



Investigation Report

Report no. : 700.02.NCR.EC.QA1.H.25
Date of report : August 18th, 2025
Issued by : Quality Assurance Dept.
Reference doc : 100.006.QA7.H.25
Customer name : Itochu Corporation
Person in Charge : Shumpei Yokomichi

PROBLEM

During production running with SAP sheet lot AE12BZF001 item PT0T26-H00W10-00227, the customer found a section of material rejected by the Automatic Weight Checker. After the customer checked the basis weight (qty : 10 pieces), they found the weight to be lower than standard ($227 \pm 8\%$), with actual 187.76gsm. This problem caused machine stoppage and resulted in production of NG products.

The details of problem and Investigate actual by UCT-QC

Problem : Basis weight is not meet Standard.
During running the production, there had reject from Automatic Weight checker.

So, they had stopped production and change to new festoon.
After QC checked the Basis Weight (QTTY: 10 pieces)
, they found the basic weight is lower than STD ($227 \pm 8\%$) Actual 187.76gsm

Effect : Machine stoppage and found NG products.

MC.2 Shift 2

STD Spec = $227 + 8\%$ (208.84 - 245.16) g/m²

Issue Date	25-Jan-24	5. Material Specifications	Doc no.	700.001.SA.MQDS-UC.A.24				
Revision Date	04-Nov-24		Page	5				
Physical Property								
Property	Unit	Specification					Test Method	
Basis Weight	g/m ²	227 +/- 8%	267 +/- 8%	317 +/- 8%	337 +/- 8%	397 +/- 8%	457 +/- 8%	6
Thickness	mm	≤ 1.8	≤ 1.9	≤ 2.2	≤ 2.3	≤ 2.4	≤ 2.6	6
Strike Through	sec	≤ 14	≤ 14	≤ 14	≤ 14	≤ 14	≤ 14	6
Rewet	gr	≤ 0.13	≤ 0.13	≤ 0.13	≤ 0.13	≤ 0.13	≤ 0.13	6

Lot no / Roll no

AE12BZF001



Actual Basic weight		Cut sample (width* Length)		convert from mm. to meters	
STD :	227 ± 8% (18.16)	Min	208.84	Max	245.16
Material Code:	607885	SAPSHEET H00W10-00227 110G50MM			
น้ำหนักที่ส่งได้	พื้นที่ตัด X กับ (กว้าง X ยาว)	แปลงมิลลิเมตรเป็นเมตร = 1,000,000 m.	Basis weight	Result	
9.430	50000	1,000,000	188.60	X	
9.470	50000	1,000,000	189.40	X	
9.240	50000	1,000,000	184.80	X	
9.440	50000	1,000,000	188.80	X	
9.370	50000	1,000,000	187.40	X	
9.390	50000	1,000,000	187.80	X	
9.450	50000	1,000,000	189.00	X	
9.500	50000	1,000,000	190.00	X	
9.380	50000	1,000,000	187.60	X	
9.210	50000	1,000,000	184.20	X	
Ave: Over target			187.76	X	

INVESTIGATION

- Basis Weight (BW) Check from Finished Goods (FG) Lot AE12BZF001

MSJ checked basis weight data of finished goods (FG) from lot AE12BZF001 and the result was on spec. All basis weight tests for FG are conducted twice, at the beginning and end of the pallet (n = 2).

No Pallet	Test Position	Sample Size (width x length) 'mm	Basis Weight (gsm)		
			Run 1	Run 2	Average
AE12BZF001	Top Pallet (Start)	50 x 1000	239	240	239
	Bottom Pallet (End)	50 x 1000	243	241	242

- Std BW : 227 gsm (208.8 ~ 245.2 gsm)
- Basis weight of finished goods are on spec

● Basis Weight (BW) Check from Semi-finished Goods (SFG) Lot AE12BZF001

Product AE12BZF001 is produced from 27 individual rolls, with the following details:

No Pallet	No Roll	Sample Size (width x length) 'mm	Basis Weight End Roll (gsm)			Basis Weight Start Roll (gsm)			Roll Length (m)	
			Run 1	Run 2	Average	Run 1	Run 2	Average		
AE12BZF001	AE11CLM027	50 x 200	200	200	200	220	190	205	19010	Start
	AE11CLM028	50 x 200	200	200	200				18964	
	AE11CLM029	50 x 200	200	200	200				18223	
	AE11CLM030	50 x 200	210	200	205				17484	
	AE11CLM011	50 x 200	200	200	200				16750	
	AE11CLM012	50 x 200	210	210	210				16014	
	AE11CLM013	50 x 200	200	200	200				15304	
	AE11CLM014	50 x 200	200	200	200				14568	
	AE11CLM015	50 x 200	210	210	210				13834	
	AE11CLM016	50 x 200	200	210	205				13098	
	AE11CLM017	50 x 200	200	210	205				12362	
	AE11CLM018	50 x 200	200	200	200				11627	
	AE11CLM019	50 x 200	210	210	210				10893	
	AE11CLM020	50 x 200	210	210	210				10156	
	AE12DLM001	50 x 200	210	200	205				9420	
	AE12DLM002	50 x 200	210	200	205				8686	
	AE12DLM003	50 x 200	200	200	200				7951	
	AE12DLM004	50 x 200	200	200	200				7216	
	AE12DLM005	50 x 200	200	200	200				6479	
	AE12DLM006	50 x 200	200	200	200				5730	
	AE12DLM007	50 x 200	200	200	200				4993	
	AE12DLM008	50 x 200	200	200	200				4272	
	AE12DLM009	50 x 200	200	210	205	200	200	200	3530	
	AE12DLM010	50 x 200	200	210	205				2785	
	AE11CLM001	50 x 200	200	210	205				2038	
	AE11CLM002	50 x 200	210	210	210				1291	
	AE11CLM003	50 x 200	210	200	205	190	190	190	546	End

UCT finding (yellow block) : Basis weight lower standard found after SAP sheet is used around 10-20% from above, or about 15200-17100m

MSJ suspect (red font) : Jumbo roll suspected with lower basis weight compared to standard

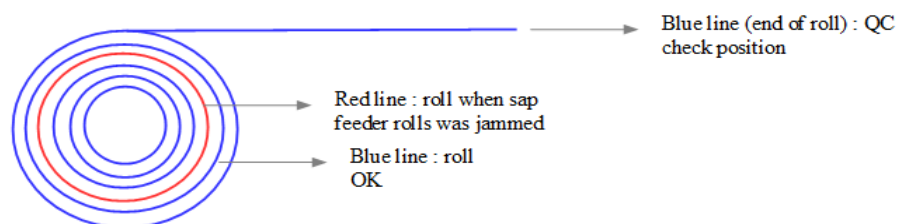
- Std BW : 200 gsm (181.8 ~ 218.2 gsm)

- All rolls basis weight at start and end of rolls are on spec

BW checks for SFG are conducted at the end for each roll and sampling was conducted at the beginning for selected rolls during the c-folding process (rolls used at the start, middle and end of each pallet). The results showed no indication of BW being off-spec.

Based on internal review of all processes including direct interviews with machine operators, MSJ concludes that the section of low BW found by the customer occurred in the middle of jumbo roll production. The highest likelihood is caused by the SAP feeder rolls being jammed mid production, causing the SAP powder to not be released for a short period. The machine is equipped with alarm notification to alert the operator when this occurs. Once the alarm sounds, the operator then tried to remediate the issue by turning on the breaker of the roll feeder enabling it to run again, but the operator did not double check the product that was produced during the jam. Therefore, the product produced during the period when the SAP feeder roll was jammed still entered the finish product. So when QC checked the basis weight at the end of the roll, the basis weight was still on spec.

The following is a diagram of the position of lower BW products within the jumbo roll.



ROOT CAUSE

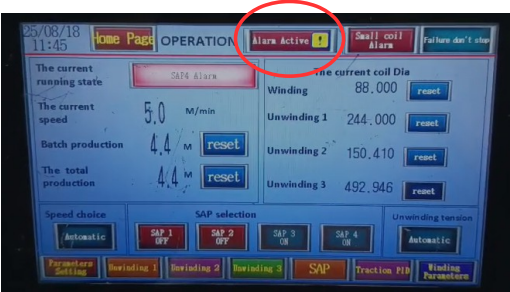
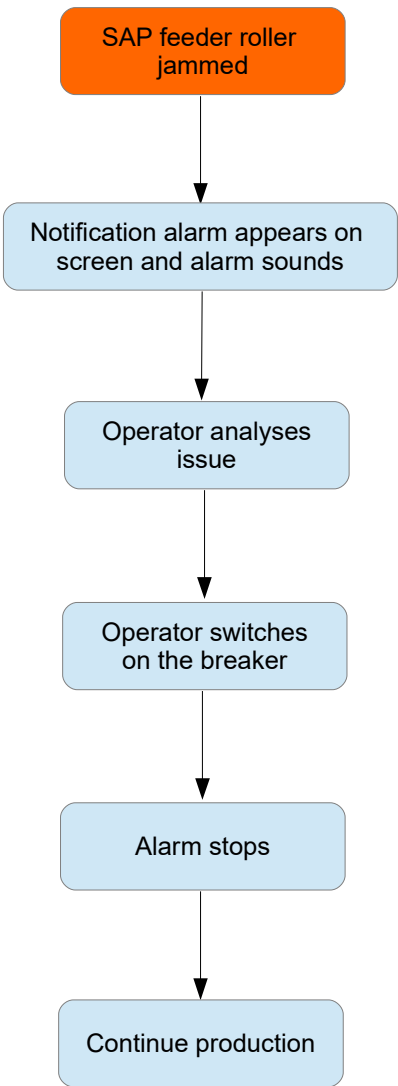
From the investigation above, the section of low basic weight is caused by jamming of the SAP feeder roll for a short period of time, with the operator failing to check the product that was produced during that period. The operator had no clear standards and prior experience in handling SAP feeder roll issue

COUNTERMEASURE

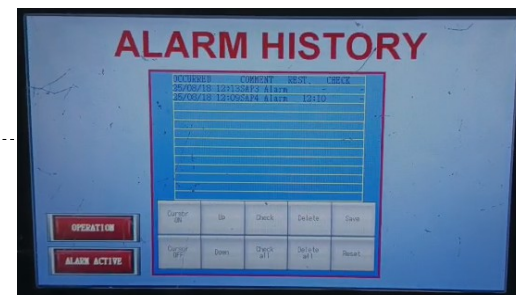
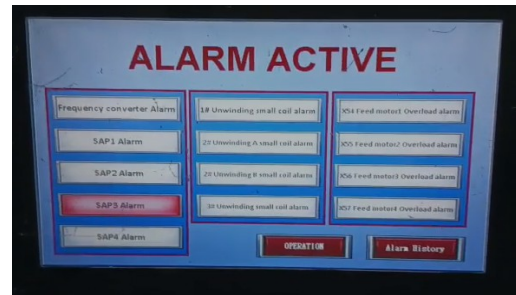
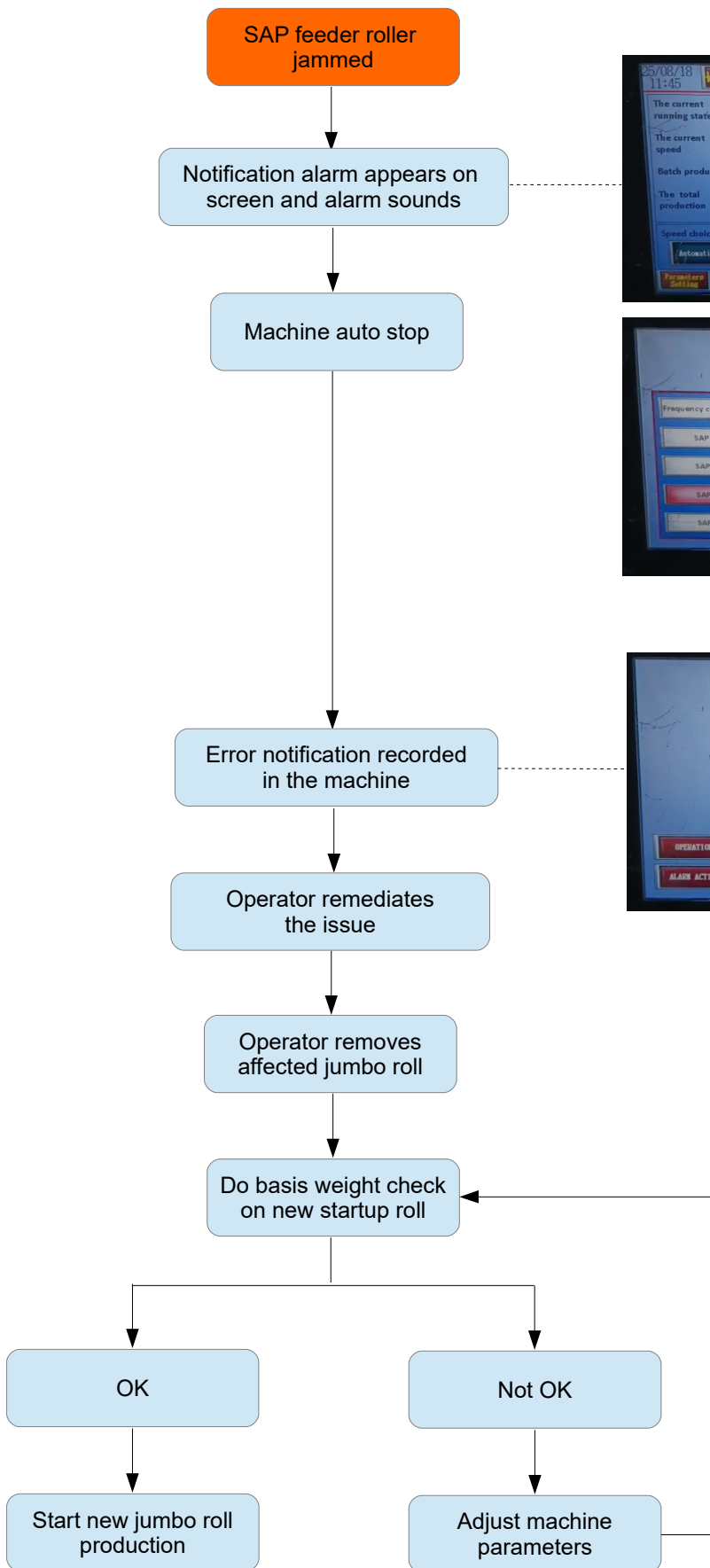
1. Establish a new Standard Operating Procedure (SOP) for situations when the SAP feeder roller is jammed so operators can ensure low BW sections does not enter the product. This SOP has been registered with code number 400.P16.0.2 and socialized to all machine operators. **Implemented: 18th Aug 2025**

2. Add a safety mechanism to the machine to automatically stop when it encounters any issue in the SAP feeder roller, in order to eliminate potential NG products with low basis weight caused by jammed feeder rollers from entering the finished product. **Implemented: 18th Aug 2025**

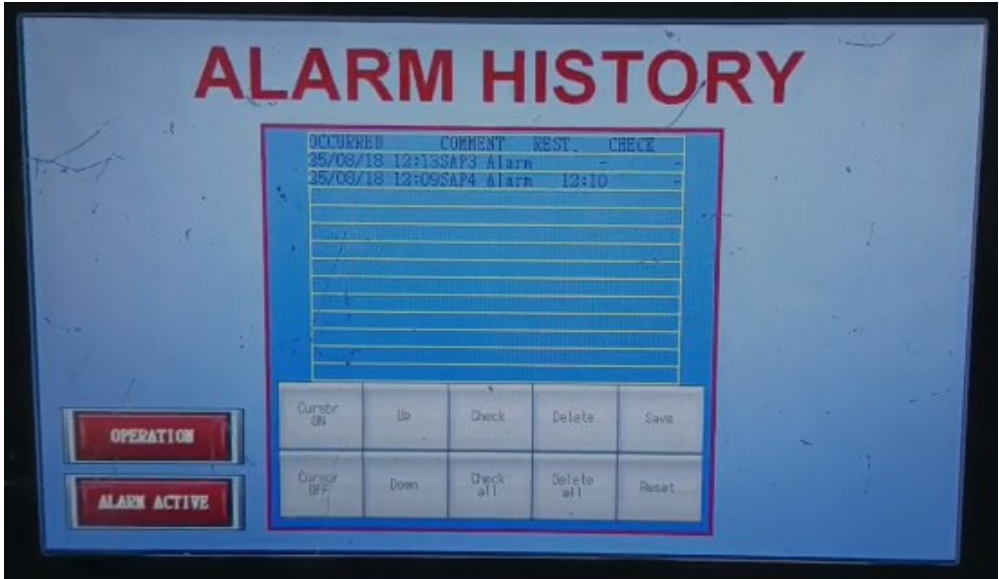
BEFORE:



AFTER:



3. Add more detailed description in the error log specific to issue of SAP feeder roller being jammed.
Implemented: 18th Aug 2025



Issued by	Approved by	Review	Review
QA – section	QA – Head	Production – Head	Operational Manager