

Fluid Systems Visuals Information

Slide 2:

Hydraulic systems are often used in braking systems, heavy machinery, many airplane and jet systems because they are simple systems that can eliminate complicated gears, chains, etc. and transmit a large amount of force through small and flexible hoses and tubes.

These systems are widely used when heavy force or torque is involved since the force/torque can be held constant and the pressurized fluid may be transmitted over long distances. They can also be used in hazardous environments as they are spark-free and can be used at high temperatures.

Slide 3:

Pneumatic systems are easy to design and are flexible since air can be pumped to most places inside a factory and are easy to maintain. These systems are often used where fast repetitive motions are required (i.e. jackhammer or air drill). They can also be very simple as in a bicycle pump or exercise machine.

Slide 5:

1. See how a few simple hydraulic systems work:

<http://science.howstuffworks.com/transport/engines-equipment/hydraulic.htm>

2. See how hydraulics systems are also used to make high-tech prosthetics:

<http://video.nationalgeographic.com/video/i-didnt-know-that/idkt-prosthetic-leg>