

PRIMARY DEVELOPER: Glenn Wisniewski – Henry Ford College

# Integrated Manufacturing Systems Troubleshooting (IMST) Level 1

- Attachment 1-6: Fluid Power
  - STUDENT RESOURCE LINKS
- 1) Introduction to Pneumatics <u>http://www.clippard.com/downloads/PDF\_Documents/Application\_and\_Training/Intro\_to\_Pneumatics.pdf</u>
- 2) Fluid Power eBook from Hydraulics & Pneumatics (Trade Publication) <u>http://hydraulicspneumatics.com/ebooks/fluid-power-ebook-fluid-power-basics</u>
- Also from Hydraulics and Pneumatics
   <u>http://hydraulicspneumatics.com/200/TechZone/HydraulicValves/Article/False/6408/TechZone-HydraulicValves</u>

  Select the Fluid Power Basics tab and choose area of interest: pumps, valve, and etc.

 4) On-line learning objects from the Wisconsin Technical College System <u>https://www.wisc-online.com/search?searchType=3&q=Hydraulics</u> Use the search function to select Hydraulics, Pneumatics, electrical, etc. Note: Under Hydraulics there are topics like:

- Comparing Hydraulics and Pneumatics
- Normally open and Closed Pressure control valves
- Functions of Hydraulic Fluid
- Then search for Pneumatics
- Etc. The options are quite extensive

5) Reference on directional control valves. <u>http://www.thomasnet.com/articles/pumps-valves-accessories/pneumatic-valves</u>

#### Symbol and additional reference material links:

Parker fluid power symbols:

https://www.parker.com/literature/Literature%20Files/pneumatic/Literature/PDN1000US\_Pro\_ducts/PDN1000-2\_Products/PDN1000-2US\_Technical-Data.pdf

Airline Schematic Symbols Chart: http://www.airlinehyd.com/WebPages/Information/Knowledge\_Center/Symbols.aspx

Applied Pneumatic symbols – Download: https://www.applied.com/site.cfm/Pneumaticsymbol.cfm

Instructor Note: The majority of the material referenced here is Pneumatic due to the trainers used being primarily pneumatically operated.



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