

# Valmet SP 取代旋轉式濃度傳訊器成功實績 二

**DATE** : 13/10/1999 to 19/10/1999  
**COMPANY** : UNITED PAPER INDUSTRIES  
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**PARTICIPANT** : -  
**DONE BY** : Mr.Arto Leinonen (Neles Automation Bangkok)  
Agus Eko Hs (Neles Automation Indonesia)

**VISIT PERPOSE** : Performance test of Smart-Pulp Consistency Transmitter that has been install for trial After Machine Chest No.19

**RESULT** :

## Job Description

Before collect the few samples for analysis to LAB

- To observed Smart-Pulp measurement it was hunting up-down from +/- 2.30 % to +/- 5.98 % while from this condition I check the power supply it was drop until +/- 13.60 VDC (The Smart-Pulp need power supply 18 VDC to 35VDC).
- Because the power supply it was drop the consistency indicating was blinking and then I turn-off the power supply for at the moment and turn-on again.
- While the load resistor used (1000 Ohm & ½ Watt) for beginning power-up the Smart-Pulp measurement it was stable by meant the output power supply from +/- 30.70 VDC become to +/- 18.45 after connected to Smart-Pulp and load resistor.
- However after +/- 10 minute the load resistor become heat and power supply drop again until 13.60 VDC and also the Smart-Pulp measurement blinking and hunting again.
- From above case I tried to solve the problem by exchange the load resistor from (1000 Ohm & ½ Watt) to (500 Ohm & 1 Watt).
- After exchange above the load resistor, output power supply from +/- 30.70 VDC become to +/- 22 VDC after connected to Smart-Pulp and now the Smart-Pulp measurement become stable.
- To collect few samples for analysis to LAB and from average analysis result compared with Smart-Pulp measurement the different it was +/- 0.1 %.

## Check configuration & Calibration parameter.

To check configuration at recipe number 3 as process data required or as follows:

### RECIPE No.3

- Lower range : 2.00 %
  - Upper range : 4.50 %
  - Damping : 8 Second
  - Units : Gram & Celsius
  - Mounting : Vertical Upward
  - Blade type : RL AISI
- To check calibration parameter with two-samples point at recipe number 3 as follows:
- Recipe number : 3
  - Pulp type : RCFS
  - Ash : 0.0 %
  - P1 : 0.915
  - P2 : 0.427

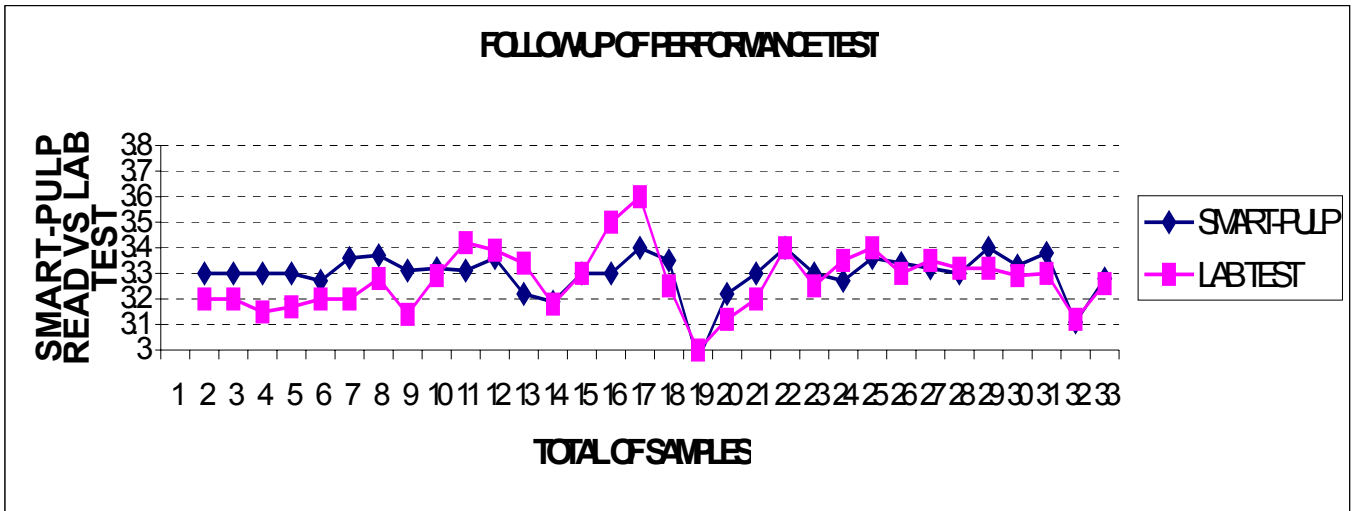
- But to prevent the next problems Mr.Eric Tan asked the old one power supply to exchanged with switching system power supply and load resistor from (500 Ohm & 1 Watt) to (250 Ohm & 2 Watt).
- And after exchange above the power supply and load resistor the output powers supply from +/- 24 VDC become to +/- 21.92 VDC after connected to Smart-Pulp and now the Smart-Pulp measurement become stable.
- To collect few samples again for analysis to LAB and from average analysis result compared with Smart-Pulp measurement the different it was +/- 0.11 %.
- On Thursday 14 October 1999 in the morning the machine it has shutdown +/- 16 Hrs and it will start-up at 21:00 PM.

#### **Follow-up**

While the machine beginning start-up at 21:00 PM until 05:00 AM in the morning,

- I collect few samples for analysis to LAB and from average analysis result compared with Smart-Pulp measurement and average different it was +/- 0.03 to 0.09 %. Please see below result.

| No. | DATE     | TIME     | SMART-PULP | LAB TEST | Each Error | Aver. Error | PULP TYPE RECYCLE      | PRODUCTS             |
|-----|----------|----------|------------|----------|------------|-------------|------------------------|----------------------|
| 1   | 13/10/99 | 16:30    | 3.3        | 3.2      | 0.1        | 0.023125    | ONP = 100 %            | GCB' 0'              |
| 2   | 13/10/99 | 20:30    | 3.3        | 3.2      | 0.1        |             | ONP = 100 %            | GCB' 0'              |
| 3   | 13/10/99 | 23:50    | 3.3        | 3.15     | 0.15       |             | ONP = 100 %            | GCB' 0'              |
| 4   | 13/10/99 | 04:30    | 3.3        | 3.17     | 0.13       |             | ONP = 100 %            | GCB' 0'              |
| 5   | 14/10/99 | 21:45    | 3.27       | 3.2      | 0.07       |             | ONP = 100 %            | GCB' 0'              |
| 6   | 14/10/99 | 22:20    | 3.36       | 3.2      | 0.16       |             | ONP = 100 %            | WLCB                 |
| 7   | 14/10/99 | 23:50    | 3.37       | 3.28     | 0.09       |             | ONP = 100 %            | WLCB                 |
| 8   | 15/10/99 | 24:35:00 | 3.31       | 3.14     | 0.17       |             | ONP = 100 %            | WLCB                 |
| 9   | 15/10/99 | 01:10    | 3.32       | 3.29     | 0.03       |             | ONP = 100 %            | WLCB                 |
| 10  | 15/10/99 | 02:20    | 3.31       | 3.42     | -0.11      |             | ONP = 100 %            | WLCB                 |
| 11  | 15/10/99 | 03:10    | 3.36       | 3.39     | -0.03      |             | ONP = 100 %            | WLCB                 |
| 12  | 15/10/99 | 04:10    | 3.22       | 3.34     | -0.12      |             | ONP = 100 %            | WLCB                 |
| 13  | 15/10/99 | 05:00    | 3.19       | 3.18     | 0.01       |             | ONP = 100 %            | WLCB                 |
| 14  | 16/10/99 | 09:10    | 3.3        | 3.3      | 0          |             | ONP = 100 %            | WLCB                 |
| 15  | 16/10/99 | 11:10    | 3.3        | 3.5      | -0.2       |             | ONP = 100 %            | WLCB                 |
| 16  | 16/10/99 | 20:30    | 3.4        | 3.6      | -0.2       |             | ONP = 100 %            | WLCB                 |
| 17  | 16/10/99 | 23:40    | 3.35       | 3.25     | 0.1        |             | ONP = 100 %            | WLCB                 |
| 18  | 16/10/99 | 01:50    | 2.96       | 3        | -0.04      |             | ONP = 100 %            | WLCB                 |
| 19  | 16/10/99 | 05:30    | 3.22       | 3.12     | 0.1        |             | ONP = 100 %            | WLCB                 |
| 20  | 17/10/99 | 08:30    | 3.3        | 3.2      | 0.1        |             | ONP = 100 %            | WLCB                 |
| 21  | 17/10/99 | 10:15    | 3.4        | 3.4      | 0          |             | ONP = 100 %            | WLCB                 |
| 22  | 17/10/99 | 12:30    | 3.3        | 3.25     | 0.05       |             | ONP = 100 %            | WLCB                 |
| 23  | 17/10/99 | 18:00    | 3.27       | 3.35     | -0.08      |             | ONP = 100 %            | WLCB                 |
| 24  | 17/10/99 | 21:30    | 3.36       | 3.4      | -0.04      |             | ONP = 100 %            | WLCB                 |
| 25  | 18/10/99 | 11:30    | 3.34       | 3.3      | 0.04       |             | ONP = 100 %            | WLCB                 |
| 26  | 18/10/99 | 12:30    | 3.32       | 3.35     | -0.03      |             | ONP = 100 %            | WLCB                 |
| 27  | 18/10/99 | 13:20    | 3.3        | 3.32     | -0.02      |             | ONP = 100 %            | WLCB                 |
| 28  | 18/10/99 | 14:00    | 3.4        | 3.32     | 0.08       |             | ONP = 100 %            | WLCB                 |
| 29  | 18/10/99 | 15:00    | 3.33       | 3.29     | 0.04       |             | ONP 59%,OCC 15%,MW 26% | GCB 'A'              |
| 30  | 18/10/99 | 15:20    | 3.38       | 3.3      | 0.08       |             | ONP 59%,OCC 15%,MW 26% | GCB 'A' VALVE = 0 %  |
| 31  | 18/10/99 | 15:23    | 3.11       | 3.12     | -0.01      |             | ONP 59%,OCC 15%,MW 26% | GCB 'A' VALVE = 100% |
| 32  | 18/10/99 | 16:00    | 3.28       | 3.26     | 0.02       |             | ONP 59%,OCC 15%,MW 26% | GCB 'A'              |



- As above follow-up test result it was clear that Smart-Pulp consistency transmitter performance is stable even the process it has running with mix pulp and Smart-Pulp consistency transmitter is available for use as consistency measurement on process line.

**Prepare by:**

(Agus Eko Herisusanto)

**Accepted by customer:**

Mr.Eric Tan has signed it this report.

(Mr.Eric Tan Cheng Seng)

**DISTRIBUTION TO**

- |                        |                              |
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