



TOTALFLOW

Technical Bulletin 135

Correcting Problems with Winccu32 Analysis Edits

Totalflow Technical Bulletin

Version 1.0, Revision AA (20 December 2005)

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1. Purpose

This document is to aid users in correcting errors in Longterm database analysis data in Winccu32. This document only applies to users with Winccu32 versions 5.18 thru 5.27, who leave a fixed analysis value in the flow computer, and perform analysis edits with Winccu32, on a month to month basis. If you enter analysis data directly into the flow computer each month, or if you are editing analysis data with any software package other than Winccu32, this document does not apply.

2. Description

Analysis data reads incorrectly in Winccu32 longterm database, after making a new analysis data entry. When performing analysis edits with Winccu32, analysis data can become corrupted if a certain sequence of edits take place.

When analysis data is edited using a date range edit, new analysis data is entered for a specific date range. The editor then recalculates flow values, based on the new analysis data entered, from the starting date, to the ending date of the date range selected. When the end of the selected date range is reached, the analysis values are set back to the values that are stored in the flow computer.

For example, a typical monthly editing session would show edits being performed in a date range window from the first of one month, to the first of the next month. Typically once analysis data is entered into the editor, further edits of that date range do not occur. Corruption occurs when monthly analysis data is edited, and then, edits are performed again, either in the same date range, or a date range prior the last edited date range.

During the flow recalculation process the editor loses track of the analysis values stored in the flow computer, and at the end of the editing window, reverts the analysis data back to a value that actually has been entered as edited data, instead of the values stored in the flow computer. At this point calculated flow values are compromised, and the editor now has false values for what should be the characteristic values of analysis data. Once this occurs the meter file is corrupted and edited flow values will be wrong from that point forward.

To determine if your analysis data is corrupted:

First check the characteristics file, and make note of what the analysis values actually stored in the flow computer are. Then compare those values to the values in the last entry in the edited analysis data. They should be the same. If they are not, the problem has occurred and must be corrected.

In the example below, the characteristic file shows the Heating value to be 858.400, while the last entry on the analysis tab in longterm database shows 757.300. It should read 858.400, just like the characteristic file.

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Log Period Detail | Analysis | Calibration Adjustment | Change Log
 Daily Summary | Log Period Summary | Events | Characteristics | Daily Detail

Parameter	Value	Last Changed
Tris contact2 on low flow?	No	
Tris contact2 on high flow?	No	
----- Fixed Analysis Data -----		
Heating value (BTUSCF)	858.4000	08.01.2005 7:00
Specific Gravity	0.6559	08.01.2005 7:00
N2 Content (Mol %)	21.1620	08.01.2005 7:00
CO2 Content (Mol %)	0.6740	08.01.2005 7:00
H2S content (Mol %)	0.0000	
H2O content (Mol %)	0.0000	
Helium content (Mol %)	0.0000	
Methane content (Mol %)	77.6000	08.01.2005 7:00
Ethane content (Mol %)	0.0000	
Propane content (Mol %)	0.0000	
n-Butane content (Mol %)	0.0000	
i-Butane content (Mol %)	0.0000	
n-Pentane content (Mol %)	0.0000	
i-Pentane content (Mol %)	0.0000	
n-Hexane content (Mol %)	0.0000	
n-Heptane content (Mol %)	0.0000	
n-Octane content (Mol %)	0.0000	
n-Nonane content (Mol %)	0.0000	
n-Decane content (Mol %)	0.0000	
Oxygen content (Mol %)	0.0000	
CO content (Mol %)	0.0000	

Meter << >> Collect << >> OK Cancel Help

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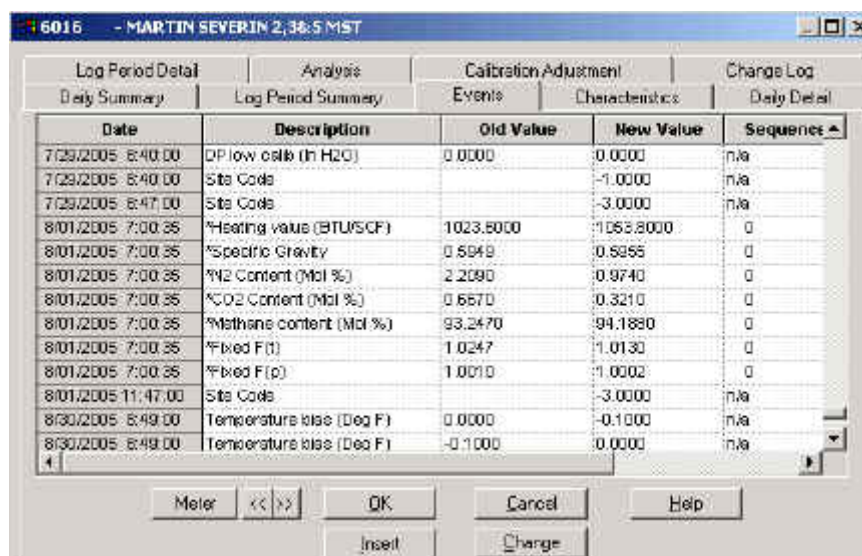
Daily Summary | Log Period Summary | Events | Characteristics | Daily Detail | Log Period Detail
 Analysis | Calibration Adjustment | Change Log

Date/Time	Heating Val	Gravity	N2	CO2	H2S	H2O	f
09/25/2003 10:26:00	868.400	0.622	13.732	0.686	0.000	0.000	0
09/25/2003 10:28:00	868.400	0.631	14.734	0.790	0.000	0.000	0
09/25/2003 10:29:00	868.400	0.622	13.732	0.686	0.000	0.000	0
06/25/2004 11:01:00	868.400	0.656	21.162	0.674	0.000	0.000	0
03/01/2005 7:00:00	759.900	0.673	25.195	0.645	0.000	0.000	0
04/01/2005 7:00:02	764.200	0.661	23.002	0.560	0.000	0.000	0
05/01/2005 7:00:12	757.300	0.670	25.463	0.593	0.000	0.000	0
06/01/2005 7:00:00	746.800	0.672	26.252	0.579	0.000	0.000	0
06/01/2005 7:00:30	746.800	0.672	26.252	0.579	0.000	0.000	0
06/01/2005 7:59:00	746.800	0.672	26.252	0.579	0.000	0.000	0
06/30/2005 7:00:06	746.800	0.672	26.252	0.579	0.000	0.000	0
07/01/2005 7:00:45	752.500	0.669	25.641	0.562	0.000	0.000	0
08/01/2005 7:00:16	757.300	0.670	25.463	0.593	0.000	0.000	0

Meter << >> OK Cancel Insert/Modify Help

You can also check the values listed in the events file, by starting at the beginning of the events record and working your way thru the events, looking at the analysis value entries.

Make note of the value that is set in the flow computer, and then check for that same value at the end of each editing session. You should see the analysis values change back to the original values that were set in the flow computer. If they don't, your meter file is corrupted.



Log Period Detail		Analysis		Calibration Adjustment		Change Log
Daily Summary		Log Period Summary		Events	Characteristics	Daily Detail
Date	Description	Old Value	New Value	Sequence		
7/29/2005 8:40:00	DP low calib (H ₂ O)	0.0000	0.0000	n/a		
7/29/2005 8:40:00	Site Code		-1.0000	n/a		
7/29/2005 8:47:00	Site Code		-3.0000	n/a		
8/01/2005 7:00:35	*Heating value (BTU/SCF)	1023.5000	1053.8000	0		
8/01/2005 7:00:35	*Specific Gravity	0.5949	0.5955	0		
8/01/2005 7:00:35	*N ₂ Content (Mol %)	2.2090	0.9740	0		
8/01/2005 7:00:35	*CO ₂ Content (Mol %)	0.6570	0.3210	0		
8/01/2005 7:00:35	*Methane content (Mol %)	93.2470	94.1880	0		
8/01/2005 7:00:35	*Fixed F(t)	1.0247	1.0130	0		
8/01/2005 7:00:35	*Fixed F(p)	1.0010	1.0002	0		
8/01/2005 11:47:00	Site Code		-3.0000	n/a		
8/30/2005 8:49:00	Temperature bias (Deg F)	0.0000	-0.1000	n/a		
8/30/2005 8:49:00	Temperature bias (Deg F)	-0.1000	0.0000	n/a		

This problem is a bug in the Winccu32 software. To fix the bug, you must:

Download and install the Winccu32 5.28 patch from the totalflow website. (<http://www.abb.com/totalflow/>) This must be done to prevent corruption from reoccurring.

Once the 5.28 patch has been intalled and run, further corruption should not occur. However the patch does not repair data that has already been corrupted, so to insure data integrity, there are two ways to correct the data in your longterm database

1. Enter new analysis values into the flow computer. From that point in time all data collected into the longterm database will be correct. This does not correct errors in the flow data, prior to the date the new analysis was entered into the flow computer.
2. Run the repair utility (you can download this from the totalflow website) This will identify all meters in the longterm database and correct the analysis values, so



that they match the values stored in the flow computer.

Conclusion

This software bug causes the Winccu32 editor to lose track of the correct analysis values stored in the flow computer and as a result, can cause calculated flow values to be incorrect as long as the condition exists.

The repair utility will identify all meter files affected, and corrects the last analysis value entry in the event file.

Users are encouraged to examine flow data on meters identified as having this problem, and take necessary measures to ensure flow data is correct.