

2015 Projects -- BPMI

Background:

BPMI, a major contractor for the US Navy, has been an outstanding supporter of GCC engineering having created and sponsored outstanding senior projects for numerous years. This project provides opportunity to work on a real world design project for a local company and network with experienced engineers and engineering managers.

Project:

This year's BPMI project involves optimizing a control valve. Control valves are common throughout industries involving fluids.

A full project spec. can be found in course folder.

Skills Needed: Creo, Fluid Mechanics, CFD, Instrumentation, FEA

The project requires a team of about 8 students. BPMI will provide the funding for this project.

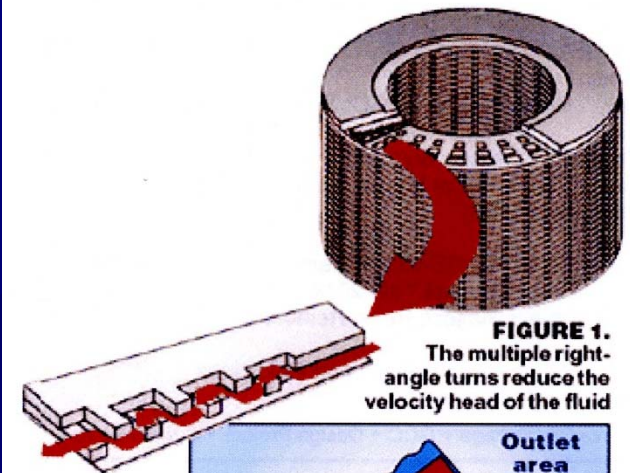
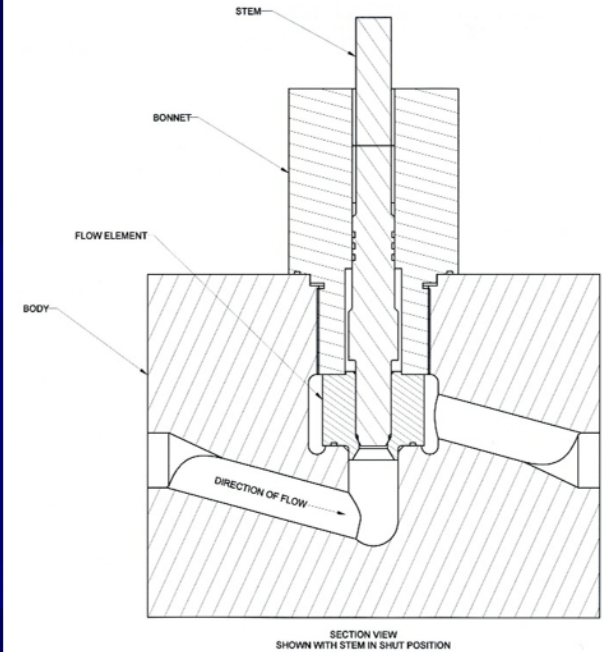


FIGURE 1.
The multiple right-angle turns reduce the velocity head of the fluid

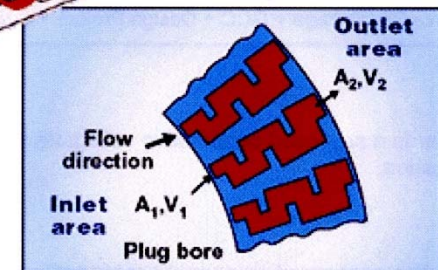


FIGURE 2. The passages are machined so that $V_1 > V_2$ because $A_1 < A_2$