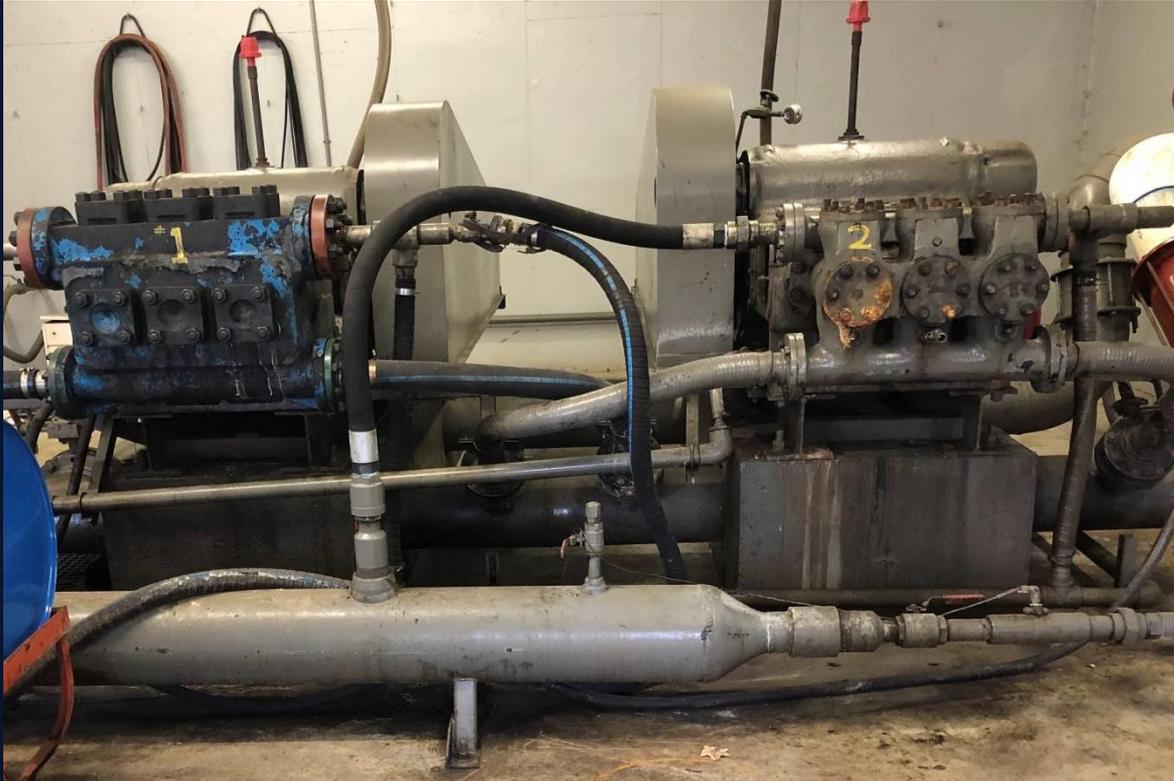
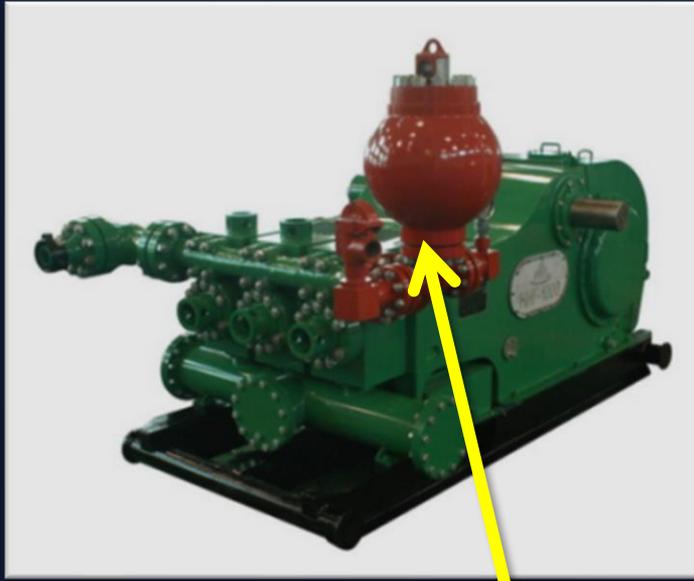


Acoustic Pulsation Dampener (APD)



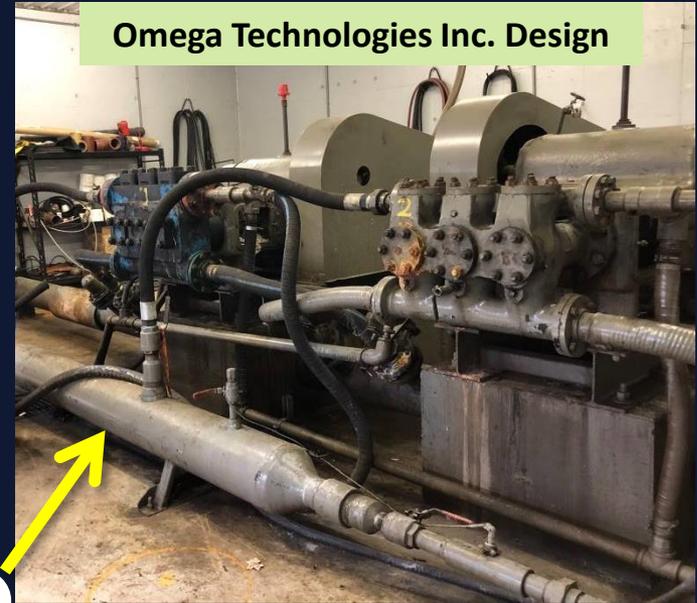
Reducing Vibrations in Triplex / Quintuplex Pumps



Typical Pulsation Dampener

- Bladders, Gas Charges
- More Vibrations
- Higher Investment

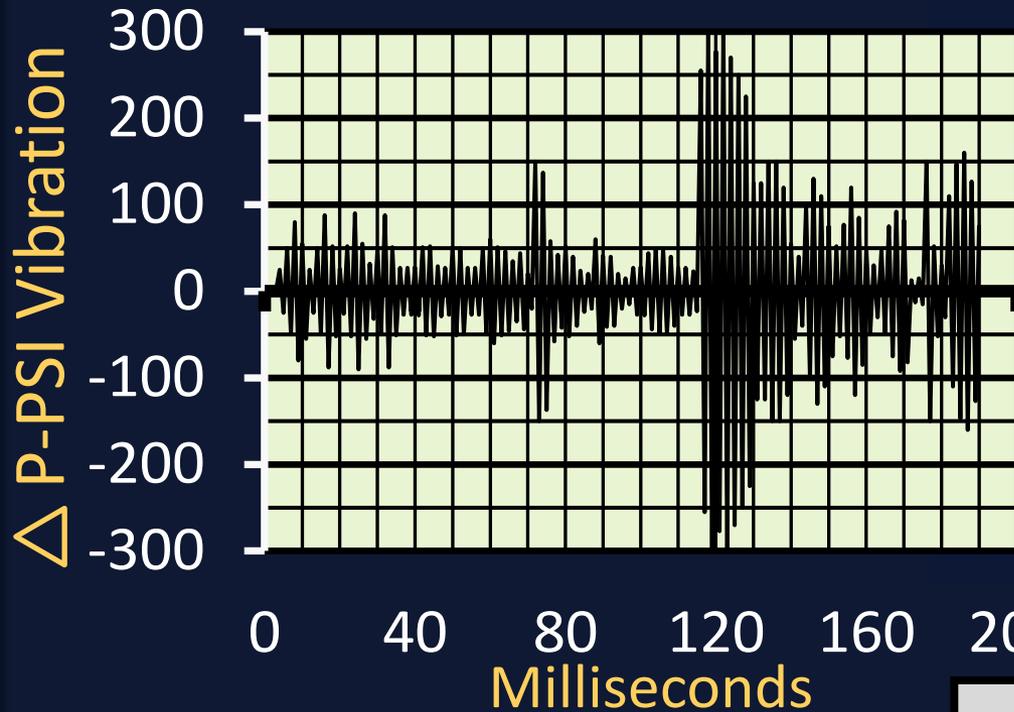
Versus



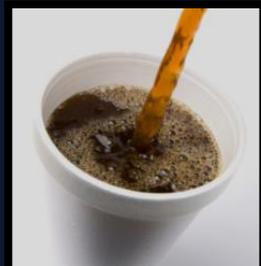
Large Header Design
No Bottle

- No Moving Parts
- Special Header Design
- Less Vibrations
- Utilize Regular Piping

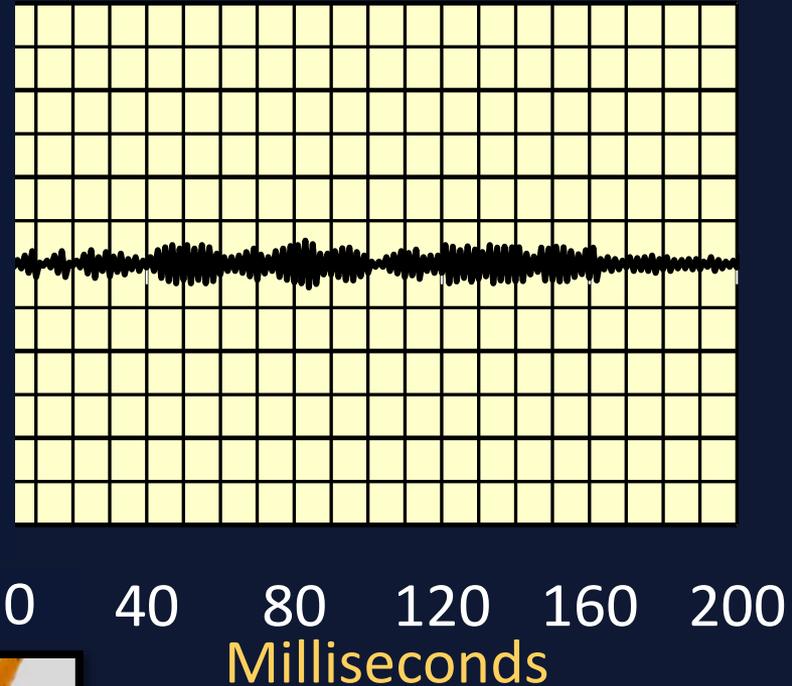
Case Study : Acoustic Header Reduces Pump Vibrations



No Dampener
Peak 310 PSI



Smooth = Balance a Cup
on Discharge Piping



Acoustic Header
Peak 22 PSI

Takeaway:

Reduce Vibrations Failures with Acoustically Designed Headers