



A Rockwell Automation Company

Bristol Aerospace Ltd. Autoclave Upgrade

The Client:

Bristol Aerospace is a subsidiary of the Magellan Group of aerospace companies. They provide aerospace design, manufacturing and maintenance services for military and commercial aircraft. Bristol

Aerospace is situated in Winnipeg Manitoba, and includes support facilities throughout the province.

The Requirement:

Bristol Aerospace manufacturers structurally bonded carbon fiber aircraft parts using an autoclave. The autoclave in question was running using an SLC 5/04 PLC and a Control View to allow the operator to monitor and document the load. The system, however, was poorly implemented and required upgrading. The

customer chose to use an existing autoclave control system as a template to model the system with the use of the existing hardware and updated off the shelf HMI products.

The Design Solution:

After a careful evaluation of the client's needs and standards on site, it was decided the existing SLC 5/03 would continue to be used with a firmware upgrade. The HMI software selected was RSView32. The field hardware was upgraded to allow the PLC to control 12 additional solenoid valves and two control valves for dynamic vacuum management. The HMI system was setup to duplicate, as closely as possible, the controls of one of the sites other autoclaves. In doing this, one of Hinz's most advanced RSView HMI projects was orchestrated. Using a combination of the HMIs built in functionality and extensive VB and

VBA programming, a twelve screen system was designed which emulated and exceeded the capabilities of the existing systems and provided the operator with an easily controlled window on the autoclave operation. After initial test runs, the autoclave was immediately placed into operation. The newly designed system has consistently made parts that meet specifications without failure to date.



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Load-7618
SCHEDULE#40.XLS
10/15/00 8:16:58 AM

Segment: 06	Ramp	Dwell
Current:	45	0
Total:	49	0

CURE RUNNING

MAX	-10 "Hg
@TP	140 Deg
PER	0.0 0.0
DUR	0.0 2.0

VACUUM "Hg": -0.20

VACUUM 1	VENT 1	VACUUM 4	VENT 4	VACUUM 7	VENT 7	VACUUM 10	VENT 10
VACUUM 2	VENT 2	VACUUM 5	VENT 5	VACUUM 8	VENT 8	VACUUM 11	VENT 11
VACUUM 3	VENT 3	VACUUM 6	VENT 6	VACUUM 9	VENT 9	VACUUM 12	VENT 12

MAIN CONTROL PARTS SENSORS CURES DATALOG ADMIN Print ?

System Specifications:

- 1 SLC 5/03 OS2 PLC
- 49 Discrete Outputs
- 16 Discrete Inputs
- 28 Thermocouple Inputs
- 16 Analog Inputs (4-20mA)
- 8 Analog Outputs (4-20mA)

For further information or to contact a Hinz office near you, please check our website at:

www.hinz.com