

PERFORMANCE AUGMENTATION NETWORK

Field PROVEN Tuned Loop PAN

NEAR ZERO PRESSURE LOSS

OPTIMUM's Performance Augmentation Network, **PAN**, (patents-pending) does what was previously thought to be impossible. PANs attenuate reciprocating compressor pulsation to acceptable levels **WITHOUT PRESSURE LOSS**.

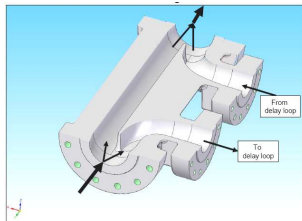
- ❑ **Eliminates all bottles, baffles, choke tubes and orifice plates**
- ❑ **Dramatically enhances the efficiency of compressor stations**
- ❑ **Provides a rapid ROI**

OPTIMIZED MODEL-BASED DESIGN

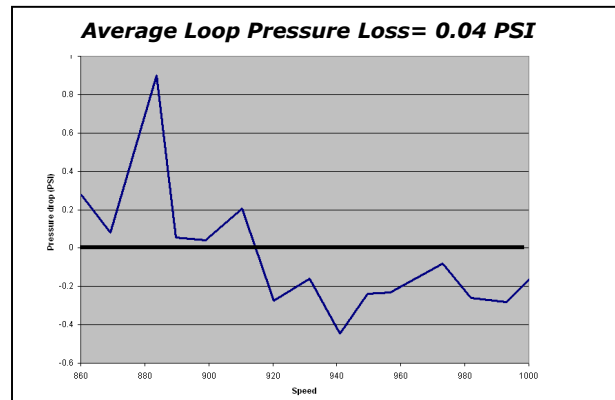
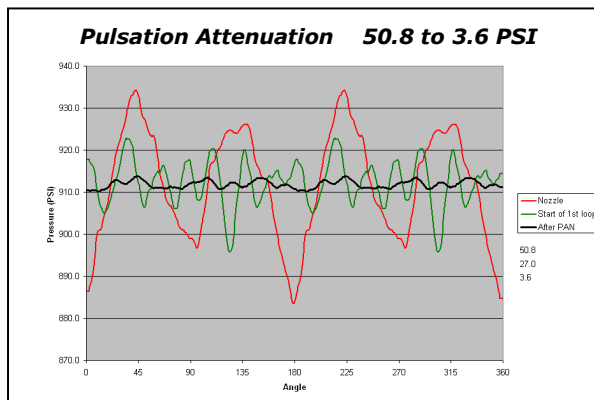
After decades of R&D, OPTIMUM has created the world's only unsteady gas dynamic pumping station simulation system, **Virtual Pumping Station**. Whether you are upgrading an existing station or building a new one, OPTIMUM's design team can use Virtual Pumping Station to accurately model your compressor and pumping station and optimize the PAN geometry to maximize that station's performance goals for efficiency and mass flow.

TUNING SECTION TRANSITIONS (TSTs)

ACI's *PulseBusters* TST™ products facilitate the design and construction of new and retrofit PAN systems with standard pipe and components. Designed and built to rigorous specifications, ACI TST's are critical elements of any PAN system.



Cutaway of a TST junction
(Patent Pending)



TRUSTED INDUSTRY LEADERS

ACI and OPTIMUM can provide complete PAN system designs and procurement specifications or complete turnkey installations to satisfy individual customer requirements. For more information contact:



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PERFORMANCE AUGMENTATION NETWORK

Advanced PAN Design

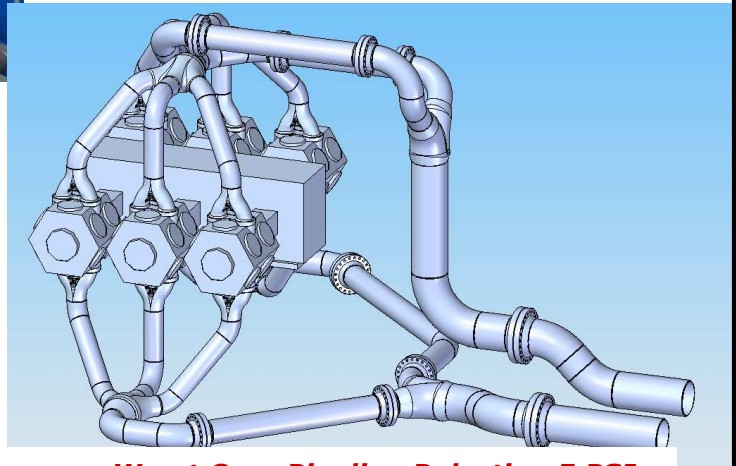


OPTIMIZED MODEL-BASED DESIGN

After decades of R&D, OPTIMUM has created the world's only unsteady gas dynamic pumping station simulation system, **Virtual Pumping Station**. This is the only design tool that can predict the performance of a **PAN**. OPTIMUM and ACI used **Virtual Pumping Station** to design and optimize the lengths and diameters of all of the pipes that make up the **PAN** shown below. This **PAN** was designed to replace the inefficient bottle systems on the 6-throw compressor pictured on the left. **The results are AMAZING!**

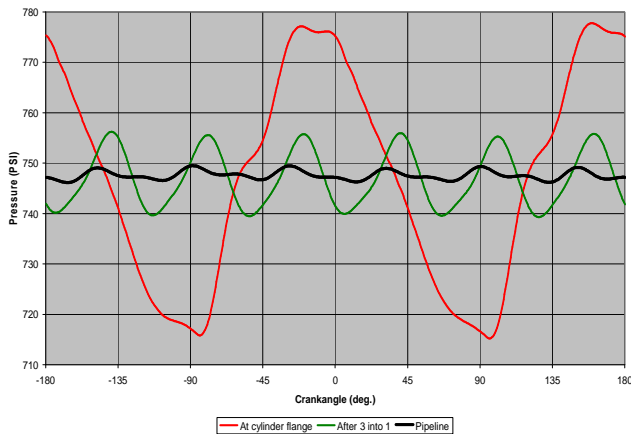
Electricity savings \$750,000/year

ROI < 15 months



- **Worst Case Pipeline Pulsation 5 PSI**
- **93% Reduction in Pressure Loss**
- **15% Improved Efficiency**
- **70 MMSCFD More Flow @ 1.5 PR**

Pulsation Attenuation



- **Simple Installation**
- **Works over FULL Load range**
- **Patent Pending TST™ Y and W Junctions**
- **Industry Standard Pipe**
- **Reduces Carbon Footprint**

PV Bottles vs. PAN at 1.2 PR

