



New Knowledge, New Power, New Options

PM Event Analyzer® Root Cause Analysis for the Process World

Is your Plant drowning in Plant data, but you still cannot get to the real cause of why you have problems in your process? SlipStream Software's PM Event Analyzer® provides process engineers the answers to their manufacturing problems. PM Event Analyzer mines any plant data historians and displays the variable root cause for any problem within your manufacturing facility. You can now detect problems and know the exact cause. Finding the exact reason why, allows you to be more productive quicker.

Process Improvement and PM Event Analyzer

In today's global manufacturing markets every manufacturer is looking at every variable in their process for improvement. Whether you are practicing Six Sigma, Lean, TPS, 5S or any other improvement metric, having the **right** plant information at your fingertip is how your organization can make real improvements in your process.

PM Event Analyzer will show you **exactly why** something occurred. SPC charts can only show you that a process went out of spec. KPI's, also can only show you that something is not within standards. **But neither of these can give you the specific reason for a problem. With PM Event Analyzer you can exact cause in minutes.**

How PM Event Analyzer provides you with the real root cause answer

The power of SlipStream Software's PM Event Analyzer lies in how we analyze the historical data that sits in your plant historian. We can make use of any plant data historian or SQL based system. Our Smart Sequencer® engine makes sense of the massive volume of information in your historian.

-PM Event Analyzer extracts the data tags from your historian and they are group by area.

-Smart Sequencer ® automatically calculates the delay between each tag and models each tags relationship

-As the plant historian is updated PM Event Analyzer automatically recalculates the latest values.

-PM Event Analyzer will calculate root cause several ways:

- Event Analysis
- Process Analysis
- Frequency Analysis
- Break Analysis

Edit PI DataPoints at Area: Paper Mill

GROUP 3	TAG NAME	TAG NUMBER	DEL	SERVER
PITag 1	PM2 BS HWD WSH STCK CONS	292CCPB008	0	pkg-col2-picp1
PITag 2	PM2 BS SWD WSH STCK CONS	292CCPB010	0	pkg-col2-picp1
PITag 3	PM2 BS SWD TO REFINERS PRESS	292PCPB018	0	pkg-col2-picp1
PITag 4	PM2 BS HWD TO REFINERS PRESS	292PCPB019	0	pkg-col2-picp1
PITag 5	PM2 FINE W/S pH CONTROL	292ACPB002	0	pkg-col2-picp1
PITag 6	PM2 HWD W/S pH CONTROL	292ACPB001	0	pkg-col2-picp1
PITag 7	#2PM B/S S.W. WASH CH LVL CNTL	292LCPB017	0	pkg-col2-picp1
PITag 8	#6 HD TO #2 PM B/S WASH CH FLOW	292LCPB019	0	pkg-col2-picp1
PITag 9	PM2 SWD BS WSC PUMP 1	29-MC-8007	0	pkg-col2-picp1
PITag 10	PM2 HWD BS WSC PUMP	29-MC-8003	0	pkg-col2-picp1
PITag 11	#4 HD TO #2 PM B/S WASH CH FLOW	292FCPB004	0	pkg-col2-picp1
PITag 12	#2PM RECYCLE FLOW CNTL	292FCPB017	0	pkg-col2-picp1
PITag 13	PM2 T/S HWD WSHD STKCONSISTENCY CNTL	292CCPB005	0	pkg-col2-picp1
PITag 14	PM2 T/S SWD WSHD STKCONSISTENCY CNTL	292CCPB007	0	pkg-col2-picp1
PITag 15	PM2 TS HWD TO REFINERS PRESS	292PCPB008	0	pkg-col2-picp1
PITag 16	PM2 TS SWD TO REFINERS PRESS	292PCPB006	0	pkg-col2-picp1
PITag 17	PM2 HWD W/S pH CONTROL	292ACPB003	0	pkg-col2-picp1
PITag 18	PM2 SWD W/S pH CONTROL	292ACPB004	0	pkg-col2-picp1
PITag 19				

Select Group: 1 2 3 4 5 6 7 8 9 10

Group Name: Wash Chest Reference Speed: 0

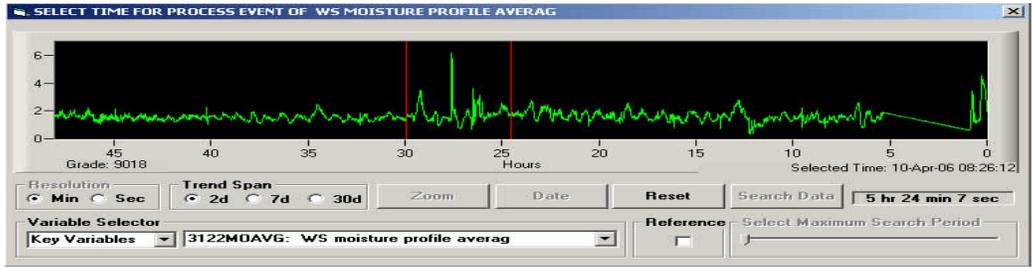
PI Tag Search [Close] [Save]

Select File Number of PITag Database: PM2 Mach. PM2 Stock PM2 Coaster PM1 Mach. PM1 Stock PM2 KPI Couch 8 9 10

[Statistics] [More...]

With PM Event Analyzer you can spend your time focused on finding the true cause to your production problems. When you see spikes in your production you can now drill down and see the real reason why.

- You can look at any area of your plant and select by tag group.
- Data can be displayed in 2 day, 7 day or 30 day increments.
- Changes or spikes in your process can be highlighted for further analysis.



- PM Event Analyzer automatically calculates the statistical root cause of the problem
- The correlation list shows not only the correlation but also the lag in time in the process of when the change occurred.

TIME BASED CORRELATION LIST

CORRELATION LIST

SELECTED VARIABLE: 3122MOAVG Key Variables: WS moisture profile average

TAG	DESCRIPTION	CORR	COV	LAG
1	312ACBW4AE #2PM SIZE PRESS BW SCAN	37.4%	5.1%	-18 sec
2	312PIVB035 COUCH VACUUM	14.9%	0.6%	-1 min 33 sec
3	290PCPB006 #4 HD TO #2 PM PRES CNTL	9.5%	7.7%	-1 hr 36 min 39 sec
4	292LCPB015 PM2 B/S BLEND CHEST LEVEL CNTL	8.2%	2.5%	15 min 28 sec
5	312PCPB045 SUC BOX VACUUM	6.6%	1.5%	-2 min 4 sec
6	292LCPB017 #2PM B/S S.W. WASH CH LVL CNTL	3.8%	10.2%	1 hr 40 min 21 sec
7	312FCOB007 #2PM WEIGHT VALVE	3.8%	2.2%	-3 min 29 sec
8	292CCPB010 PM2 BS SWD WSH STCK CONS	3.7%	6.4%	2 min 13 sec
9	292CCPB007 PM2 T/S SWD WSHD STKCONSISTENCY CNTL	3.7%	2.5%	15 min 1 sec
10	292ACPB004 PM2 SWD W/S pH CONTROL	3.6%	1.9%	27 min 36 sec
11	292ACPB002 PM2 PINE W/S pH CONTROL	1.9%	3.8%	-9 min 6 sec
12	292JIVB008 #6 REFINER KILOWATS INDIC.	1.8%	1.7%	-2 hr 7 min 52 sec
13	290FCPB004 #4 HD TO #2 PM B/S WASH CH FLOW	1.4%	52.9%	-20 min 3 sec
14	292CCPB005 PM2 T/S HWD WSHD STKCONSISTENCY CNTL	1.4%	1.9%	-6 min 13 sec
15	292CCPB012 #4 HD TO #2 PM TRIM CONS CNTL	1.4%	1.1%	4 min 44 sec
16	292JIVB012 #11 REFINER KILOWATS INDIC.	1.2%	1.3%	-11 min 33 sec
18	292CCPB011 #3 HD TO #2PM CONS CTL	1.0%	23.8%	1 min 42 sec
17	292ACPB003 PM2 HWD W/S pH CONTROL	1.0%	0.9%	16 min 17 sec
19	312FCPB057 TS POLYMER POST DIL	0.8%	10.3%	-23 min 54 sec
20	292JIVB013 #4 REFINER KILOWATS INDIC.	0.7%	1.0%	-2 hr 41 min 10 sec

Time Trend Close

PM Event Analyzer finds the real problem

- Drill further down to look at the statistical charts for each associated correlation variables and see when changes occurred.
- Users can move either backward or forward in time to determine if anything either upstream or downstream also was impacted.

PM Event Analyzer determines a problem occurred downstream



The benefits of root-cause analysis

Root cause analysis provides multiple benefits to your organization.

- Determining the real cause of a problem allows you to make the right changes so that subsequent production runs are not affected.
- Allows for you to fix a maintenance problem right the first time
- Becomes the next logical tool your organization can use for increased process improvement

Take the next step in your process improvement initiative

Let PM Event Analyzer provide your organization with **the real answers** to your process problems. Learn how your organization can take the next step in your process improvement programs by using SlipStream Software's PM Event Analyzer, and stop drowning in data.



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