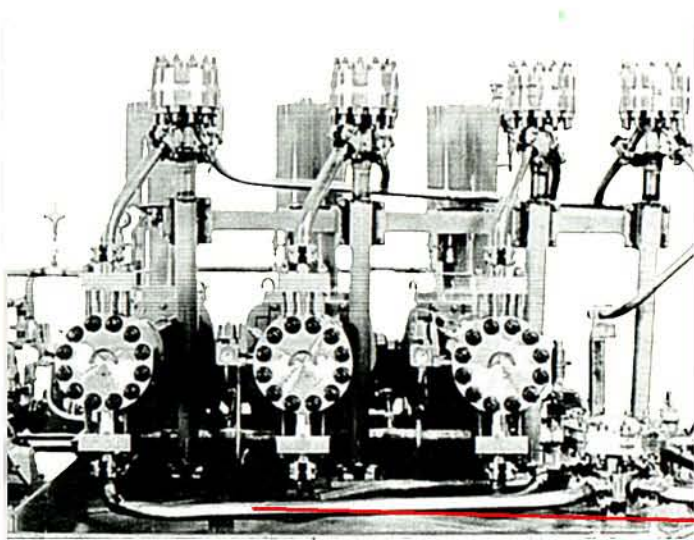
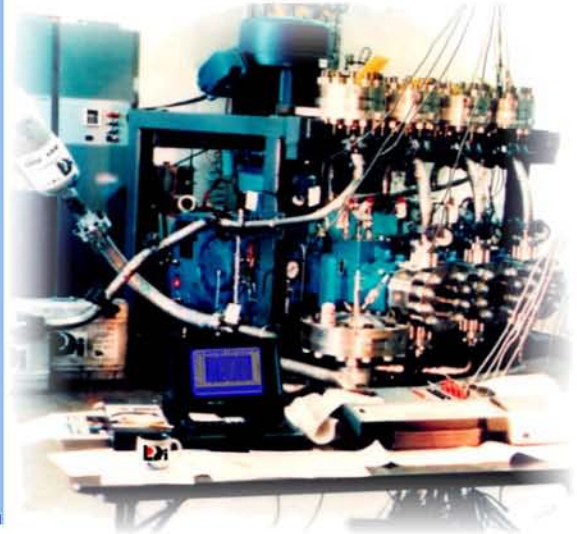


PulseDoctor

Example :- Suction pressure too high.
Driving the pump, instead of it "doing its thing".

DIAGNOSTICS

You have the hardware already ? LDi has the tools.
Certified calibrated signal conditioned transducers.
Real time massive paper rate, oscillograph printers.
GPIB data stream capture laptops, with FFT analysis.
Yes even stethoscopes ! Let us identify
the heart of the problem, on site.

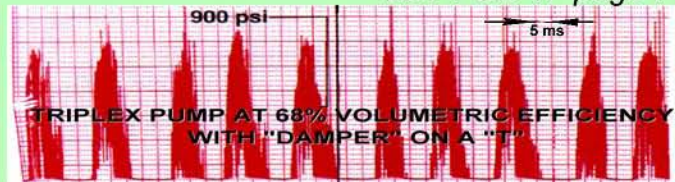


ShockDoctor

"Joukowski" velocity jump, excites RV.

ANALYSIS

For More on the example below please see
LDI PUB 1. page 7



The answer is simple, as usual its the pipe, it is stopping one cylinder filling - TOO LONG.

Pipe-Doctor

For more on the "manifolding" examples, right,
please see LDi PUB 5. Pages 34 and 35.

SURVEY

We will survey your pumping system pipe and advise
Where:- 1. They are oversized, 2. Direction changes
are causing instadility, 3. "Ts" & "Hard 90s" need replacing.
NO = RPM doubled from 1950s design, valves driven off
seats by suction column oscillation. YES = Stop valves
from "talking" to each other. NO WAY = Typical Manifold,
turns pulse into an "orchestra". YOU BET = intercepts.



Then, job 1 becomes , identify the pulse signature - please see LDi PUB 2. pages 16 and 17