

LEWA Academy

Course Title **Repair and Maintenance of LEWA metering pumps (S2)**

Organizer:

LEWA GmbH

Venue:

LEWA Headquarters, 71229 Leonberg/Germany

Audience

Personell which has to install, assemble, commission, operate, maintain and repair LEWA metering pumps.

Objectives

- To know mechanical and hydraulically basics, which applies during operation of metering pumps
- Describe the evolution from plunger pump to diaphragm pump and behaviour in case of failures
- Know the functioning of diaphragm pump heads and main type of seals and valves
- Know the advantage of a triplex pump and how to assemble it referring to operating manual
- List the different types of fluid valves and there applications
- Know aim and strength of CMS Condition Monitoring System
- List four out of five failures impacts and name per impact two possible reasons and two possible correctives
- Be able to fulfil maintenance and repair tasks referring to operating manual

Content

- Design and properties of metering pumps
- Technique of drive elements
- Technique of pump heads
 - Evolution from plunger pump to diaphragm pump
- Integration of the metering pump into the complete system
 - Accessories
 - Discharge characteristics
 - Co-function pump / plant. Pump and pipeline as oscillating system
 - Pressure amplitudes at under critical operation; pressure shocks.
 - Operating criteria of reciprocating positive displacement pumps
 - Damping of pressure and flow pulsation
- Valves and applications
- Workshop failure detection and diagnostics
- Practical training maintenance and repair
 - Drive element assembly, combination of multiplex pumps
 - Assembly of plunger pump heads, replacing plunger seals
 - Assembly of diaphragm pump heads
 - Lapping valves, installation for plungers, setting of valves
 - Commissioning and test run
 - Damping of pressure and flow pulsations
 - Demonstrating with test stands
 - Installation and adjustment of stroke actuators
 - Work on different metering pumps
- Discussion and exchange of experience