



PRODIGY PUMP PRESSURE MONITORING SYSTEM

When pressure is applied to a filter from a moulding rig, it is critical that the pressure is within pre-defined limits to ensure high quality products are consistently manufactured

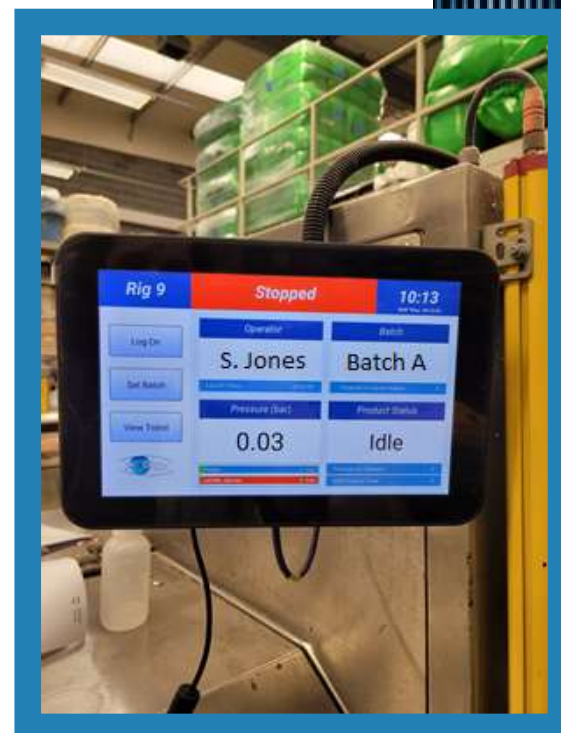
This case study details the development of a bespoke Prodigy SCADA system used for the monitoring of pump pressure and batch reporting during a filter moulding process.

OVERVIEW

A leading manufacturer of filters and air / oil separators for the compressed air and vacuum industries is monitoring their production process using Prodigy SCADA.

Why did they want it?

Accurate data is a requirement to understand a production process in more detail - information gathered from live capture can help drive improvements. Recording key parameters within the run cycle aids in predicting the quality of a product based on its characteristics. The recording and reporting of data, based on shifts and batches, gives the customer reliable production history and highlights any areas that need addressing. Monitoring of pressure readings to prevent equipment damage was also an important factor.





FUNCTIONALITY

Prodigy Server

The Prodigy Server has been designed to provide an overview of each rig from a centralised location. Key parameters can be monitored in realtime, such as product quality, and pressure readings (via pressure transducers). Each of the rigs have their own dedicated trend display with in-depth historical data analysis facilities.

Rig cycle monitoring settings accessible via Prodigy's menu bar allow flexible cycle run and product quality criteria.

Rig 1	
Operator	FRANK
Shift	Morning
Batch	10790121033513
Run / Stop Status	Stopped
Pressure (bar)	0.00
Min Limit (bar)	2.00
Max Limit (bar)	6.00
Product Status	Idle
Shift Product Total	49
Shift Time	00:19:16
Run Time	00:01:56
Step Time	00:17:22

Rig 3	
Operator	LEE
Shift	Morning
Batch	107145/210305504
Run / Stop Status	Running
Pressure (bar)	3.00
Min Limit (bar)	2.00
Max Limit (bar)	6.00
Product Status	Good
Shift Product Total	40
Shift Time	00:19:16
Run Time	00:05:03
Step Time	00:14:15

Rig 4	
Operator	CHRIS
Shift	Morning
Batch	108075/21041506
Run / Stop Status	Running
Pressure (bar)	2.40
Min Limit (bar)	2.00
Max Limit (bar)	6.00
Product Status	Bad - High
Shift Product Total	43
Shift Time	00:19:16
Run Time	00:04:57
Step Time	00:14:21

Rig 7	
Operator	PHIL
Shift	Morning
Batch	107537/21033303
Run / Stop Status	Stopped
Pressure (bar)	1.70
Min Limit (bar)	2.00
Max Limit (bar)	6.00
Product Status	Idle
Shift Product Total	64
Shift Time	00:19:16
Run Time	00:00:00
Step Time	00:19:18

Rig 8	
Operator	SUSAN
Shift	Morning
Batch	107145/210305504
Run / Stop Status	Running
Pressure (bar)	4.50
Min Limit (bar)	2.00
Max Limit (bar)	6.00
Product Status	Idle
Shift Product Total	60
Shift Time	00:19:16
Run Time	00:04:39
Step Time	00:14:39

Rig 9	
Operator	DAVE
Shift	Morning
Batch	107145/210305504
Run / Stop Status	Running
Pressure (bar)	4.00
Min Limit (bar)	2.00
Max Limit (bar)	6.00
Product Status	Good
Shift Product Total	29
Shift Time	00:19:16
Run Time	00:03:54
Step Time	00:15:24

Prodigy Tablets

Each rig has been equipped with a tablet that interacts with the Prodigy Server on the shop floor. Operators can update and view live Prodigy Server signal statuses from the tablets, a seamless integration into the operating procedure that facilitates:

- Logging on / off operators
- Input of batch IDs
- Monitoring of live pressure values
- Trend display for live analysis
- Visual feedback of product quality
- Onscreen batch / shift / operator totals

KEY BENEFITS

- Realtime production status
- Improved data quality
- Automatic batch / shift report generation
- Product / batch traceability
- Removal of paper forms with digital database
- Faster response times to potential issues as they occur