

[Application example] Utilization of the Operation Log Function

In this issue, we introduce an example of utilizing MONITOUCH on an injection molding machine, which forms plastic products by melting plastic material (resin), pouring the material into a mold (injection), and hardening the material into shape.

Before

There is no anomaly that operators would notice during the molding process, but defects are found during the inspection process.

Molding process

Inspection process

I have no idea what caused the defect.

Found a Defective product!

Inspector

Cause investigation calls for **comprehensive tracking of factors hidden in various operations within the molding process.**
Is there any system for noticing **slight anomalies of various processes?**

Solve this problem using the operation log and security functions!

After

Based on the date and time a defective product was formed, operation logs can be used to visualize potential operations that could be a cause!

The setting is changed to a incorrect value!

No.	Date / Time	Op.	Action	Co.	Comment	Pr.	Value (Before)	Pr.	Value (After)
53	2023/07/31 11:13		DataChg	CL-008			158.3		790.0
54	2023/07/31 11:13		Switch Action	CL-007			87.7		199.0
55	2023/07/31 11:13		DataChg	CL-007			87.7		199.0
56	2023/07/31 11:14		Switch Action	CL-002			7.3		9.0
57	2023/07/31 11:14		DataChg	CL-002			7.3		9.0
58	2023/07/31 11:14		Switch Action	CL-001			10.0		99.0
59	2023/07/31 11:14		DataChg	CL-001			10.0		99.0
60	2023/07/31 11:14		Switch Action	SW_00000					
61	2023/07/31 11:14		Switch Action	SW_00000					
62	2023/07/31 11:14		ScrnChg	Monitor2-1			73		76
63	2023/07/31 11:14		Bit Alter	AV301					
64	2023/07/31 11:14		Bit Alter	AV302					
65	2023/07/31 11:14		Bit Alter	AV320					
66	2023/07/31 11:14		Bit Alter	AV320					
67	2023/07/31 11:14		Bit Alter	AV302					
68	2023/07/31 11:14		Bit Alter	AV301					



There is a sign that the setting was changed inappropriately when the mold was changed!

Operation logs are useful for later analysis!

What is the operation log function? 

* Applicable models: V10, V9 series



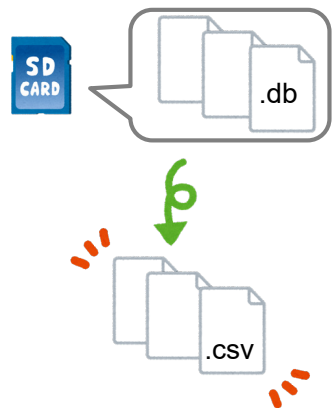
- Logs of screen operations are recorded.
- By using in combination with the security function, the operator information can also be recorded.

Past operations can be looked up for cause analysis when an error occurs!

Logs can be viewed on MONITOUCH using the operation log viewer or output to a storage device for viewing on a PC!

No.	Date / Time	User ID	Action	Comment	Value (Before)	Value (After)
66	07/31 16:45	UserB	DataChg	CL-005	30.0	45.9
67	07/31 16:45	UserB	Switch A...			
68	07/31 16:45	UserB	DataChg	CL-001	10.0	60.2
69	07/31 16:45	UserB	Switch A...	SW_00000		
70	07/31 16:45	UserB	ScrnChg	Menu	73	1
71	07/31 16:45	UserB	Switch A...	SW_00000		
72	07/31 16:45	UserB	Switch A...	SW_00000		
73	07/31 16:45	UserB	ScrnChg	Switch	1	5
74	07/31 16:45	UserB	Switch A...	SW_00000		
75	07/31 16:45	UserB	ScrnChg	Security1	5	40
76	07/31 16:45	UserB	Switch A...	Login		
77	07/31 16:45	UserC	ScrnChg	Security2	40	41
78	07/31 16:45	UserC	DataChg	Product A	20	50
79	07/31 16:45	UserC	DataChg	Product B	250	200
80	07/31 16:45	UserC	DataChg	Product C	300	450
81	07/31 16:45	UserC	DataChg	Product D	30	600
82	07/31 16:45	UserC	DataChg	Product E	800	40

Relevant operation logs

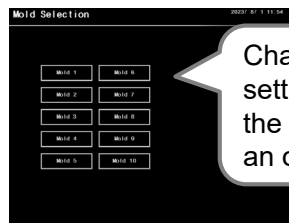


Convert to CSV files for viewing and analysis on a PC!

* Refer to the "Reference Manual" for details.

For example... 

Analysis of operation logs revealed that an error in setting value entry caused the defect.



Change the system so that the setting is automatically sent to the temperature controllers when an operator selects a mold.



The operation log function is effective in problem analysis!

