

AST

Trust

Advancing Steam Traction

Steam locomotives and the digital age

Imagine today's world

Steam in everyday use

No modern
traction

Computer

Mobile Phone

Internet

Steam locomotives and the digital age

We would have

GSM-R

OTMR

TPWS

ERTMS

Steam locomotives and the digital age

We could have

Real Time Remote Monitoring and
Diagnostics

Real Time Remote Monitoring and Diagnostics



Vacuum

- Smokebox

Indicating

- Cylinder Pressure
- Piston Position

Pressure and Temperature

- Main Steam Pipe Pressure & Temperature
- Blast Pipe Temperature & Pressure

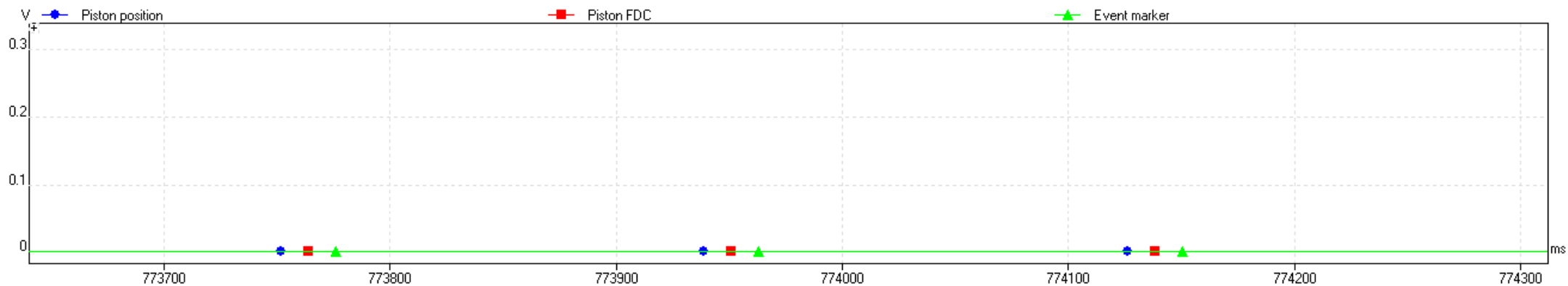
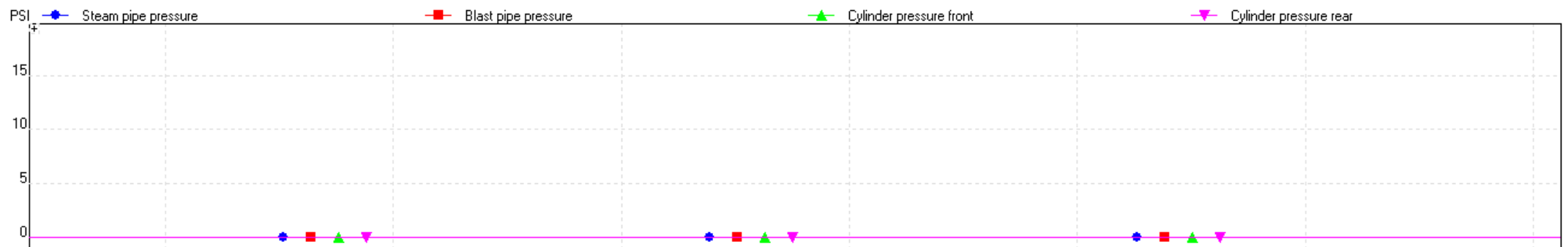
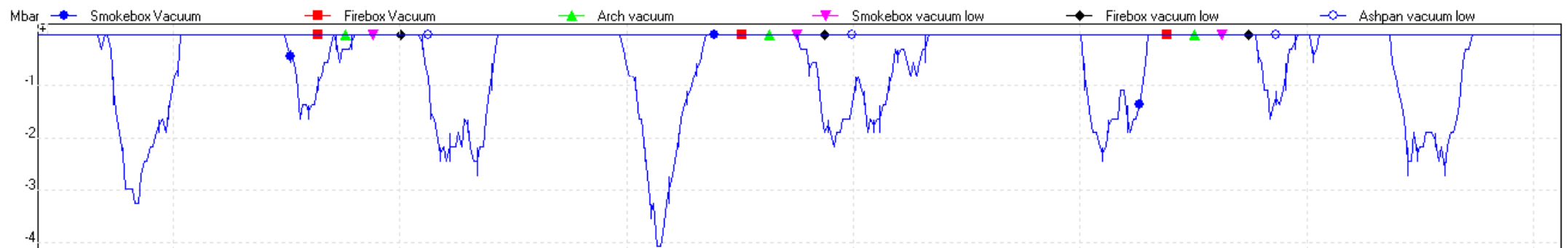
Real Time Remote Monitoring and Diagnostics

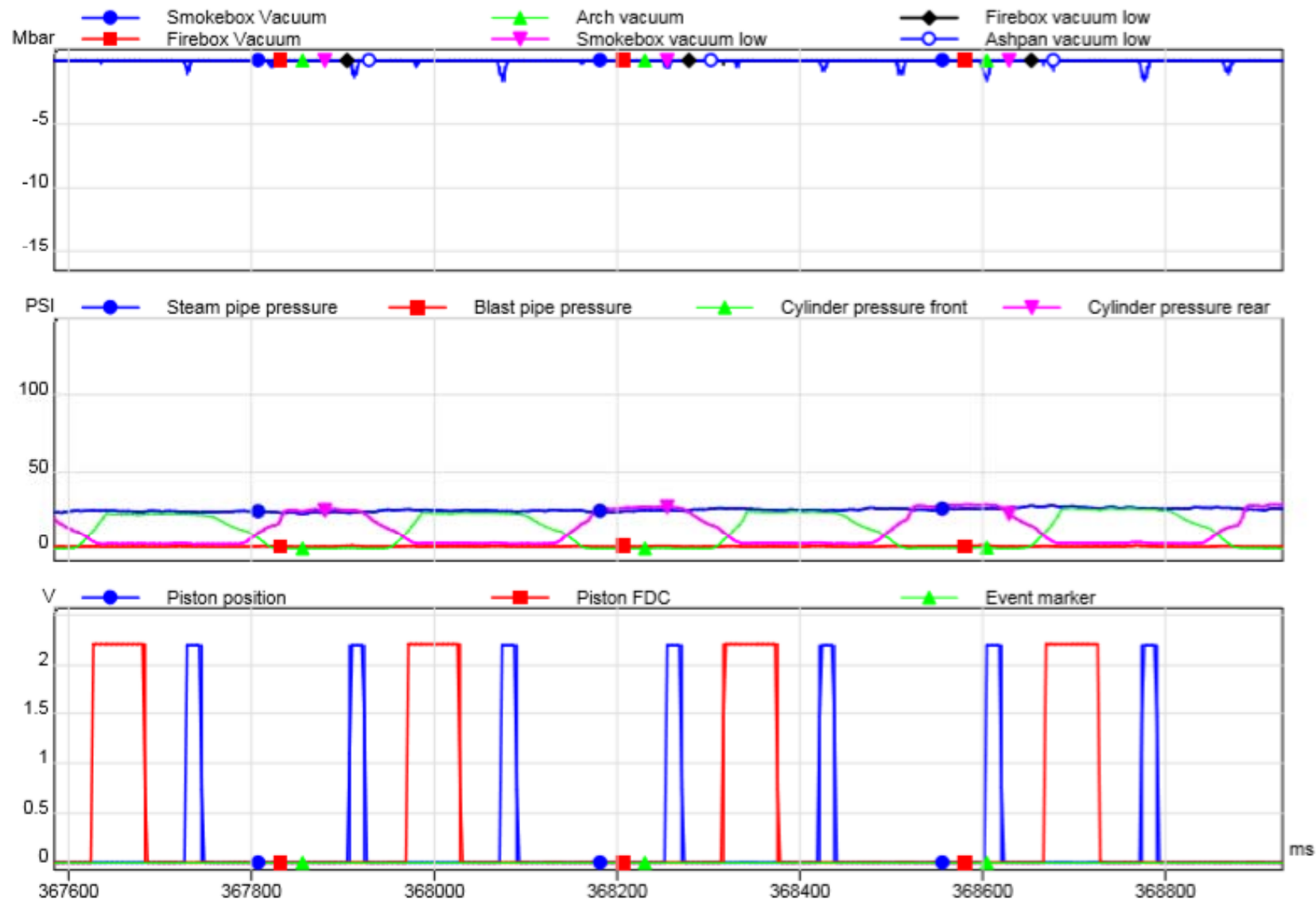
Fleet Status

Developing Faults

Specific Faults

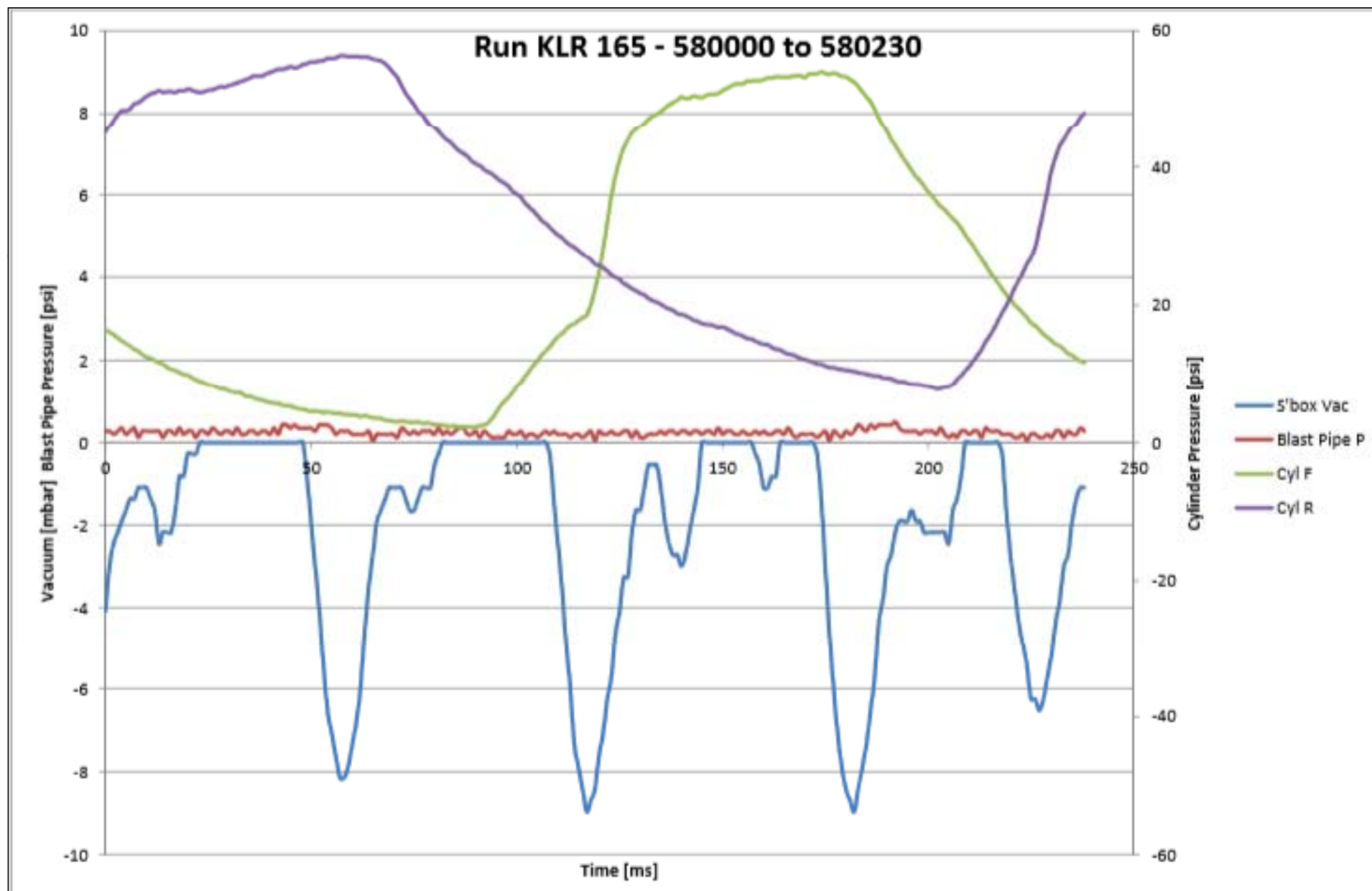
Replay
Events

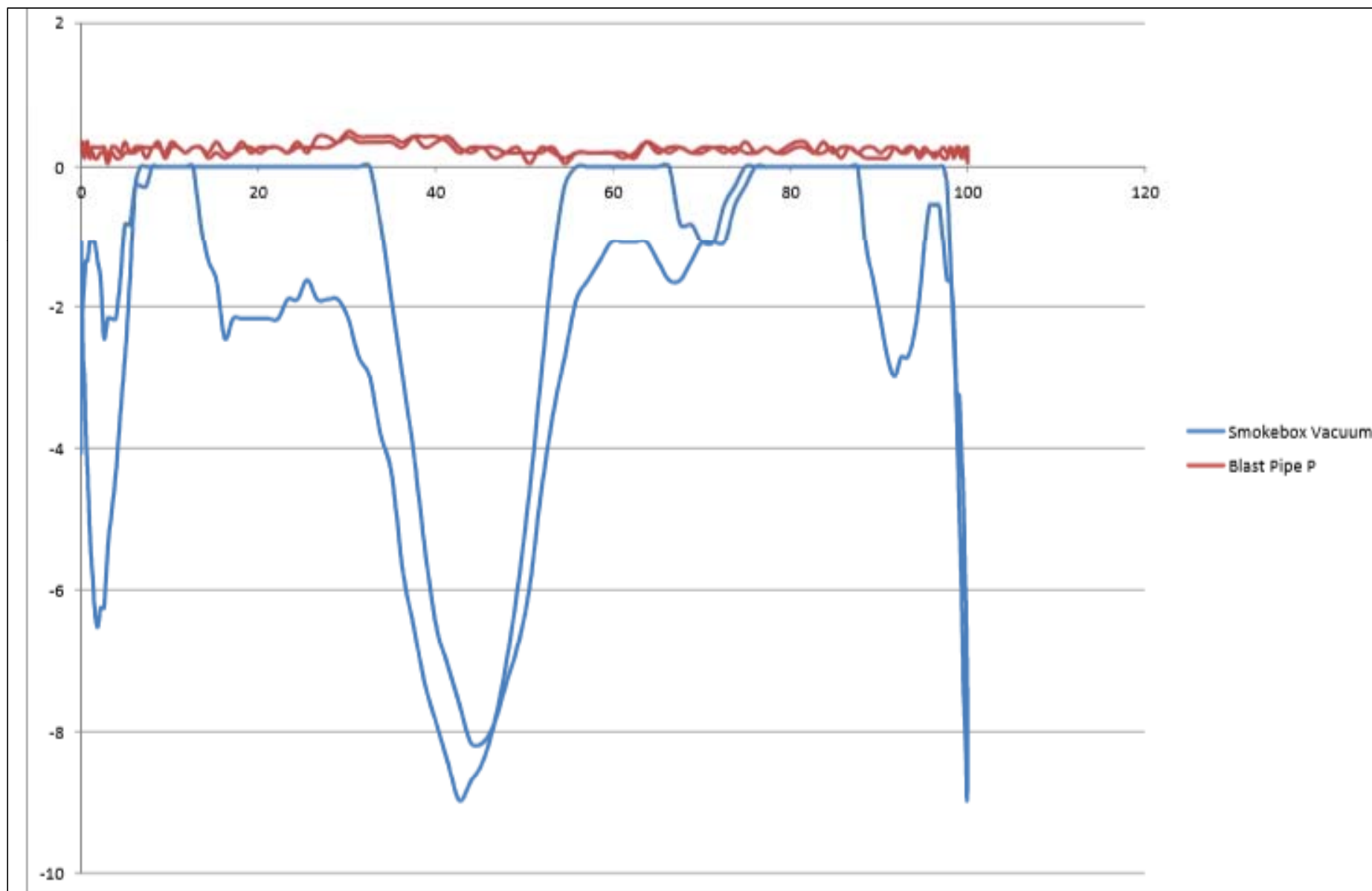




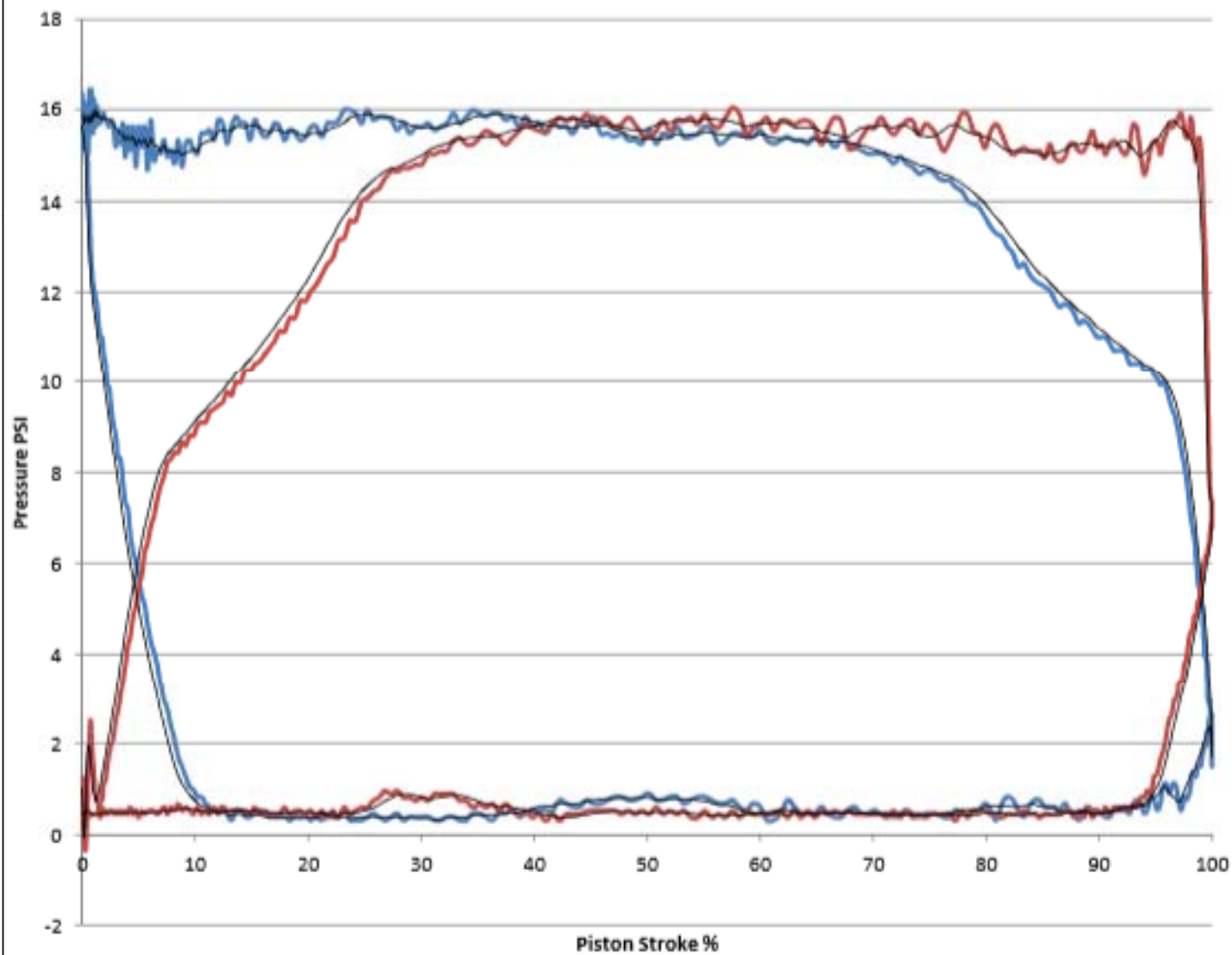
C:\Jamie\5ATVKLR\27-03-17 testing\kwvr16.PLW 27/03/2017 12:25:14

PicoLog for Windows R5.22.1 Pico Technology Ltd UK Tel:+44-1480-396395 www.picootech.com





ID1 - 15 PSI Full Fwd Gear, 117 rpm, IP = 378 W



Real Time Remote Monitoring and Diagnostics

The problem

Establishing Baselines

Monitoring and
Analysing

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What else could we have?





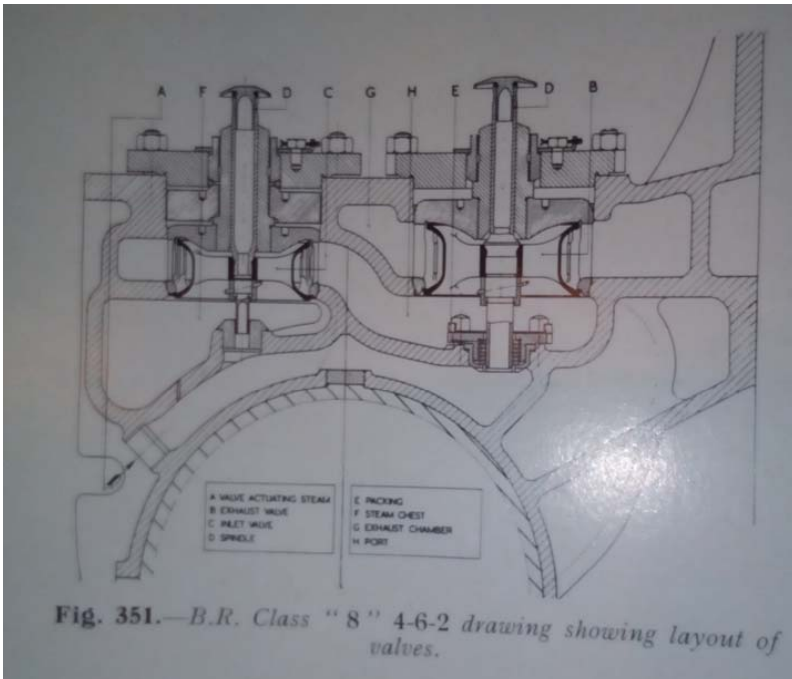
Computer control for cam control



☐ Hydraulic actuation?

☐ Air Actuation?

☐ Solenoid?





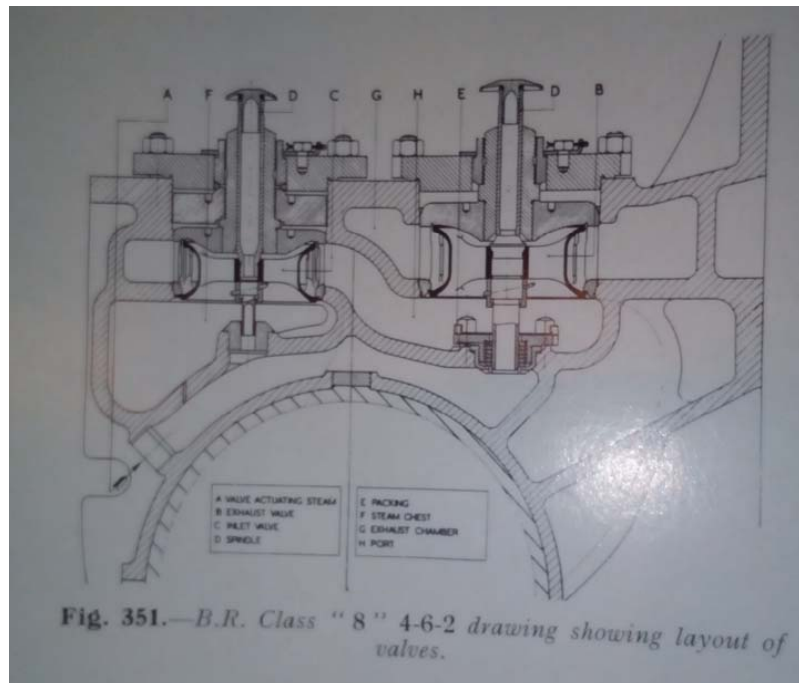
Advantages?



☐ Programmable Valve Events

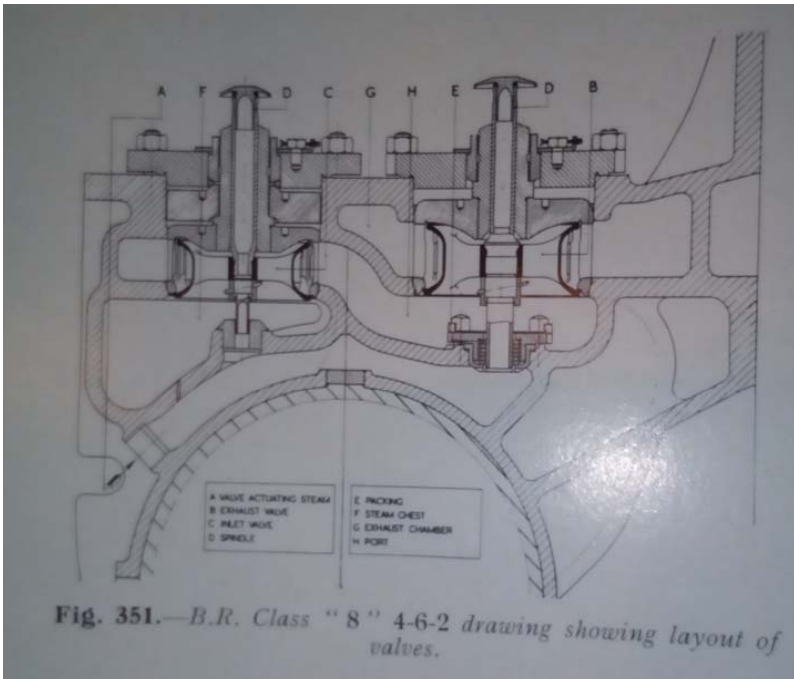
☐ Slip Control

☐ Auto drive





Some thoughts?



☐ Reliability

☐ Calibration



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