

A. Vincent May, Inc.

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NOW OFFERING MECHANICAL TRAINING!

Introducing Ed Rybarczyk

Ed is currently president of E.R. Consultants, Inc., and is an expert in fluid power with several certifications as well as being an accredited instructor.

Ed has been a member of the International Fluid Power Society since 1992. Among his certifications for fluid power are:

- Accredited Instructor
- Authorized C&C Job Performance Proctor
- Authorized Job Performance Proctor
- Connector & Conductor
- Hydraulic Specialist
- Specialist



Mechanical Classes

Basic Fundamentals of Hydraulics (3 days, lecture)

Fundamentals, principles and laws (Pascal's Law), symbology, components and their functions, schematic reading and troubleshooting. Course can be lengthened an additional 1-2 days depending on availability of hydraulic systems on floor equipment, or availability of components to disassemble and evaluate.

Basic Fundamentals of Pneumatics (2 days, lecture)

Fundamentals, principles and laws (Pascal's Law), symbology, components and their functions, air compressors and systems, schematic reading and troubleshooting. Course can be lengthened an additional 1-2 days depending on coverage of air drying, piping, filtration and evaluating the performance of the system. Also, can discuss pneumatic circuits and systems used on the floor depending on machine availability.

Ball Screw (2 days, lecture)

Fundamental principles, terminology, types, preloads, alignment and inspection procedures and troubleshooting. Course can be lengthened an additional 1 day depending on availability of a machine to remove covers and inspect ball screw.

Bearings and Lubrication (2 days, lecture)

Types of bearings, installation and maintenance of bearings, shaft and housing fits, bearing materials, classifications and identification, difference between oils and greases, selecting the proper lubricant, understanding terms, automatic systems and troubleshooting. Course can be lengthened an additional 1-2 days depending on available sample bearings and lubrication systems on floor equipment.

Centrifugal Pumps (2 days, lecture)

How a pump functions, pump curves, affinity laws, critical speeds, pump designs and energy saving. Course can be lengthened an additional 1-2 days if client has a pump to tear down and rebuild.

Conveyor Systems (2 days, lecture)

Basic course on types of conveyors, bearings used in conveyors, lubrication of conveyors, drives, accessories and troubleshooting. Course could be lengthened an additional 1 day for hands-on tear down and inspection of a conveyor.

CNC Troubleshooting (4 days, lecture)

Commands such as G, F, T, S, and M, machine controls, Fanuc and Siemens, ladder logic and diagnostics and troubleshooting. Course can be lengthened an additional 1 day depending on machine availability.

Hoisting and Rigging (2 days, lecture and hands-on)

Proper lifting procedures, safety in lifting, calculating weight and center of gravity, rigging hardware, slings, hitches, accessory items, ropes and hand signals. Course includes inspection of rigging equipment and, if possible, proper procedures for rigging a lift.

Machine Tool Positioning and 5 Axis Alignment (5 days, lecture and hands-on)

Feedback devices used on CNC machines, scales, encoders, linear and rotary axes relationships and performing a 5 axis alignment. Course would require a 5 axis machine to totally understand the working relationship of the feedback devices and axes.

Mechanical Drives (2 days, lecture)

Fundamentals of power transmission, bearing types and applications, belt and chain systems, lubrication, couplings, clutches and brakes, gear drives and prime movers. Course can be lengthened an additional 1 day pending purchase of hands-on training equipment.

MTAC/3 Axis (4 days, lecture)

Machine identification, types of machines, checking and adjusting level, machine terminology, relationships of 3 axis linear, adjust geometries and troubleshoot. Course can be lengthened an additional 1 day depending on availability of a machine to perform alignment checks.

Predictive Maintenance (1-5 days, lecture)

Learn the fundamentals of predictive maintenance, vibration analysis, infrared thermography, oil analysis, ultrasonic testing, financial implications, establishing a program and failure mode analysis. The variation in course length is dependent on how many subjects will be discussed in detail.

Plumbing Standards (2 days, lecture)

Fundamentals of plumbing, tools and equipment, sinks, urinals, water heaters, uniform and international plumbing codes. Course can be lengthened an additional 1 day if hands-on is requested. Hands-on would require client to purchase tools and material and would entail soldering and brazing of copper tube, priming and gluing of PVC and threading black iron pipe.

Shaft Alignment (2 days, lecture and hands-on)

The importance of alignment, procedures in proper alignment techniques, dial indicator and laser methods, check runout and correcting soft foot. This is a primarily hands-on class learning to use the tools and techniques.

Spindle Technology (3-5 days, lecture and hands-on)

Fundamentals of spindle performance, different types of spindles, CAT 50 taper spindles, HSK spindle, precision and ceramic bearings, assembly and rebuild. Course is dependent upon availability of a spindle for tear down and rebuild.

Fluid Power Certifications (3-4 days, lecture and hands-on)

Connector and Conductor is a 4-day course. The first 3 days are preparation for a 3-hour hands-on test of hydraulic and/or pneumatic fittings, connectors, hoses and tubing. There is an additional written 3-hour test for the individual proctored by another person.

Fluid Power Hydraulic or Pneumatic Specialist is a 3-day course to prepare the individual for a 3-hour written test.

Fluid Power Industrial Hydraulic/Pneumatic Mechanic or Technician is a 3-day course to prepare the individual for a 3-hour hands-on job performance test and a 3-hour written test.