@src.sk.ca)

Course registration fee includes:

- ◆ Demonstration software to assist with the design calculations
- ◆ Comprehensive course notes
- ◆ Copies of the course presentation material
- ◆ Hands-on laboratory data collection and analysis, conducted at the SRC Pipe Flow Technology Centre
- ◆ Lunch and Coffee/Tea Breaks
- ◆ Casual Reception on Tuesday, May 11, 2010

Accommodation:

A preferred rate is available at the Hotel Senator, 243 21st Street East, Saskatoon (Tel: 306-244-6141; www.hotelsenator.ca). Mention "Saskatchewan Research Council" to obtain the preferred rate. There tends to be a shortage of hotel space in Saskatoon during the summer months so book early.

A service will be provided to transport course attendees from the Hotel Senator to the University campus.

For more information please contact:

Leanne Crone

Email: crone@src.sk.ca

Lesley McGilp

Email: mcgilp@src.sk.ca

Tel: 306-933-7364

Fax: 306-933-7446

Tel: 306-933-5756

SRC / P & C
**Slurry Pipeline
Design & Operation Course**



May 11 – 14, 2010

Room 5C61, Agriculture Building
University of Saskatchewan
Saskatoon, SK, Canada



Registration Fee \$2,500 + 5% GST
(Hotel registration not included)

REGISTRATION FORM – Please print and complete

Name: _____

Company: _____

Address: _____

City and Province/State: _____

Postal Code: _____ Country (If not Canada): _____

Email: _____

Phone: _____ Fax: _____

PLEASE INDICATE METHOD OF PAYMENT

____ Invoice my company:

Contact Name: _____

Phone: _____ Fax: _____

Email: _____

____ Visa Account Number: _____

____ Mastercard Expiry Date: _____

Cardholder Name: _____

Sorry, we are unable to accept American Express.

Registration / Fee Payment Deadline is April 23, 2010

** A space in the course will be reserved for you upon receipt of the Registration Fee.

Fax or Email completed form to Leanne Crone
Fax: 306-933-7446 Email: crone@src.sk.ca Tel: 306-933-7364