Service and Maintenance for Solids Control Equipment

**About the Course**
Proper installation, care, and repair are all vital components to maintaining a productive solids control system. This course is designed for the tradesperson with both mechanical and electrical responsibilities on solids control equipment. Students will have the opportunity to participate in a hands-on course related to all aspects of service for each piece of solids control equipment manufactured by Derrick. (Service overview of competitive equipment by request)

**Main Areas of Focus**
- Equipment identification, parts, preventative maintenance and troubleshooting.
- Disassembly & reassembly of the following solids control equipment: Shale shakers, Degasser, Hydrocyclones, Pumps, Agitators, and parts of a Centrifuge.
- Related electrical components, troubleshooting and electrical maintenance.
- Operating manual referencing.

**Who Should Attend**
The course is designed for new hires, rig personnel, civil and underground operators, service technicians, and any other personnel who directly with servicing solids control processing equipment.

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**Course Specifics**

**Instructor:** Matt Wiggins  
Roberto Revelo

**Course Length:** 5 days*  
*Includes test tank and lab sessions

**Time:** 8:30 AM – 4:00 PM*  
*Breakfast and lunch are provided

**Price:** $1,500.00

**Class Limit:** 5

**Attire:** Jeans or pants  
Shirt  
Closed-toed shoes  
*Safety equipment/tools provided

**Schedule subject to change based on enrollment**
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<th>Course Name</th>
<th>Learning Targets</th>
<th>Solids Control Key Outcomes</th>
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| **Derrick Equipment Company Overview** | • History  
• Locations  
• Services | • Derrick key contacts & information |                                                                                           |
| **Electrical Overview**             | • Basics of voltage, amperage, ohms, and horsepower  
• Wire stripping, identification, multimeter use, and troubleshooting | • Understanding Derrick starters, motors, and wiring | • Starter box labeling and identification  
• Motor cord assembly  
• Troubleshooting inside the starter box  
• Troubleshooting motors |
| **Operating Manual Overview**       | • How to access manuals  
• How to locate parts  
• Wiring schematics | • Proper equipment installation methods  
• Locating and ordering parts | • Classroom overview of operating manual locations, access, and utilization. |
| **500 Series Shale Shaker**         | • Design and overview  
• Technical specifications  
• Mechanical specifications | • Service & Preventative maintenance | • Shaker disassembly  
• Parts identification and troubleshooting  
• Shaker reassembly  
• Hydraulic overview if applicable |
| **Primer & Flo-Divider**            | • Design and overview  
• Technical specifications  
• Mechanical specifications for primer | • Service & maintenance on primer  
• Flo-divider recommendations & troubleshooting | • Primer walk-around and parts identification  
• Flo-divider installation overview |
| **Hyperpool Shale Shaker**          | • Design and overview  
• Technical specifications  
• Mechanical specifications | • Service & Preventative maintenance | • Shaker disassembly  
• Parts identification and troubleshooting  
• Shaker reassembly |
| **Screen Technology**               | • Brief history  
• API RP 13 C  
• Screen comparisons  
• Screen performance | • Screen sizing  
• Cut points  
• Issues  
• Care | • Screen change on Derrick & competitive shakers  
• Screen microscope  
• Cost per foot/well tracking program  
• Screen animation |
| **600 Series Shale Shakers**        | • Design and overview  
• Technical specifications  
• Mechanical specifications | • Service & Preventative maintenance | • Shaker disassembly  
• Parts identification and troubleshooting  
• Shaker disassembly  
• Starter box troubleshooting  
• Hydraulic overview |
| **Degasser**                        | • Design and overview  
• Technical specifications  
• Mechanical specifications | • Proper connection & operation  
• Service & Preventative maintenance | • Safety overview  
• Degasser disassembly  
• Parts identification and troubleshooting  
• Degasser reassembly |
| **Hydrocyclones**                   | • Design and overview  
• Technical specifications | • Proper connection & operation  
• Service & Preventative maintenance | • Degasser disassembly  
• Parts identification and troubleshooting  
• Degasser reassembly |
| **Pumps**                           | • Design and overview  
• Technical specifications  
• Mechanical specifications | • Proper connection & operation  
• Service & Preventative maintenance | • Pump disassembly  
• Parts identification and troubleshooting  
• Pump reassembly |
| **Mud Agitators**                   | • Design and overview  
• Technical specifications  
• Mechanical specifications | • Proper installation  
• Service & Preventative maintenance | • Agitator disassembly  
• Parts identification  
• Agitator reassembly |
| **Centrifuge**                      | • Design and overview  
• Technical specifications  
• Mechanical specifications | • Proper installation  
• Service & Preventative maintenance | • Parts identification  
• Fundamental mechanical troubleshooting  
• Troubleshooting basic faults and alarms |
| **Solids Control Service Review**   | • Quick quiz  
• References  
• Zip drive  
• Course evaluation | • Assessment for learning | • Recap & discussion |

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