

Monday January 22nd, 2018						
Time	Short Course Title	Short Course Title	Time	Short Course Title	Short Course Title	Short Course Title
8:00am	Reverse Osmosis and Membrane Technology – Proper uses, maintenance, monitoring and cleaning for the Mineral Processor	Gravity Concentration		Screening Theory & Practical Considerations in Operating Screening Equipment Efficiently	Mineral Processing Plant Debottlenecking : Tools and Methodology	Thickener Operation – Use of Instruments to Optimize Thickener Performance
	Objectives: Water quality from both a process requirement and discharge perspectives becoming more important to mineral processing operations. Metallurgists, process engineers and mineral processing plant managers are increasingly being involved in projects to improve water quality where various membrane technologies are evaluated and often implemented. This course is designed to provide attendees with an understanding of options available to meet their needs based on a desired outcome for water quality. It should also result in the ability to consider and evaluate and compare different filtration and membrane options at a high level. Finally, attendees will leave with an understanding of proper maintenance to retain design performance and extend the life of consumable membranes and associated equipment.	Objectives: This course is designed for the Mineral Processing Engineer who wishes to have a more detailed understanding on Gold Gravity Concentration using Centrifugal Gravity Concentrators. The course will cover gold gravity applications, test work, scale-up and modelling, gravity circuit audits, and gravity circuit benefits.		Objectives: The objective of the Course is to give the delegate a basic understanding of the Screening process (Theory). Then to look at the practical aspects of Screening so that in a Plant situation they know how to solve basic Screening problems & optimize their Screens for the application & operate them as efficiently as possible.	Objectives: To assist plant mineral processors to identify the deviations between nameplate capacity and actual operating capacity and identify adequate solutions following a structured approach.	Objectives: Increase an Operators Understanding of the Thickener, Resulting in Improved Performance & Lower Running Costs.
	Cost \$400 Full Day Course	Cost \$400 Full Day Course		Cost \$400 Full Day Course	Cost \$200 Half Day Course	Cost \$200 Half Day Course
	Course Instructors: Russel Johnson, Edward Sylvester and Brian Daniyw - Chemtreat Coporation	Course Instructor: Michael Fullam - FLSmithh		Course Instructor: Anthony Yell - Tema kenmann	Course Instructors: Jean-François Boudet – Dynamic Simulation Expert - Hatch and Nicolas Paulin – Process Engineer - Hatch	Course Instructors: Peter Latta - Tenova Deltor and Mark Taylor Tenova Deltor
12:00p	Lunch		12:00p	Lunch	Course Concludes at 12:00p	Course Concludes at 12:00p
4:30p	Description: The training will focus on proper applications of Reverse Osmosis and other membrane technologies for process applications, environmental/effluent applications, and pretreatment of influent or recycle water. The core material of the course will be focused on proper selection of equipment for applications based on raw water quality and desired results. We will also focus on proper maintenance, monitoring, and cleaning which can result in a much greater payback on this capital equipment due to increased life and reduced unscheduled downtime.	Description: Gold gravity recovery using centrifugal concentrators has become commonplace over the last 20 years. This course will give the Mineral Processing Engineer a thorough step by step approach to testing an ore for gravity amenability, and to determine how large or small a gravity circuit to install by scaling up. Various applications will be covered, from the more common primary grinding circuit installation, to less common application such as flotation regrind or open circuit concentrates. Linking gravity and its benefit to overall recovery will be reviewed, as a way to help determine circuit sizing and economics. The next section will be more practical topics such as common design issues with gravity circuits, gold rooms, and Intensive Cyanidation systems, and different configurations for a gravity circuit and gold room design. A detailed section on Intensive Cyanidation of gravity concentrates will be included Optimization of gravity circuits will follow with techniques on how to audit and measure performance and typical operating parameters to use with various applications. The last section will cover continuous applications, including testing and scale up	4:30p	Description: The one common denominator is that Screening is considered to be a "black art". It is not taught in any detail at colleges or Universities. The result is that our Process Engineers, Metallurgists, Plant Operators have very little knowledge on how to operate, maintain & optimize their Screening machines. This Course will give them the theoretical knowledge plus a practical understanding on how to operate & optimize their equipment to achieve the best results. In addition we will give tips on how to maintain their equipment to reduce maintenance downtime & optimize availability. This course will benefit Process Engineers, Metallurgists, Plant Operators & Maintenance personnel.	Description: - o Introduction to basic concepts o Analysis of operating data and key performance indicators o Analysis of downtime and blockages o Bottleneck Diagram o Analysis of the project implementation sequences (road map) o Value-Stream Mapping of processes / operations o Documentation of delays in the operation o Decision support tools o Static analysis tools (Linn and Metsim model and other model by defined elements) o Dynamic Analysis Tools (Arena Model) - Case Studies - Questions	Description: The Course Will Go Through Testwork, Flocculation and Sizing of a Thickener to Enable Operators to Understand the Critical Concepts of Thickener Operation. By Showing the Difference Between High Rate, High Density and Paste Thickeners – Operators Will Learn What Instruments & Control Philosophies Can Be Used to Improve Performance. Benefits Would Include Increased Utilization Rates and Lower Flocculant Consumption – Where a 10% Reduction Could Equal Hundreds of Thousands of Dollar.
	End of Day	End of Day		End of Day	End of Day	