FLOW MEASUREMENT AND CUSTODY TRANSFER

27 - 31 Aug 2017, Dubai
05 - 09 Nov 2017, Muscat
09 - 13 Sep 2018, Dubai
INTRODUCTION

Custody Transfer defines the point at which ownership changes hands for the process product being measured. This transfer is unique among flow-meter applications since money changes hands and accuracy requirements are higher than they are for most other applications. The custody transfer system must generate detailed and indisputable cargo reports, based on accurate flow measurements and calculations.

In this intensive and highly practical training seminar, participants will gain sound and practical understanding and extend their knowledge of Custody Transfer and Flow Measurement systems, principles and types, and how to assess their impact on the strategic and tactical aspirations of the company.

This training seminar will highlight:
- The laws governing fluids and gases
- Important principles of flow-metering including accuracy and repeatability
- Main types and applications of Flowmeters with emphasis on custody transfer
- Flowmeter proving and calibration techniques
- Custody transfer principles and applications

OBJECTIVES

This training seminar introduces participants to a variety of flow measurement technologies and systems that are used custody transfer applications, and gain an understanding about how measurement systems can work properly and accurately.

At the end of the training seminar, the participants will:
- Have a sound understanding of relevant fluid and gas Laws that are needed for the use of flow measurement devices
- Understand the main requirements of custody transfer systems
- Appreciate the main requirements of flow measurements including accuracy and repeatability
- Be knowledgeable about up-to-date flow measurement meters including differential pressure (DP) measurement, turbine meters, positive displacement meters, Coriolis flow measurement, Magnetic and ultrasonic flow measurement
- Gain the ability to determine if a metering system is adequate for the purpose, select appropriate custody transfer metering systems and identify potential problems
- Learn about the principles and applications of Multiple meters/ meter runs, Flow computers, Quality systems, Calibration, Meter Runs, Proving and Supporting Automation

TRAINING METHODOLOGY

The Flow Measurement and Custody Transfer training seminar combines structured and focused presentations and discussions of topics covered with relevant examples and question & answer sessions to maximise the benefits to the participants. Relevant computer simulations and videos will be used to emphasise the main topics.

Participants will be provided with comprehensive hard and soft copies of the training seminar notes and soft copies of all presentation material. These will be very valuable for detailed study and future reference.

ORGANISATIONAL IMPACT

- The company will achieve improved and optimised control of its custody Transfer and flow measurement operations.
- Optimised process selection criteria will increase efficiency and Financial Performance and result in Fiscal Savings. This will be brought about by more accurate measurement techniques and more robust Custody Transfer operations.
- Improved competencies will result in higher staff productivity and effectiveness.
- The organisation will be able to generate detailed and indisputable cargo reports, based on accurate flow measurements and calculations.

PERSONAL IMPACT

- Participants will gain sound and practical understanding and extend their knowledge of Custody Transfer and Flow Measurement systems, principles and types, and how to assess their impact on the strategic and tactical aspirations of the company.
- Participants will have the necessary information and confidence to conduct reviews of flow measurement systems and the ability to report to management on the status of the custody transfer systems in place and methods of improvement.
- Participants will be able to minimise loss and increase Fiscal Gains, through the correct selection and operation of flow measurement systems that are related to Custody Transfer.

WHO SHOULD ATTEND?

This training seminar is highly relevant to personnel needing a basic understanding of Custody Transfer concepts and requirements and fluid flow measurement techniques and applications.

This seminar is suitable to a wide range of professionals but will greatly benefit:
- Engineers and Technicians of all disciplines
- Instrumentation Personnel
- Procurement and quality control personnel
- Inspection and Maintenance engineers
SEMINAR OUTLINE

DAY 1
Introduction - Basic Fluid and Gas Laws
- Custody Transfer principles and requirements
- Pressure, Viscosity, Flow Volume, Continuity Principle, Energy Law (Bernoulli’s)
- Flow Configurations (Flow Profiles), Laminar Flow, Turbulent Flow
- Reynold’s Number, Flow Losses (Friction Losses)
- Ideal and Real Gases, Gas Laws, Boyle’s Law, Charles’s Law, Gay-Lussac’s Law

DAY 2
General Characteristics and Performance of Flow Meters
- System Characteristics and Flow range
- Performance, Accuracy, Stability and Repeatability, Sensitivity, Noise, Linearity, Reliability
- Flow modification and meter runs
- Applications and Usage, Sizing
- Temperature and Pressure Measurements

DAY 3
Types and Applications of Flow Meters
- Differential Pressure (DP) Flow Meters, Orifice, Venturi, Nozzles, Pitot tubes
- Positive Displacement (PD) Flow Meters, Rotor, Oscillating Piston, Oval Gear
- Turbine Flow Meters, Conventional and Helical
- Problems with Erosion, corrosion, Cavitation and Obstructions
- Uses and Applications, Installation requirements and Standards

DAY 4
Types and Applications of Flow Meters (Continued)
- Ultrasonic Flow Meters
- Magnetic Flow Meters
- Coriolis Flow Meters
- Uses and Applications, Installation requirements and Standards
- Straight run requirement

DAY 5
Flow Measurement Systems and Custody Transfer Considerations
- Custody Transfer Requirements
- Meter Factor
- Proving Systems; Direct, Indirect, Master Meter, Volume, Displacement
- Custody Transfer Skids
- Flow Computers and Communication
- Temperature and Pressure Measurements

Flow Measurement and Custody Transfer
FLOW MEASUREMENT AND CUSTODY TRANSFER

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<tr>
<th>Code</th>
<th>Date</th>
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<tr>
<td>IN025</td>
<td>27 - 31 Aug 2017</td>
<td>Dubai</td>
<td>$4,500</td>
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REGISTRATION DETAILS

LAST NAME:________________________________________
FIRST NAME:_______________________________________
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PAYMENT DETAILS

☐ Please invoice my company
☐ Cheque payable to GLOMACS
☐ Please invoice me

CERTIFICATION

Successful participants will receive GLOMACS’ Certificate of Completion

4 WAYS TO REGISTER

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TERMS AND CONDITIONS

• Fees – Each fee is inclusive of Documentation, Lunch and refreshments served during the entire seminar.
• Mode of Payment – The delegate has the option to pay the course fee directly or request to send an invoice to his/her company/sponsor. Credit card and cheque payments are both acceptable.
• Cancellation / Substitution – Request for seminar cancellation must be made in writing & received three (3) weeks prior to the seminar date. A US$ 250.00 processing fee will be charged per delegate for each cancellation. Thereafter, we regret that we are unable to refund any fees due, although in such cases we would be happy to welcome a colleague who would substitute for you.
• Hotel Accommodation – is not included in the course fee. A reduced corporate rate and a limited number of rooms may be available for attendees wishing to stay at the hotel venue. Requests for hotel reservations should be made at least three (3) weeks prior to the commencement of the seminar. All hotel accommodation is strictly subject to availability and terms and conditions imposed by the hotel will apply.
• Attendance Certificate – a certificate of attendance will only be awarded to those delegates who successfully completed/attended the entire seminar including the awarding of applicable Continuing Professional Education Units/Hours.
• Force Majeure – any circumstances beyond the control of the Company may necessitate postponement, change of seminar venue or substitution of assigned Instructor. The Company reserves the right to exercise this clause and implement such amendments.
• Fair Access / Equal Opportunities – In the provision of its services as a world-class Training Provider, the Company is committed to provide fair access / equal opportunities throughout the delivery of its courses and assessment leading to the completion of training seminars, or 3rd party qualifications/certifications.

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