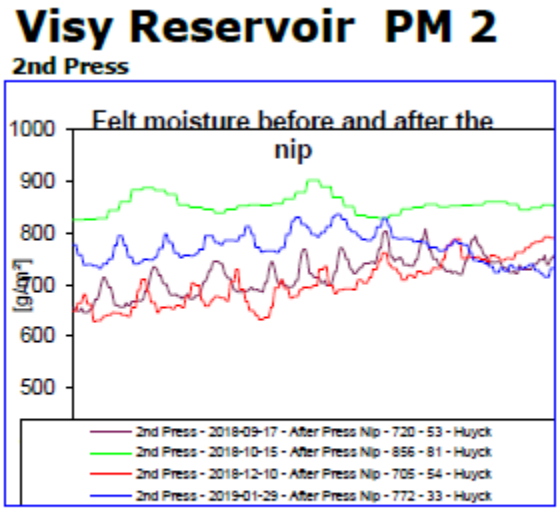
Assessment of the implementation the Venturi Project at VISY

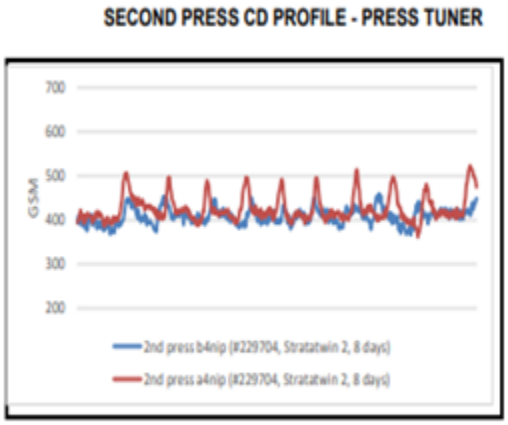
1. **Condition of felt. The principle of dewatering at NIP vs Uhle Box**.

Comparison of the state of felt according to Reports 29-01-19 and 08-03-19.



NO VENPAP

The historical trend of felt water carry



WITH VENPAP

43% reduction of water content in the felt

Comparing historically Felt Water Carry should be clearly observed by jumping dewatering of felt by Venturi Unit (before NIP: 754 gsm to 426 GSM and after NIP from 772 gsm to 409 gsm with Venturi).
The average improvement in water removal of 2nd felt is 328 gsm. This quantity dramatic increase in capacity of receiving water from the paper to the felt in NIP (with high void volume available of 43% more) and then the free flow of water outside the NIP.
The total dewatering of both: paper and felt, takes place in the NIP. The Uhle box function boils down to opening the felt in its entire structure.

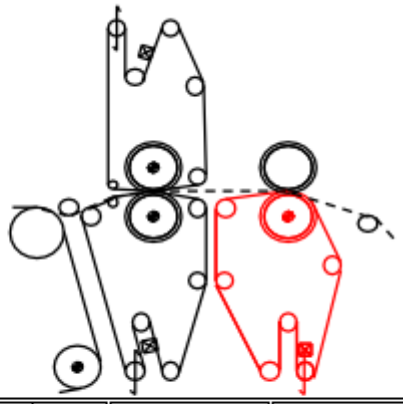
2. **Speed and production.**

Report 29 January,2019	**Report 8 March, 2019**
Grade **180** , age 33 dni (no Venpap)	Grade **190**, age 8 dni (with Venpap)
Prod 13.63 t/hr	**Prod 14.498 t/hr** (below diagram)
Machine speed **422 mpm**	Machine speed **440mpm**
Nip loading **550/580**	Nip loading **520/516**

Service Report — **Date** 29-01-19

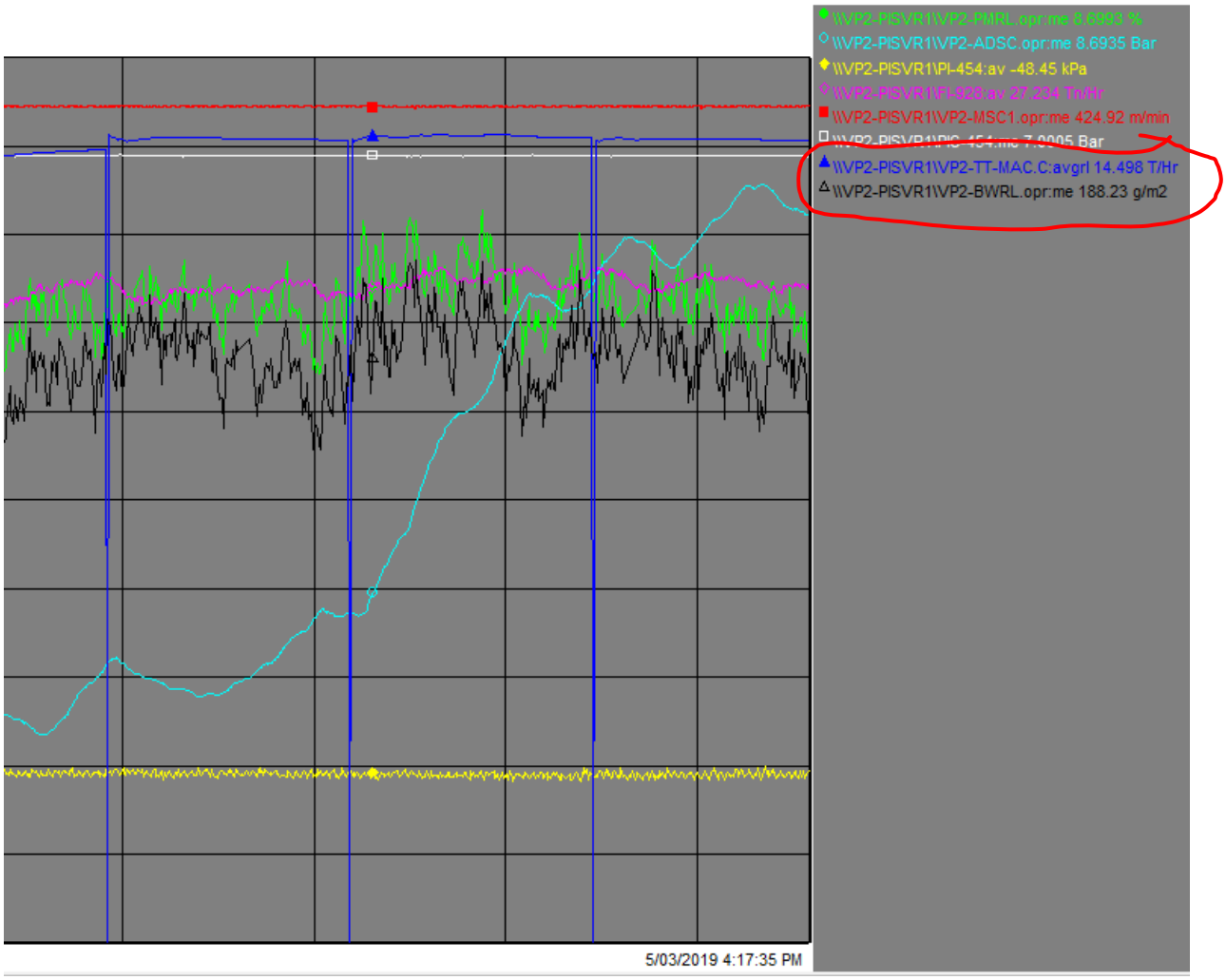
Author		William van der Valk			
Cust no		1044154			
Customer		Visy Reservoir			
PM		2			
Machine Data					
Paper Grade		M180X	Draw-1	[%]	0.00%
Paper weight (grade)	[g/m²]	180	Draw-2	[%]	0.00%
Wire speed	[m/min]	422	Draw-3	[%]	0.00%
Machine speed (pope)	[m/min]	422	Draw-4	[%]	0
Production	[t/h]	13.63	Draw-5	[%]	18.8
Sheet moisture (pope)	[%]	8.8	Total draw	[%]	0

Customer	**VISY RESERVOIR**
Machine	**VP 2**
Position	**SECOND PRESS**
Date:	**March 8, 2019**
Grade:	**190 gsm**
Press Speed	**440 mpm**
Reel Speed	**446 mpm**



FELT AND NIP LOAD DATA

Posn.	Supplier	Piece No.	Felt gsm	Date on	Age (days)	Measured (m) Length	Measured (m) Width	Jack (mm) Out	Jack (mm) Go	
Second Press	HW	229704	1593	28-Feb-19	8	12.90	3.27	288	502	
								288	502	F/S
								288	502	B/S



Production increase by 868 kg/hr (**14,498-13,630**) ; speed increased by 18 mpm(**440-422**)

It is noted that the nip loading was down by 8% with running Venturi. This is especially disadvantageous for dewatering due to reduced water content in the NIP.

3. Conclusions

A. Water removal by uhle box is an irrelevant parameter for evaluating the work of the Venturi Unit. The basic change of felt conditions has carried the dewatering process completely to the NIP.

B. According to the contract, the project provides for removal of water 30 kg/min = 1800 kg/hr from 2nd press (Uhle + NIP). This corresponds to an increase in production by 430 kg/hr.

C. **Achieved results (February and March) clearly confirm the improvement of water removal on 2nd press by Venturi Unit in accordance with the assumptions of the project.**

Visy Pulp & Paper
14 March 2019