Transportation of Solids Using Centrifugal Pumps

March 9-13, 2020  Grovetown, GA

Sponsored by The GIW Hydraulic Test Laboratory & Augusta University
Course Overview

Monday, March 9, 2020
Course begins at 10:00 am
- Fluid Flow Principles
- Basic Concepts of Centrifugal Pumps
- Basic Relations for Slurry Flows
- Settling of Solids in Liquids
- Classification of Slurries

Tuesday, March 10, 2020
- Settling Slurry Basics
- Non-Settling Slurry Basics
- Bed Formation and Deposition
- Water Hammer/Clear Loop Demos
- Settling Slurry Test
- Hydraulic Lab Tour

Wednesday, March 11, 2020
- Analysis of Test Results
- Settling Slurries Advanced Topics
- Tour of GIW Manufacturing Facility (Optional)
- Non-Settling Slurry Test
- Slurry Pump Materials

Thursday, March 12, 2020
- Analysis of Test Results
- Complex Slurries
- Slurry Pump Wear and Performance
- Slurry Pump Design and Construction
- Working Session: Total System Design

Friday, March 13, 2020
Course ends at 12:00 pm
- Slurry Pump Wear Performance
- Total Cost of Ownership
- Operating Experiences with Centrifugal Pumps
- Closing Session

The theoretical and practical aspects of slurry transport, from design to operations, are covered by an international staff of experts in the field. The format includes classroom lectures, pipeline pumping tests, demonstrations of slurry flow in the GIW Hydraulic Lab, and an extended “Total System Design” workshop where participants can practice the skills they have learned.

Course participants receive a printed copy of all presentations, a workbook with practice problems and solutions, and a copy of the supporting textbook “Slurry Transport Using Centrifugal Pumps” by Wilson, Addie, Sellgren and Clift.

Optional activities include a tour of the GIW manufacturing facility and an evening Hospitality Suite where participants can see slurry pumps first hand, test drive GIW’s SLYSEL software for pump & pipeline calculations, and meet with the teaching staff in an informal setting.

The course is intended for university-educated engineers specializing in slurry pipeline system design and slurry pump application. Participants should be fluent in English.

The course is sponsored by GIW Industries and Augusta University. Three continuing education units are awarded upon completion.
Registration Deadlines and Fees

Course fees includes all lectures, lunches, course textbook, and a training manual.

- **Early Registration**  
  (Payment Received by January 17, 2020)  
  Fee $2300.00

- **Late Registration**  
  (after January 8th)  
  Fee $2500.00

- **Multiple Attendee Discount**  
  Companies registering 2 or more employees:  
  Early registration fee $2070  
  Late registration fee $2250 per employee

**Accommodations:**
A block of rooms is reserved at the Augusta Marriott (2 Tenth Street). Reservations are made for attendees by GIW, but rooma and parking will be paid by the registrant. Details are on the registration form. While staying at the host hotel is not required, all classroom sessions will be held at this hotel. Transportation will be provided from the Augusta Marriott to GIW for all participants.

**Airports:**
Augusta Regional Airport (AGS). Complimentary hotel shuttle.  
Atlanta International Airport (ATL) 2 1/2 hour drive from hotel.

**Ground Transportation:**
AGS - Hotel shuttle call 706-722-8900 when you land.  
ATL - Groome Transportation provides shuttles from the Atlanta airport to Augusta www.groometransportation.com.

**General:**
Registrations must be approved by GIW before acceptance. GIW reserves the right to limit attendance or to cancel the course and refund registration fees. Course begins at 10:00am on Monday at the hotel and ends at noon on Friday. Please make your travel arrangements accordingly.

**Enrollment Options:**
Registration forms can be obtained from the GIW website (www.giwindustries.com) or by calling 706-434-0734.

**Cancellation:**
Cancellations made after January 17, 2020 will result in NO REFUND. A substitute may be enrolled at any time prior to the start of the course.
Teaching Staff

Dr. Anders Sellgren, professor emeritus of water resources engineering at Luleå University of Technology in Sweden, has over 40 years of international experience in research, development, and design of various slurry pumping systems. He has published numerous papers and is a co-author of the book “Slurry Transport Using Centrifugal Pumps.”

Dr. Václav Matoušek, professor of civil engineering at Czech Technical University in Prague, has over 20 years of international research experience in slurry transport particularly in connection with dredging. He holds a MSc in civil engineering from the Czech Technical University and PhD in mechanical engineering (dredging engineering) from the Delft Technical University in the Netherlands.

Dr. Harry H. Tian, GIW’s Director of Metallurgy and Materials R&D, holds a Ph.D. in metallurgical and materials engineering from the University of Alabama. He has more than 30 years of experience in research, teaching and industry, and has published numerous technical papers in national and international journals and conferences. Dr. Tian has been with GIW since 1992.

Robert Visintainer, P.E., Vice President of Engineering, Research & Development for GIW Industries, has worked in the design, testing, sales and manufacture of centrifugal pumps since 1981, with special focus on slurry wear prediction methods and all aspects of slurry pump hydraulic and mechanical design. A graduate of the Georgia Institute of Technology, Robert holds degrees in Physics and Mechanical Engineering.

Dr. John Furlan, Senior Hydraulic Engineer for GIW Industries, holds a Ph.D. in mechanical engineering from Case Western Reserve University. He is responsible for hydraulic design, wear, and performance prediction of centrifugal slurry pumps. He performs experimental and computational research in the areas of solid particle erosion, solid-liquid, and gas-liquid flows through slurry pumps, hydrocyclones, and pipelines.

Dr. John Harding, Pump Application Manager has been with the KSB Group since 1988 and with GIW since 2000. His particular area of focus is on pump selections, pump applications and trouble shooting of slurry systems.

George McCall II, P.E., Manager of the GIW Hydraulic Lab, has worked in testing, research, and development for more than 20 years and has 8 years experience in the pump industry. A graduate of the Georgia Institute of Technology, George holds bachelors and masters degrees in Mechanical Engineering and is a Professional Engineer.