

SYLLABUS Of SMC TRAINING CENTER

SMCTC – ELECTRO PNEUMATICS

➤ OBJECTIVES

Participants will have a course that meets 4 days where they will be able to:

- Understand the construction and function of the components in electro-pneumatic control system
- Identify and use control schematics
- Design, construct and troubleshooting of electro-pneumatic circuits
- Gain wider knowledge of complex electro-pneumatic circuit design
- Read and construct the complex system with supplementary conditions
- Provide a systematic approach in fault finding and correction
- Understand the importance of compressed air purification (CAP) systems
- Identify the common parts that are easily subjected to wear in Electro - Pneumatic components
- Carry out systematic approach in identifying the possible causes of failure and correction in a complex Electro - Pneumatic systems
- Realize the significant and execute the correct methods of preventive maintenance

➤ COURSE CONTENT

1. Economical and technical aspect of electro - pneumatic systems
2. Basic electric theory
3. Construction and principle of operation electro pneumatic components
4. Electrical symbols – DIN and ladder diagram
5. Reading/design of control schematics
6. Safety requirements
7. Design of various controls with Logic ladder Diagram , Memory, Intermediate Position, Counting , Time - Dependent and Pressure - Dependent Controls
8. Reading of complex circuit with step diagram
9. Systematic approach to sequential design
10. Various cut off methods for opposing signals
11. Sequential design with supplementary conditions (single/continuous cycle, manual/automatic mode, inching, Emergency Stop Design, etc)
12. Special circuits for industrial application



13. Electrical Safety
14. Practical exercises with systematic troubleshooting
15. Contamination in compressed air production and distribution
16. Air purification and treatment
17. Common learning parts in Electro- Pneumatic systems
18. Preventive maintenance of Electro-Pneumatic systems
19. Electro Pneumatic circuit measurement and testing
20. Reading of complex Electro-pneumatic Circuit
21. Common problem solving circuits for industrial application
22. Safety measures
23. Circuit set up and troubleshooting