



INTRODUCTION

Mechatronics systems, a combination of mechanical & electrical systems, contain Hydraulic & Pneumatic components, which help in automating manufacturing processes. A good understanding about Hydraulics & Pneumatics systems is mandatory for building a balanced and an efficient Mechatronics system. After building a good Mechatronics systems, it is even more important to know the techniques to troubleshoot any problems that would arise during functioning of the system.

Keeping this in view, Indian Machine Tool Manufacturers' Association (IMTMA) is organizing an online on Hydraulics and Pneumatics systems.

FOCUS AREAS

- Basics of Hydraulics and Pneumatics
- Function of hydraulic components - Pumps, DC Valves, Cylinders, Motors and Reservoirs
- Symbols and circuit diagrams
- Hydraulic systems elements - DC valves, Check valves, Pressure control and Flow control valves,
- Function of Pneumatics components
- Pneumatic system elements – Cylinder, fittings, valves, Compressor, actuator, gauges, filters
- Use of Hydraulics and Pneumatics in Mechatronics systems / Machine tools
- Maintenance and troubleshooting tips

KEY TAKE AWAYS

- Understand Basics of Hydraulic elements & Pneumatic elements
- Understand to read the hydraulic and pneumatic circuits
- Know maintenance procedures for Hydraulic & Pneumatic systems
- Troubleshoot Hydraulic & pneumatic circuits in systematic manner
- Analyze probable failures related to critical hydraulic & pneumatic elements

FEE PER PARTICIPANT (PER LOGIN)

Rs. 2000/-

+18% GST

**IMTMA Members/ Micro Companies/ Individuals/
Educational Institutions / Students/ IMTMA Non
Members/ Others**

USD 60/-

Overseas Participants

FACULTY

This programme will be conducted by **Mr. N Swaminathan**.

Mr. N Swaminathan is a Mechanical engineer with over 40 years of professional experience. He joined BFW Ltd as R&D engineer and was involved in developing a vertical machining centre. He co-founded Leonardo Automation in 1986 as Technical Director looking after design to customer service. He was involved in design of Hydraulic powerpacks, expanded to Electro- hydraulic systems with CE marking, developed special test rigs, Actuators, lab systems and jack oil systems. The powerpacks built by him have the capacity to handle a maximum pressure of 2500 kg /cm² and a flow of 1200 Litres per min. He has served customers like GE (Austria) / Nuclear power corporation / Siemens / ARAI.

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