

# **SUPPLIER DOCUMENT COVER SHEET**

<b>PO/Contract No:</b>	D3MC - 4-08020-FLD-01/D3MC100020		
<b>PO/Contract Description:</b>	Design, Manufacture, Testing and Delivery of the CHANCADORES TERCARIOS (TERTIARY CRUSHER HPGR/HRC)		
<b>Supplier:</b>	Thyssenkrupp Industrial Solutions AG		
<b>Fluor assigned Document No.</b>	4-08020-00087		
<b>Client document No (AMSA)</b>	4-08020-1251-I-TS-P2-00087		
<b>Supplier unique drawing number</b>	KXEO-01517-003346704		
<b>TAG Number</b>	1251-CR-1308; 1251-CR-1309; 1251-CR-1310		
<b>PO SDDR ref. No.</b>	50		
<b>Document Title:</b>	Specifications / process function description		
<b>CWP</b>	C1B1251FME37		
<b>Remark:</b> Page 156 - 310: version with FS tags			
tkIS Rev.	Issue date	Issue purpose	Item names (for TAG)
00	29.03.2022	For review/approval	HPGR
01	12.04.2022	For review/approval	HPGR
02	1.08.2022	For review/approval	HPGR
03	29.08.2022	For review/approval	HPGR
04	19.10.2022	For review/approval	HPGR
		 A blue rectangular stamp with a double-line border. Inside, the Thyssenkrupp logo (a stylized 'T' inside a circle) is at the top left, followed by the word 'CERTIFIED' in large capital letters. Below that is a horizontal line labeled 'SIGNATURE' and another below it labeled 'DATE'. The stamp is oriented diagonally.	
		Sven Waterkamp	Digitally signed by Sven Waterkamp Date: 2022.10.19 16:31:57 +02'00'
<b>A1 - DATA COMPLETE - NO COMMENTS - DO NOT RESUBMIT</b>			

**A1 - DATA COMPLETE - NO COMMENTS - DO NOT RESUBMIT**

Authorization to proceed does not relieve Contractor/Supplier of its responsibility or liability under the Contract and or Purchase Order.

By: Andres Pacheco PAC22403 26-10-2022

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**thyssenkrupp  
Industrial Solutions**

Beckum, Germany

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Process Function Diagram

Drawing No. : KXEO-01517-003346704

Site Description : High pressure grinding roll mill (HPGR)

Codeword : CENTIWAL

Project No.: KXEO-01517

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2				Date	22.03.2022	Codeword	CENTIWAL	thyssenkrupp Industrial Solutions	Process Function Diagram	Customer	Flour-Salfa - AMSA Centinela	8F1.PM02
				Drawn	PTD-AD-BWU	Project No:	KXEO-01517				Chile	
				check	PTD-AD-RTG	Customer No:				Sheet	1	Drawing No.
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	Group:		Page:
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	Drawn	PTD-AD-BWU	Project No:	KXEO-01517		_Centiwal_8F1PM02	Flour-Salfa - AMSA Centinela	Chile
	check	PTD-AD-RTG	Customer No:		Beckum, Germany	Dokumentation	Sheet 2 of 154	Drawing No. KXEO-01517-003346704 Group: 19.10.2022 Page:
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2	Date	22.03.2022	Codeword	CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Project No.: KXEO-01517 Customer No.: Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
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	check	PTD-AD-RTG	Customer No:				
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.

**thyssenkrupp  
Industrial Solutions**  
Beckum, Germany

Process Function Diagram  
\_Centiwal\_8F1PM02  
Dokumentation

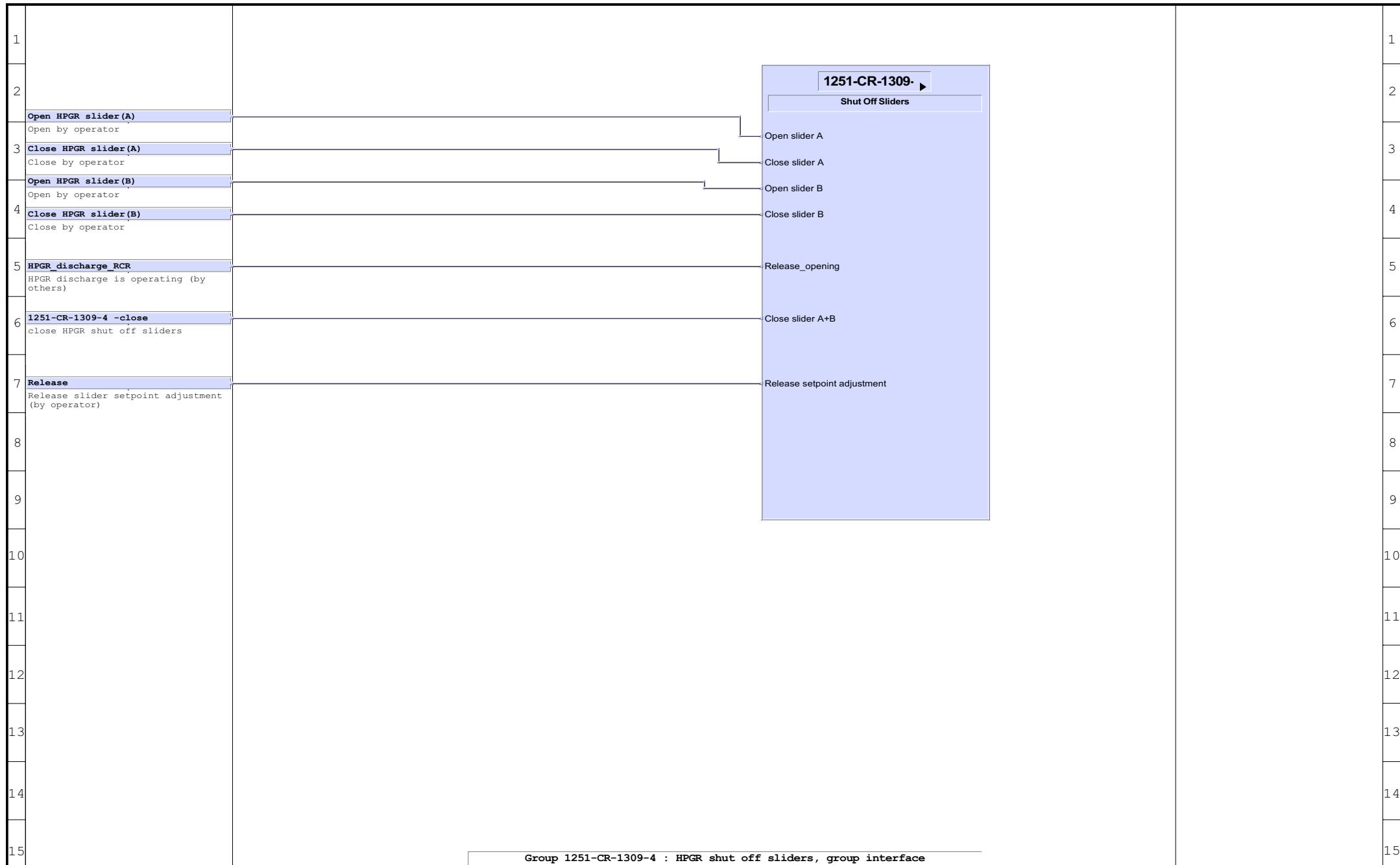
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	Drawn	PTD-AD-BWU	Project No:	KXEO-01517			Flour-Salfa - AMSA Centinela	Chile
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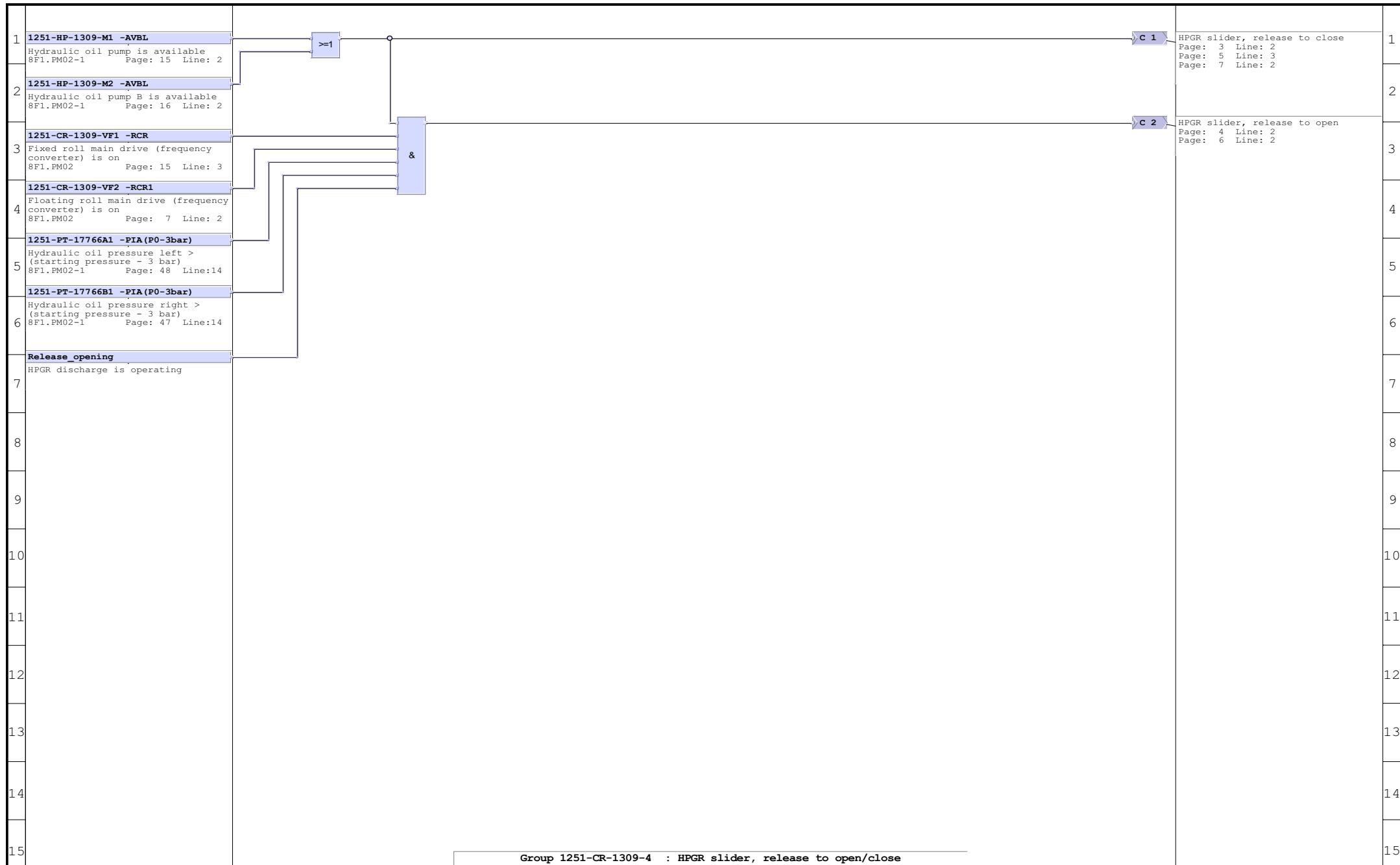
Group 1251-CR-1309-4 : HPGR shut off sliders, group interface

2		19.10.22	10461396	Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer Flour-Salfa - AMSA Centinela Chile	8F1.PM02
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				check	PTD-AD-RTG	Customer No:	1251-CR-1309-4_Shut Off Sliders		Sheet 7 Drawing No. KXEO-01517-003346704 Group: 1251-CR-1309-4	Page: 1
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1  
INTERFACE IN- AND OUTPUTS  
1251-CR-1309-4

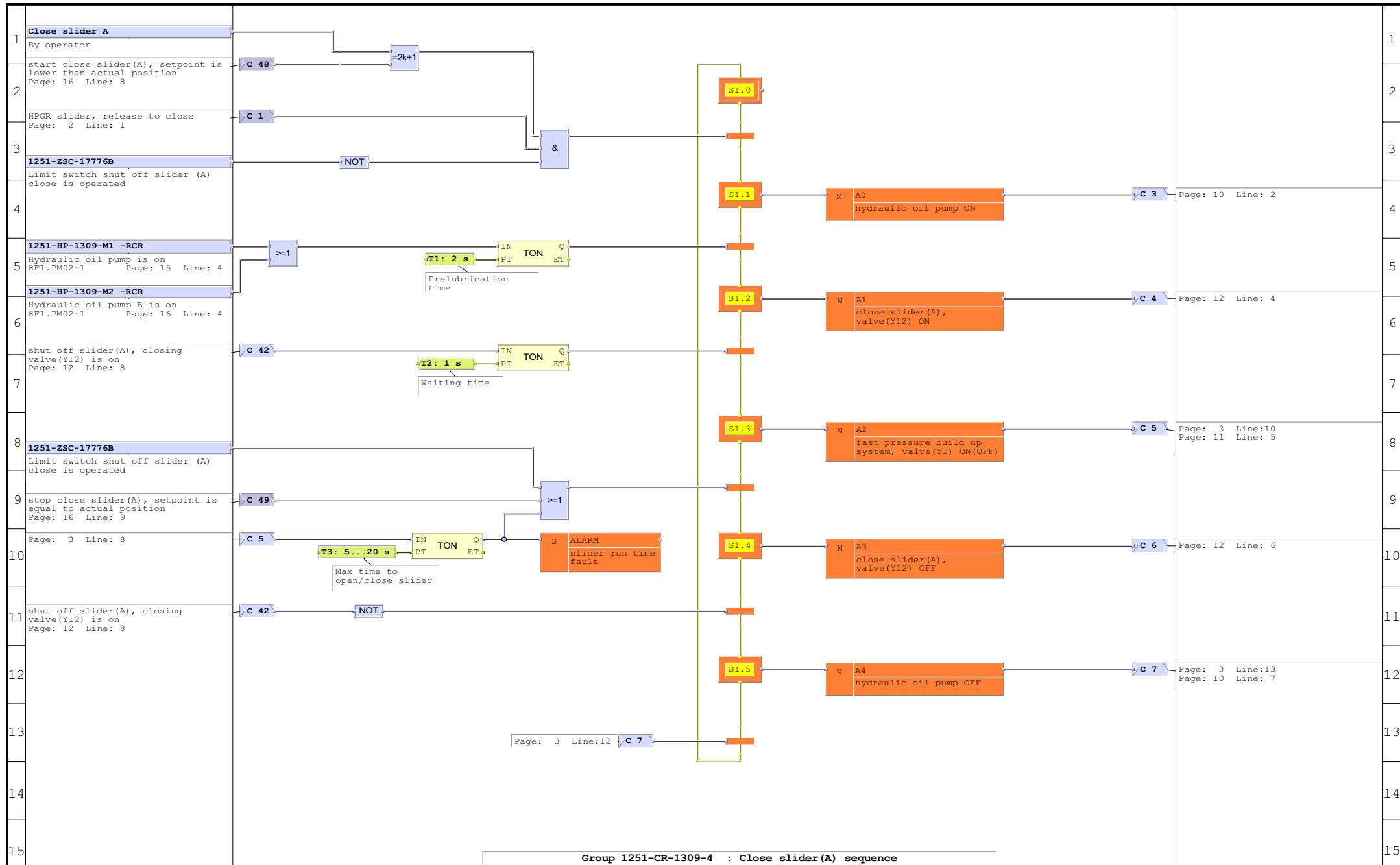
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		19.10.22	10461396	Drawn	PTD-AD-BWU					
		23.03.22	Wulowitsc*	check	PTD-AD-RTG	Customer No:				
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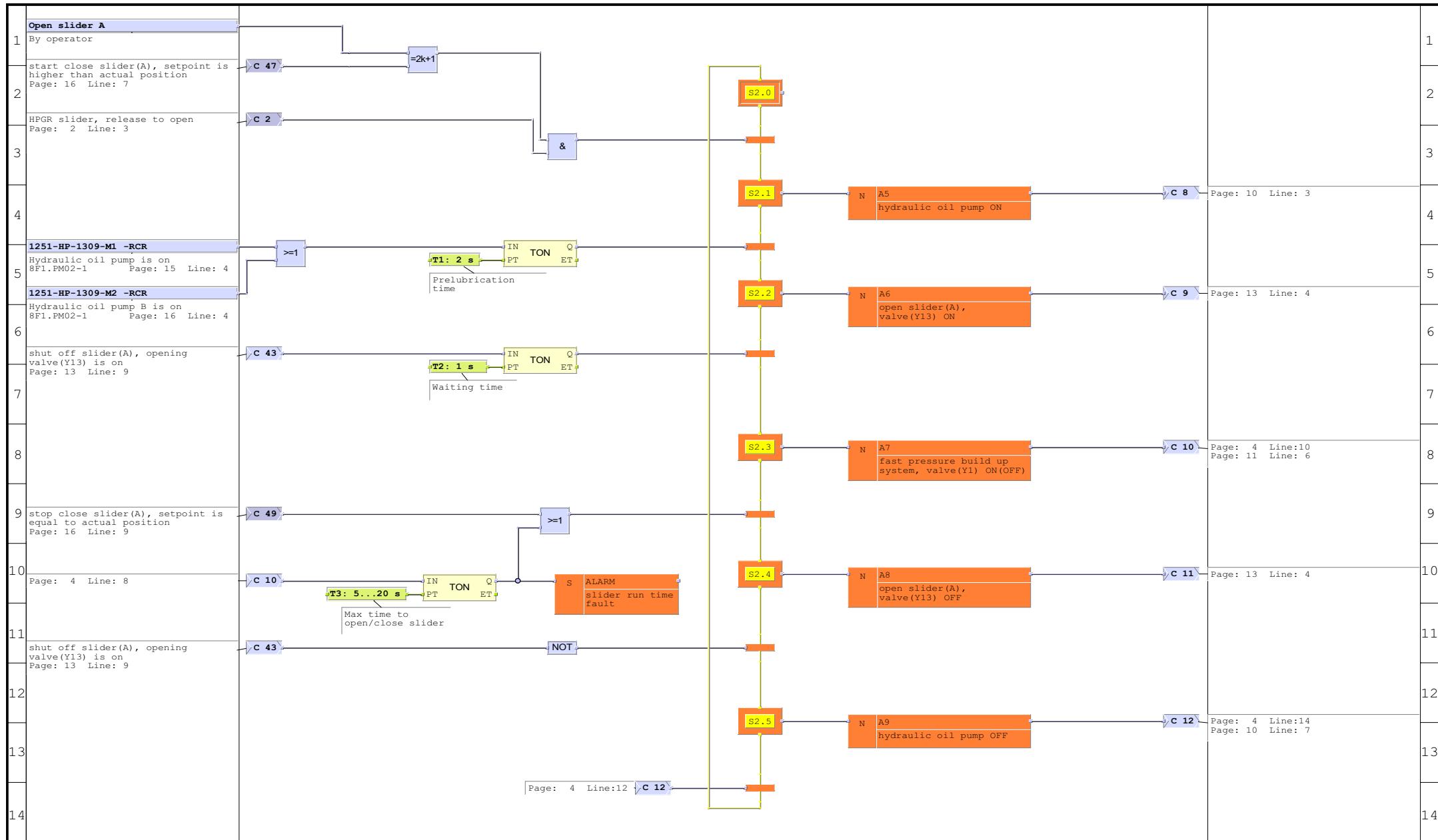


Group 1251-CR-1309-4 : HPGR slider, release to open/close

Rev	Modification	Date	Name	Date	22.03.2022	Codeword	CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02			
				Drawn	PTD-AD-BWU	Project No:	KXEO-01517		HPGR_PM02	Sheet	9	Drawing No.	Group:	Page:
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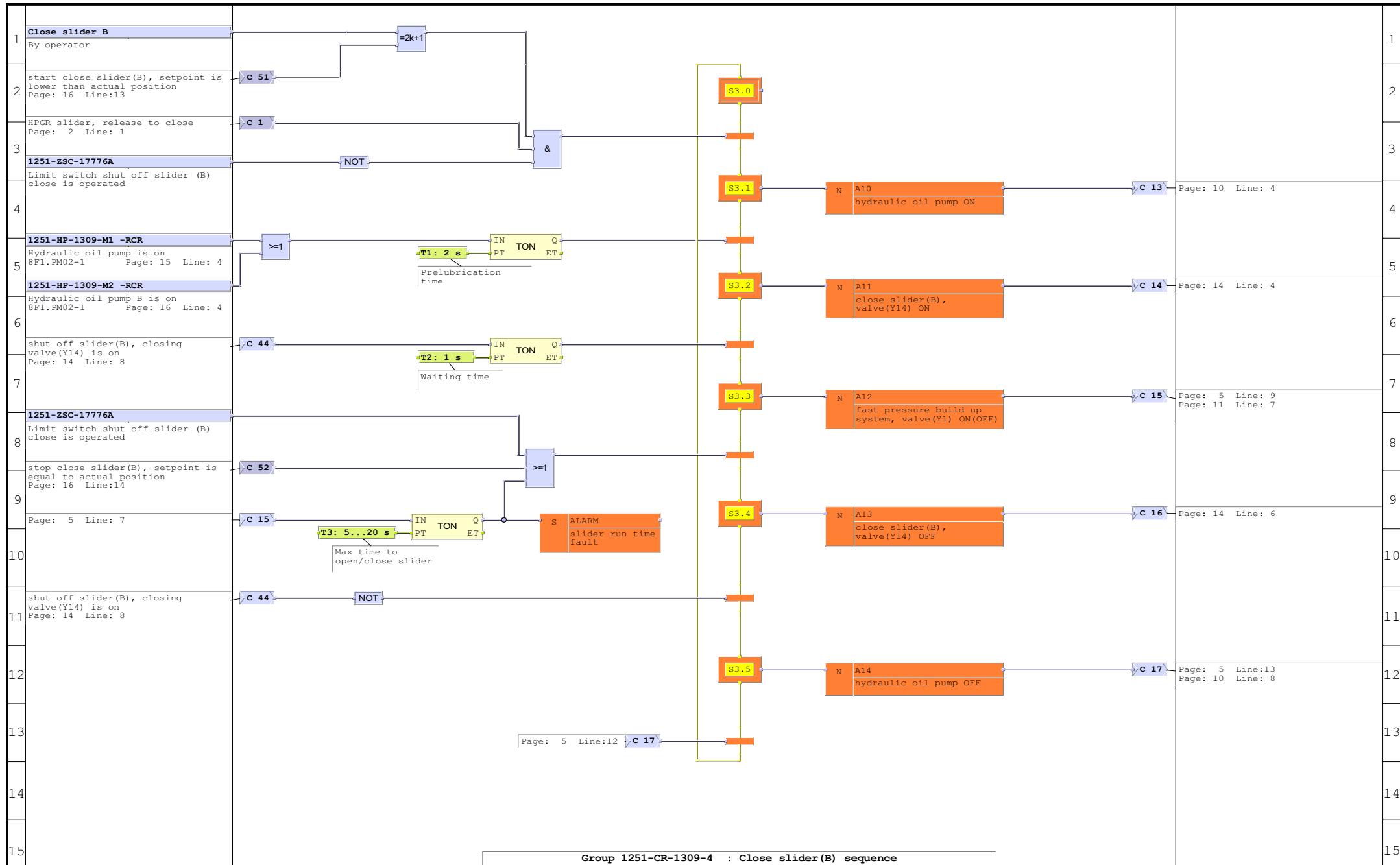


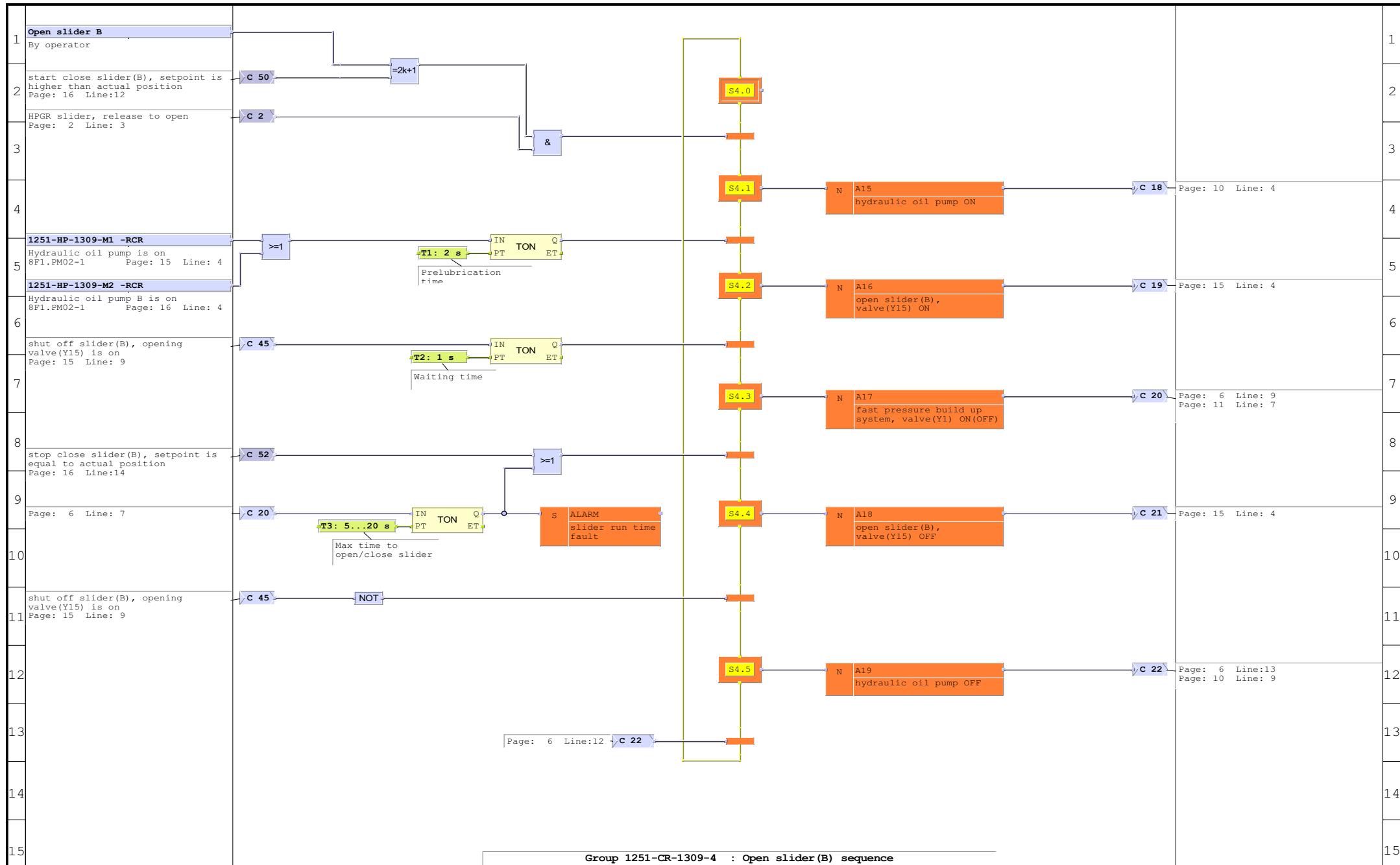
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				Drawn	PTD-AD-BWU	check	PTD-AD-RTG			Drawing No.	Flour-Salfa - AMSA Centinela Chile
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	Group:	Page:	1251-CR-1309-4
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Group 1251-CR-1309-4 : Open slider(A) sequence

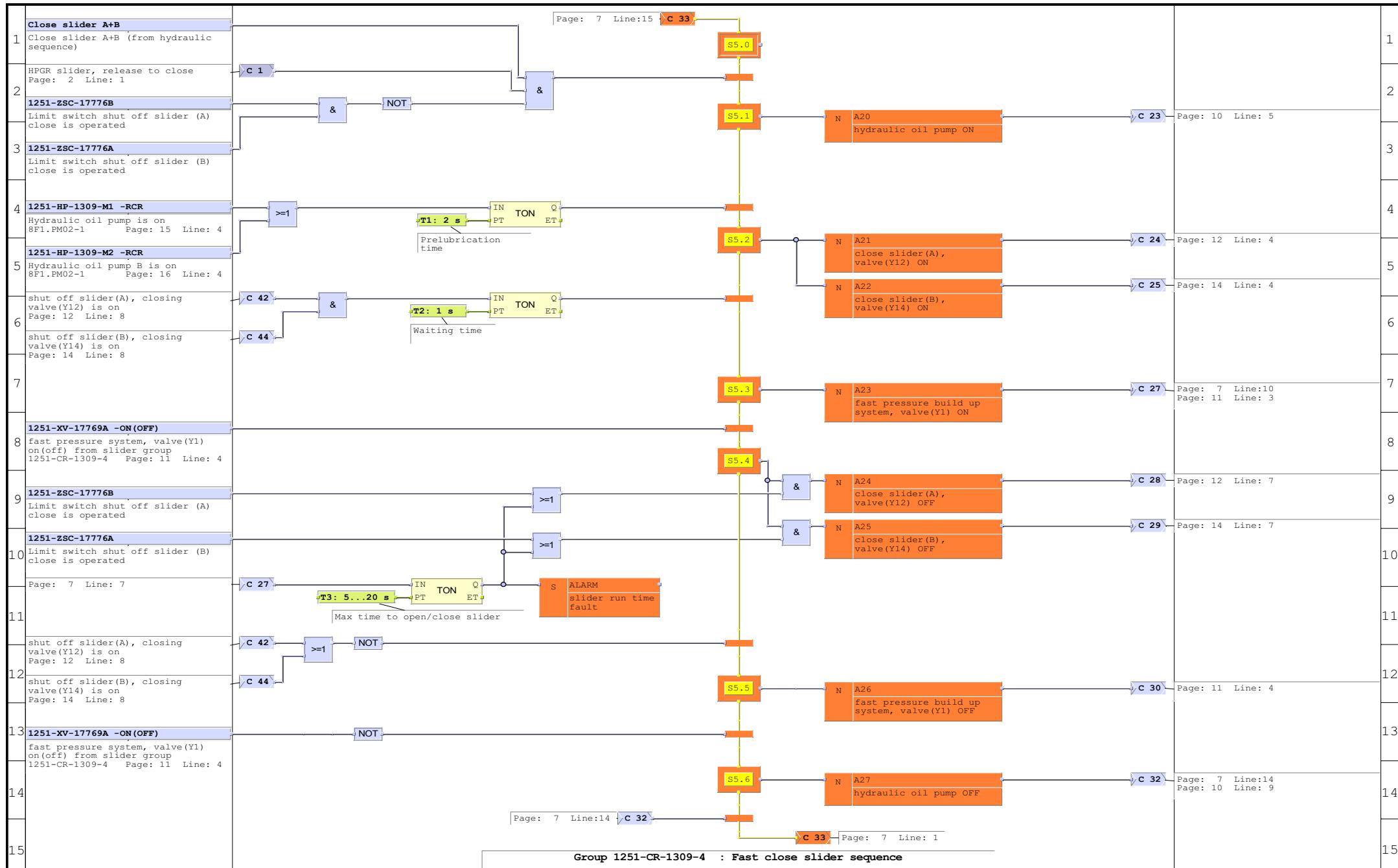
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			Drawn	PTD-AD-BWU	Customer No:					Chile	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	Sheet 11 of 154	Drawing No. KXEO-01517-003346704 Group: 1251-CR-1309-4 Page: 4



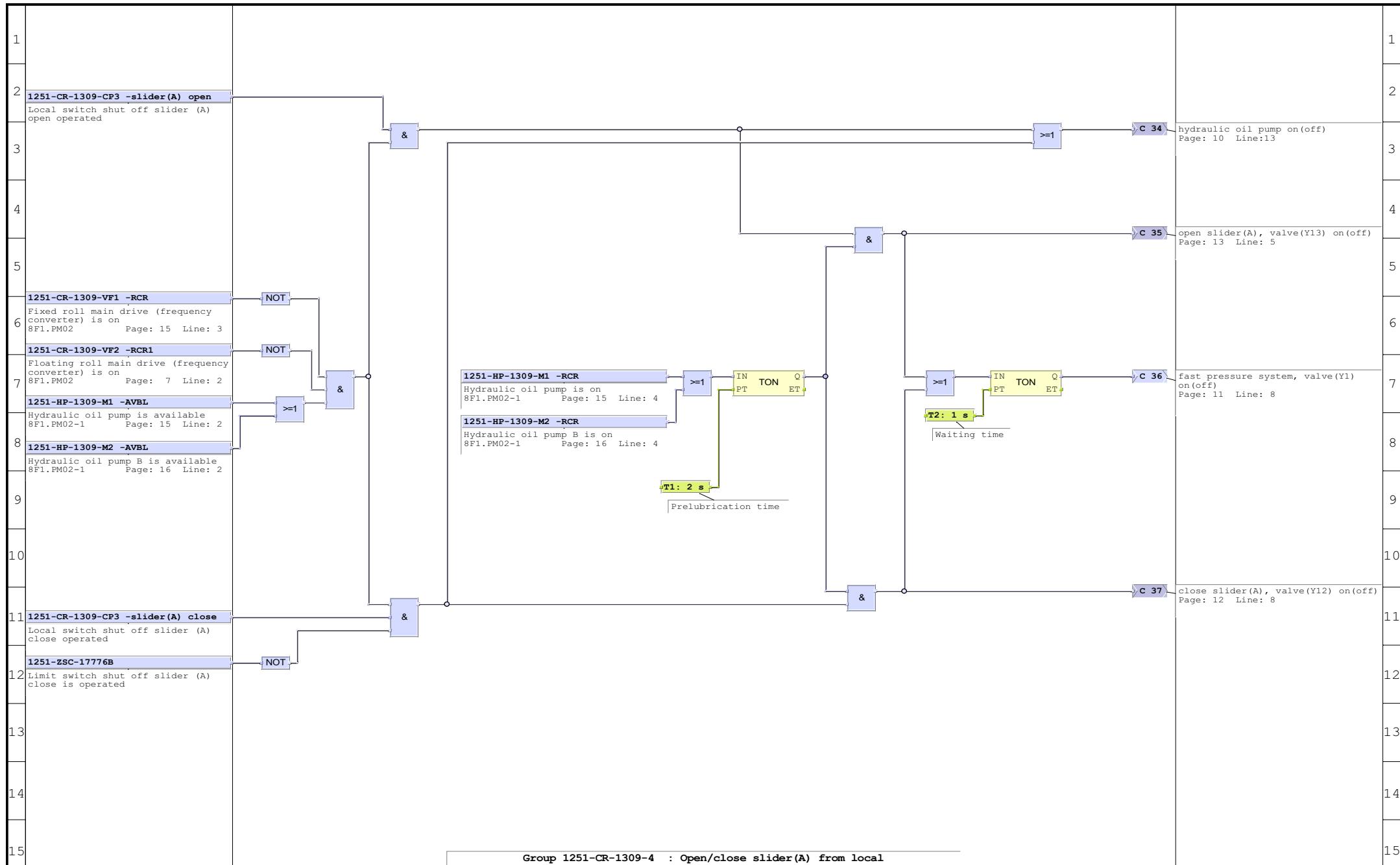


Group 1251-CR-1309-4 : Open slider(B) sequence

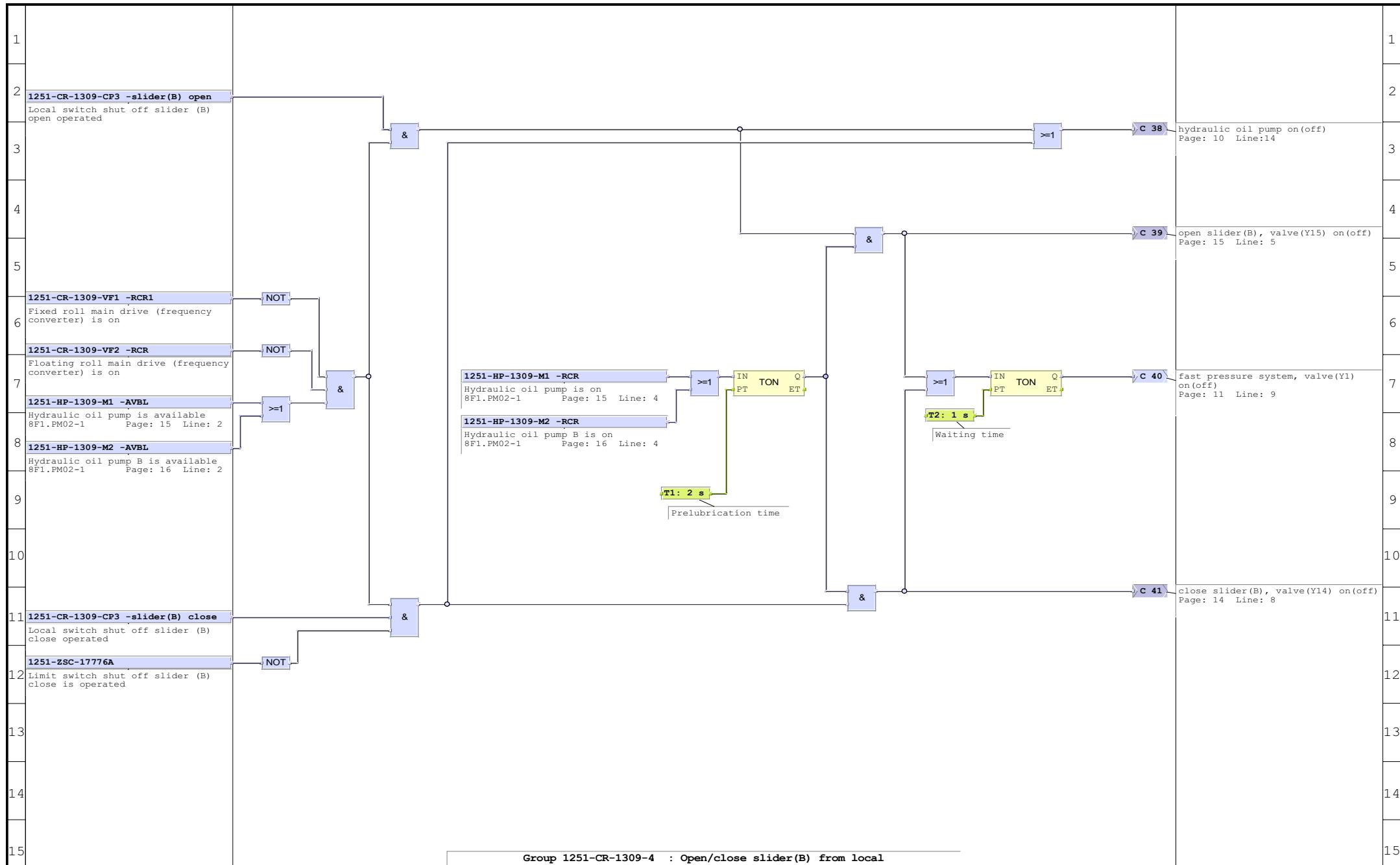
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				Drawn	PTD-AD-BWU	Project No: KXEO-01517			Chile	
				check	PTD-AD-RTG	Customer No:	Beckum, Germany	1251-CR-1309-4_Shut Off Sliders	Drawing No.	Group: 1251-CR-1309-4
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	Page: 6



2			Date	22.03.2022	Codeword CENTIWAL Project No: KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram HPGR_PM02 1251-CR-1309-4 Shut Off Sliders	Customer Flour-Salfa - AMSA Centinela		8F1.PM02		
			Drawn	PTD-AD-BNU						Chile		
			check	PTD-AD-RTG								
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Req'd.	Req'd.	Printed:	19.10.2022	Sheet 14 of 154 Drawing No. KXEO-01517-003346704 Group: 1251-CR-1309-4 Page: 7		

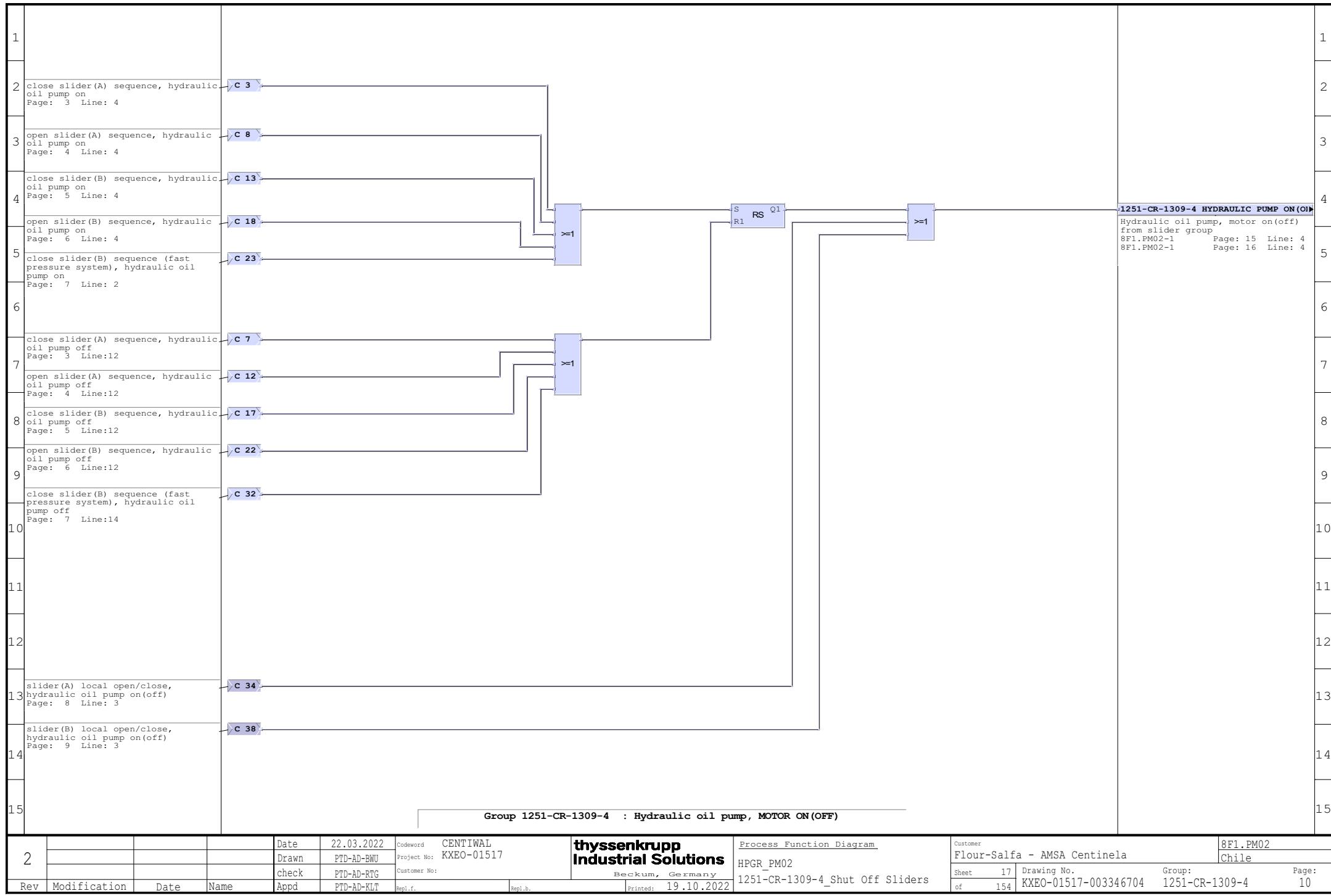


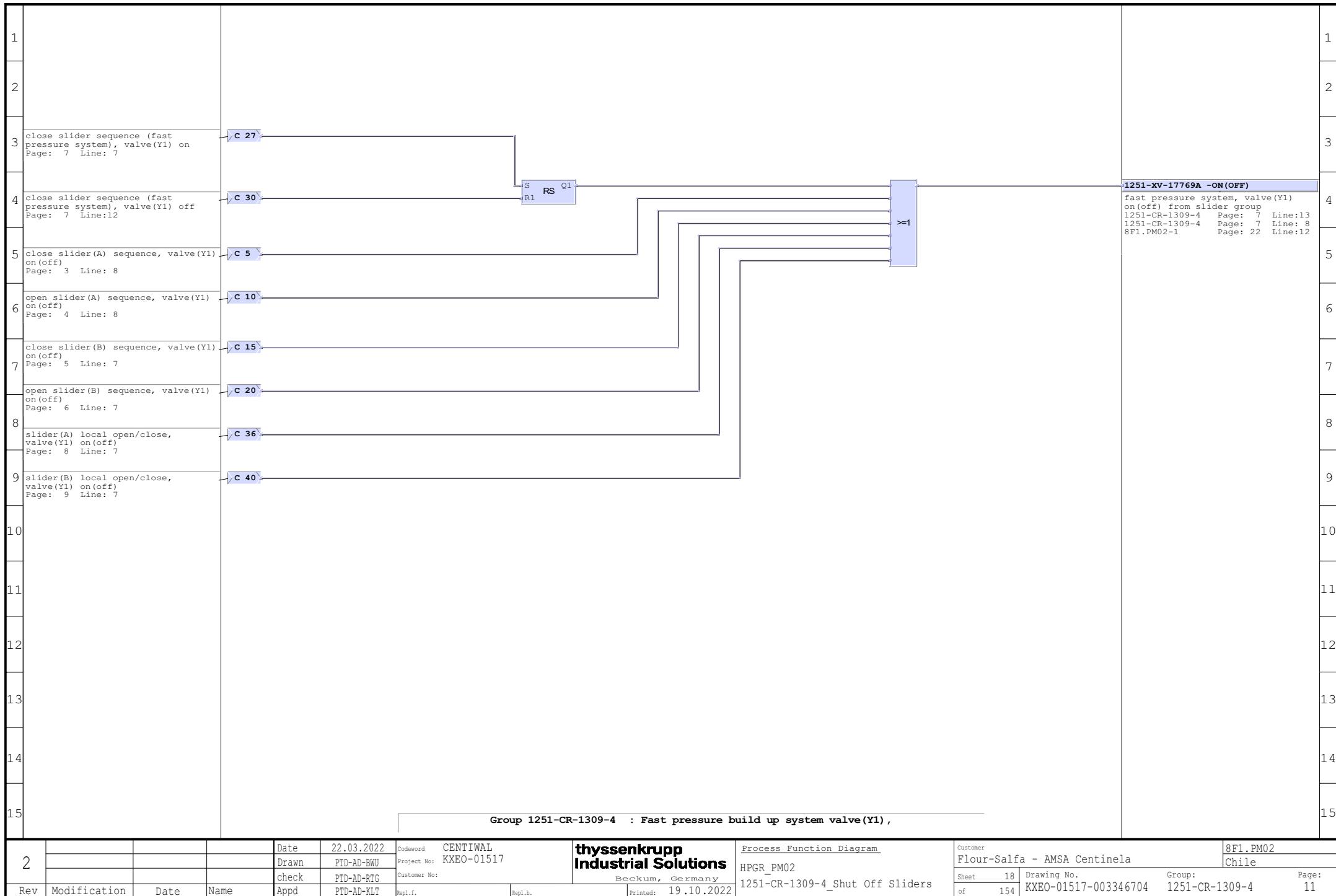
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				Drawn	PTD-AD-BWU	Project No: KXEO-01517			Chile	
				check	PTD-AD-RTG	Customer No:	Beckum, Germany			
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Sheet 15 of 154 Drawing No. KXEO-01517-003346704 Group: 1251-CR-1309-4	Page: 8

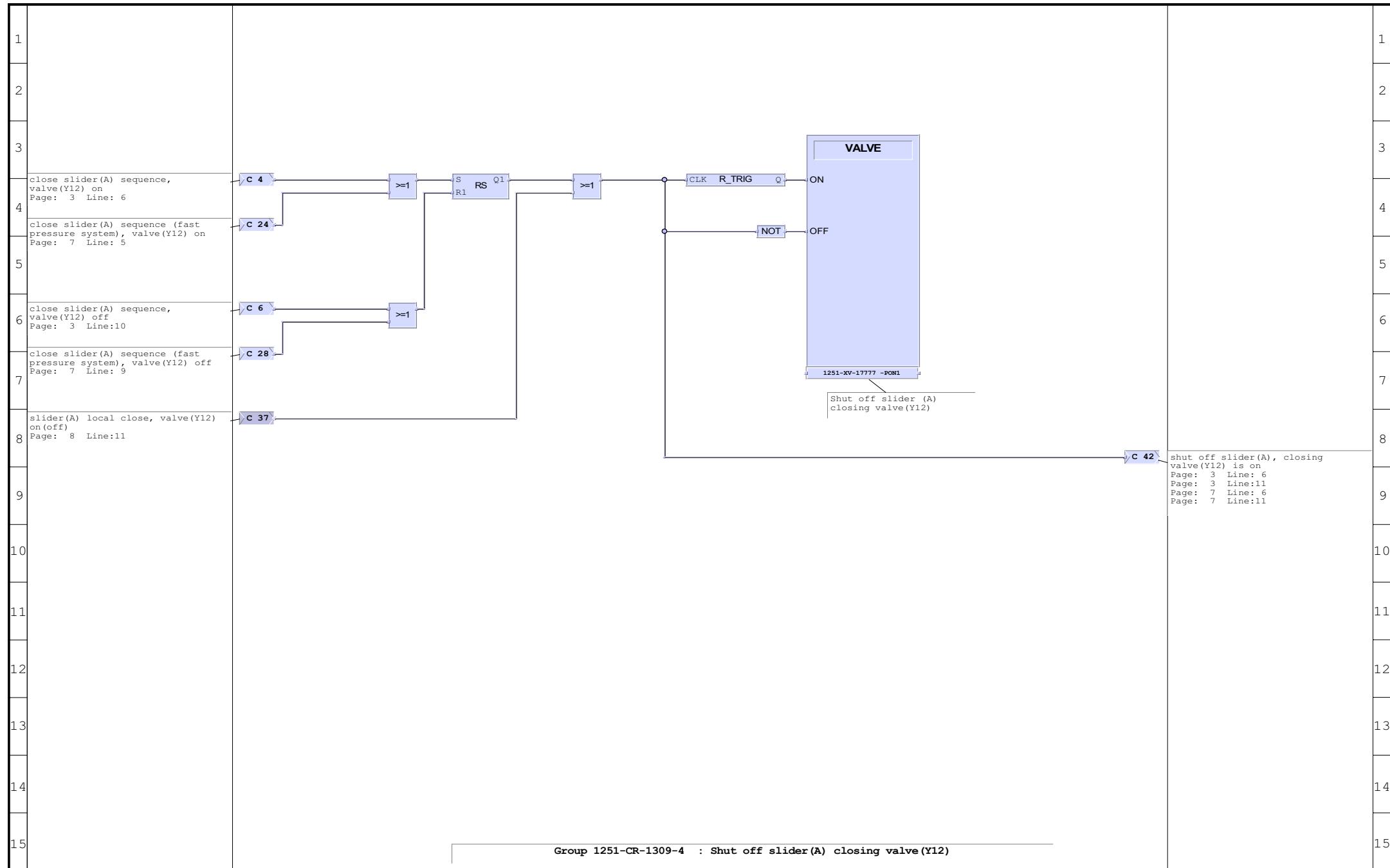


Group 1251-CR-1309-4 : Open/close slider(B) from local

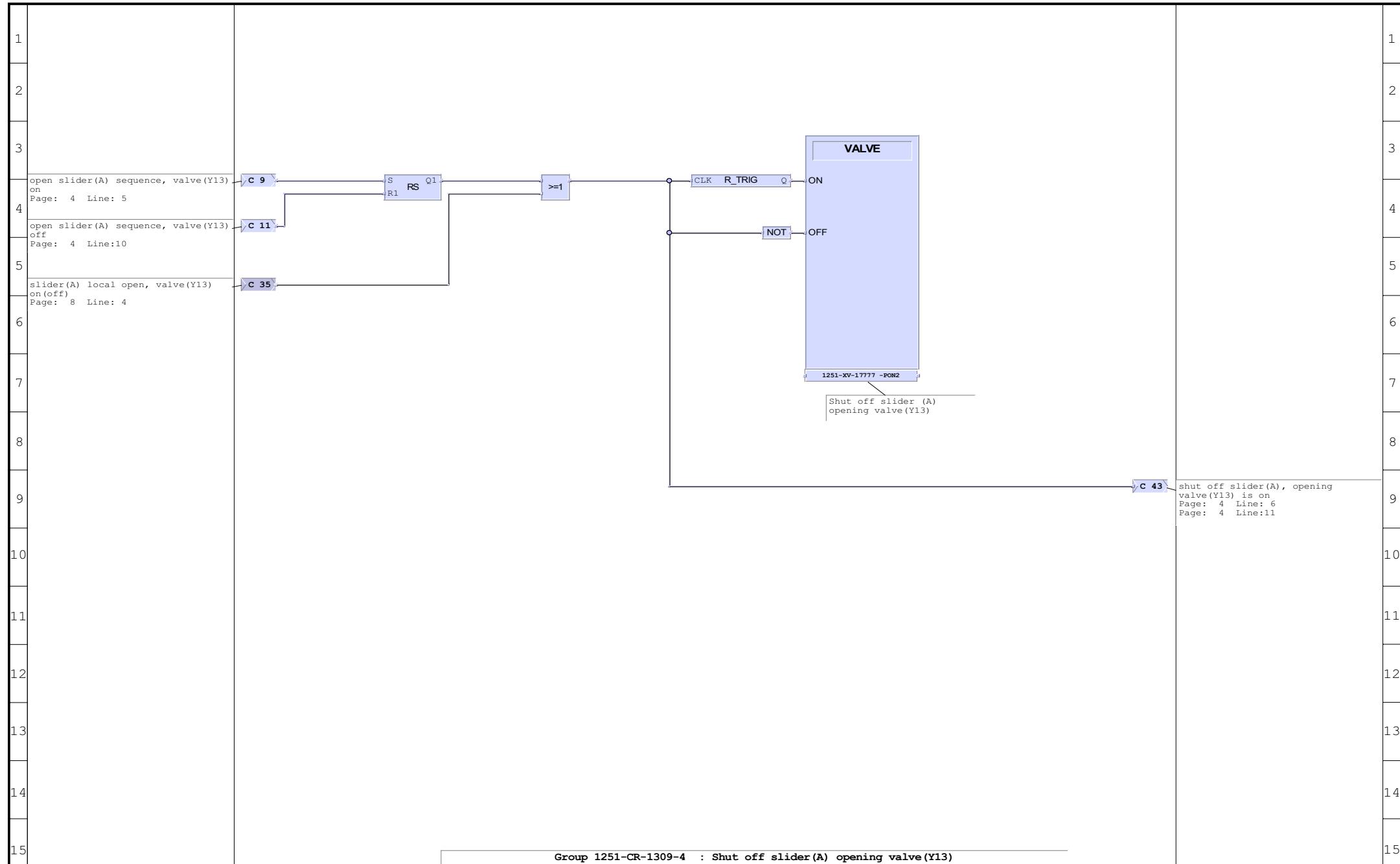
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				Drawn	PTD-AD-BWU	Project No: KXEO-01517			Chile	
				check	PTD-AD-RTG	Customer No:	Beckum, Germany	1251-CR-1309-4_Shut Off Sliders	Sheet 16 of 154	Drawing No. KXEO-01517-003346704
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Group: 1251-CR-1309-4	Page: 9



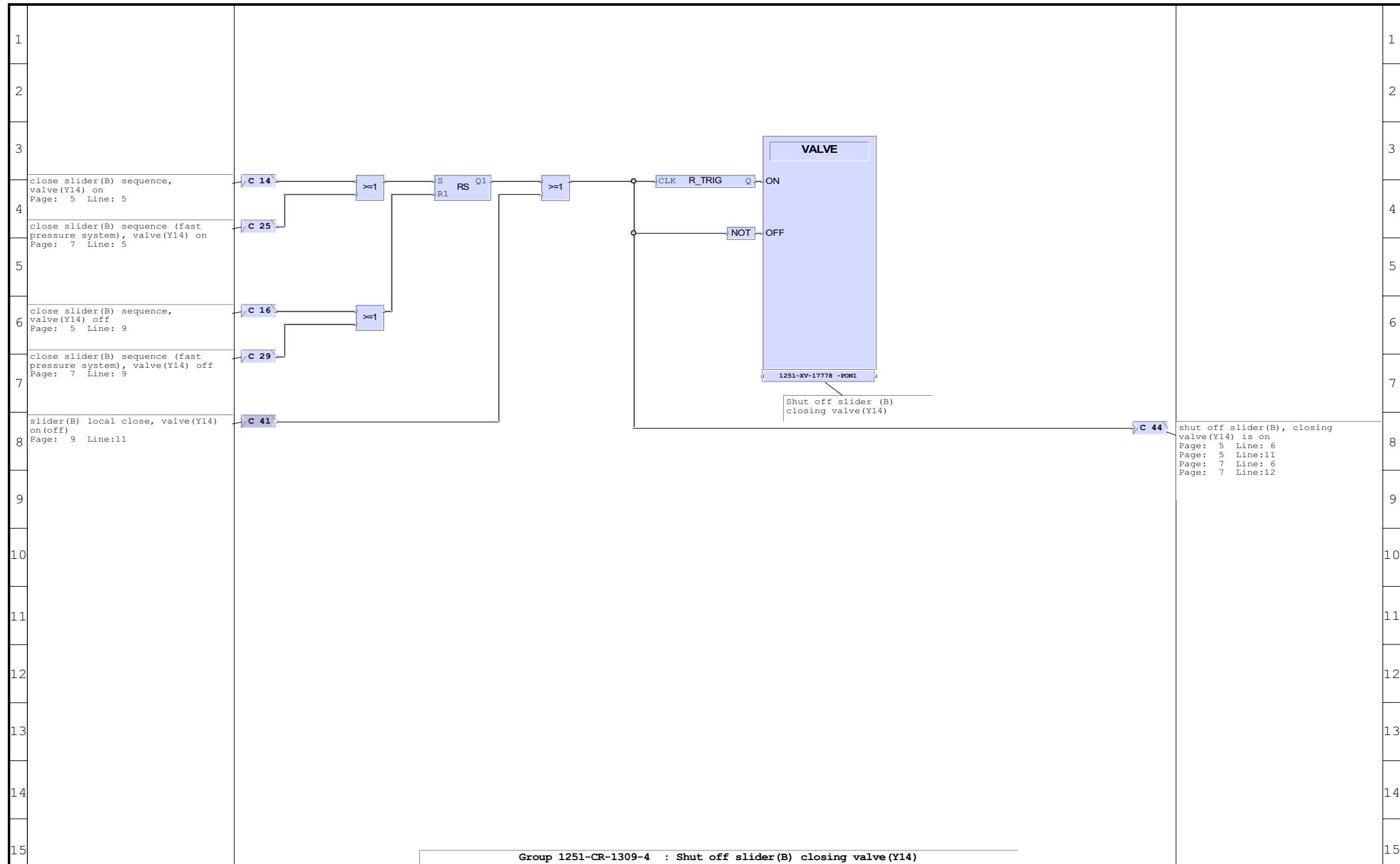




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				Drawn	PTD-AD-BWU	check	PTD-AD-RTG			
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	

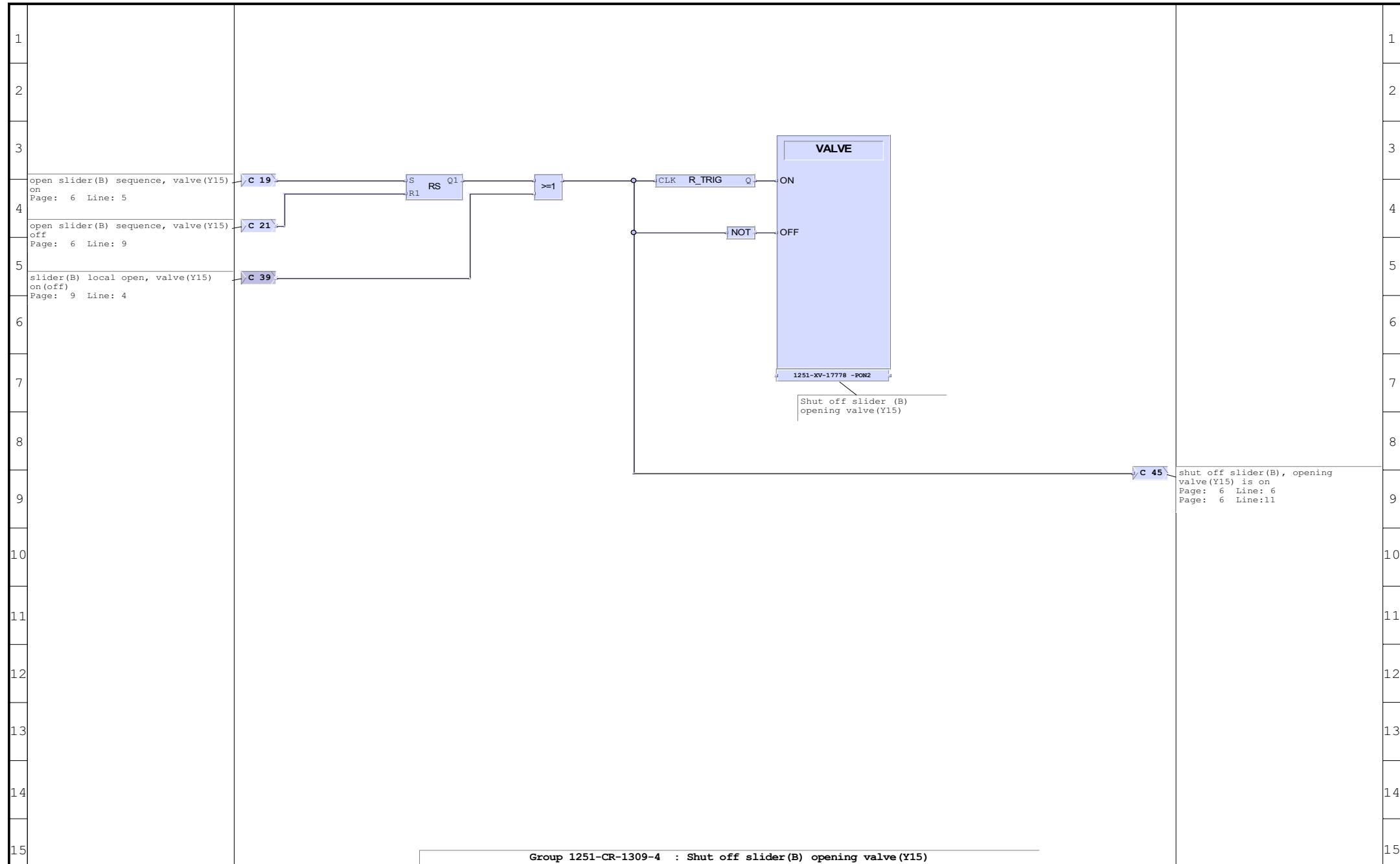


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				Drawn	PTD-AD-BWU				Drawing No.			
				check	PTD-AD-RTG				Group:	Page:		
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	KXEO-01517-003346704	1251-CR-1309-4	13

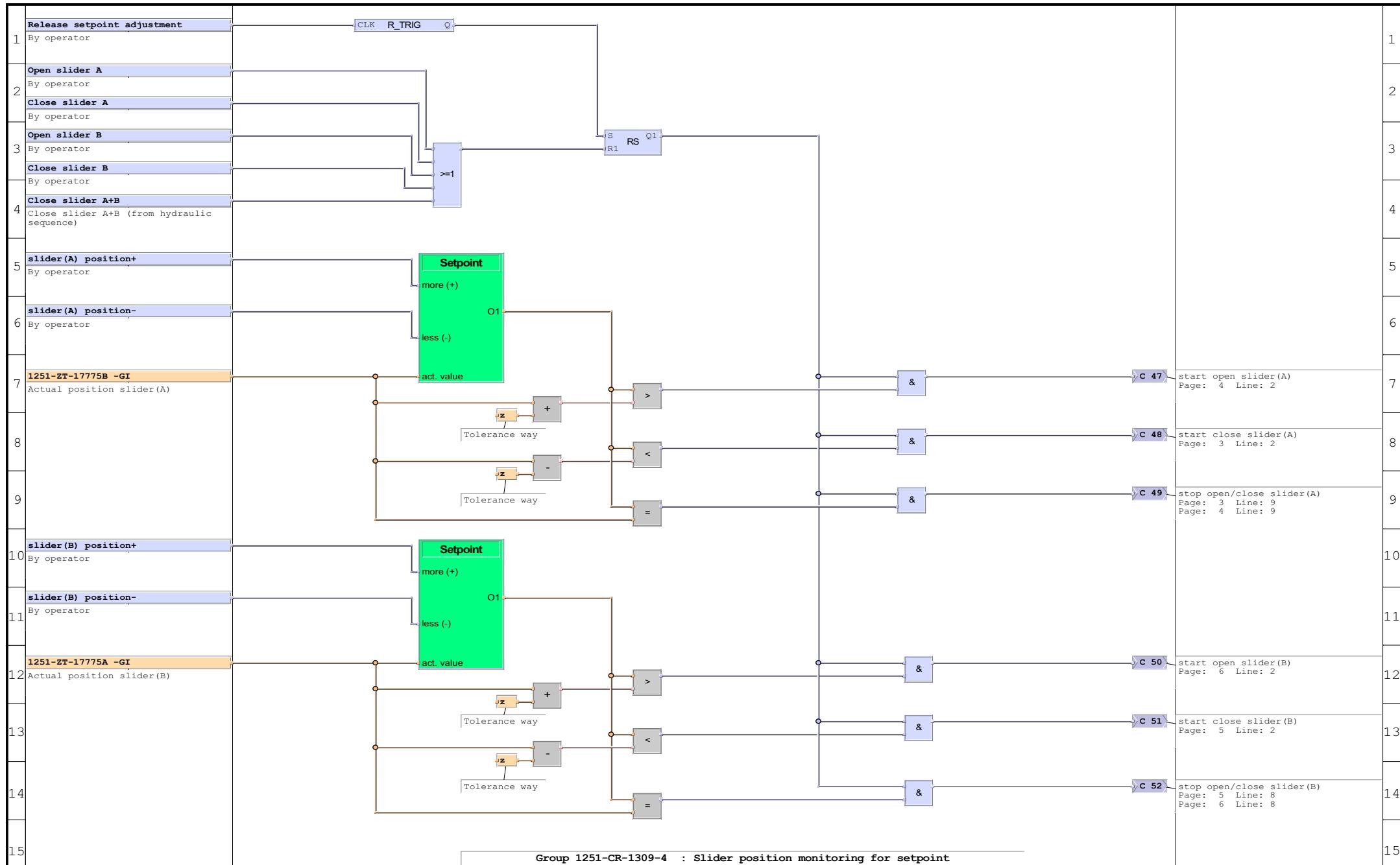


Group 1251-CR-1309-4 : Shut off slider(B) closing valve(Y14)

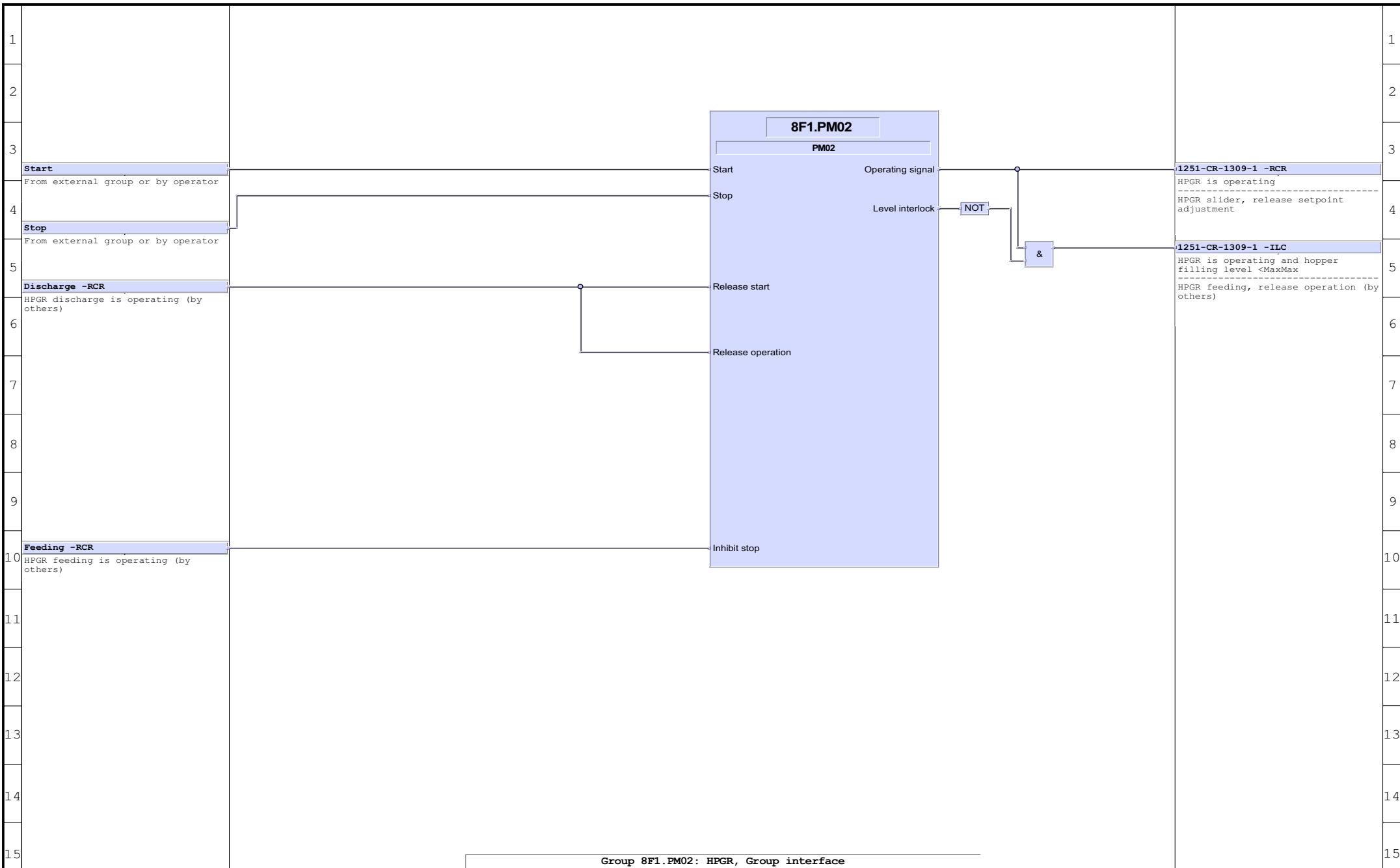
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Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	KXEO-01517-003346704 1251-CR-1309-4 14



2				Date	22.03.2022	Codeword CENTIWAL	thyssenkrupp Industrial Solutions Beckum, Germany	Process Function Diagram	Customer	8F1.PM02	
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				check	PTD-AD-RTG	Customer No:		HPGR_PM02			
				Appd	PTD-AD-KLT	Repl.f.		1251-CR-1309-4_Shut Off Sliders	Drawing No.	Group:	
Rev	Modification	Date	Name			Repl.b.			KXEO-01517-003346704	1251-CR-1309-4	Page: 15



2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
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				check	PTD-AD-RTG	Customer No.			Drawing No.	Page:
				Appd	PTD-AD-KLT	Repl.f.		1251-CR-1309-4_Shut Off Sliders	KXEO-01517-003346704	1251-CR-1309-4
Rev	Modification	Date	Name	Repl.b.		Printed: 19.10.2022	Sheet 23 of 154	Group: 16	Page: 16	



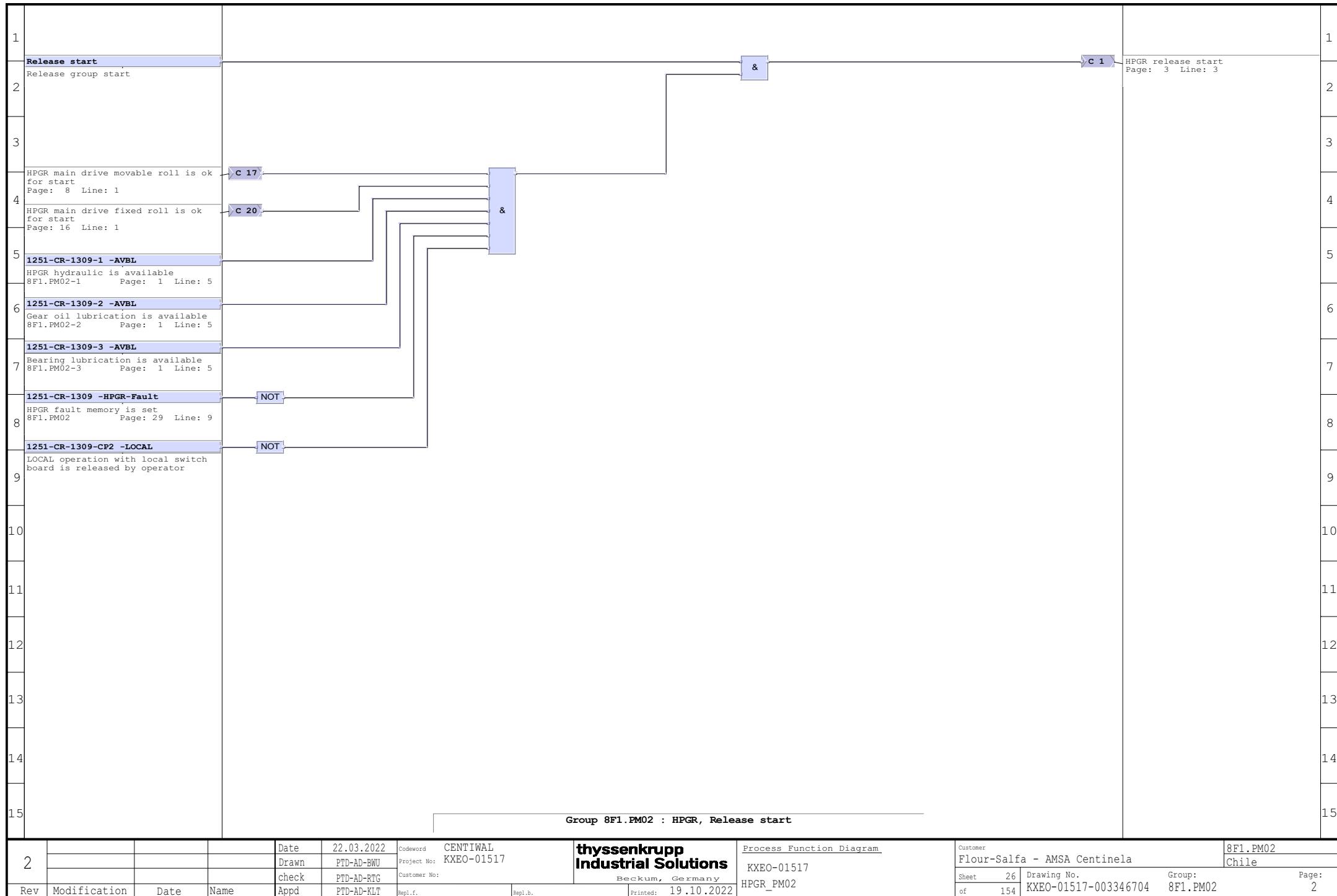
Group 8F1.PM02: HPGR, Group interface

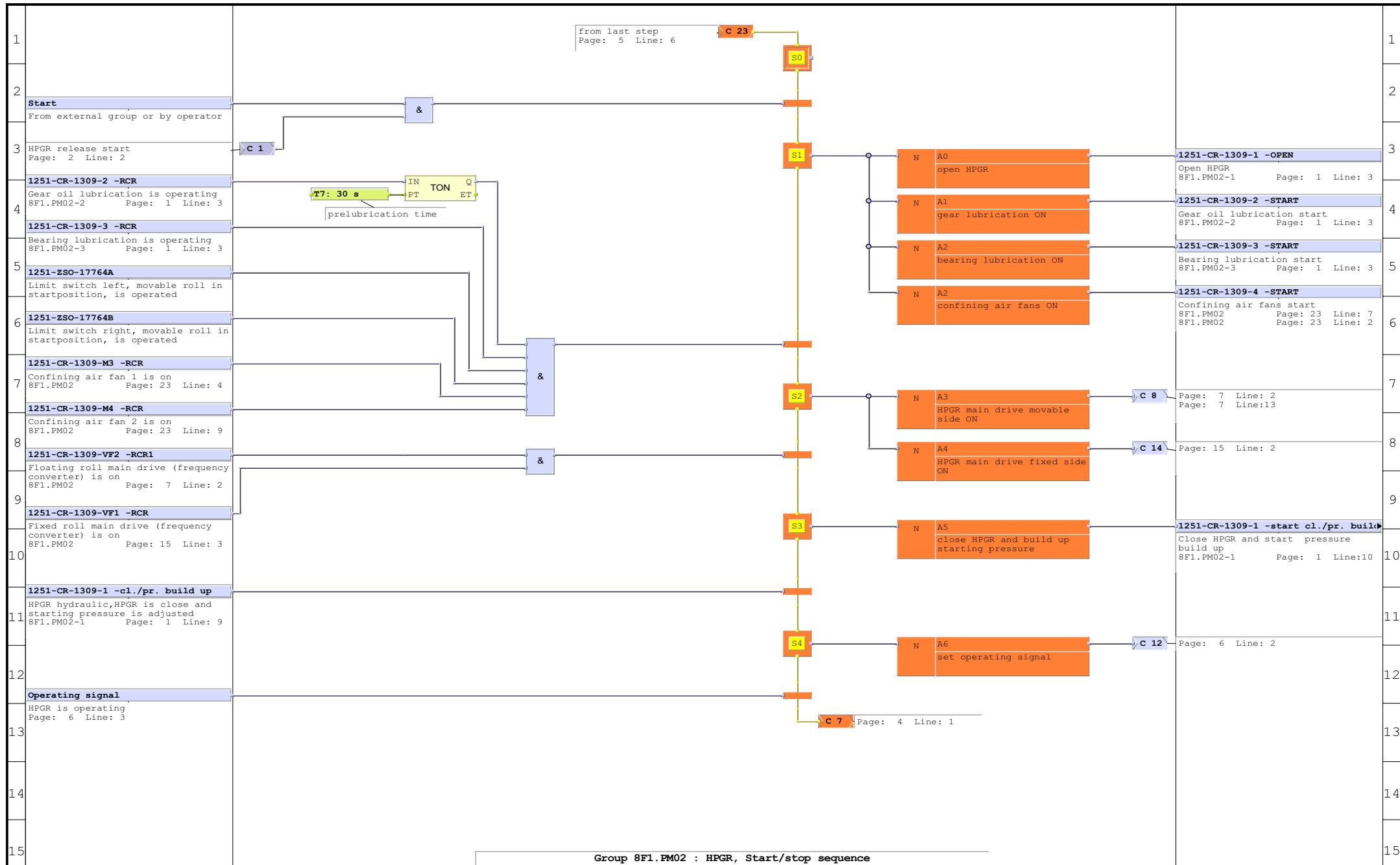
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			Drawn check	Drawn PTD-AD-RDG	Customer No: PTD-AD-KLT					
Rev	Modification	Date	Name	Apod	PTD-AD-KLT	Appl.f. Appl.b.	Printed: 19.10.2022			

1  
INTERFACE IN- AND OUTPUTS  
8F1 . PM02

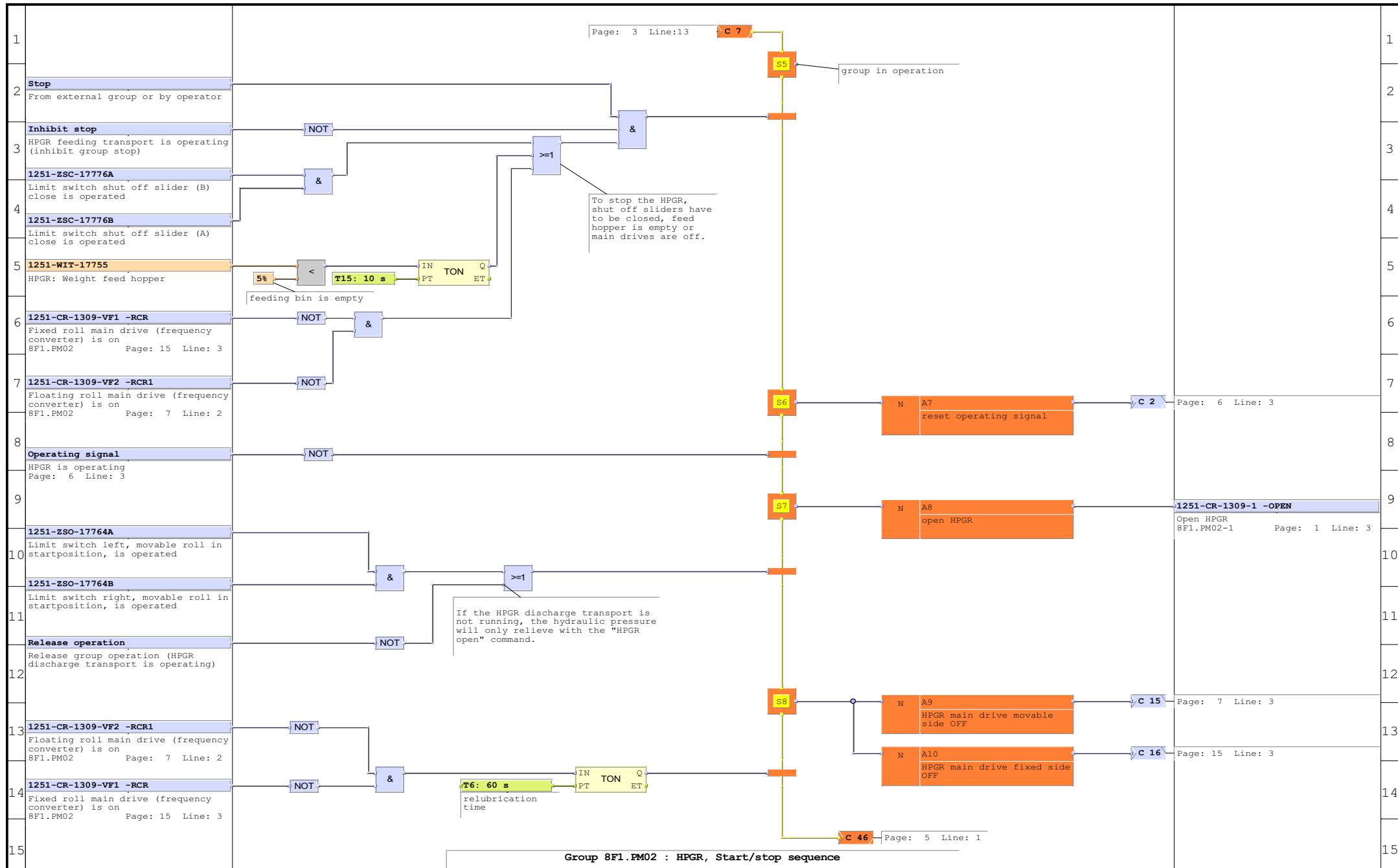
2	Name	Var-Art	Attrib	Init-Wert	Langname	Phys. Adr.	Verwendung	2
3	Inhibit stop	VAR_INPUT			HPGR feeding transport is operating (in*		4 C/-1 15/85 13 G/0 15/97 21 G/2 15/97 29 A/5 15/29 33 E/5 15/86	3
4	Release operation	VAR_INPUT			Release group operation (HPGR discharge*		4 C/-1 15/26 29 A/5 15/61	4
5	Release start	VAR_INPUT			Release group start		2 A/-1 15/93	5
	Start	VAR_INPUT			From external group or by operator		3 B/-1 15/88	
	Stop	VAR_INPUT			From external group or by operator		4 C/-1 15/91	
6	Level interlock	VAR_OUTPUT			HPGR feeding bin level is too high, sto*		30 B/5 99/77	6
	Operating signal	VAR_OUTPUT			HPGR is operating		3 B/-1 15/20 4 C/-1 15/48 6 E/-1 15/94 6 E/-1 99/82	
7								7
8								8
9								9
10								10
11								11
12								12
13								13
14								14
15								15

2		19.10.22	10461396	Date	22.03.2022	Codeword CENTIWAL Project No: KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram KXEO-01517 HPGR_PM02	Customer Flour-Salfa - AMSA Centinela Chile	8F1.PM02
		19.10.22	10461396	Drawn	PTD-AD-BWU					
		23.08.22	10461396	check	PTD-AD-RTG	Customer No:				
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Sheet 25 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02 Page:

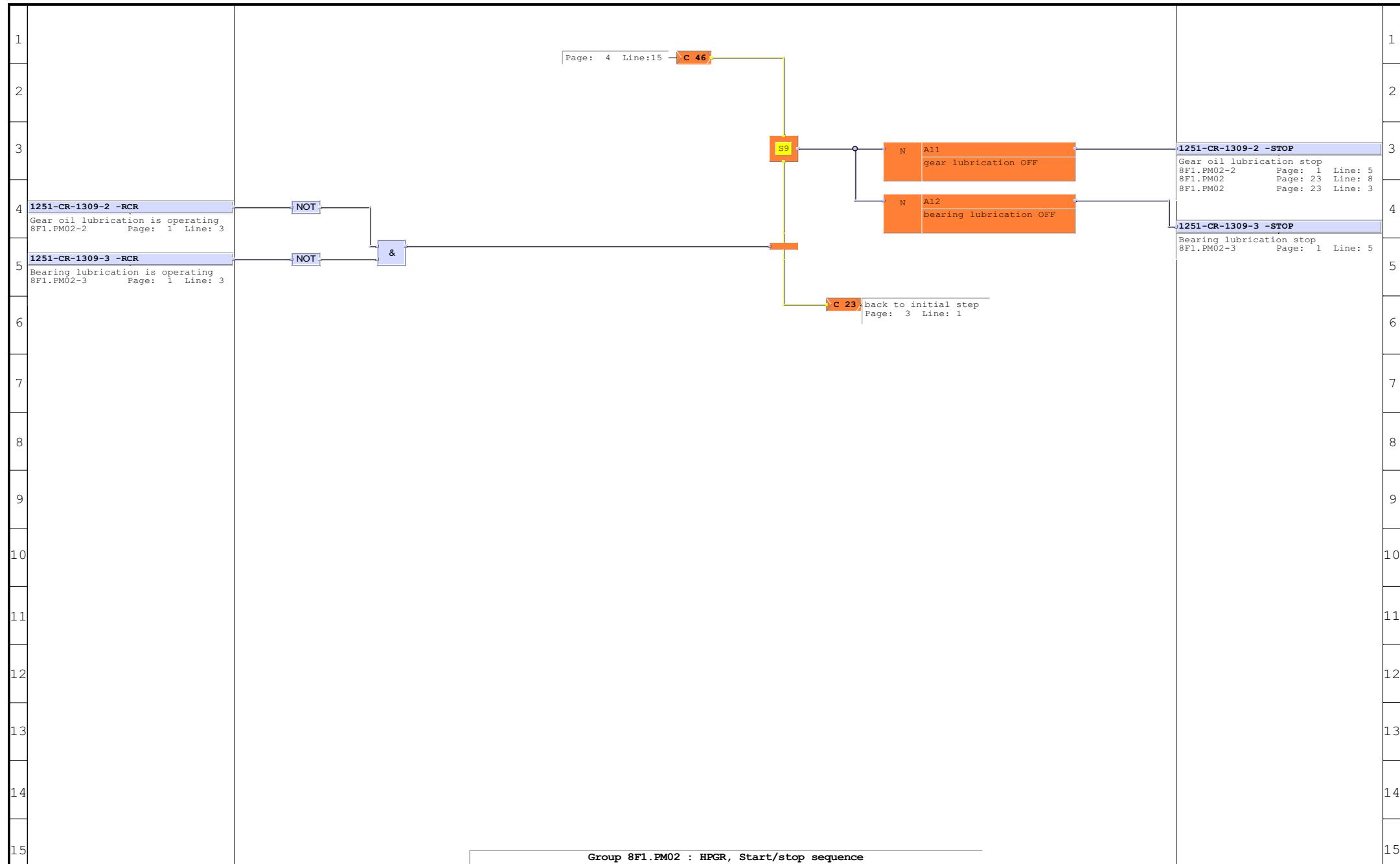




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				Drawn	PTD-AD-BWU	Project No:	KXE0-01517			Flour-Salfa - AMSA Centinela	Chile	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Customer No:			Sheet	Drawing No.	Group:	Page:
									of 154	KXE0-01517-003346704	8F1.PM02	3

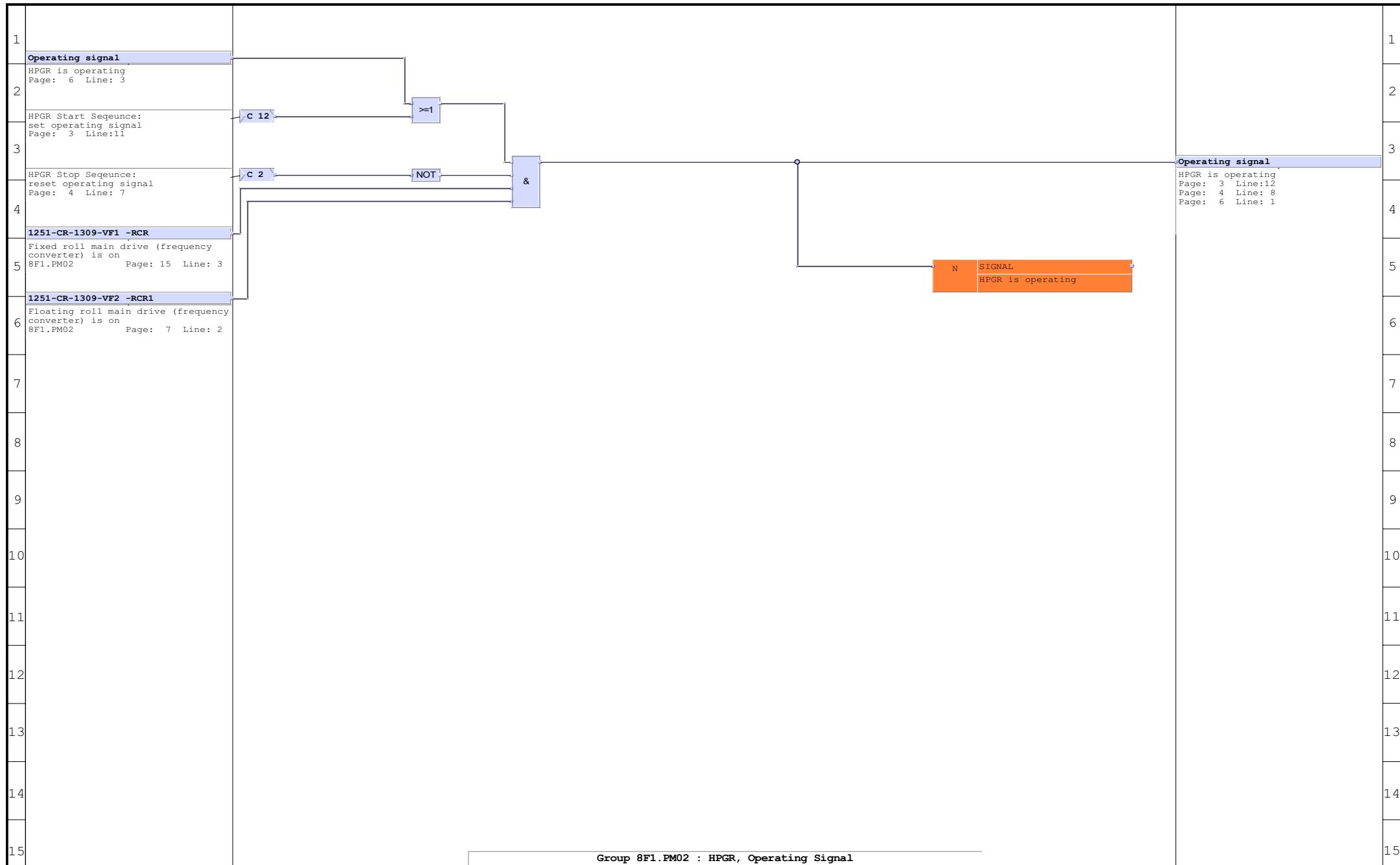


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			Drawn	PTD-AD-BNU	Customer No:					Chile	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Req.l.f.	Req.b.	Printed:	19.10.2022	Sheet 28 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02 Page: 4

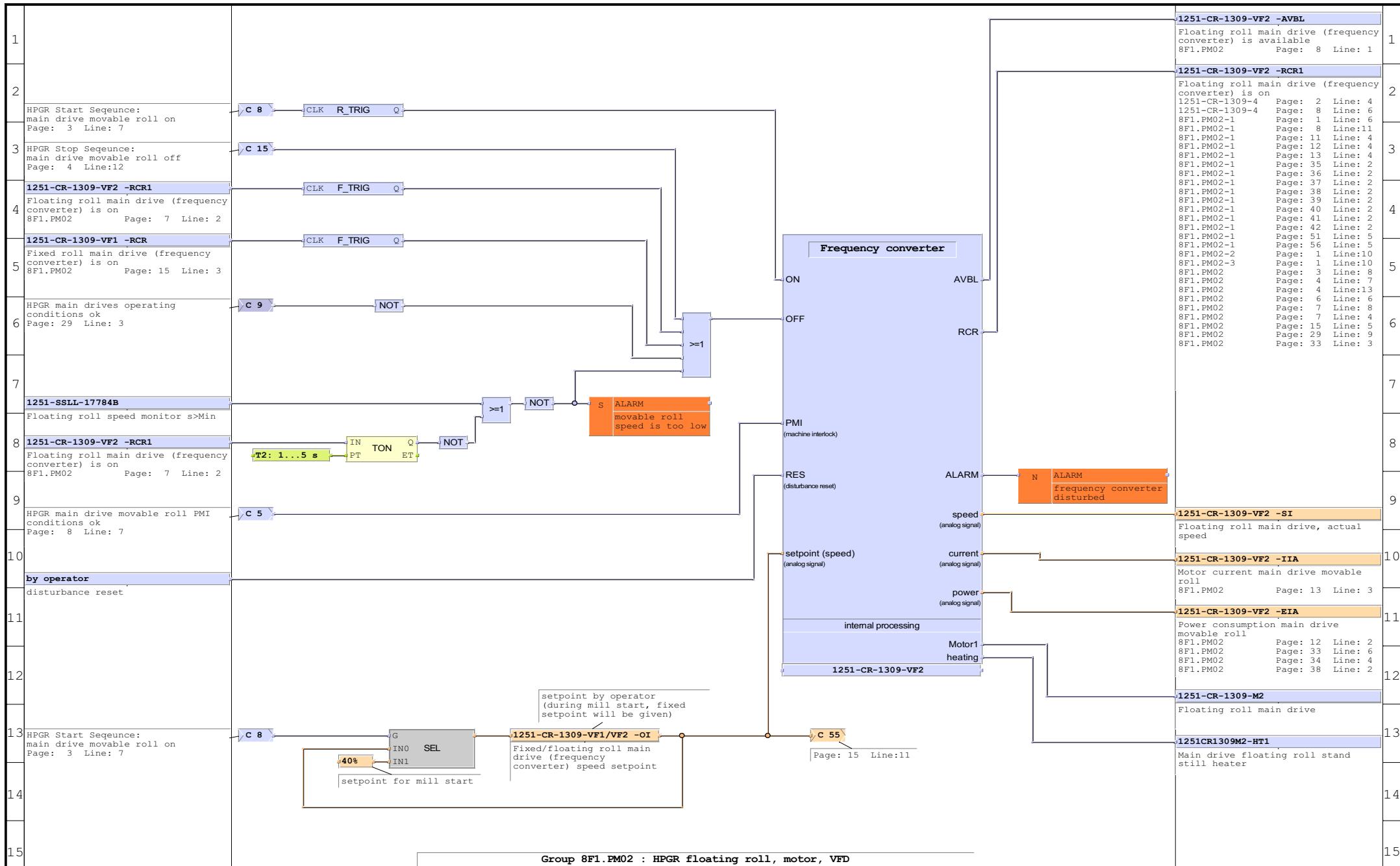


Group 8F1.PM02 : HPGR, Start/stop sequence

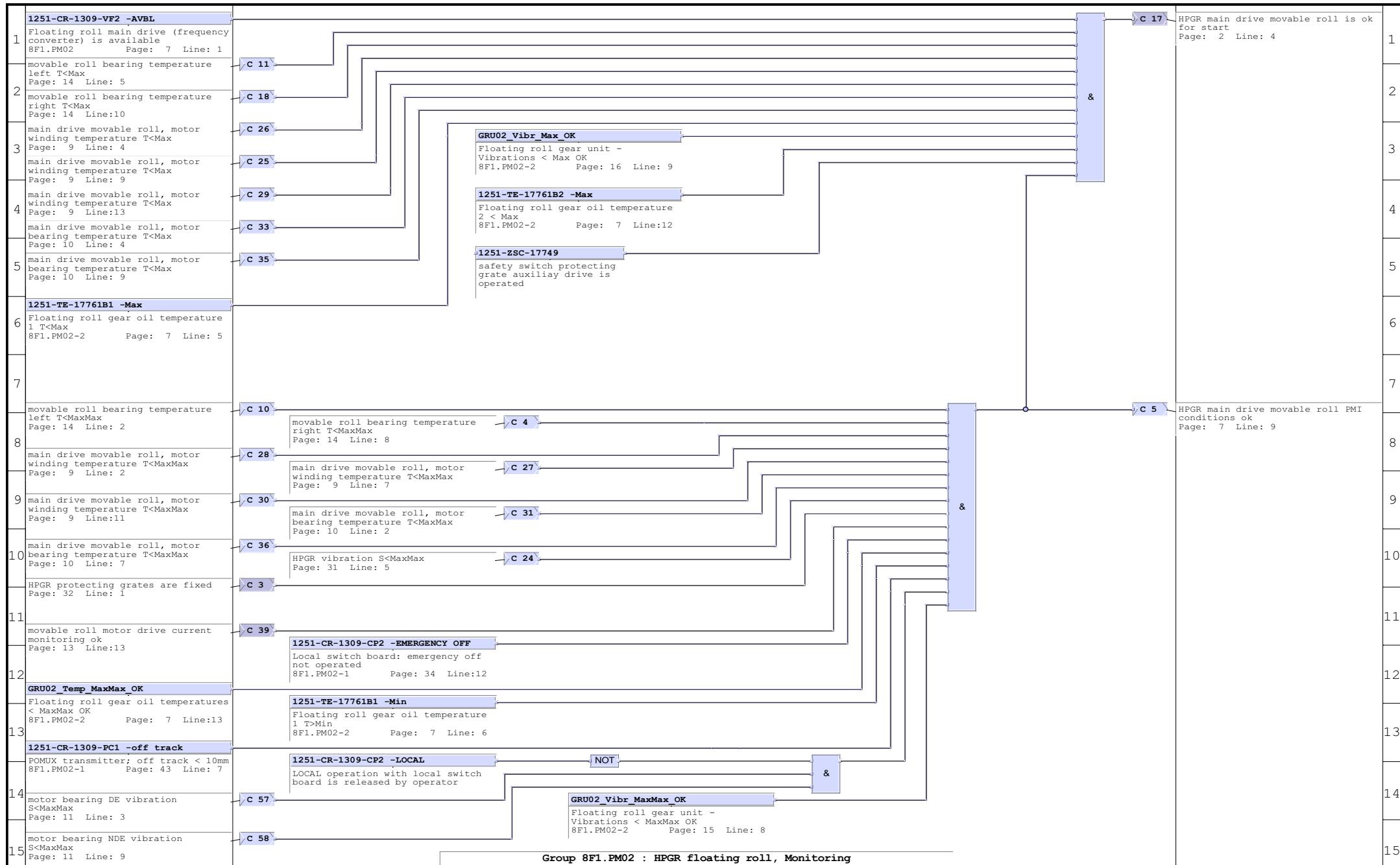
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Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02 Page: 5



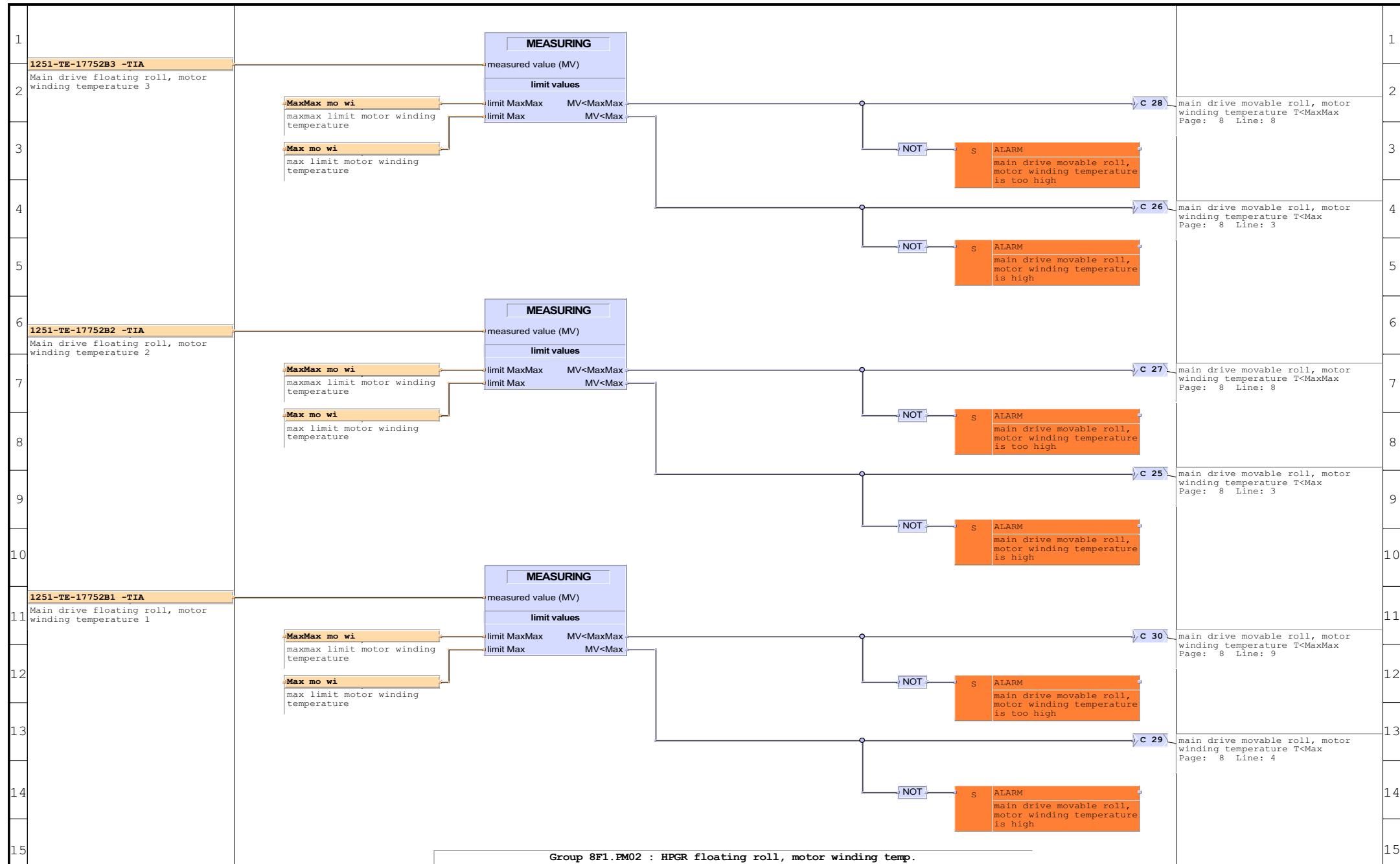
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				check	PTD-AD-RTG	Customer No:			HPGR_PM02	Drawing No.	Group:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.			KXEO-01517-003346704	Page:
										of 154	6



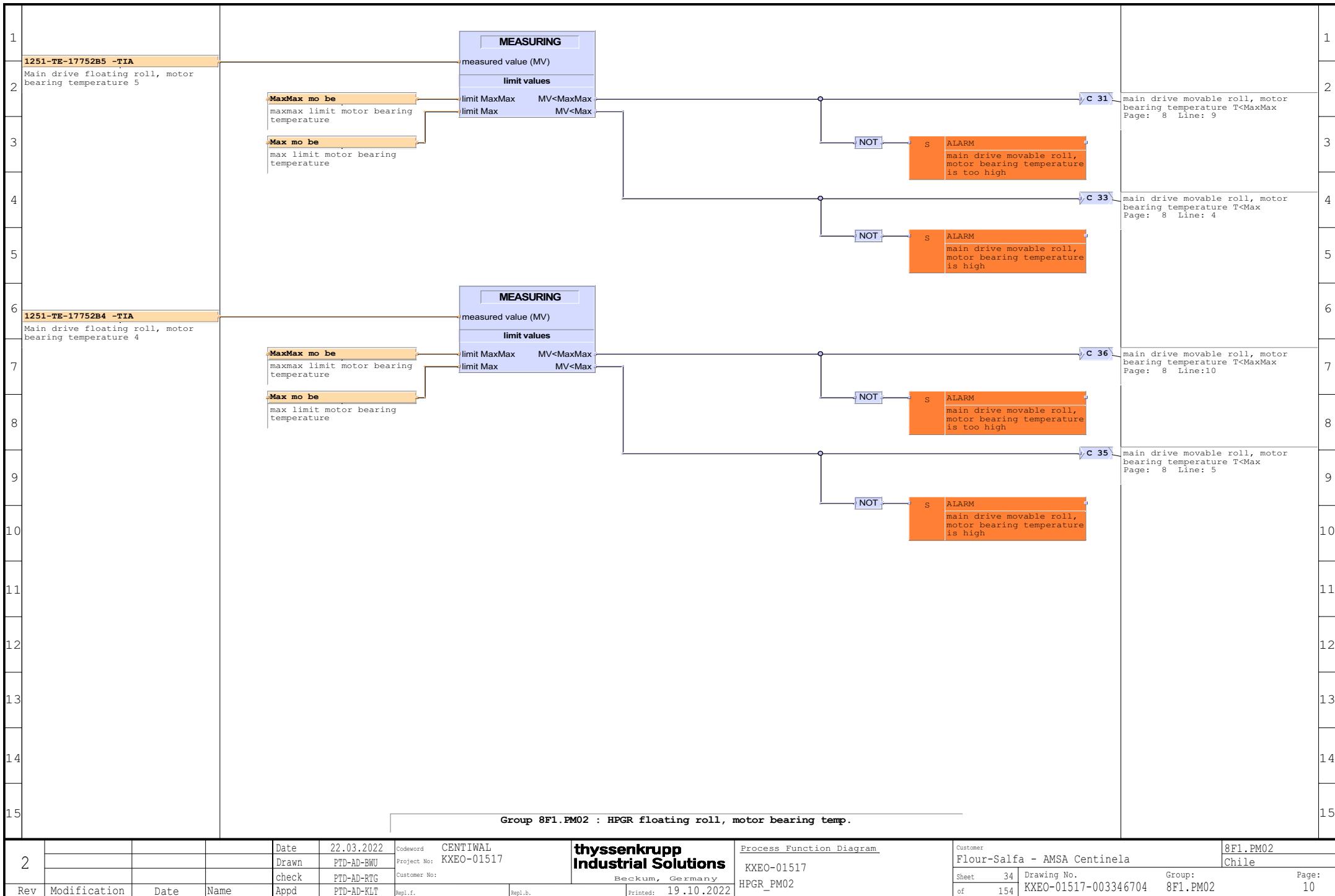
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Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Project No. KXEO-01517	Customer No: Beckum, Germany	KXEO-01517	Drawing No.	Group: 8F1.PM02
			check	PTD-AD-RTG		Customer No:	Beckum, Germany	HPGR_P02	Sheet 31 of 154	Page: 7
						Repl.f.	Repl.b.	Printed: 19.10.2022		

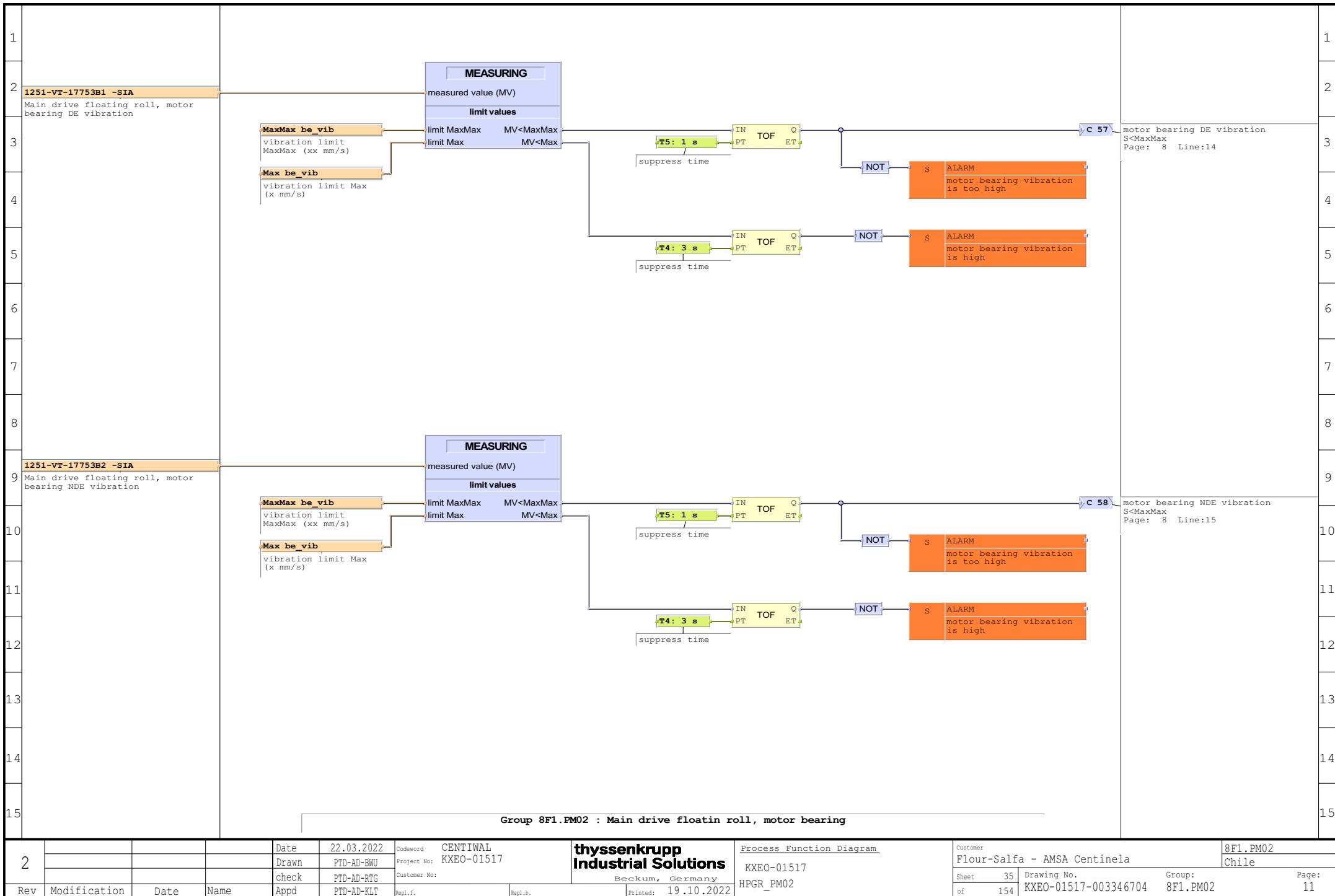


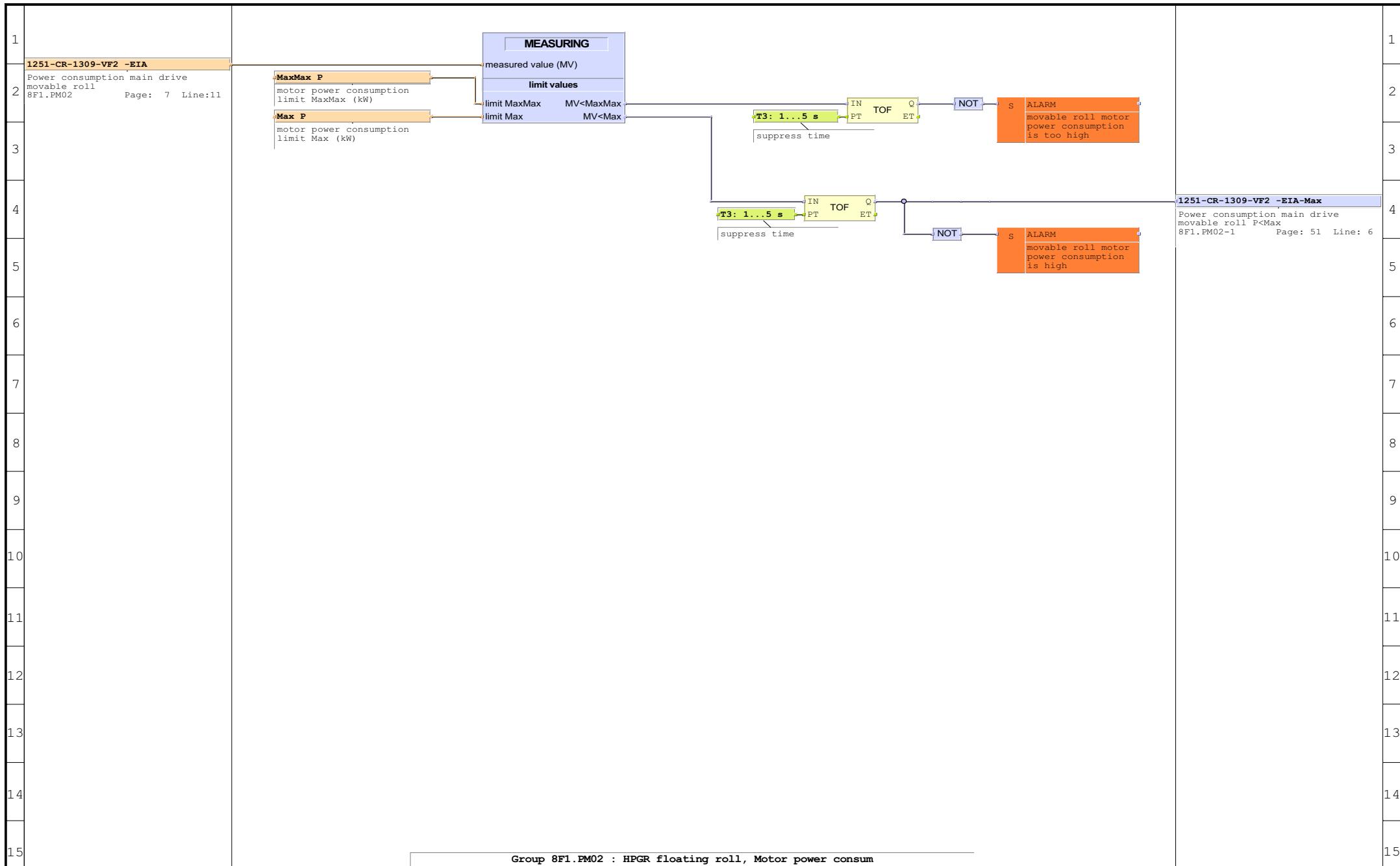
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				Repl.f.	Repl.b.	Printed:	19.10.2022			Group:	Chile				
2										Sheet	32	Drawing No.	KXEO-01517-003346704	Page:	8
										of	154		8F1.PM02		8



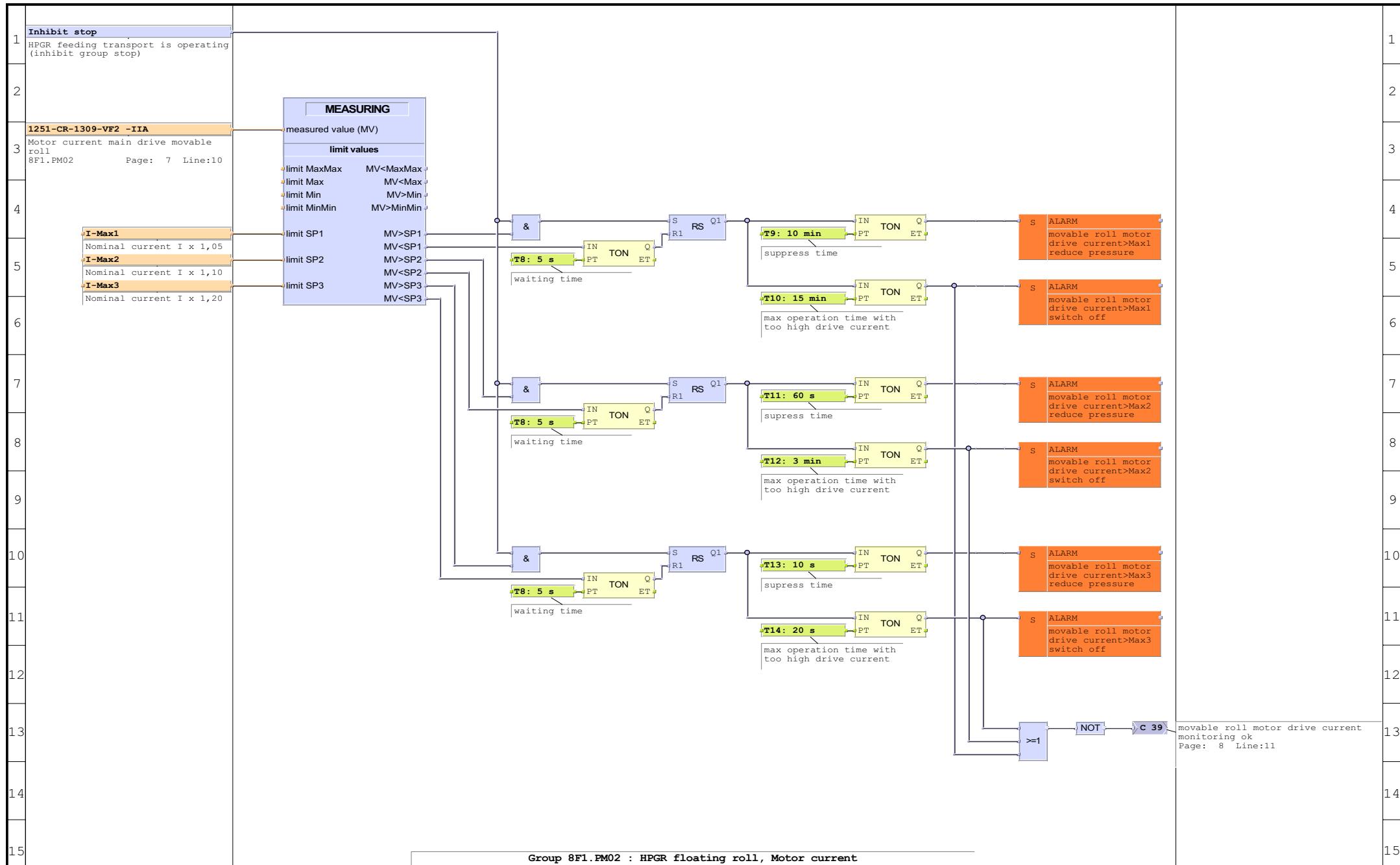
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				check	PTD-AD-RTG	Customer No:		HPGR_PM02	Drawing No.	Group:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	Page: 9



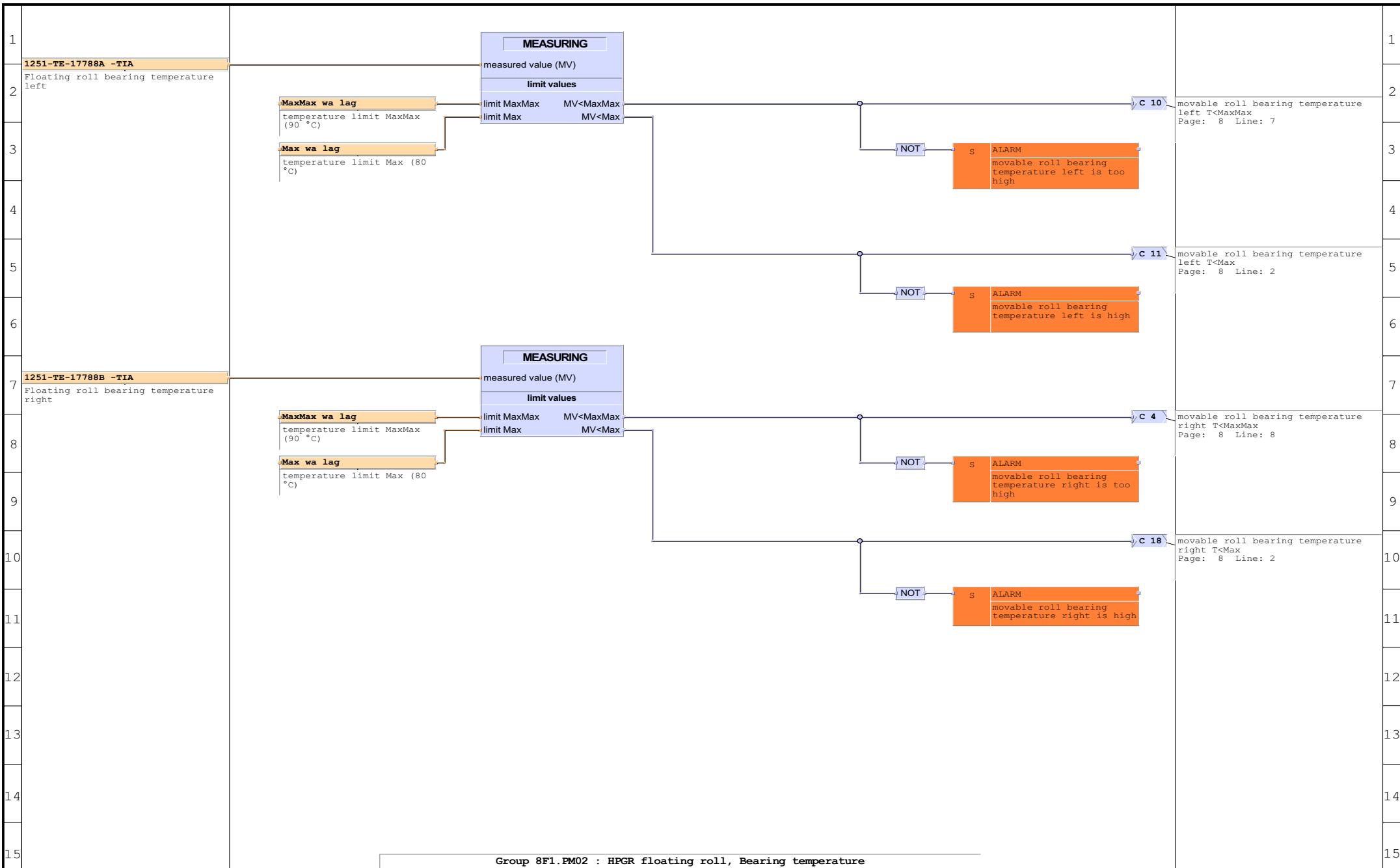




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				check	PTD-AD-RTG	Customer No:		HPGR_PM02	Sheet 36 Drawing No. KXEO-01517-003346704	Group: 8F1.PM02 Page: 12
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	

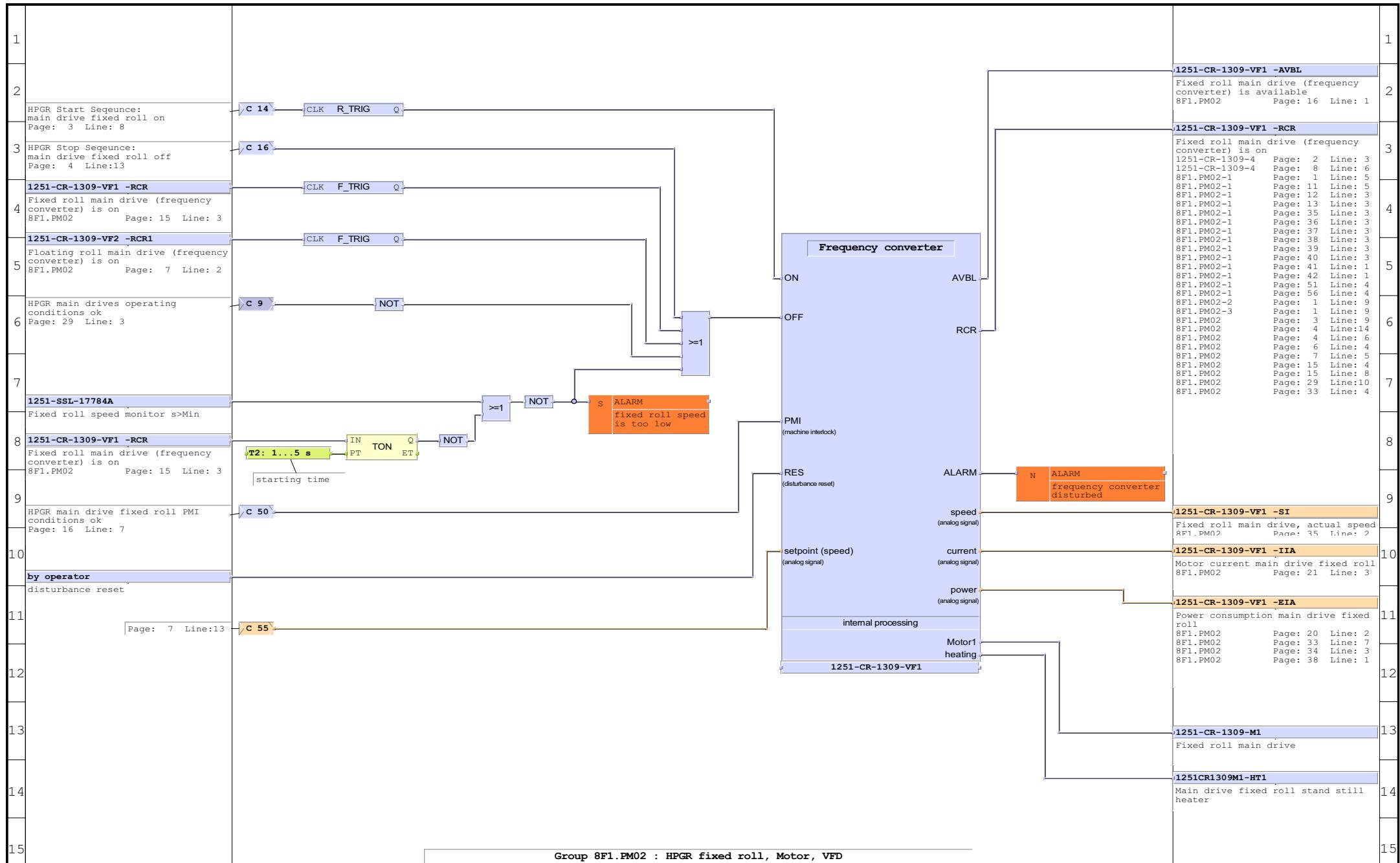


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Drawn	PTD-AD-BWU	Project No:	KXEO-01517	<b>Industrial Solutions</b>	KXEO-01517	Flour-Salfa - AMSA Centinela	Chile
check	PTD-AD-RTG	Customer No:		Beckum, Germany	HPGR_PM02		
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.
						Printed: 19.10.2022	

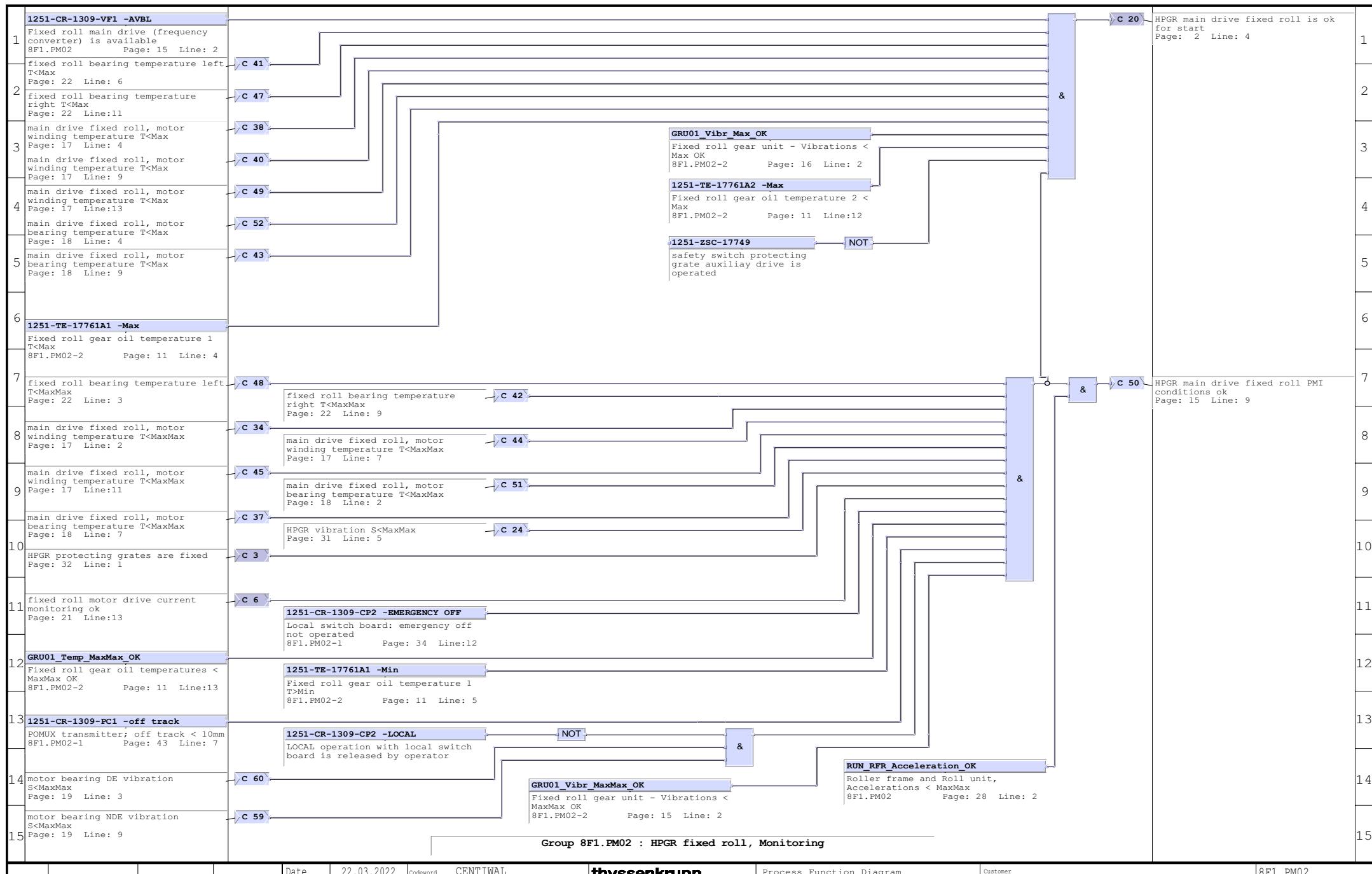


Group 8F1.PM02 : HPGR floating roll, Bearing temperature

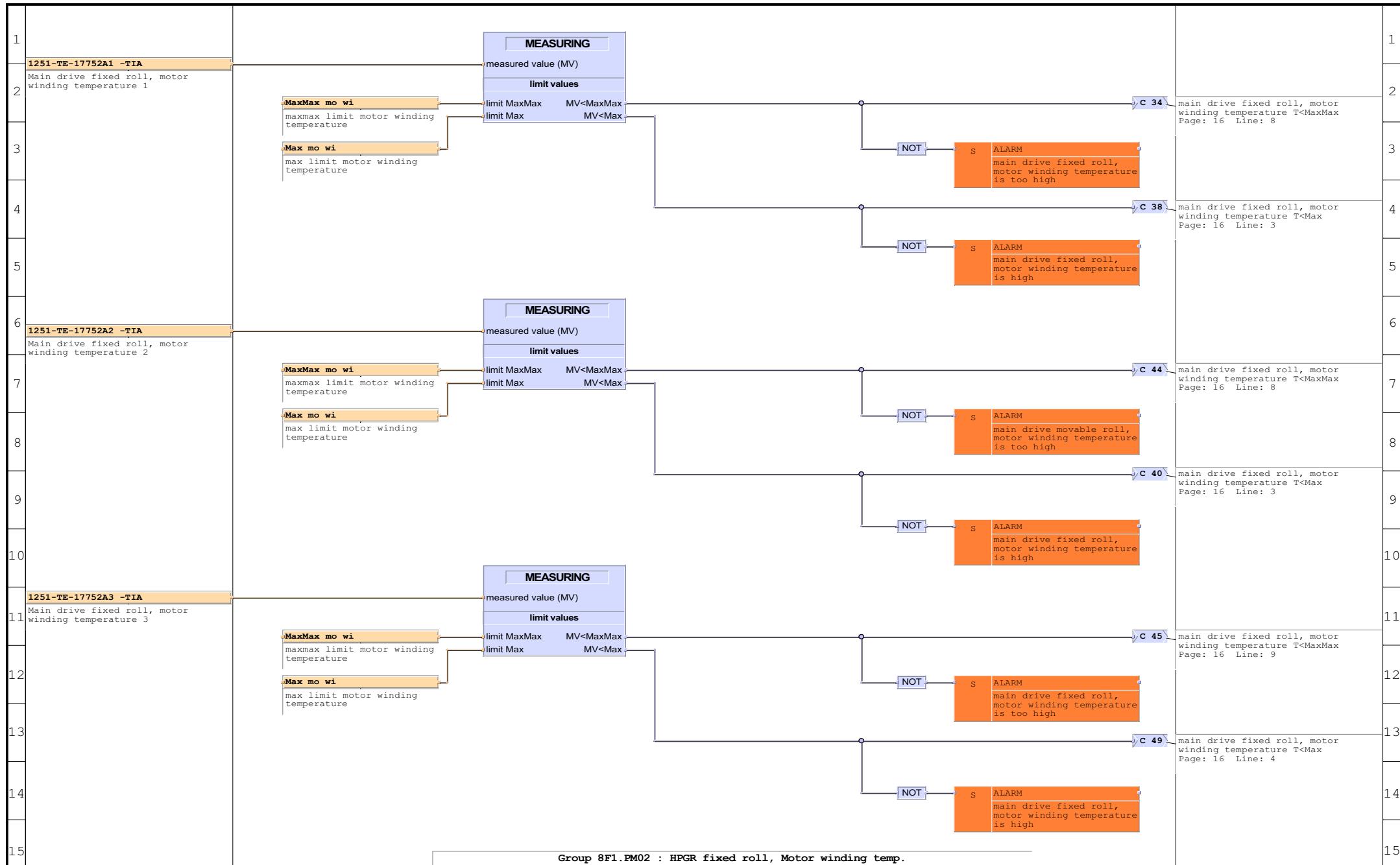
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			Drawn	PTD-AD-BWU	Customer No:			Chile			
			check	PTD-AD-RTG				Sheet 38 of 154	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02	Page: 14
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022			



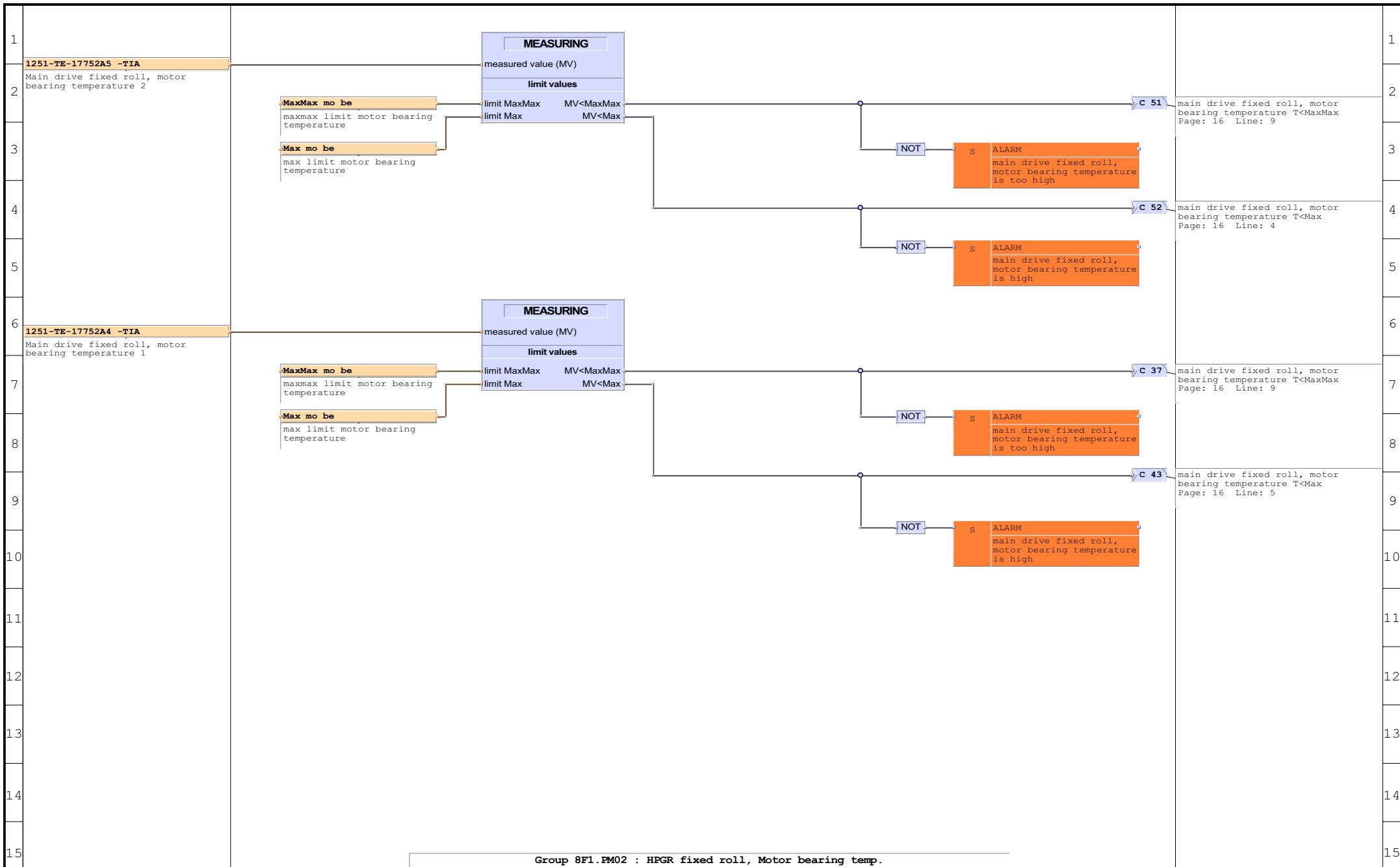
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				Drawn	PTD-AD-BWU			KXEO-01517		Chile
				check	PTD-AD-RTG			HPGR_P02		
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	Page: 15



2					Drawn	PTD-AD-BMU	Customer No:	KXE0-01517	<b>Kyocera Industrial Solutions</b>	Process Function Diagram	Flour-Salfa - AMSA Centinela	8F1.PM02
					check	PTD-AD-RTG			KXE0-01517	Sheet 40 of 154	Drawing No. KXE0-01517-003346704	Group: 8F1.PM02
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	HPGR_PM02			Page: 16

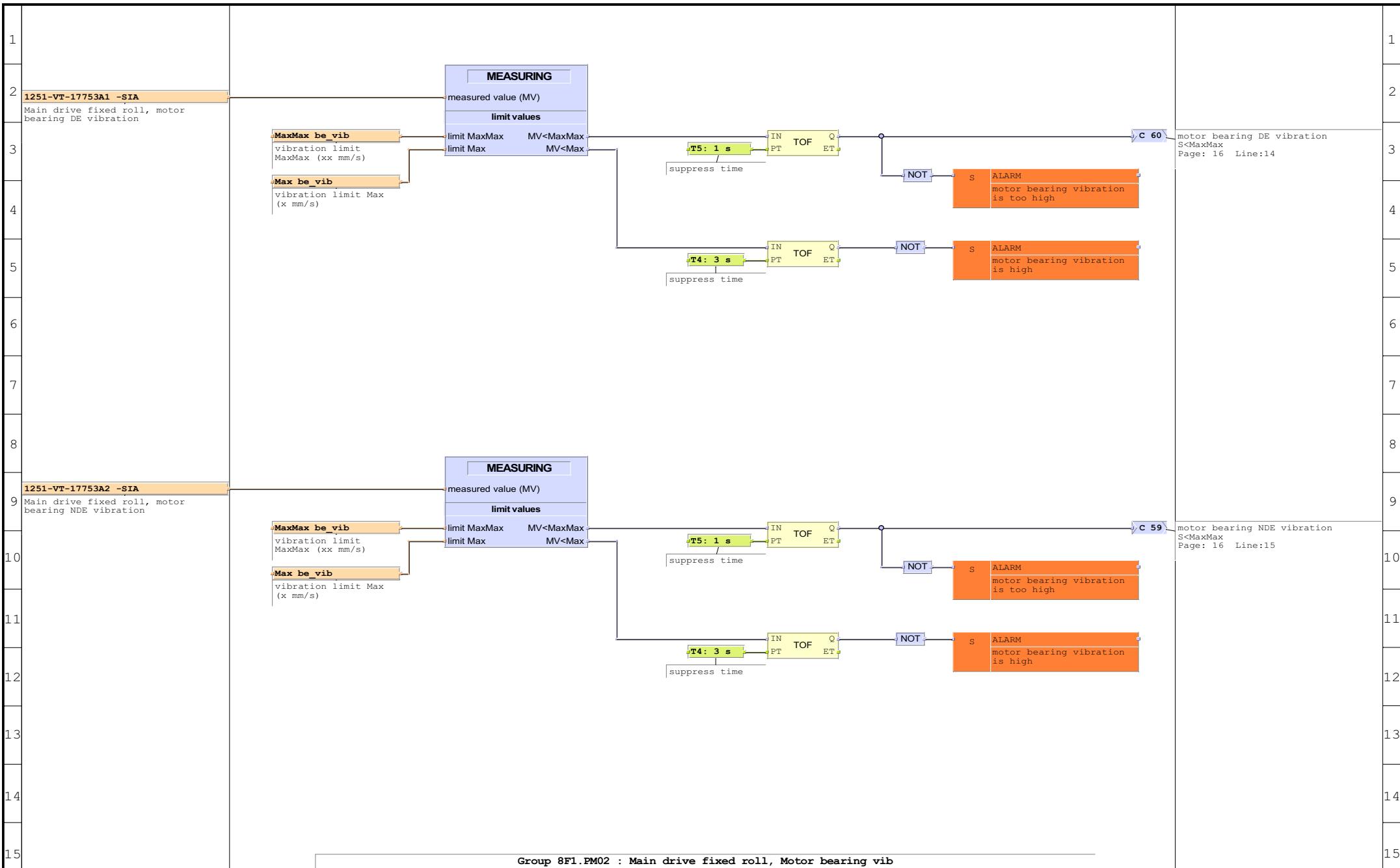


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check	PTD-AD-RTG	Customer No:		Sheet	8F1.PM02
Repl.	Appd	Repl.f.	Repl.b.	Drawing No.	Page:
Rev	Modification	Date	Name	KXEO-01517-003346704	17
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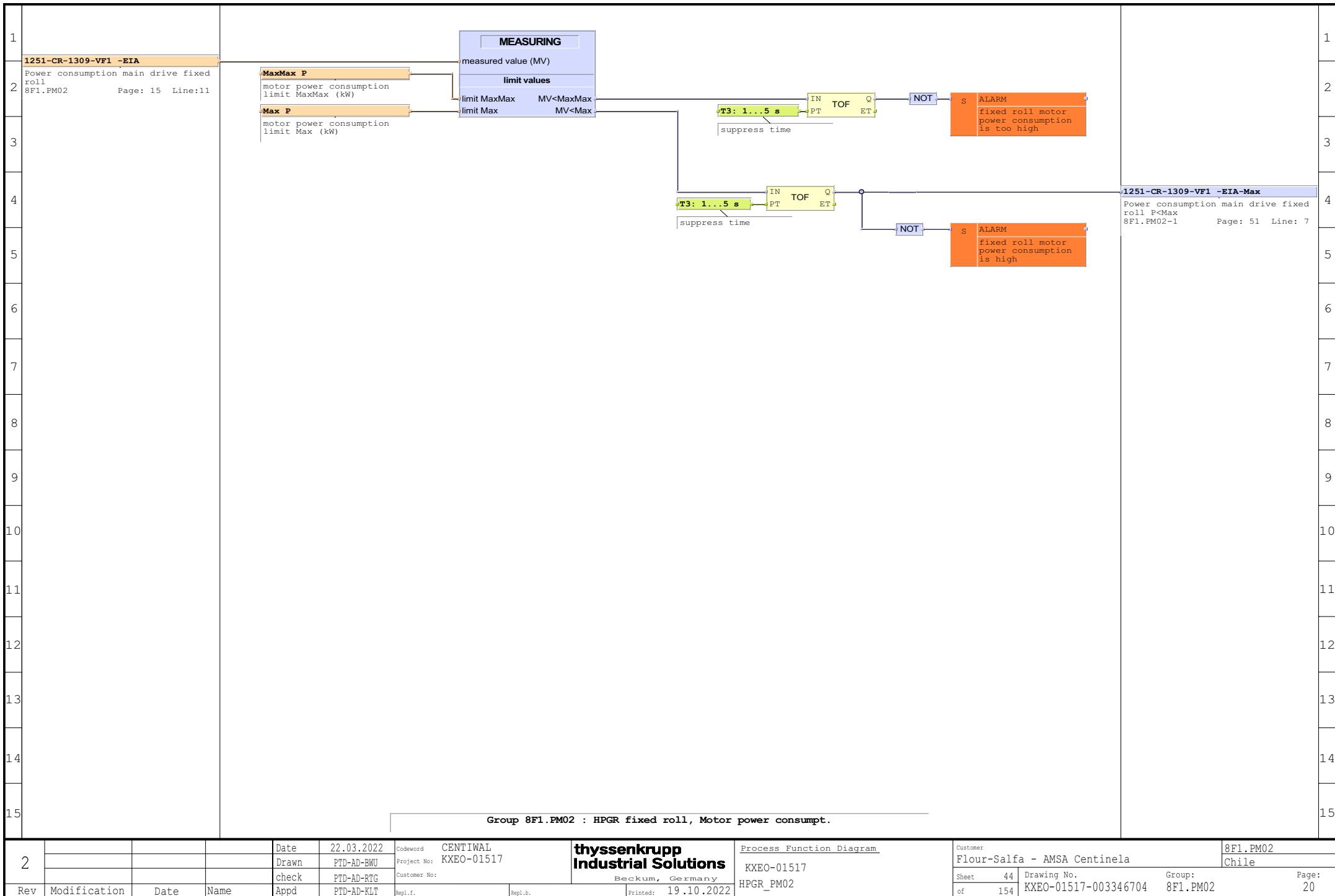
Group 8F1.PM02 : HPGR fixed roll, Motor bearing temp.

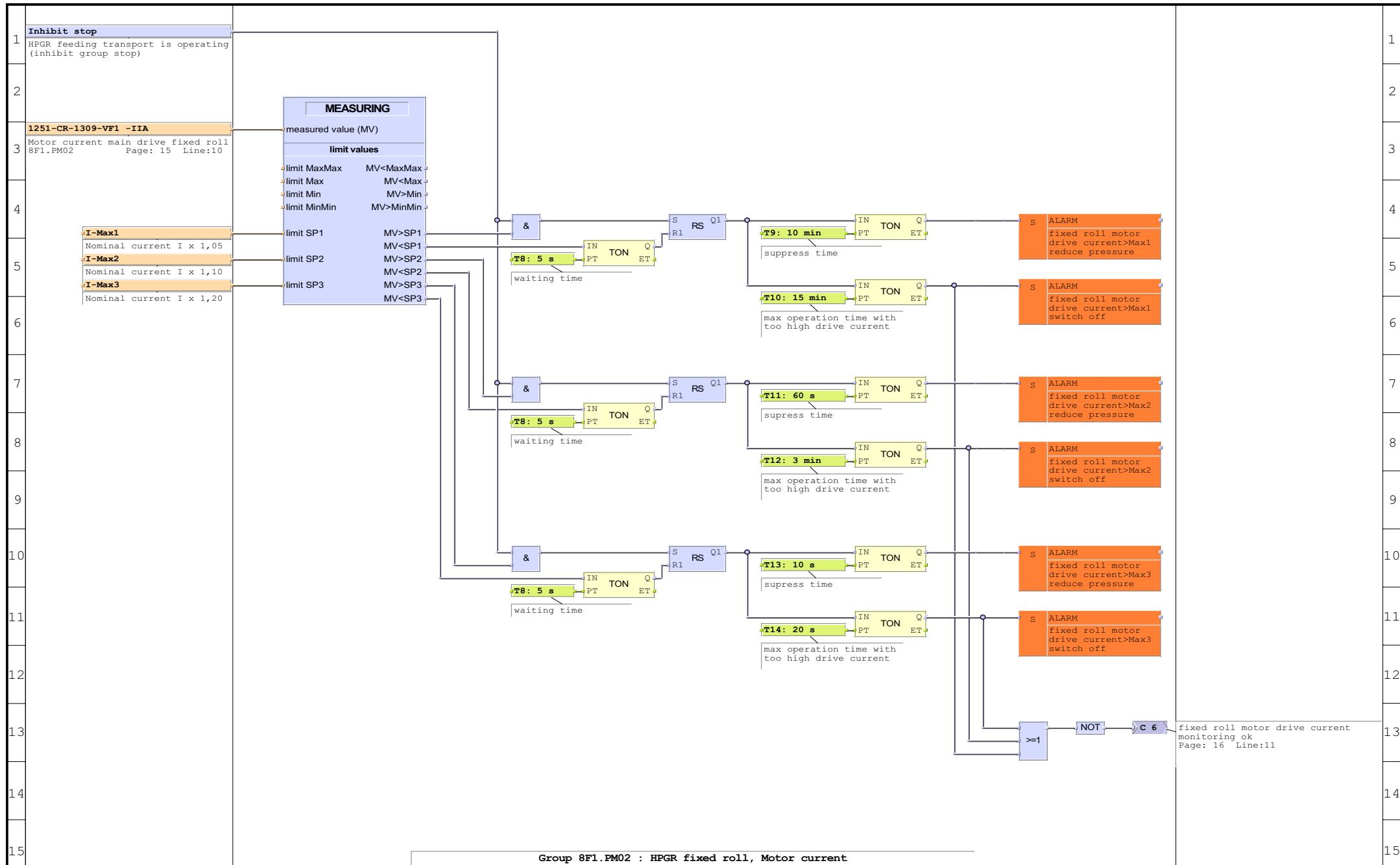
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Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	Page: 18
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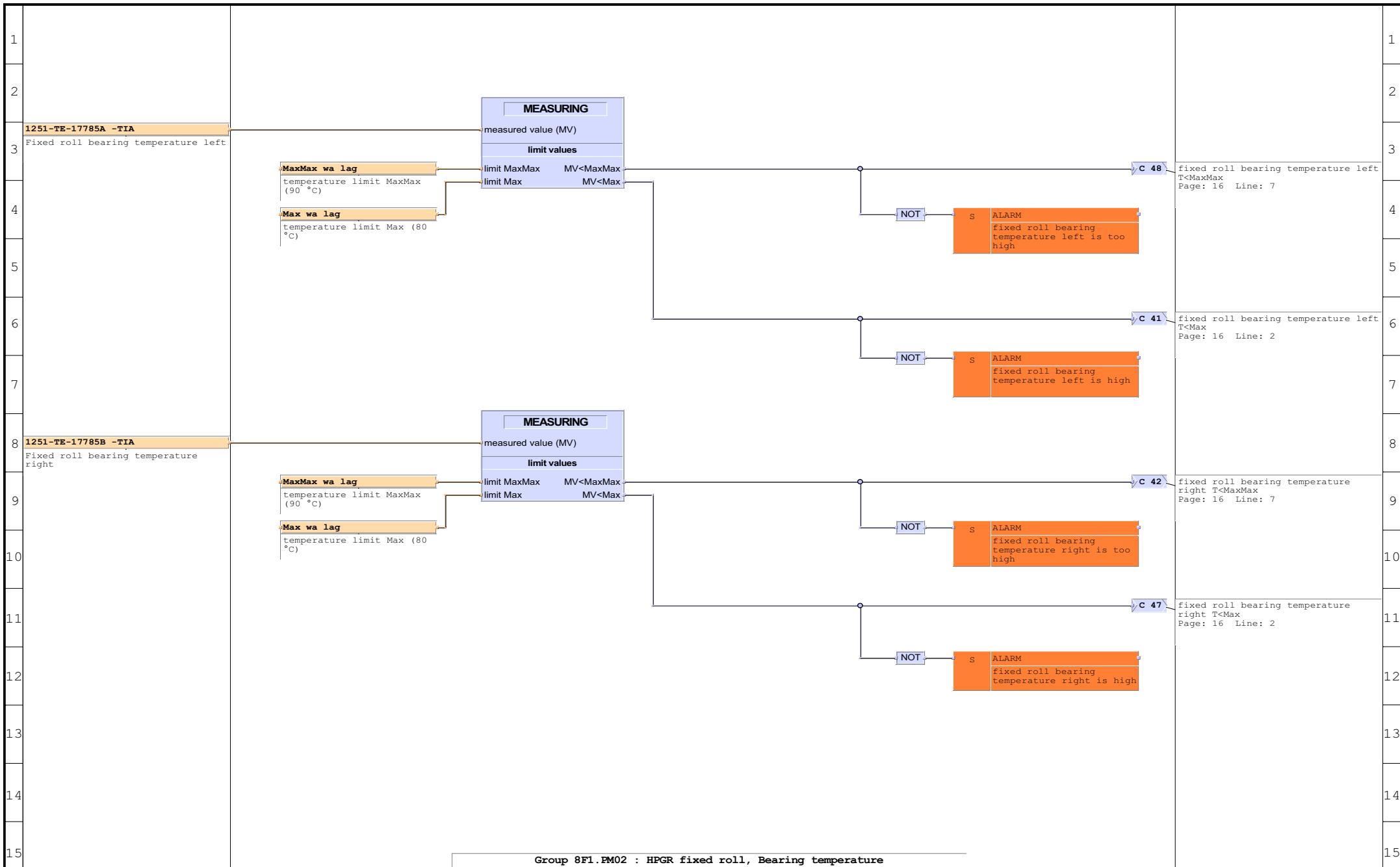
Group 8F1.PM02 : Main drive fixed roll, Motor bearing vib

2			Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> <small>Beckum, Germany</small>	Process Function Diagram KXEO-01517 HPGR_PM02	Customer Flour-Salfa - AMSA Centinela			8F1.PM02
			Drawn	PTD-AD-BWU	Project No: KXEO-01517			Sheet 43 of 154	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02	Page: 19
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022			

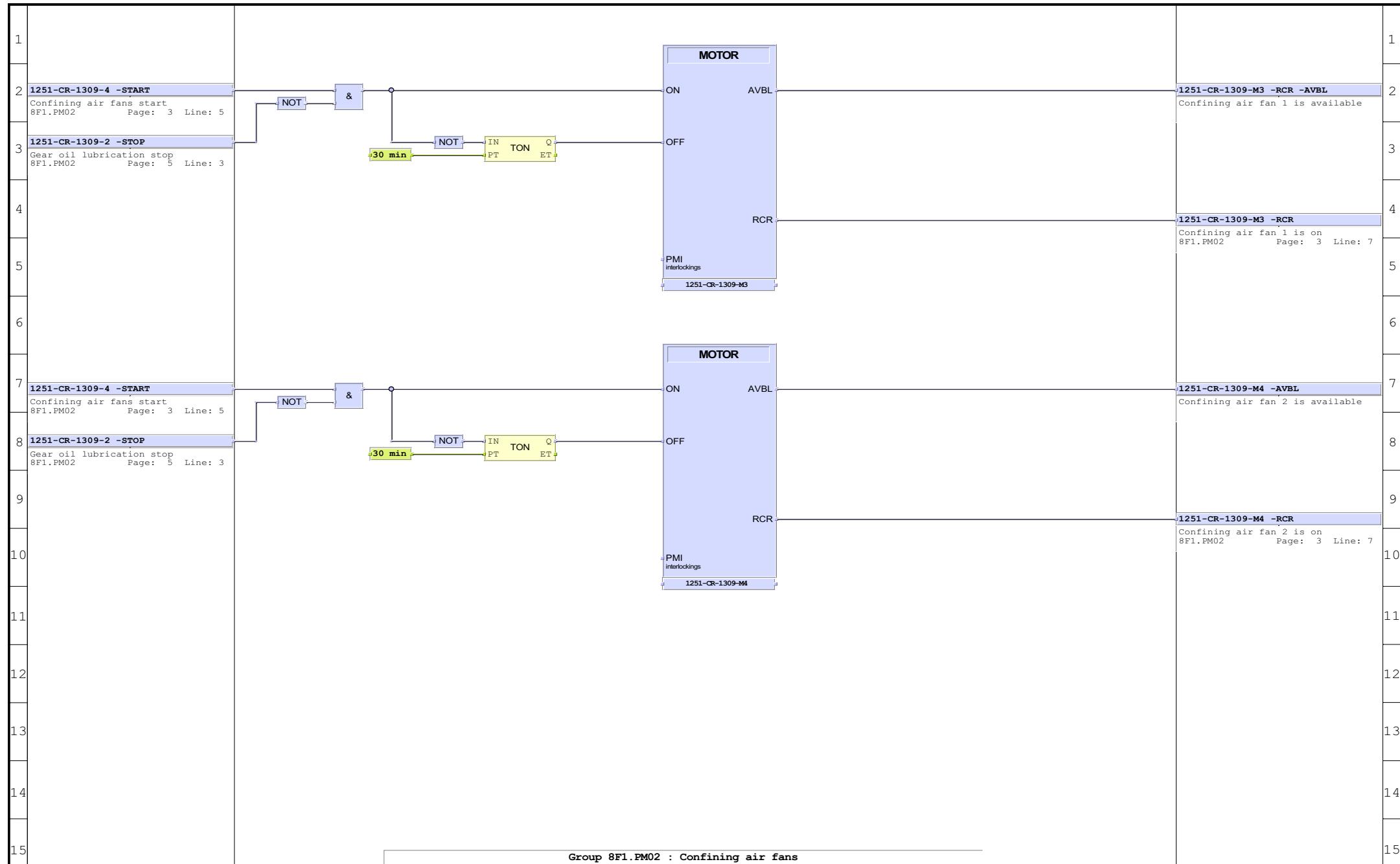




2			Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Project No.: KXEO-01517 Customer No.: Beckum, Germany	Process Function Diagram	Customer Flour-Salfa - AMSA Centinela Chile	8F1.PM02
			Drawn	PTD-AD-BWU			KXEO-01517		
			check	PTD-AD-RTG			HPGR_PM02		
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022
								of	154
								Drawing No.	KXEO-01517-003346704
								Group:	8F1.PM02
								Page:	21



2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer Flour-Salfa - AMSA Centinela Chile	8F1.PM02
				Drawn	PTD-AD-BWU	Project No: KXEO-01517		KXE0-01517		
				check	PTD-AD-RTG	Customer No:		HPGR_PM02		
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Sheet 46 of 154	Drawing No. KXE0-01517-003346704 Group: 8F1.PM02 Page: 22

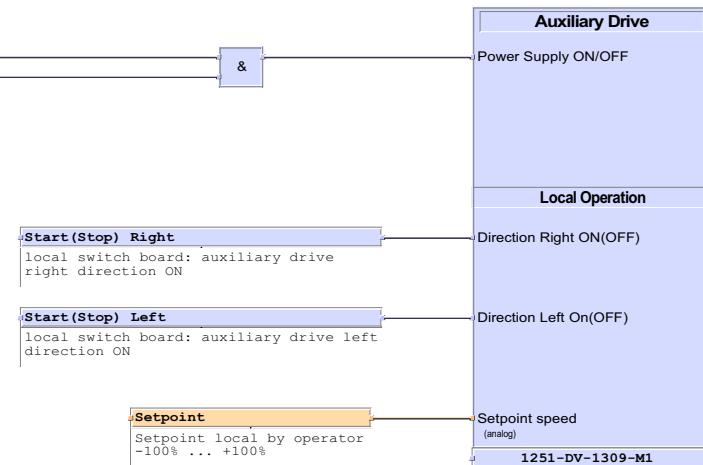


2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram KXE0-01517 HPGR_PM02	Customer	8F1.PM02
				Drawn	PTD-AD-BWU	Project No: KXE0-01517			Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:			Sheet 47 Drawing No. KXE0-01517-003346704	Group: 8F1.PM02 Page: 23
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	of 154

The HPGR auxiliary drive  
operation is only allowed in local  
mode!

1251-ZSC-17749  
safety switch protecting grate  
auxiliay drive is operated

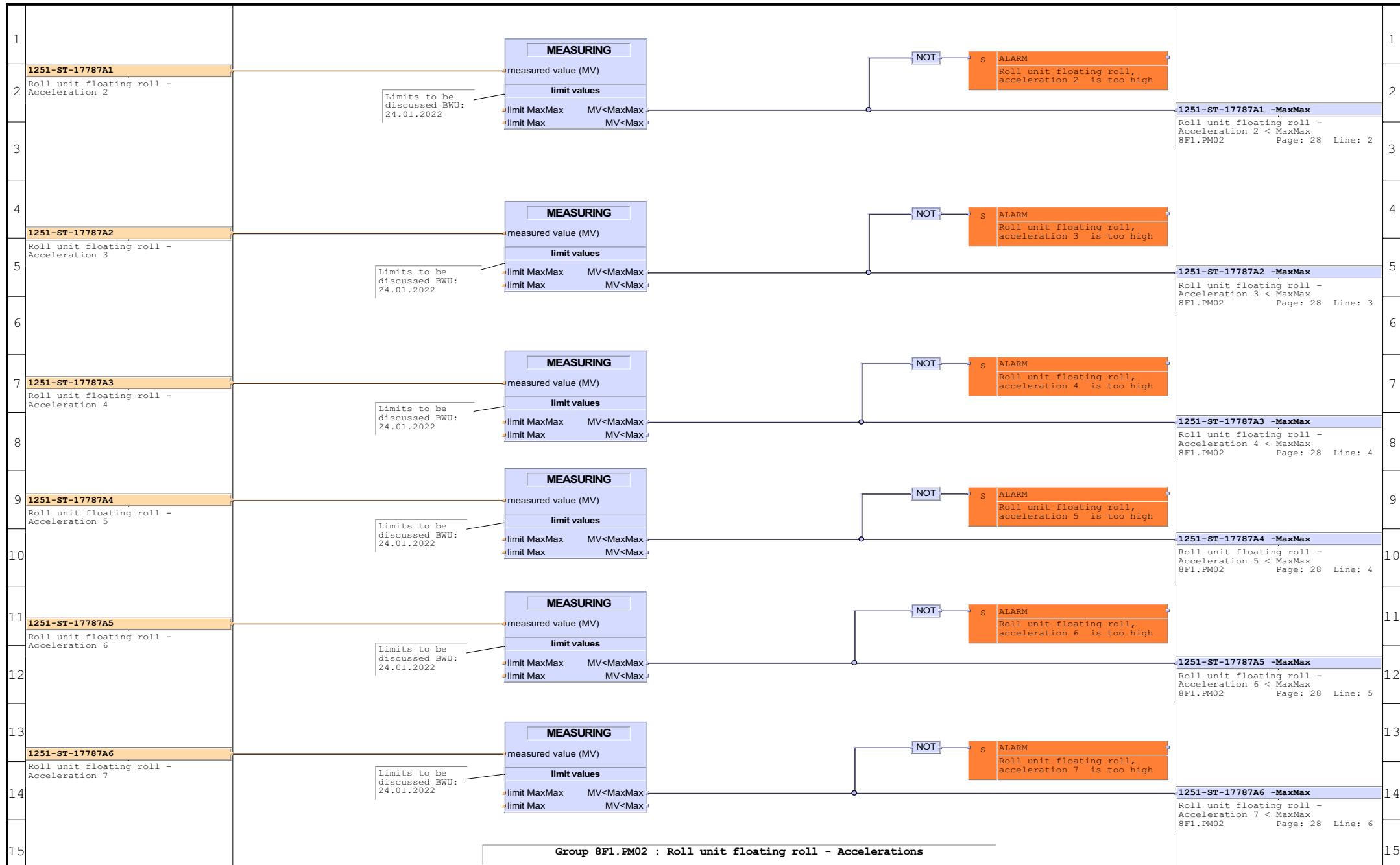
Power supply  
Power supply



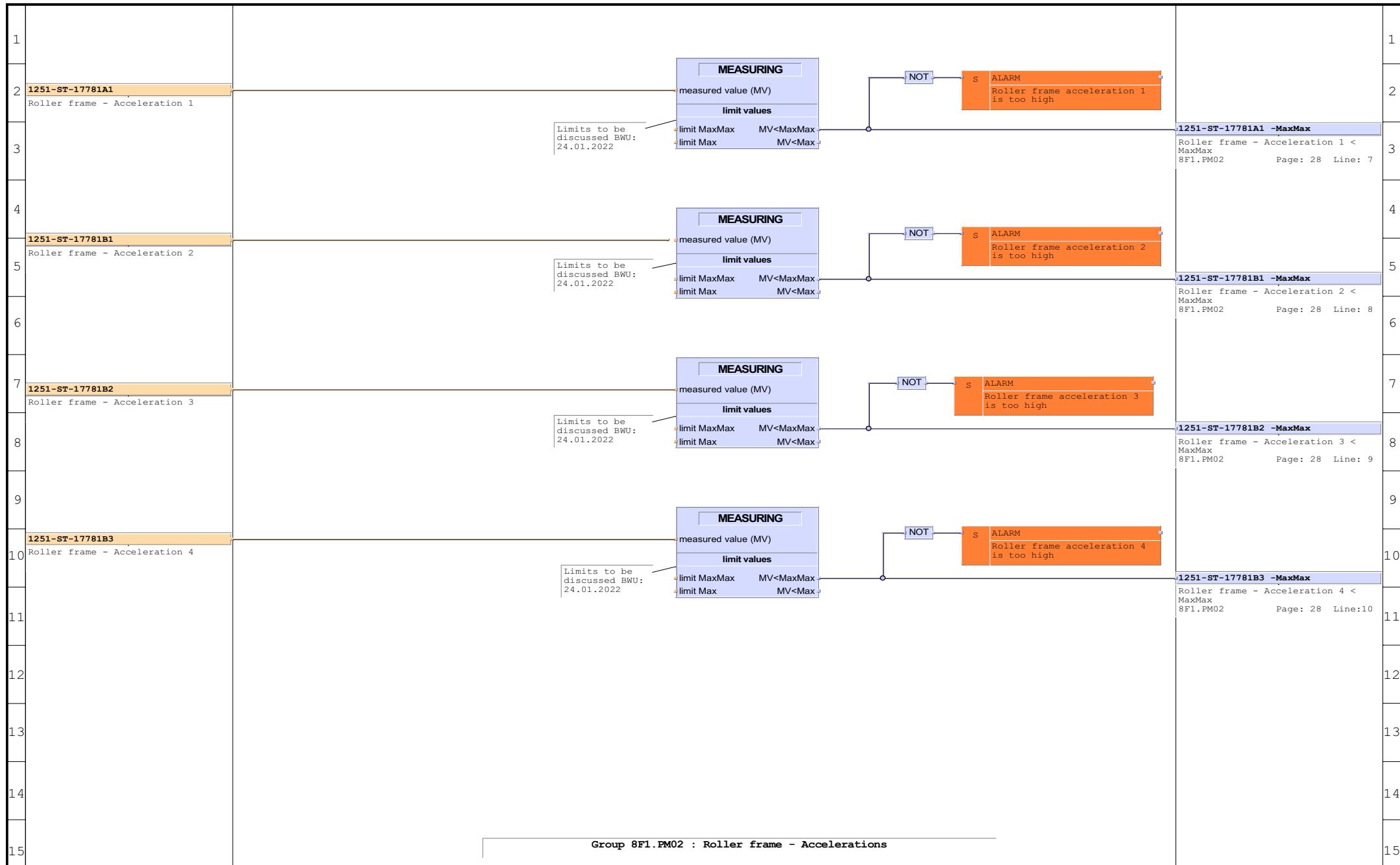
Group 8F1.PM02 : HPGR auxiliary drive

2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
				Drawn	PTD-AD-BWU	Project No: KXEO-01517		KXEO-01517	Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:		HPGR_PM02	Drawing No.	Group:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	Page: 24
									KXEO-01517-003346704	8F1.PM02

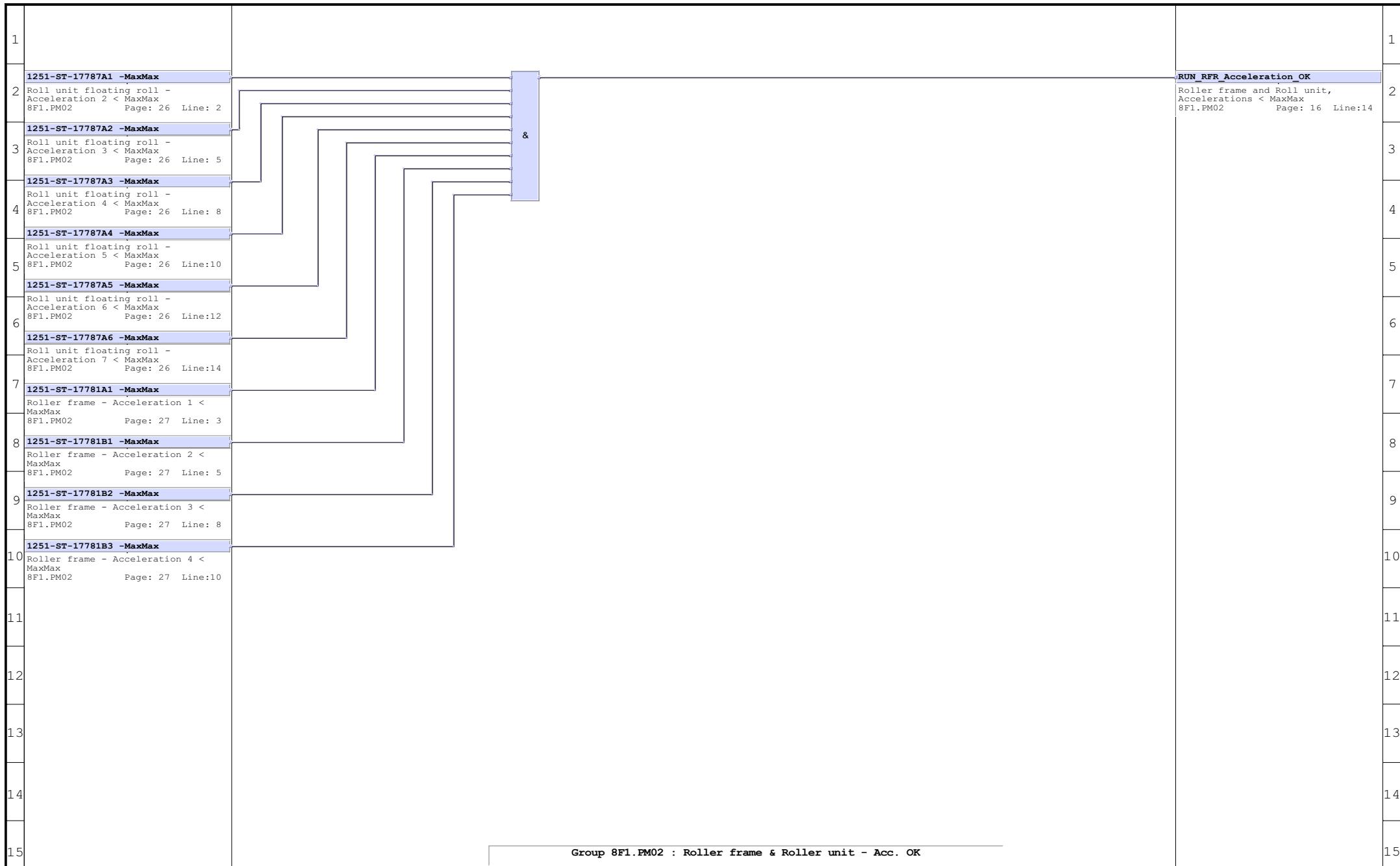
1															1
2															2
3	<b>1251-WIT-17755</b> HPGR: Weight feed hopper														3
4															4
5															5
6															6
7															7
8															8
9															9
10															10
11															11
12															12
13															13
14															14
15															15
Group 8F1.PM02 : HPGR - Weight feed bin															
2				Date	22.03.2022	Codeword CENTIWAL		<b>thyssenkrupp Industrial Solutions</b>		Process Function Diagram		Customer Flour-Salfa - AMSA Centinela		8F1.PM02	
				Drawn	PTD-AD-BWU	Project No: KXEO-01517				KXEO-01517		Chile			
				check	PTD-AD-RTG	Customer No:	Beckum, Germany			HPGR_PM02		Sheet 49 Drawing No.		Group: 8F1.PM02	
Rev		Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022		of 154	KXEO-01517-003346704	Page: 25	



2		10.02.22	Wulowitsc*	Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Project No.: KXEO-01517 Customer No.: Beckum, Germany	Process Function Diagram	Customer: Flour-Salfa - AMSA Centinela Drawing No.: KXEO-01517-003346704 Group: 8F1.PM02 Page: 26
		Drawn	PTD-AD-BWU					KXEO-01517	
		check	PTD-AD-RTG					HPGR_PM02	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	

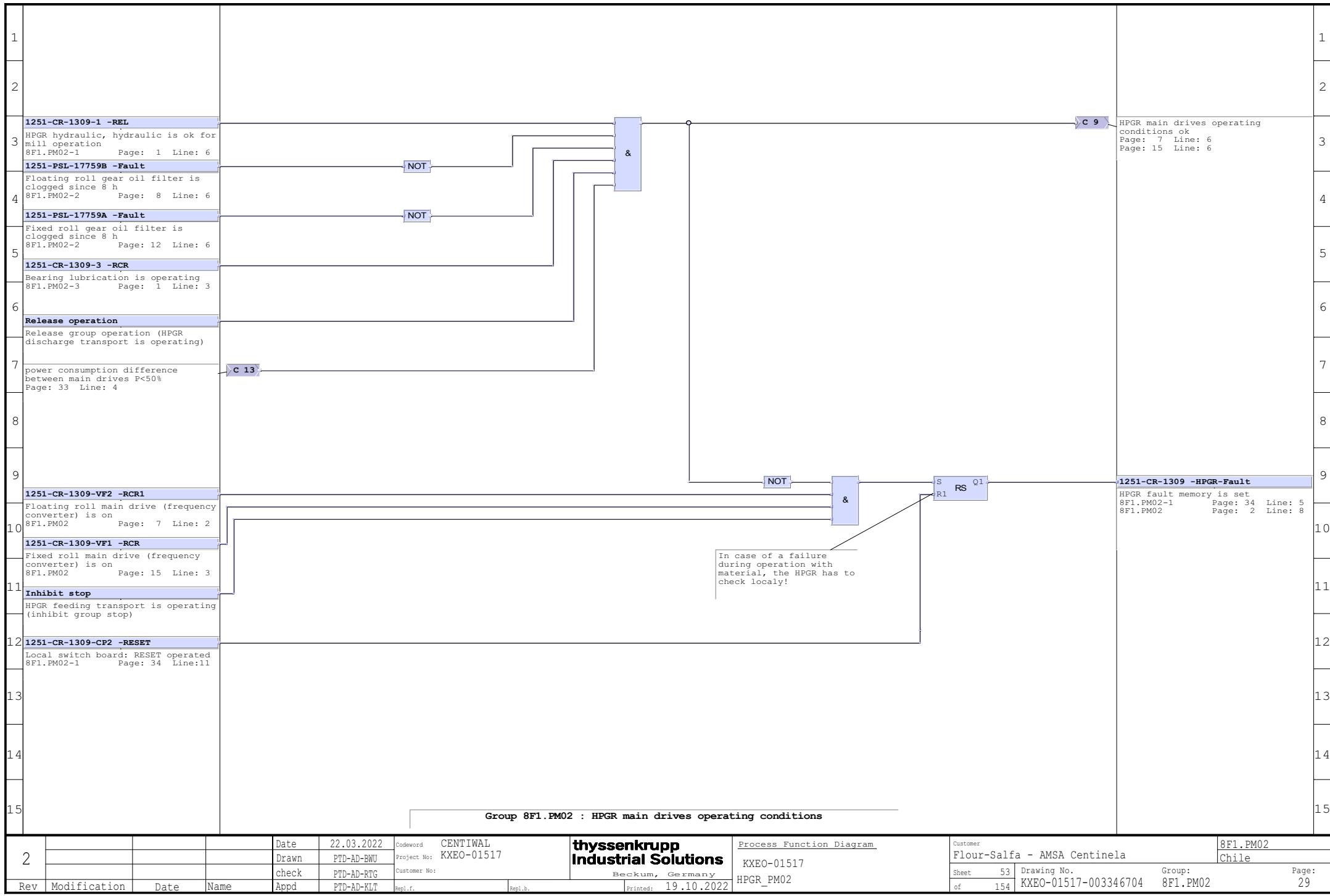


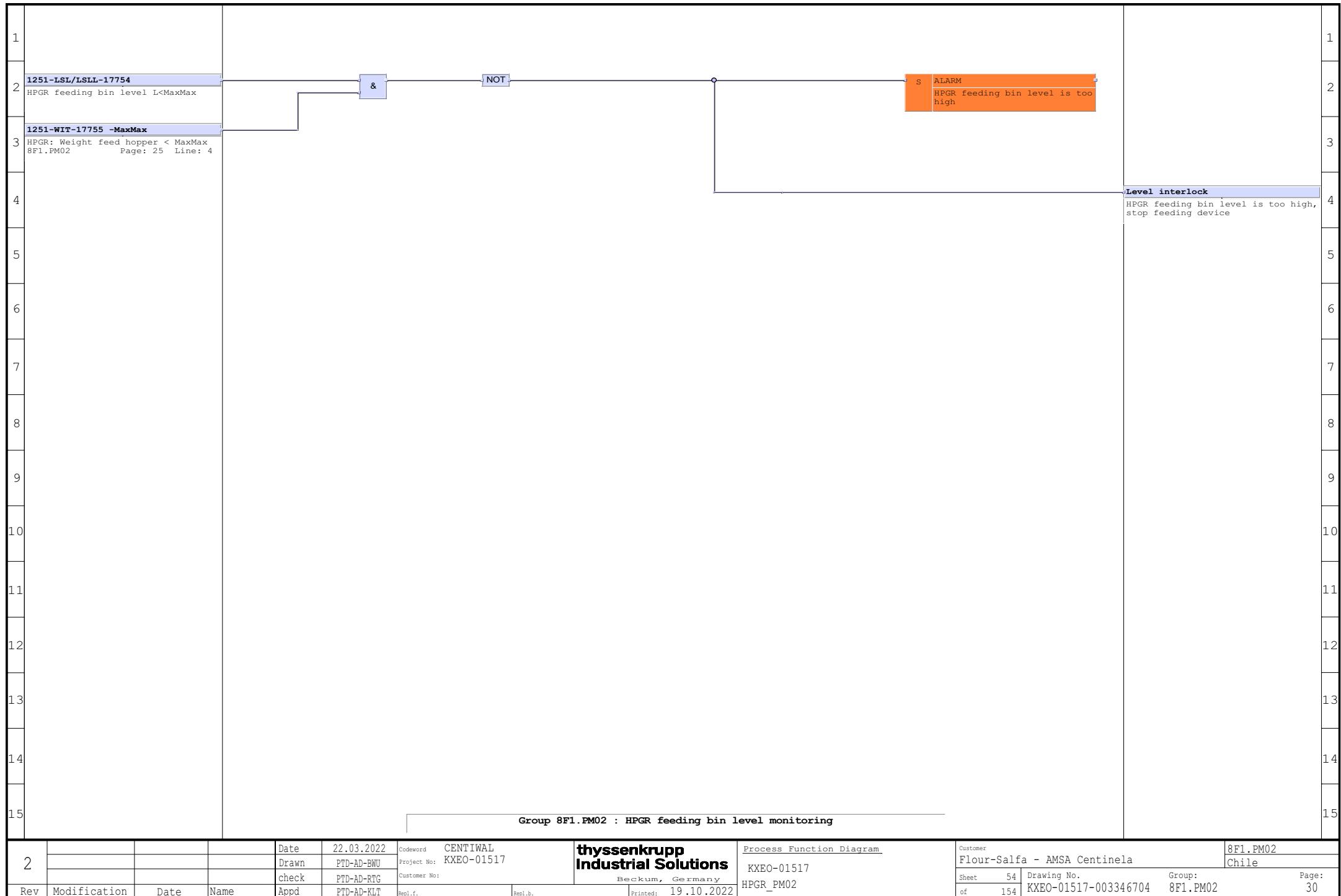
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				Drawn	PTD-AD-BWU	Project No: KXEO-01517			Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:			Drawing No.	Page:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	KXEO-01517-003346704	8F1.PM02
									of 154	27

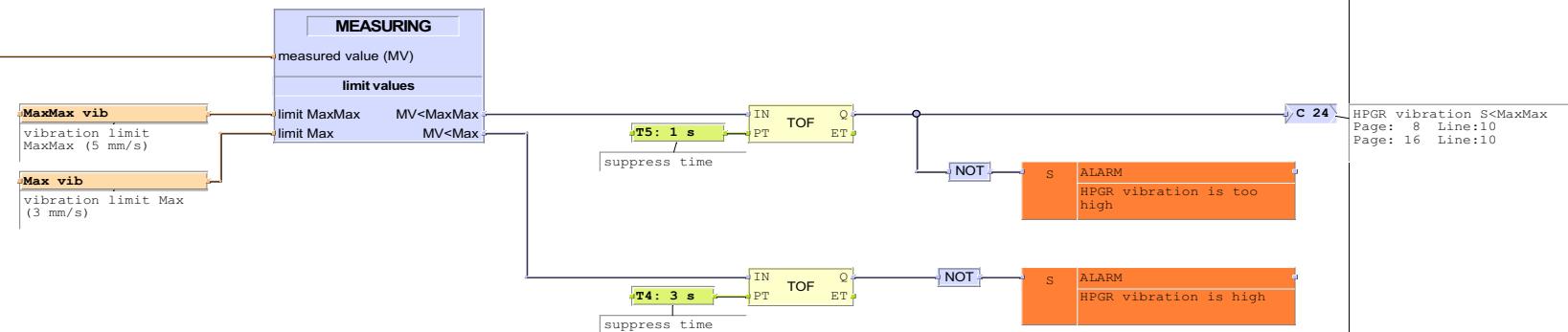


Group 8F1.PM02 : Roller frame & Roller unit - Acc. OK

2		10.02.22	Wulowitsc*	Date	22.03.2022	Codeword CENTIWAL Project No: KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram KXEO-01517 HPGR_PM02	Customer Flour-Salfa - AMSA Centinela Chile	8F1.PM02
				Drawn	PTD-AD-BWU				Drawing No.	Group:
				check	PTD-AD-RTG	Customer No:			KXEO-01517-003346704	Page: 28
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	of 154

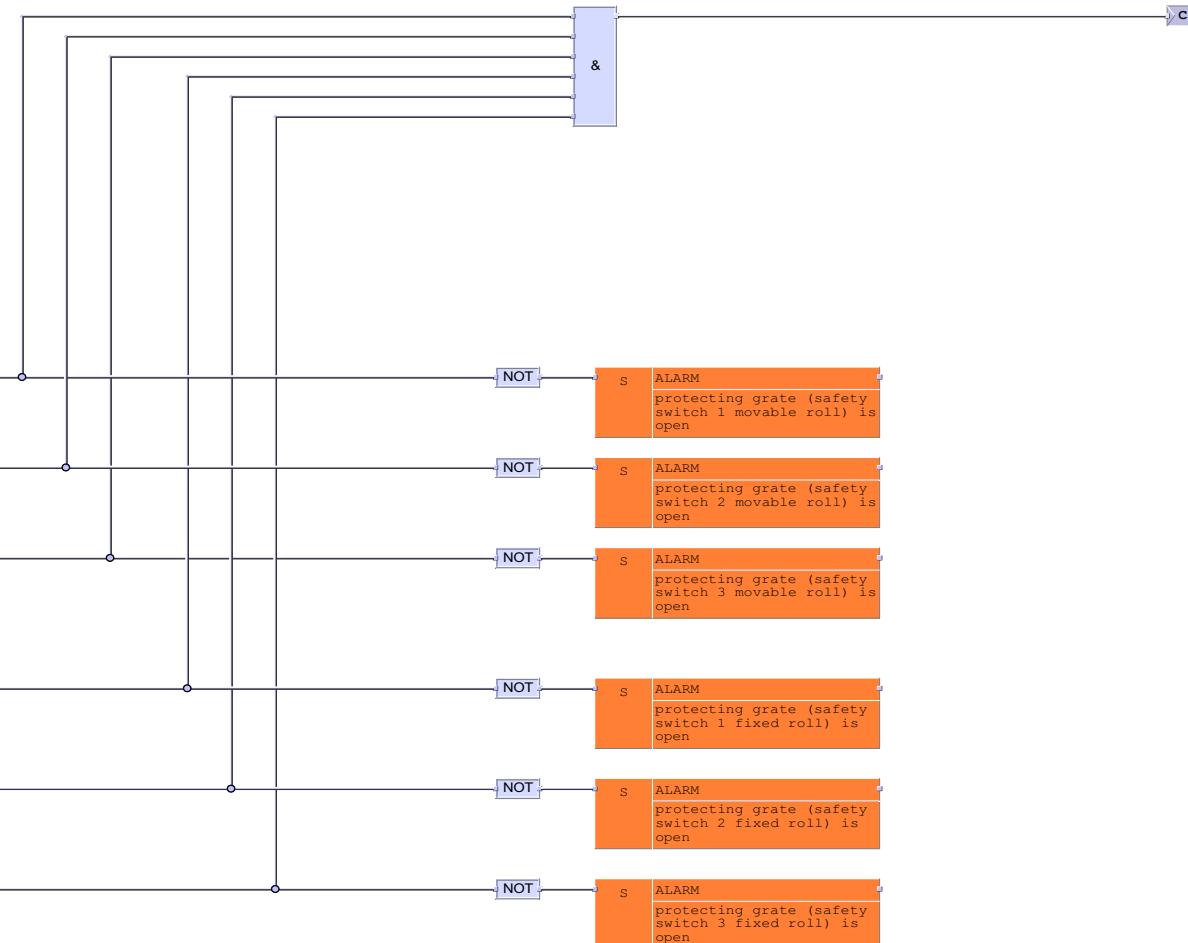






Group 8F1.PM02 : HPGR vibration monitoring

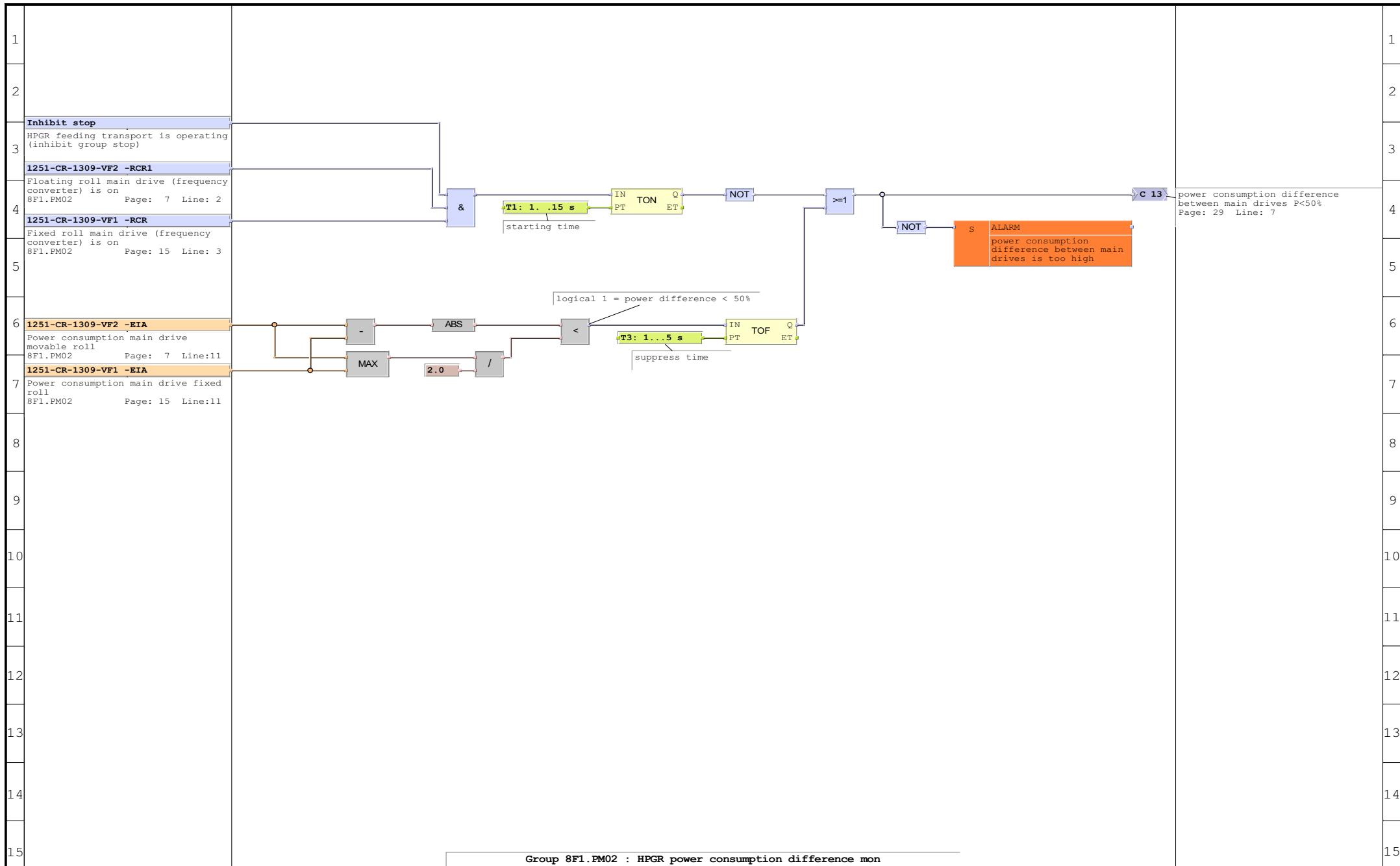
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				Drawn	PTD-AD-BWU	Project No: KXE0-01517			Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:			Sheet 55 Drawing No.	Group: 8F1.PM02
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	Page: 31



protecting grates are fixed, main drives PMI condition  
Page: 8 Line:10  
Page: 16 Line:10

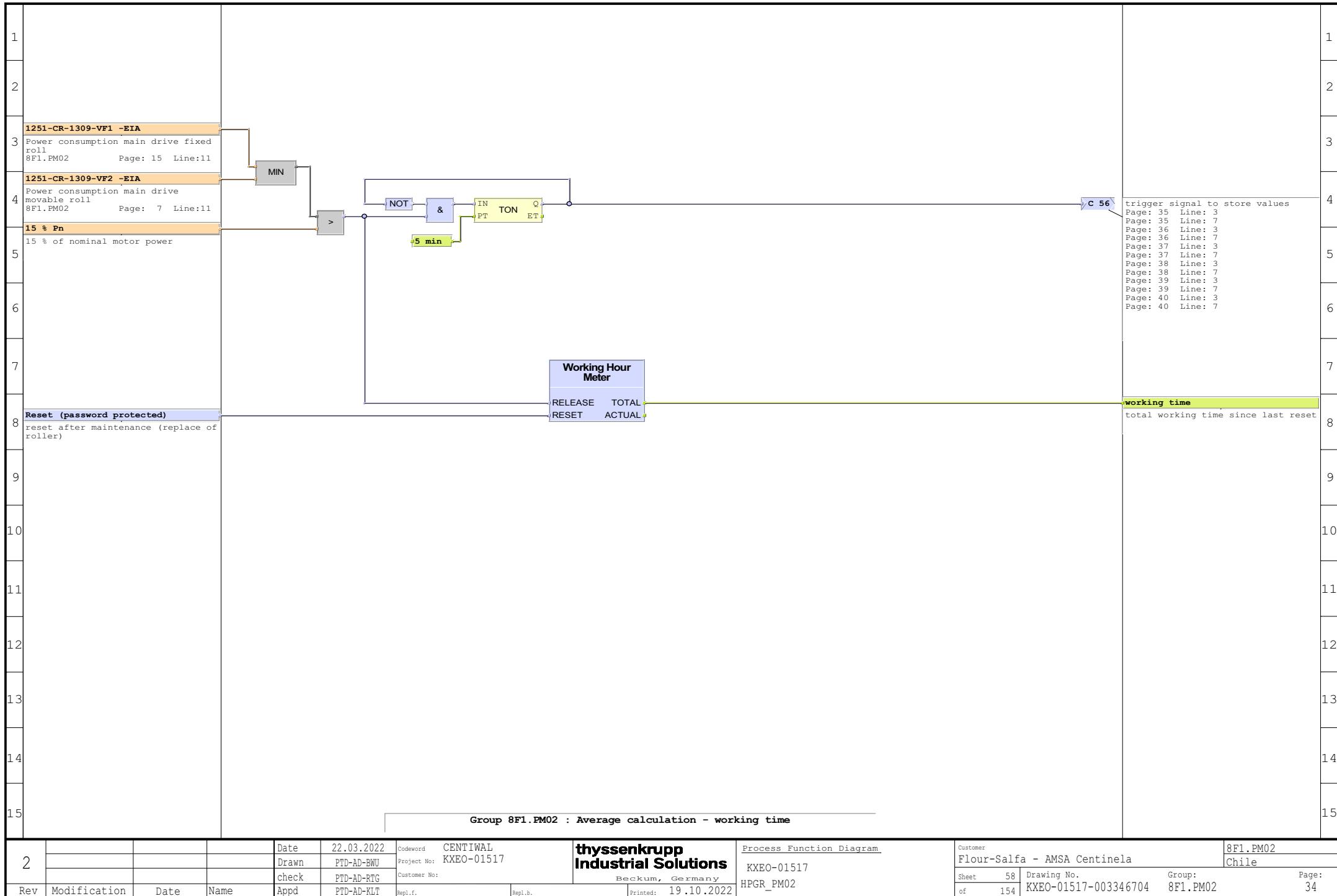
Group 8F1.PM02 : HPGR protecting grate monitoring

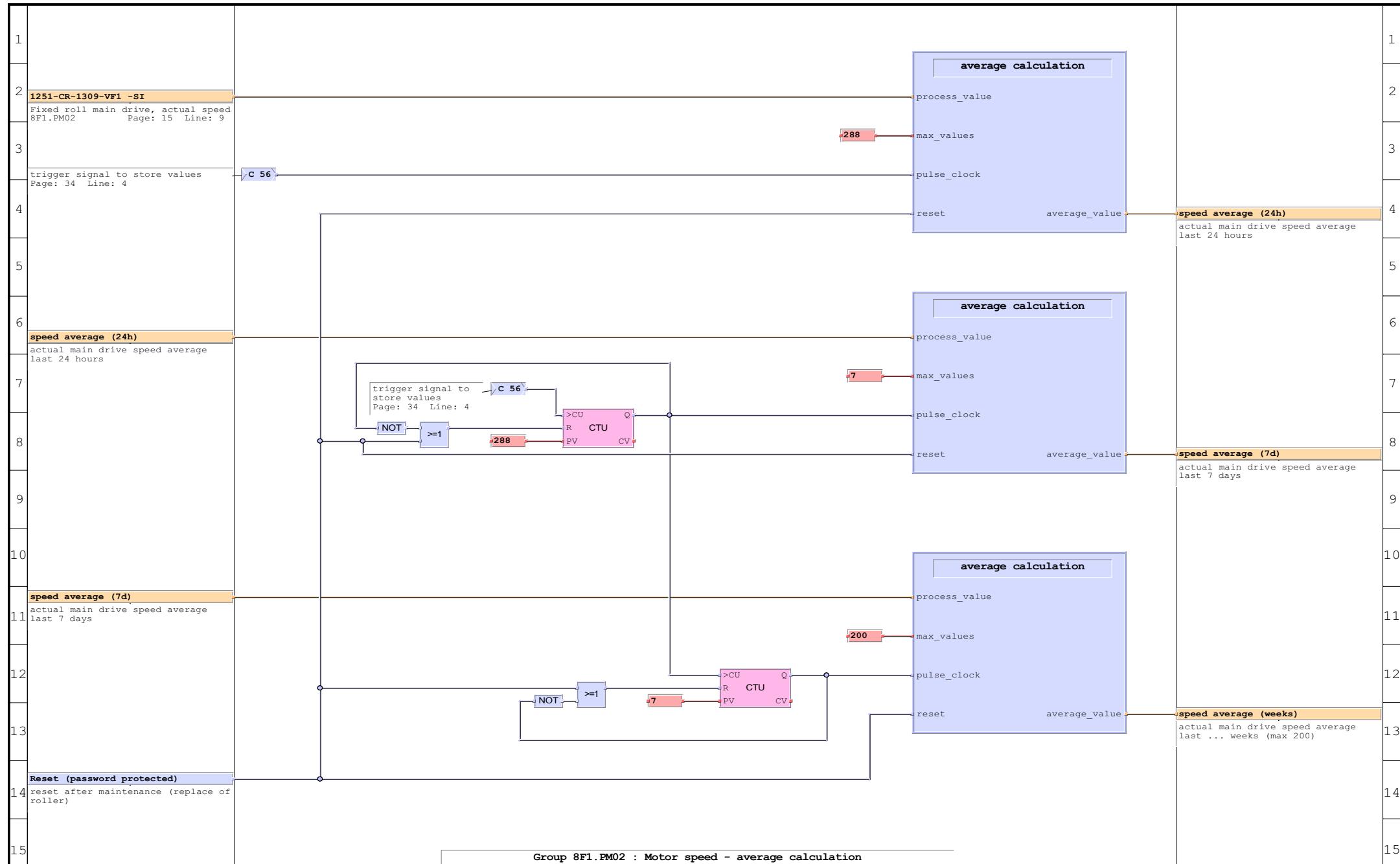
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			Drawn	PTD-AD-BNU	Customer No:			Sheet 56 of 154	Drawing No: KXEO-01517-003346704	Group: 8F1.PM02	Page: 32
Rev	Modification	Date	Name	Appd	PTD-AD-KIT	Repl.f.	Repl.b.	Printed: 19.10.2022			



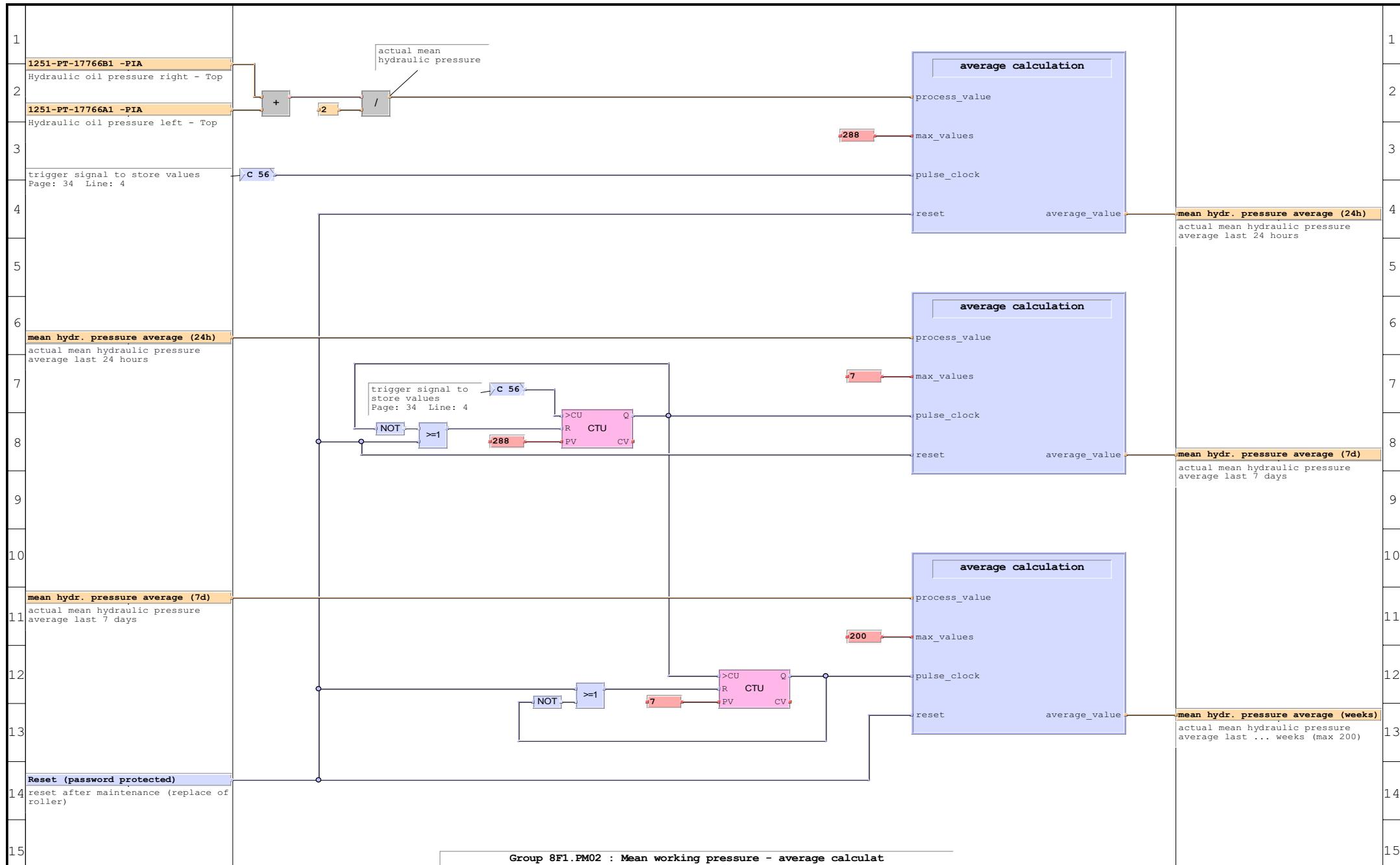
Group 8F1.PM02 : HPGR power consumption difference mon

2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
				Drawn	PTD-AD-BWU	Project No: KXEO-01517			Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:			Sheet 57 Drawing No.	Group: 8F1.PM02
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	Page: 33

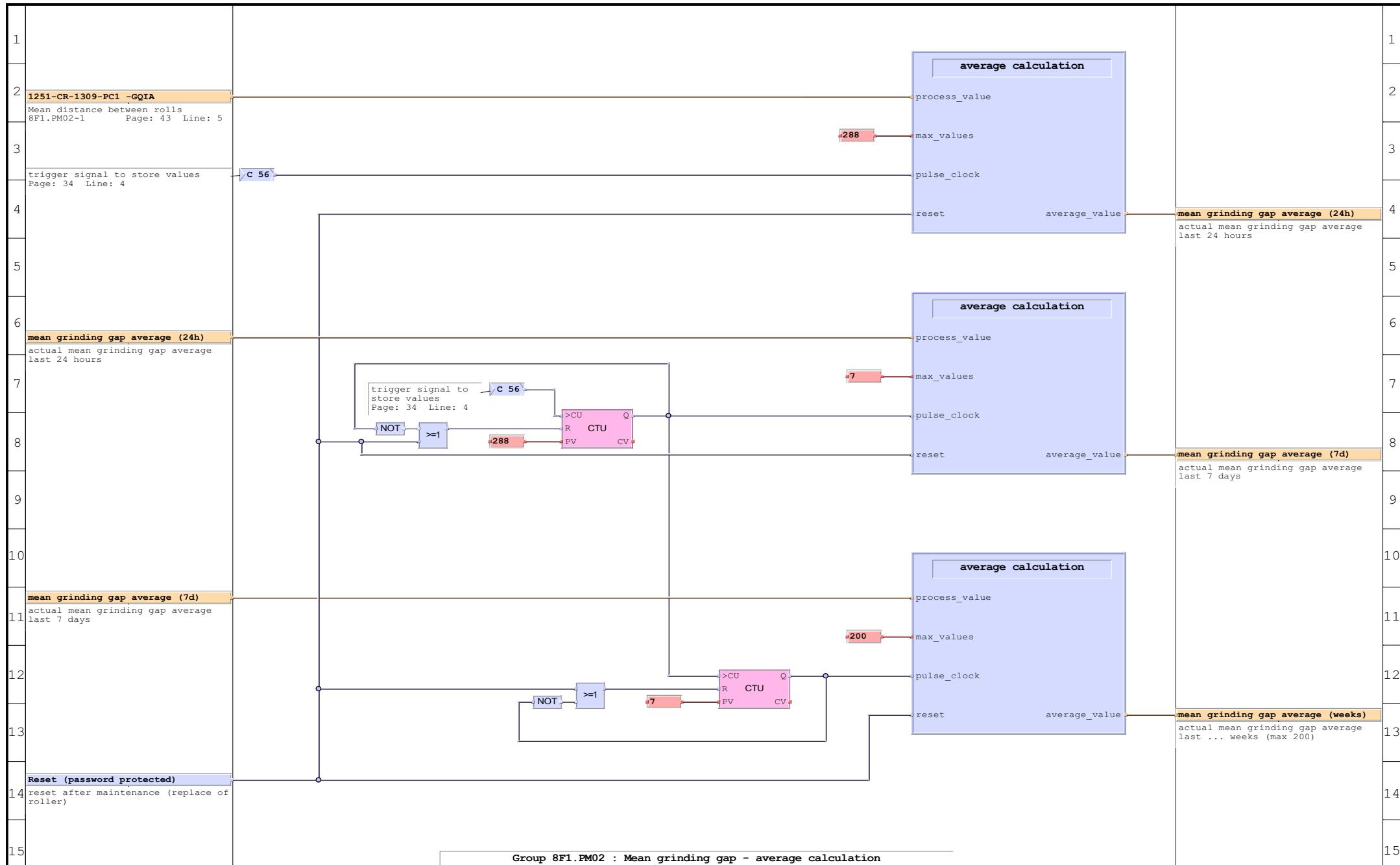




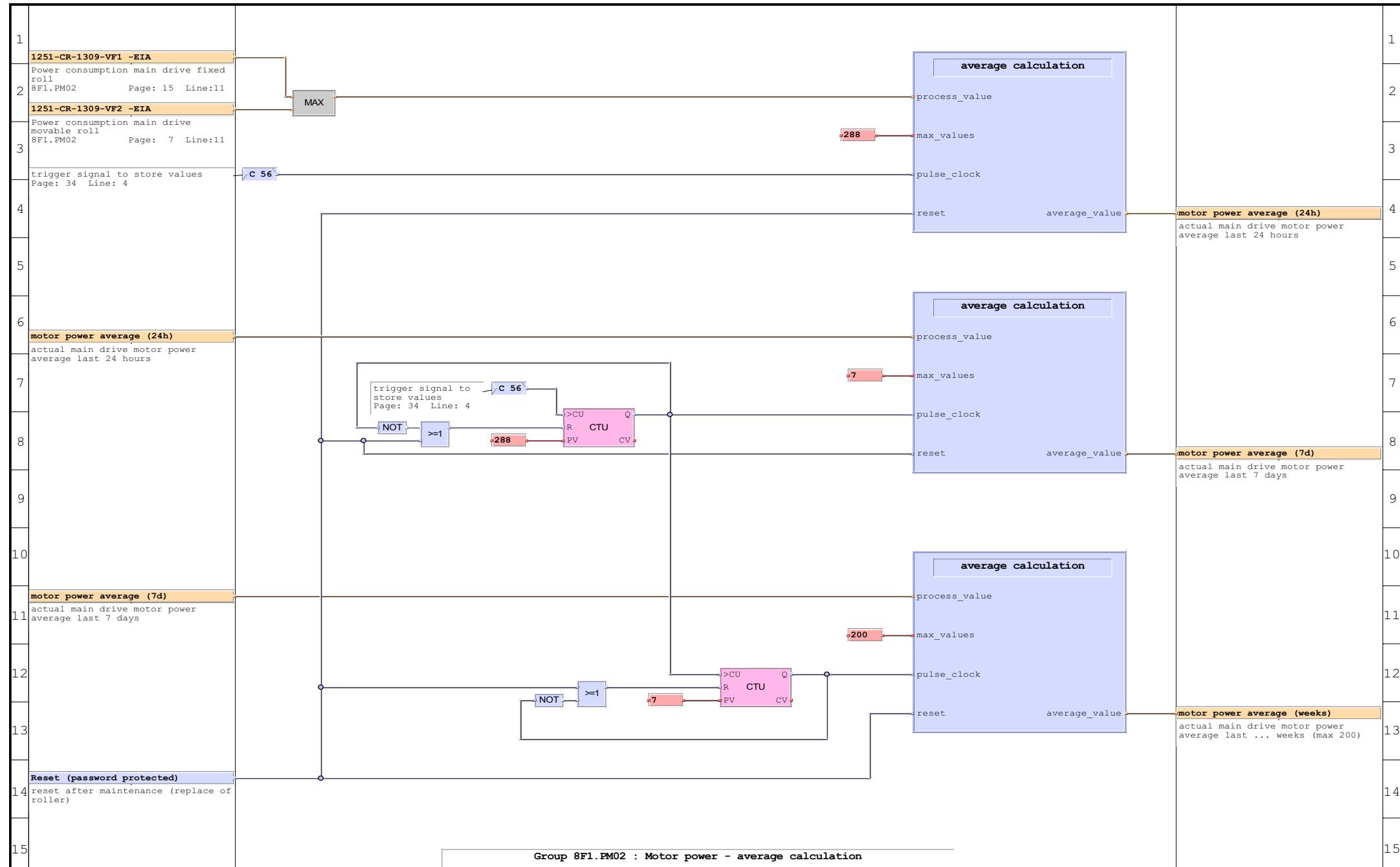
2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
				Drawn	PTD-AD-BWU	Project No. KXEO-01517			Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:			Drawing No.	Group:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	KXEO-01517-003346704	8F1.PM02
									of 154	Page: 35



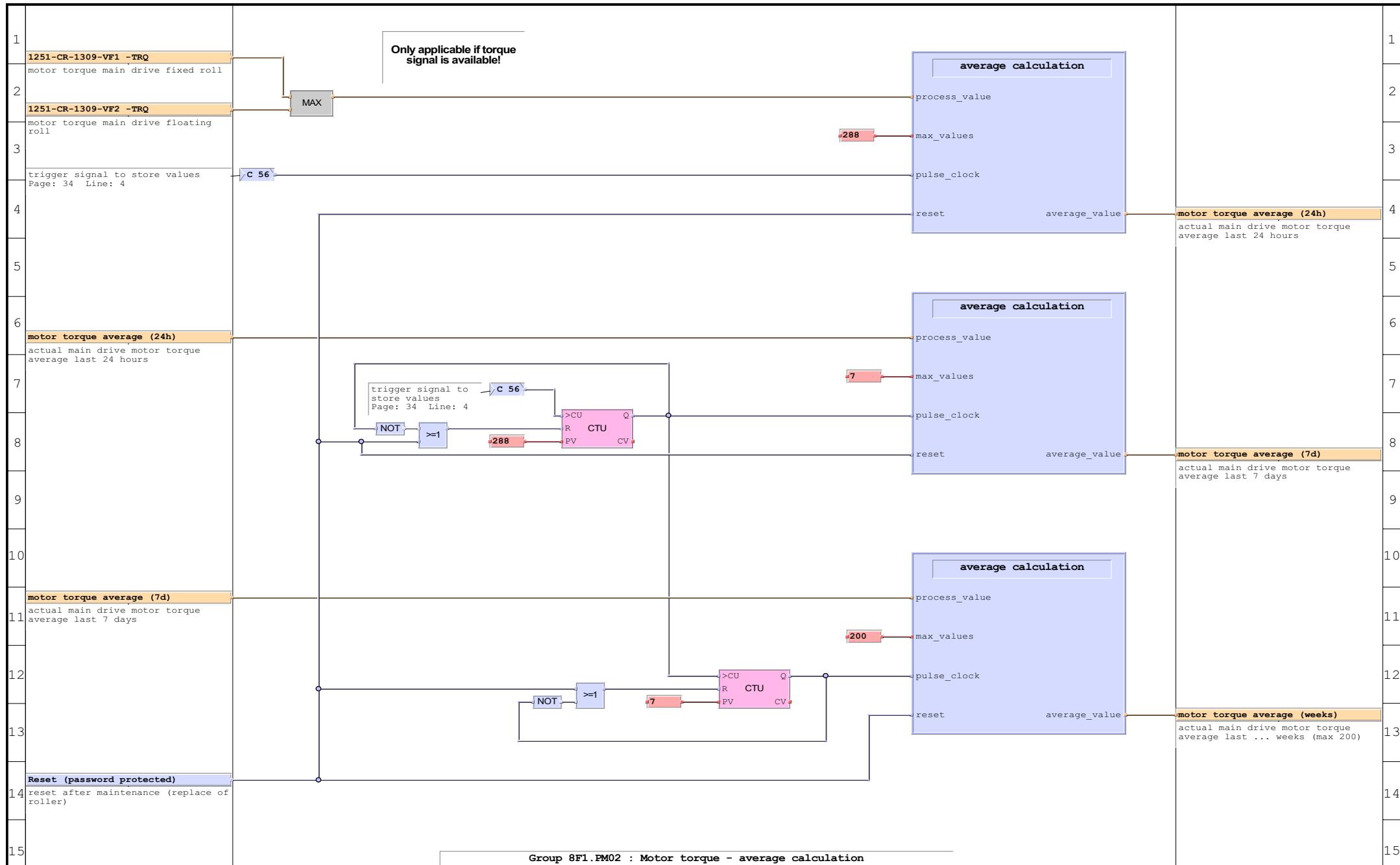
2				Date	22.03.2022	Codeword CENTIWAL Project No. KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram KXEO-01517 HPGR_PM02	Customer Flour-Salfa - AMSA Centinela of 154	8F1.PM02 Chile
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Check Repl.f.	Repl.b.	Printed: 19.10.2022	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02 Page: 36



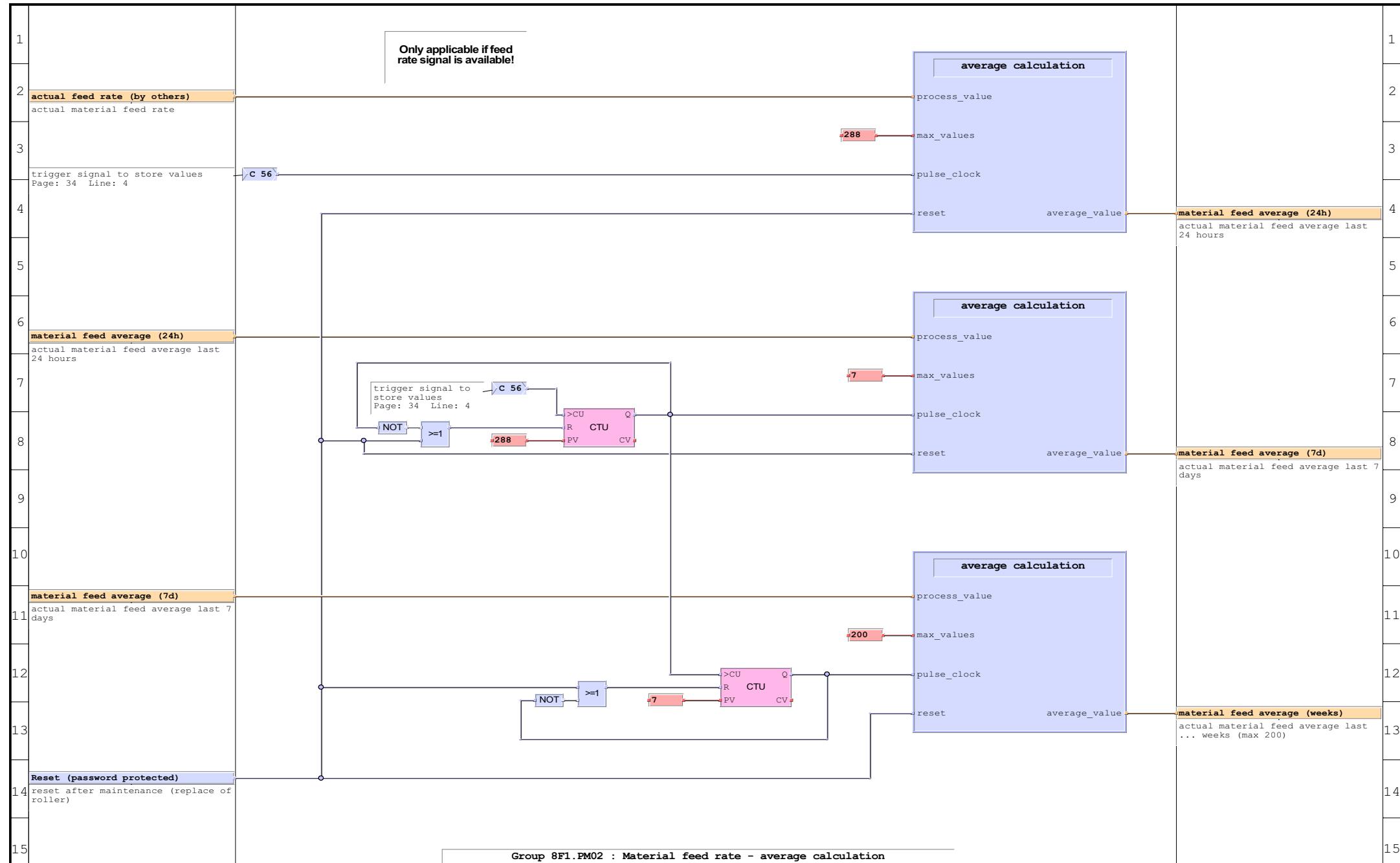
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				Drawn	PTD-AD-BWU	Project No. KXEO-01517		KXEO-01517	Flour-Salfa - AMSA Centinela	Chile	
				check	PTD-AD-RTG	Customer No.		HPGR_PM02	Drawing No.	Group:	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	KXEO-01517-003346704 8F1.PM02	Page: 37



2				Date	22.03.2022	Codeword CENTIWAL Project No: KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram KXEO-01517 HPGR_PM02	Customer Flour-Salfa - AMSA Centinela Sheet 62 of 154	8F1.PM02 Chile
				Drawn	PTD-AD-BWU	Customer No:				
				check	PTD-AD-RTG					
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02 Page: 38



2		19.10.22	10461396	Date	22.03.2022	Codeword CENTIWAL Project No. KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram KXEO-01517 HPGR_PM02	Customer Flour-Salfa - AMSA Centinela of 154	8F1.PM02 Chile
				Drawn	PTD-AD-BWU				Drawing No. KXEO-01517-003346704	Group: 8F1.PM02 Page: 39
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	

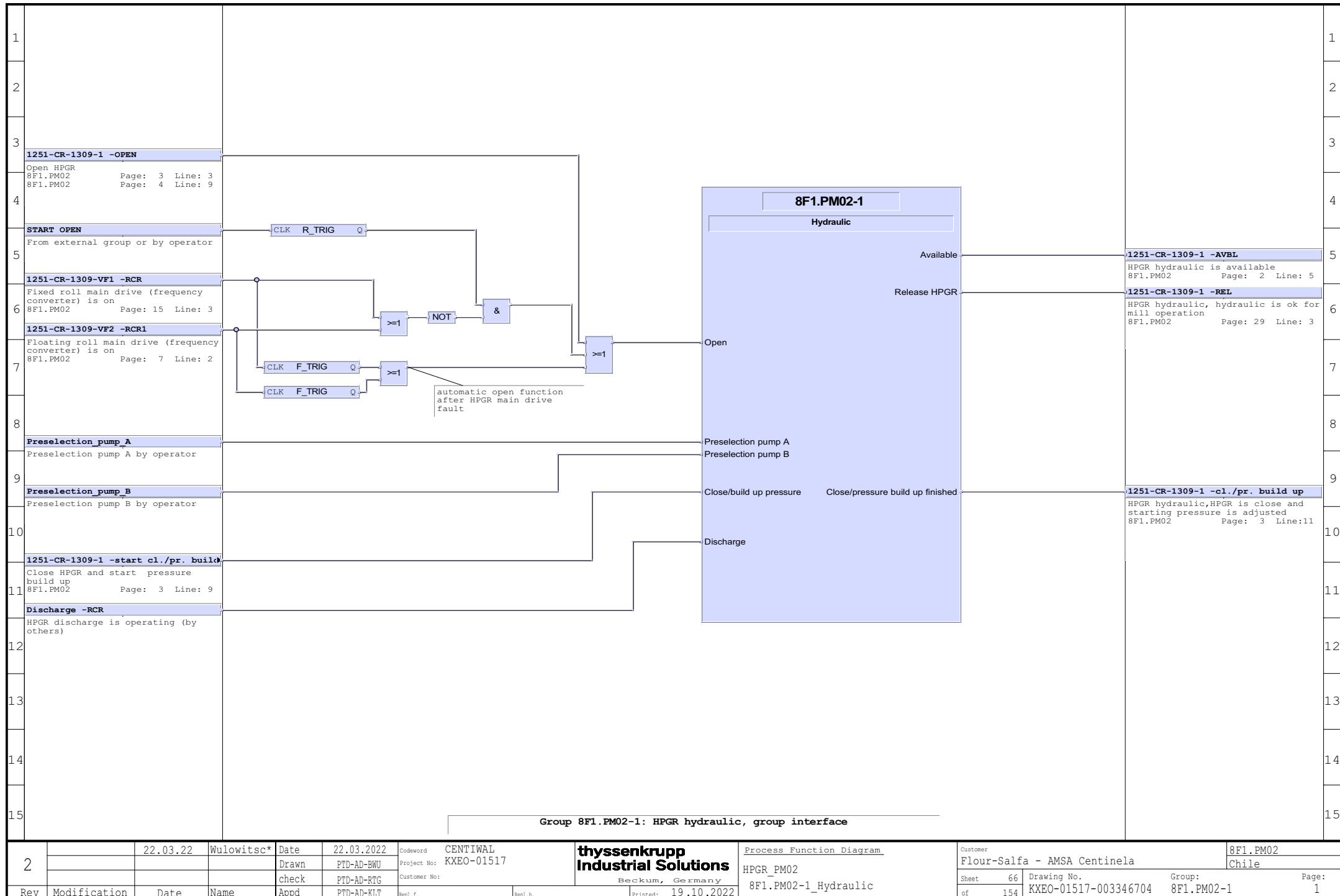


2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
				Drawn	PTD-AD-BWU	Project No. KXEO-01517			Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:			Drawing No.	Group:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	KXEO-01517-003346704	Page: 40

1  
INTERFACE IN- AND OUTPUTS  
8F1 . PM02-1

2	Name	Var-Art	Attrib	Init-Wert	Langname	Phys. Adr.	Verwendung	1
3	Preselection_pump_A	VAR_INPUT			Preselection pump A by operator	1 A/0 15/47		2
4	Preselection_pump_B	VAR_INPUT			Preselection pump B by operator	1 A/0 15/41		3
5								4
6								5
7								6
8								7
9								8
10								9
11								10
12								11
13								12
14								13
15								14

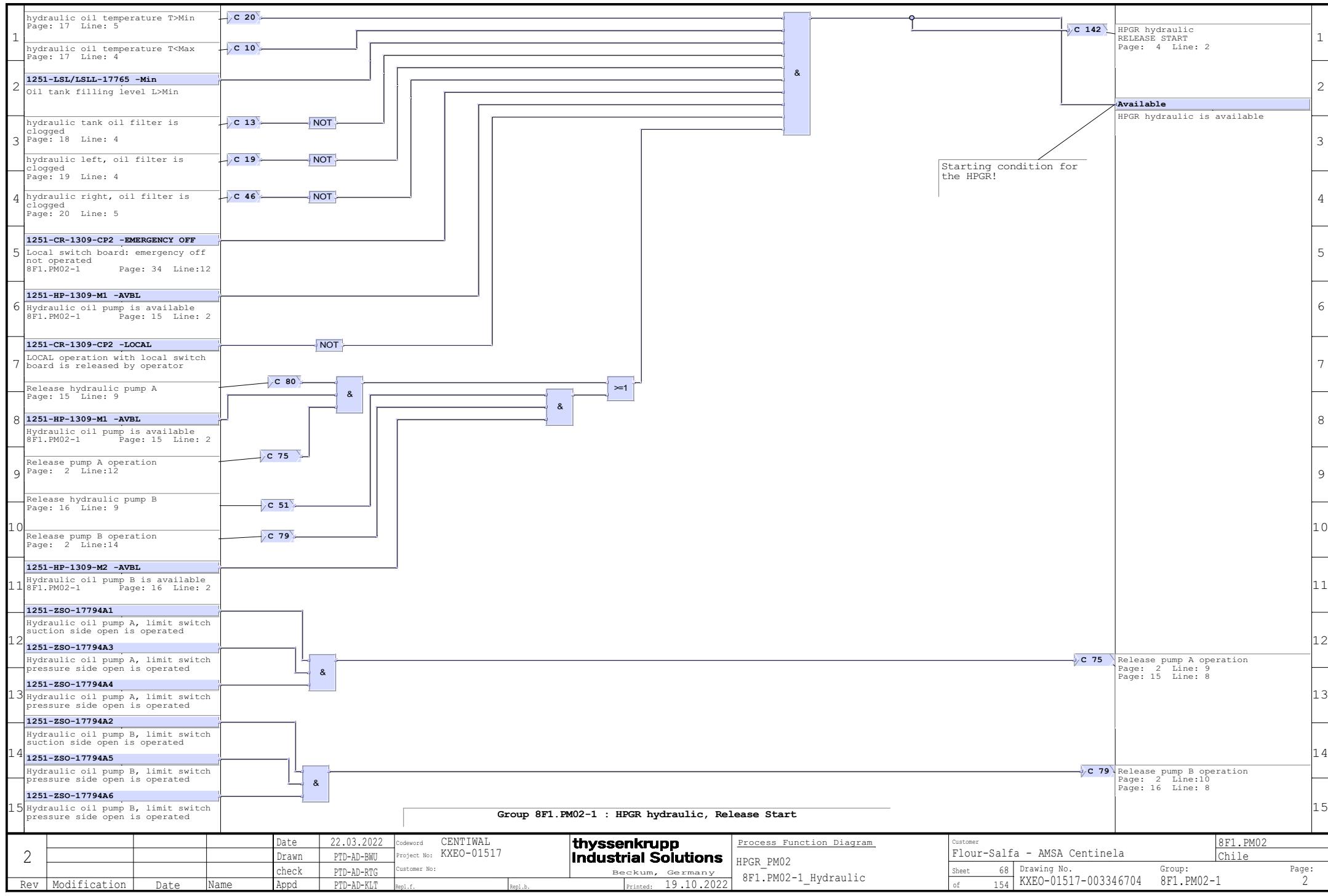
2	19.10.22	10461396	Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
	23.03.22	Wulowitzsc*	Drawn	PTD-AD-BWU	Project No: KXEO-01517		HPGR_PM02	Flour-Salfa - AMSA Centinela	Chile
	22.03.22	Wulowitzsc*	check	PTD-AD-RTG	Customer No:		8F1.PM02-1_Hydraulic	Sheet 65 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-1 Page:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	

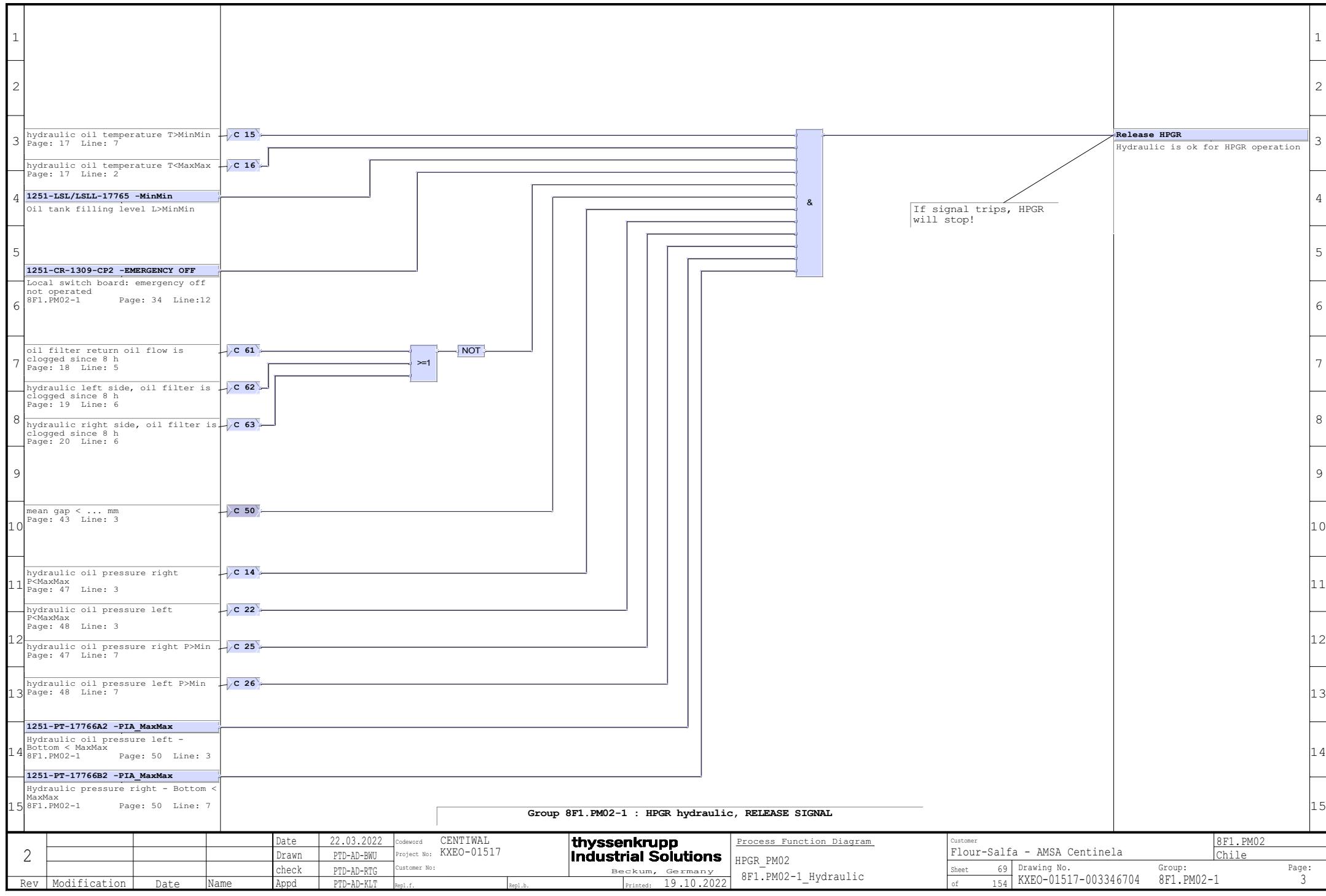


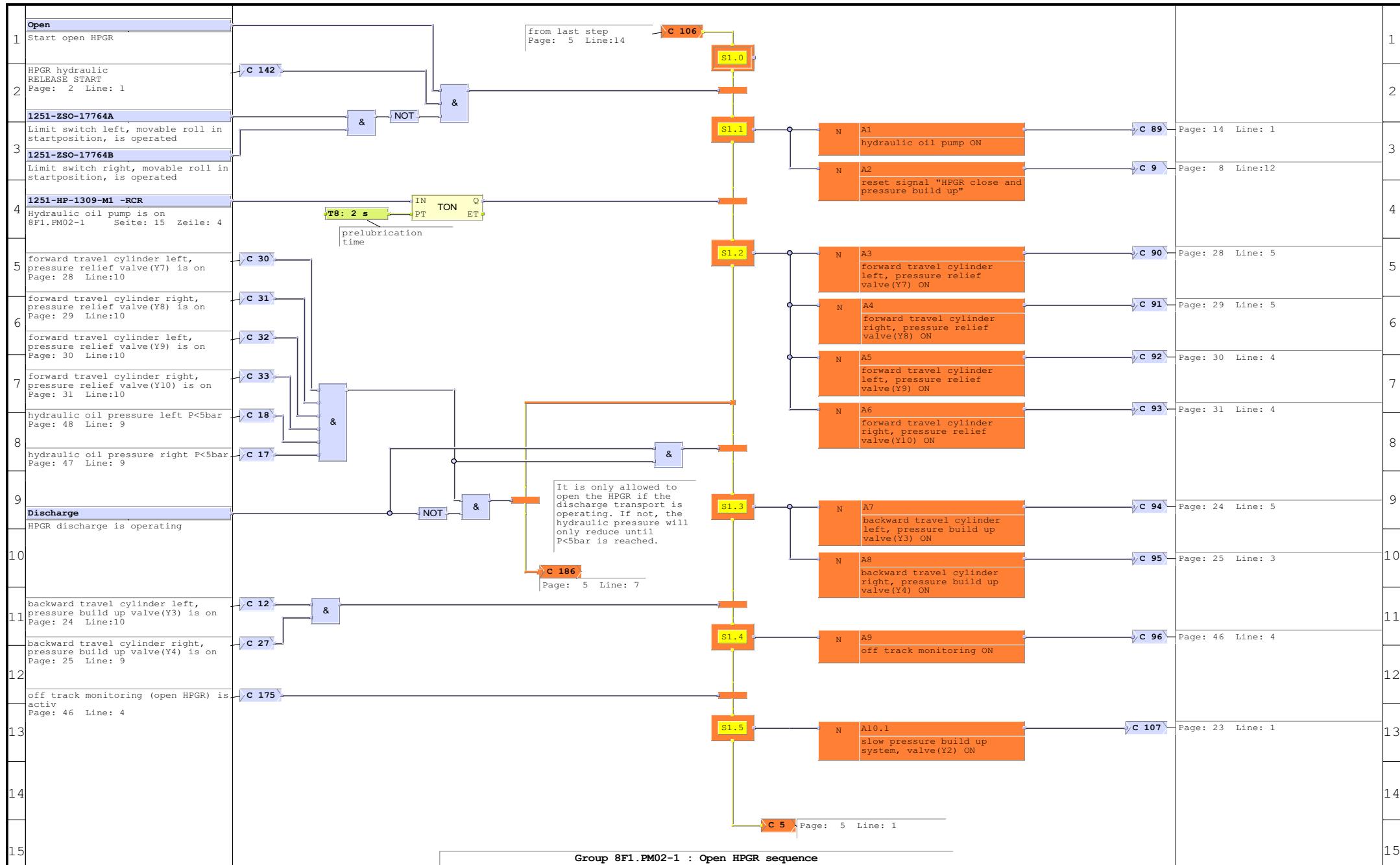
1  
INTERFACE IN- AND OUTPUTS  
8F1.PM02-1

2	Name	Var-Art	Attrib	Init-Wert	Langname	Phys. Adr.	Verwendung	2
3	Close/build up pressure	VAR_INPUT			Start close HPGR and build up pressure	6 A/-4	15/89	
	Discharge	VAR_INPUT			HPGR discharge is operating	4 A/-5	15/41	
	Open	VAR_INPUT			Start open HPGR	4 A/-5	15/97	
	Preselection pump A	VAR_INPUT			Preselection pump A by operator	15 B/-1	15/29	
						16 C/-1	15/5	
4	Preselection pump B	VAR_INPUT			Preselection pump B by operator	15 B/-1	15/5	
						16 C/-1	15/29	
5	Available	VAR_OUTPUT			HPGR hydraulic is available	2 A/-6	99/88	
	Close/pressure build up *	VAR_OUTPUT			HPGR close/pressure build up sequence i*	8 C/-4	99/38	
						12 A/-2	15/87	
						13 B/-2	15/88	
						43 A/3	15/84	
						47 E/3	15/54	
						48 F/3	15/54	
						51 A/4	15/82	
						52 B/4	15/88	
						56 A/5	15/93	
8	Release HPGR	VAR_OUTPUT			Hydraulic is ok for HPGR operation	3 B/-6	99/84	

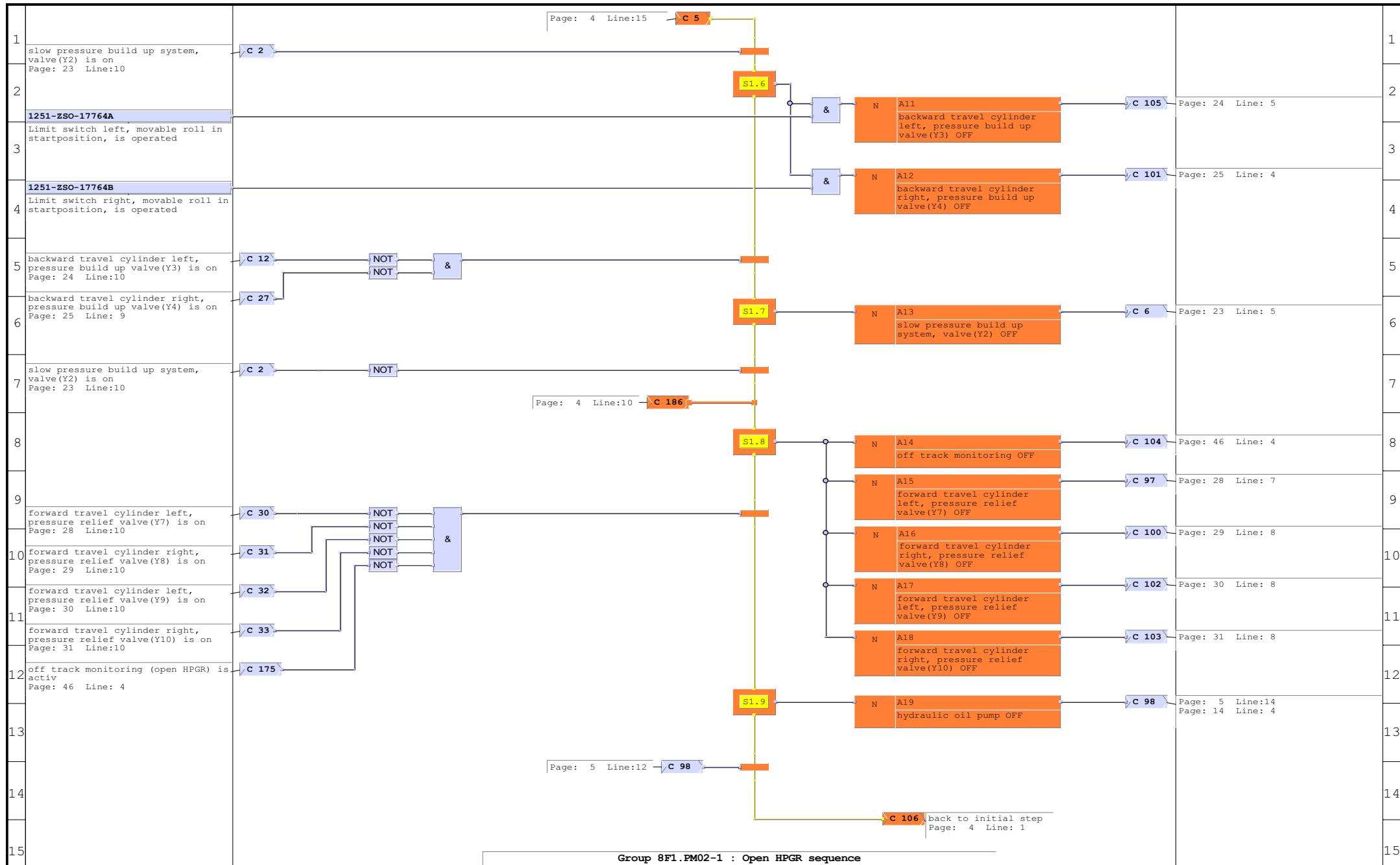
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		23.08.22	10461396	Drawn	PTD-AD-BWU				Drawing No.	
		23.03.22	Wulowitzsc*	check	PTD-AD-RTG	Customer No:			Group:	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	KXEO-01517-003346704 8F1.PM02-1



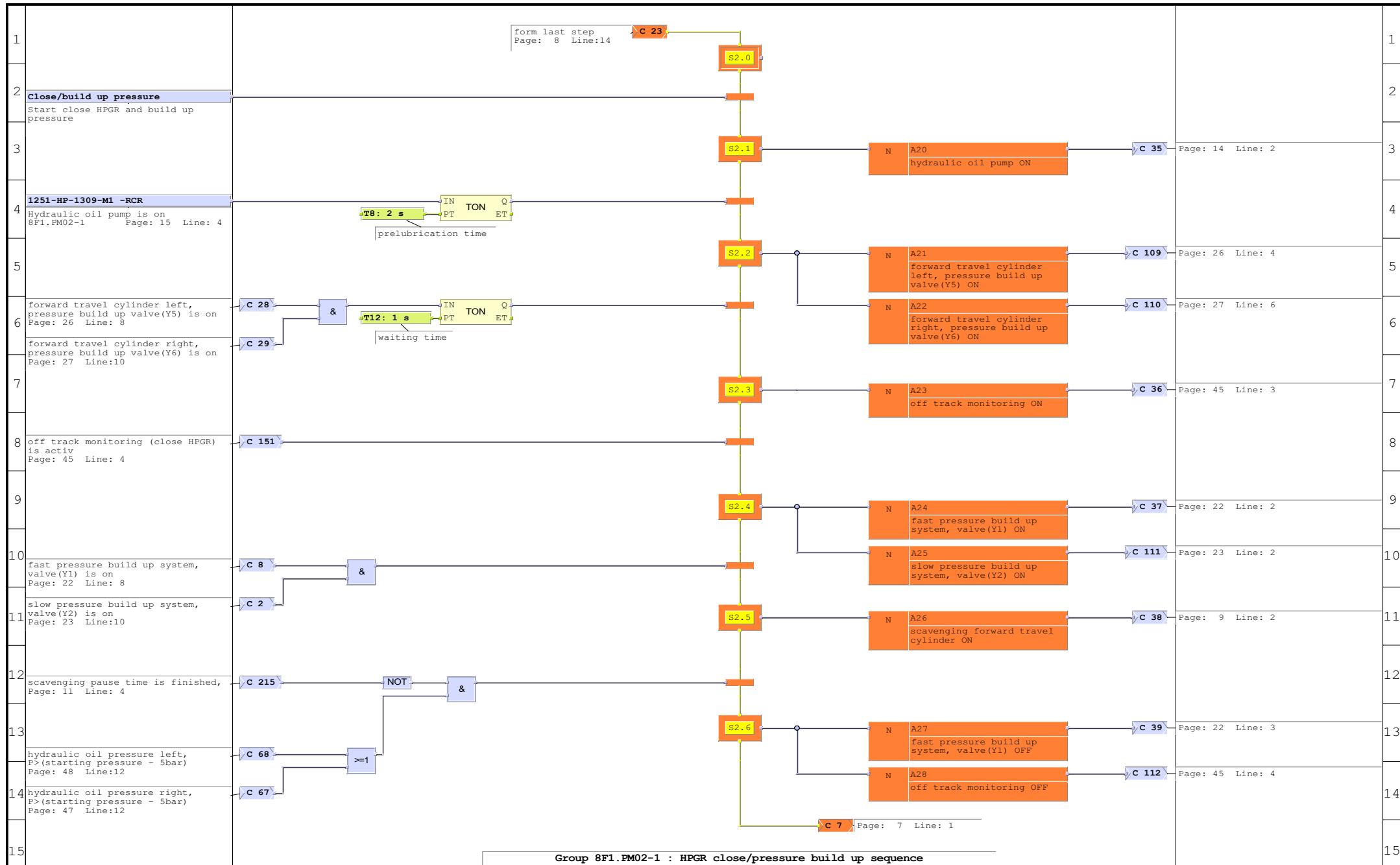




2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Project No. KXEO-01517 Customer No: Beckum, Germany	Process Function Diagram, HPGR_PM02 8F1.PM02-1_Hydraulic	Customer Flour-Salfa - AMSA Centinela Chile	8F1.PM02
				Drawn	PTD-AD-BWU	check				Sheet 70 Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-1 Page: 4
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	

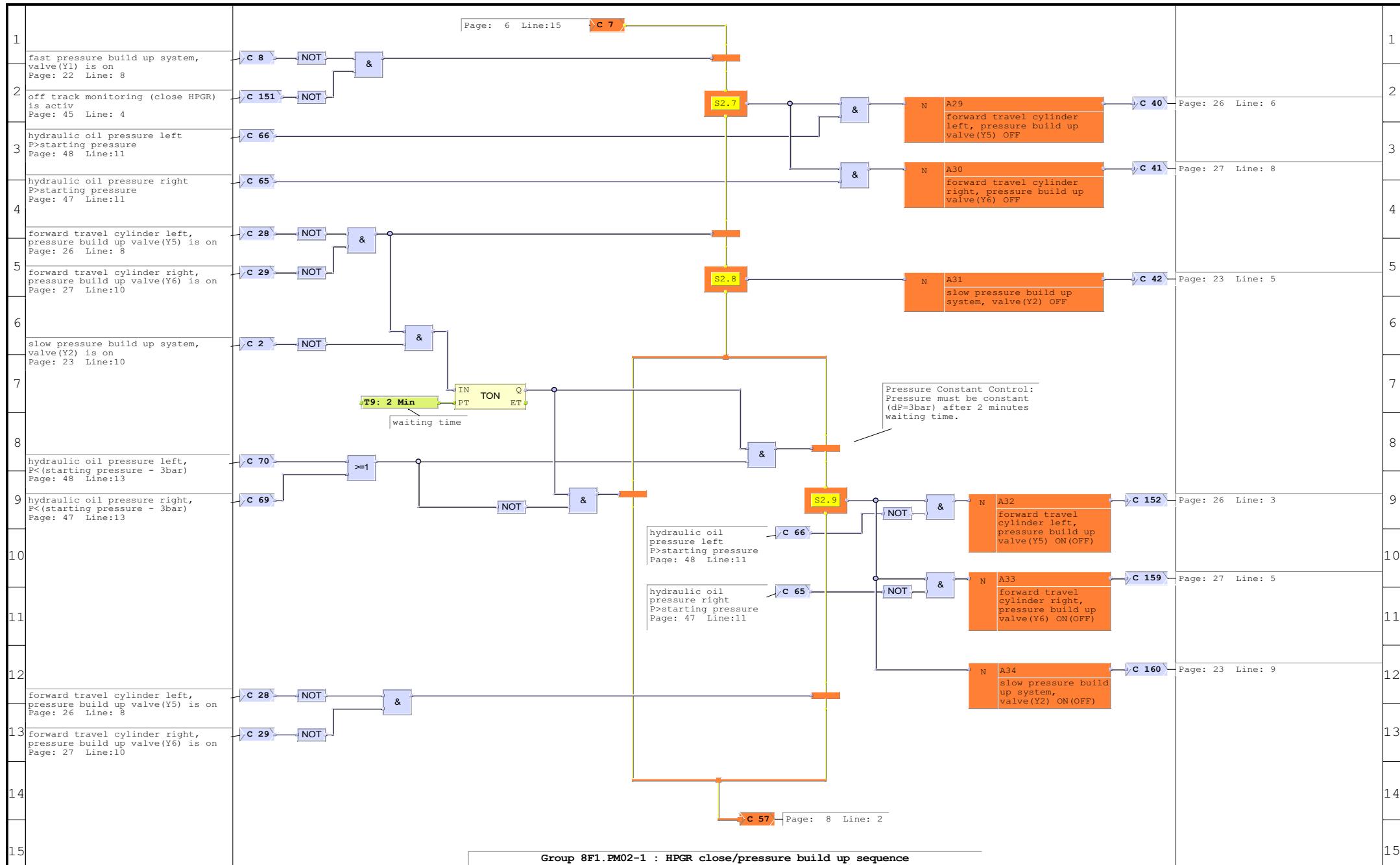


2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram HPGR_PM02 8F1.PM02-1_Hydraulic	Customer Flour-Salfa - AMSA Centinela	8F1.PM02	
				Drawn	PTD-AD-BWU	Project No. KXEO-01517				Drawing No.	Group:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Sheet 71 of 154	Page: 5	8F1.PM02-1



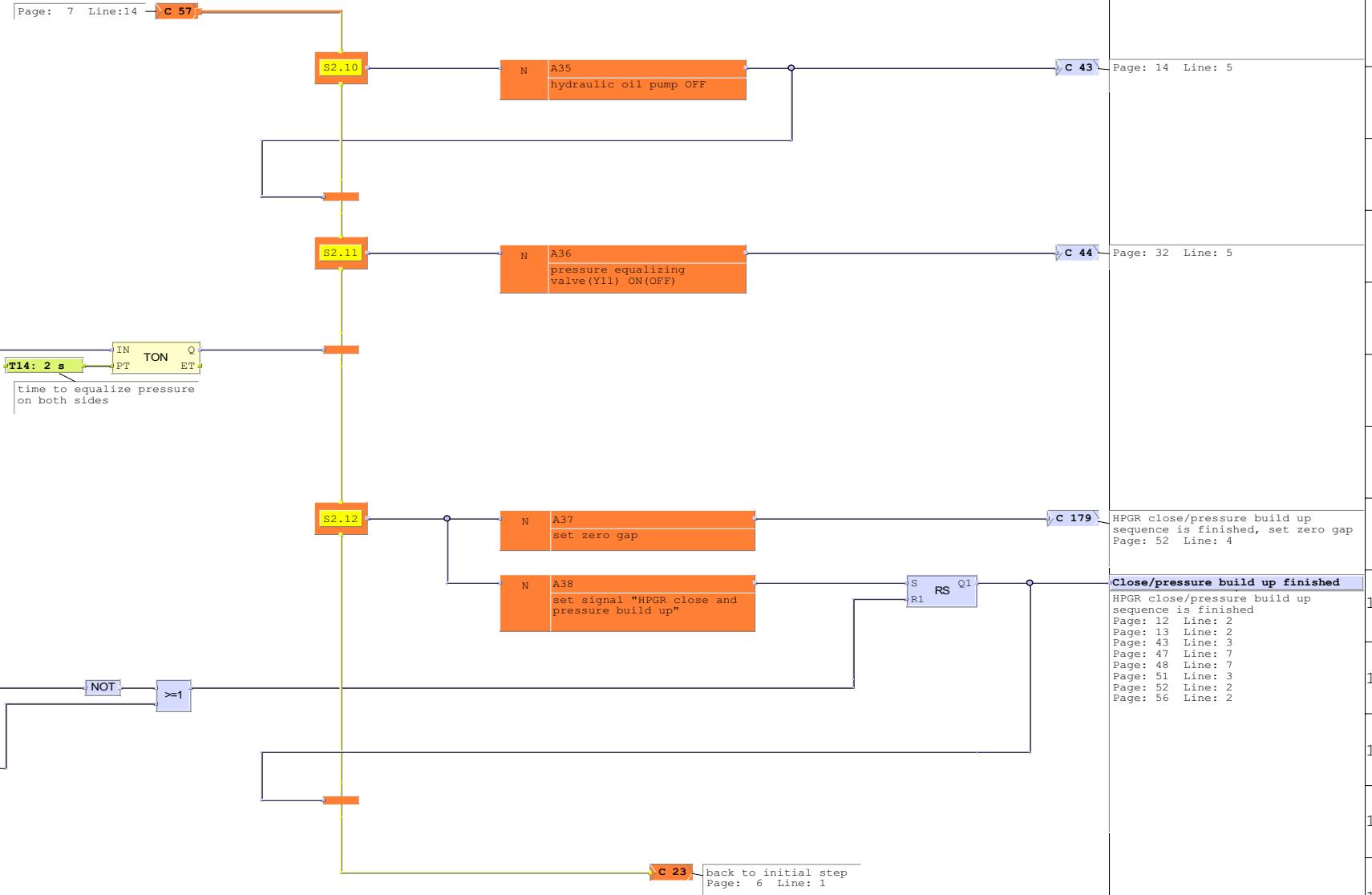
Group 8F1.PM02-1 : HPGR close/pressure build up sequence

2				Date	22.03.2022	Codeword	CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram, HPGR_PM02 8F1.PM02-1_Hydraulic	Customer Flour-Salfa - AMSA Centinela Chile	8F1.PM02				
				Drawn	PTD-AD-BWU	Project No.	KXEO-01517			Sheet	72	Drawing No.	KXEO-01517-003346704	Group:	Page:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	of	154	of	154	8F1.PM02-1	6



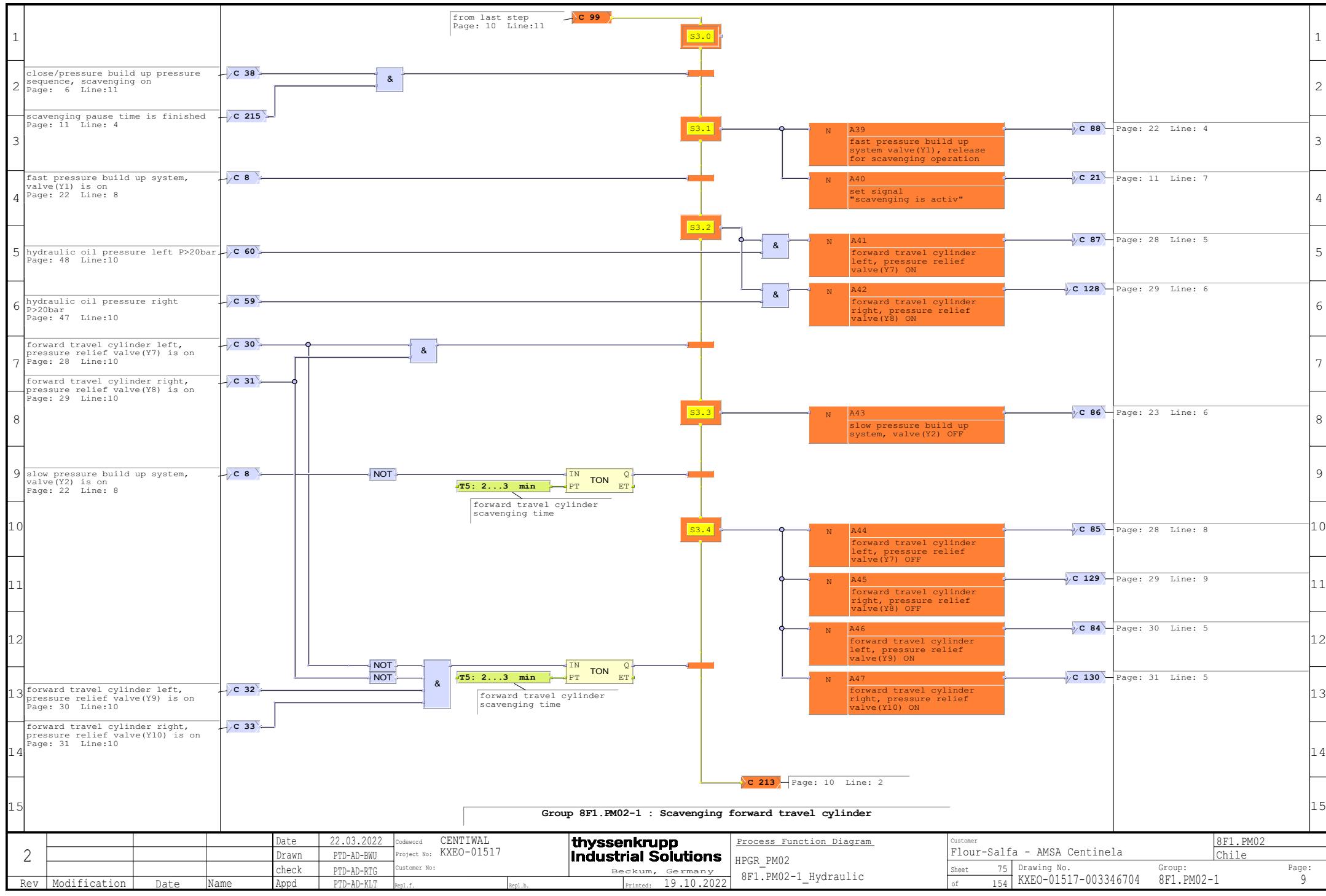
Group 8F1.PM02-1 : HPGR close/pressure build up sequence

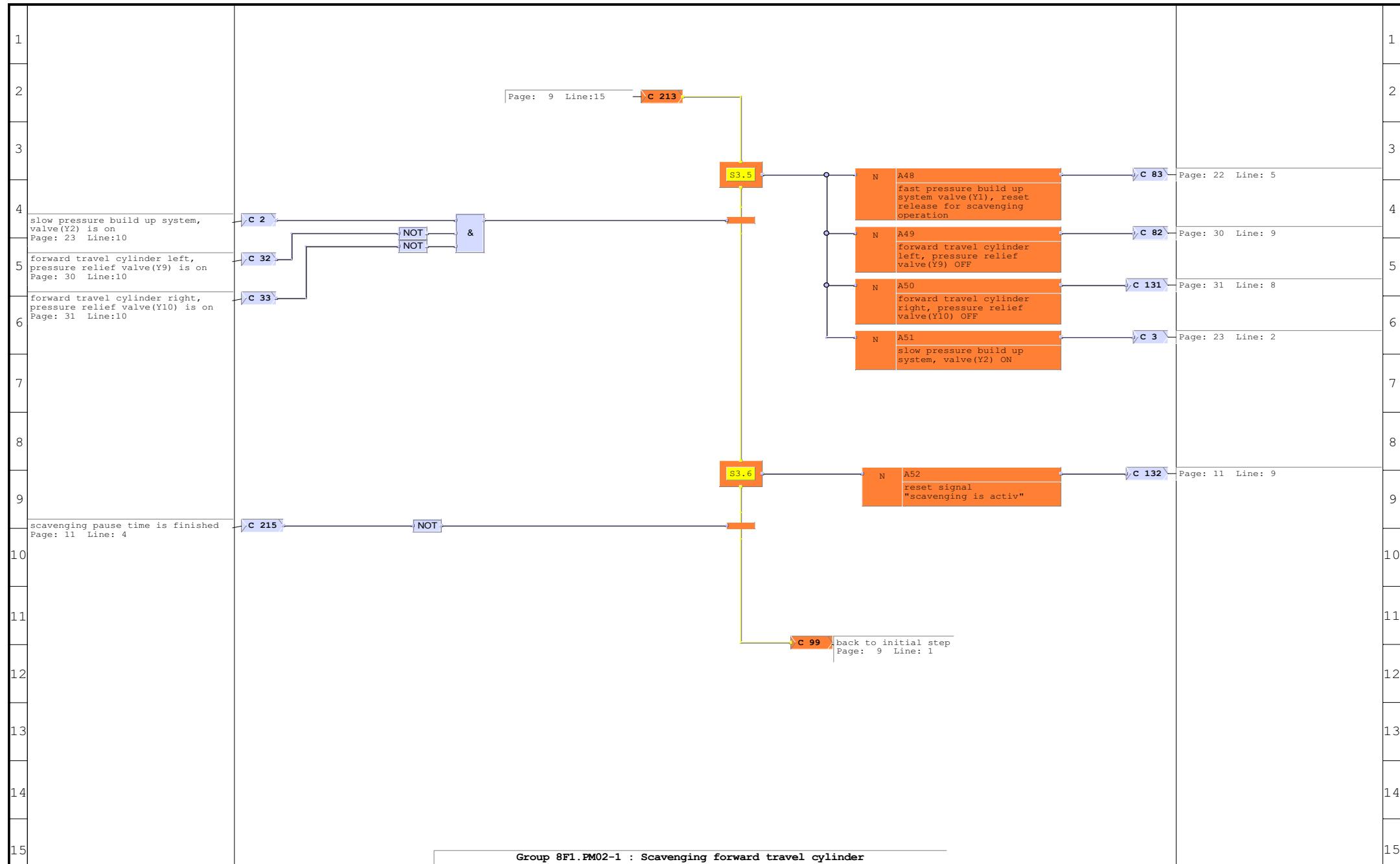
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				Drawn	PTD-AD-BWU	Project No:	KXEO-01517			Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:				Drawing No.	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	Sheet	73



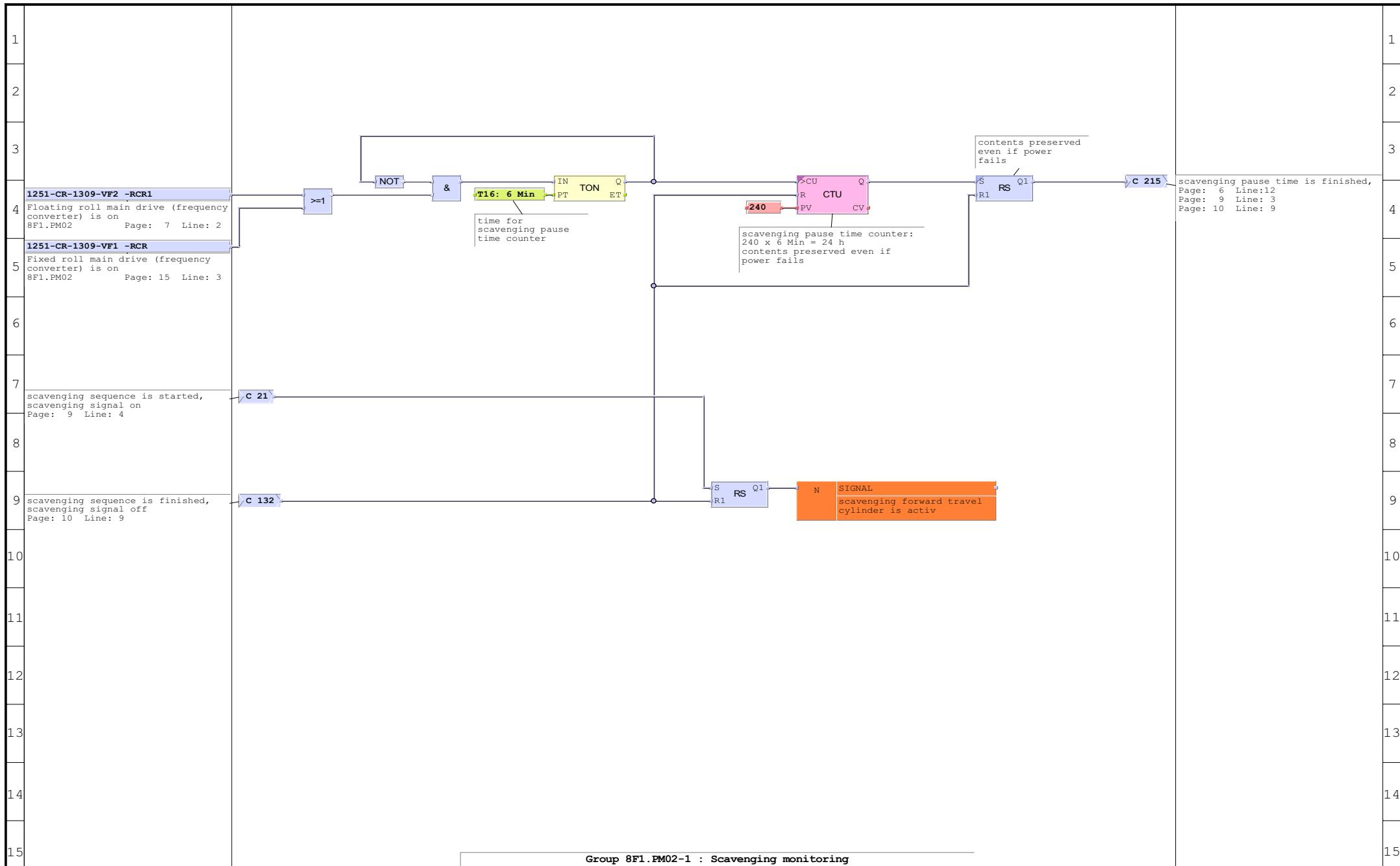
Group 8F1.PM02-1 : HPGR close/pressure build up sequence

2				Date	22.03.2022	Codeword CENTIWAL	thyssenkrupp Industrial Solutions	Process Function Diagram HPGR_PM02	Customer Flour-Salfa - AMSA Centinela	8F1.PM02
				Drawn	PTD-AD-BWU	Project No. KXEO-01517	Beckum, Germany	8F1.PM02-1_Hydraulic	Chile	
				check	PTD-AD-RTG	Customer No:				
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	KXEO-01517-003346704 8F1.PM02-1 Page: 8



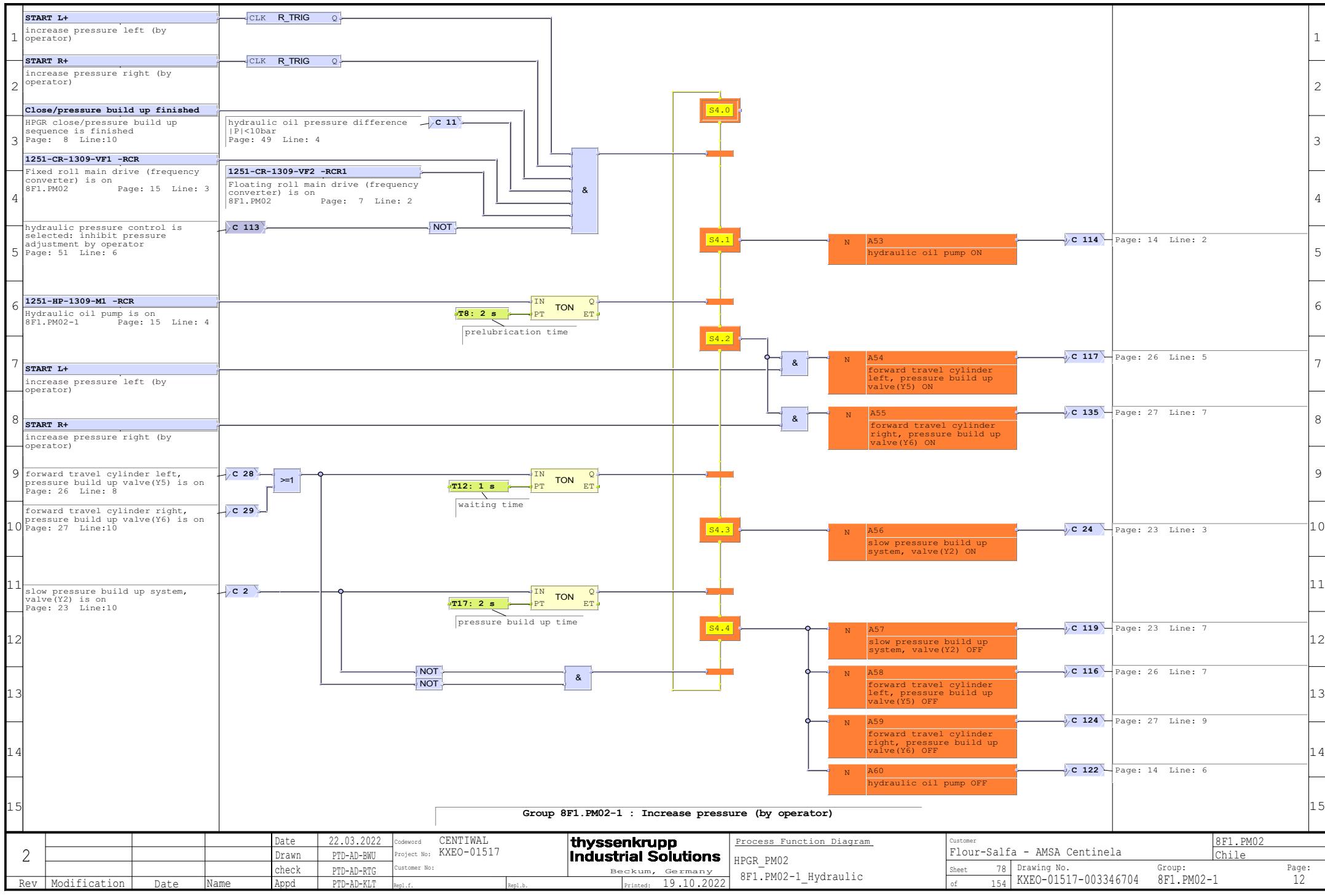


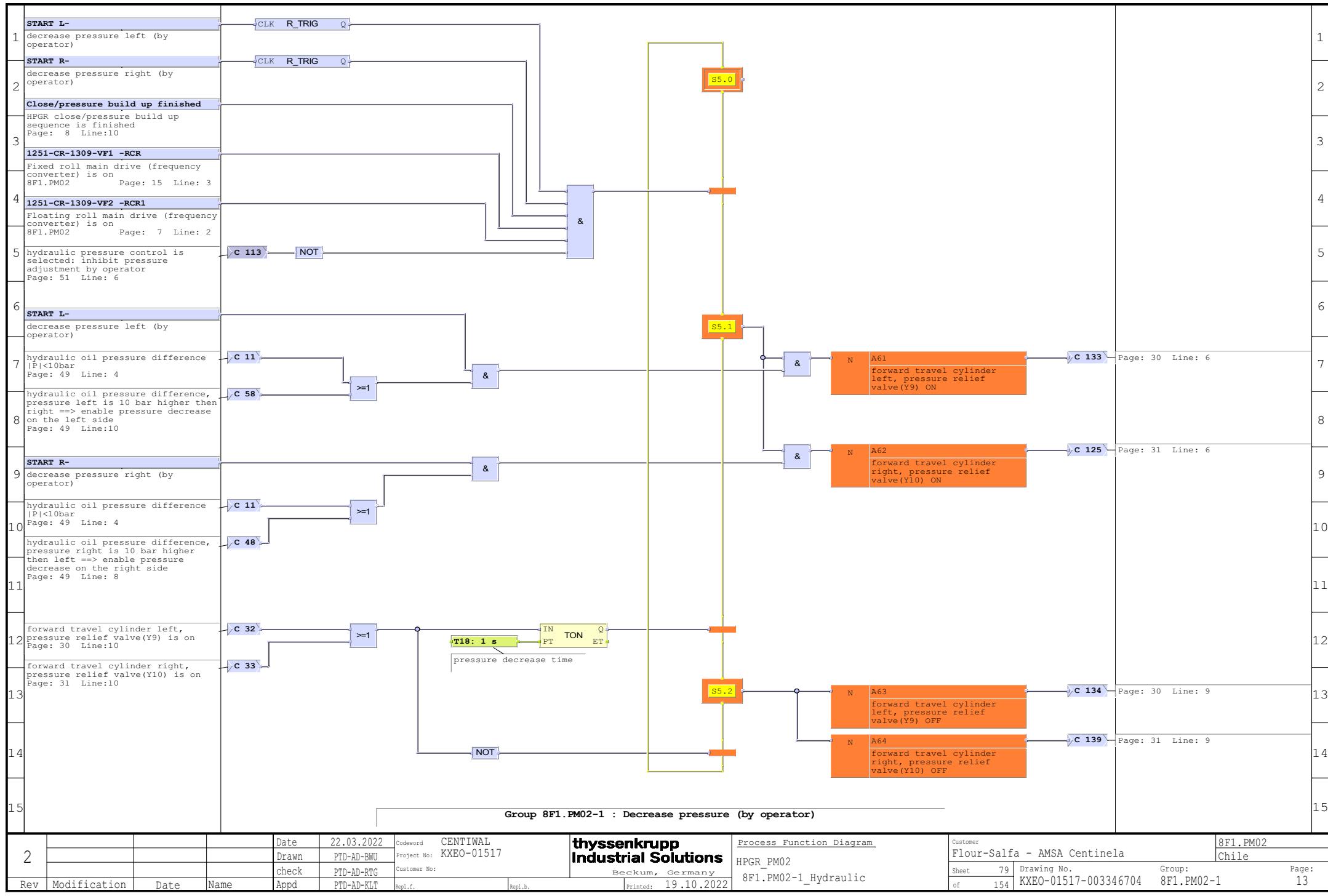
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Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Sheet	Drawing No.	Group:	Page:
								76	KXEO-01517-003346704	8F1.PM02-1	10
								of 154			

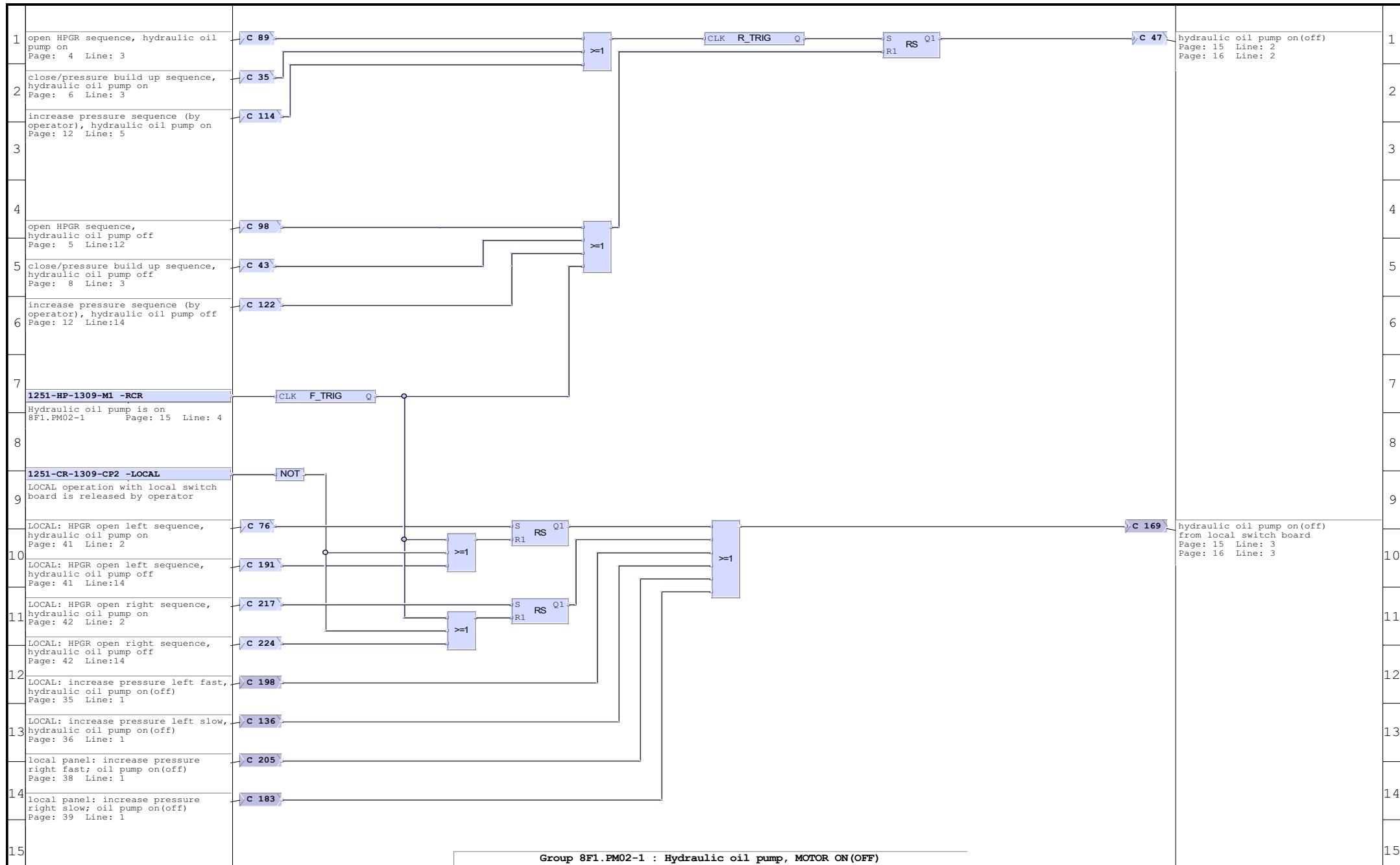


Group 8F1.PM02-1 : Scavenging monitoring

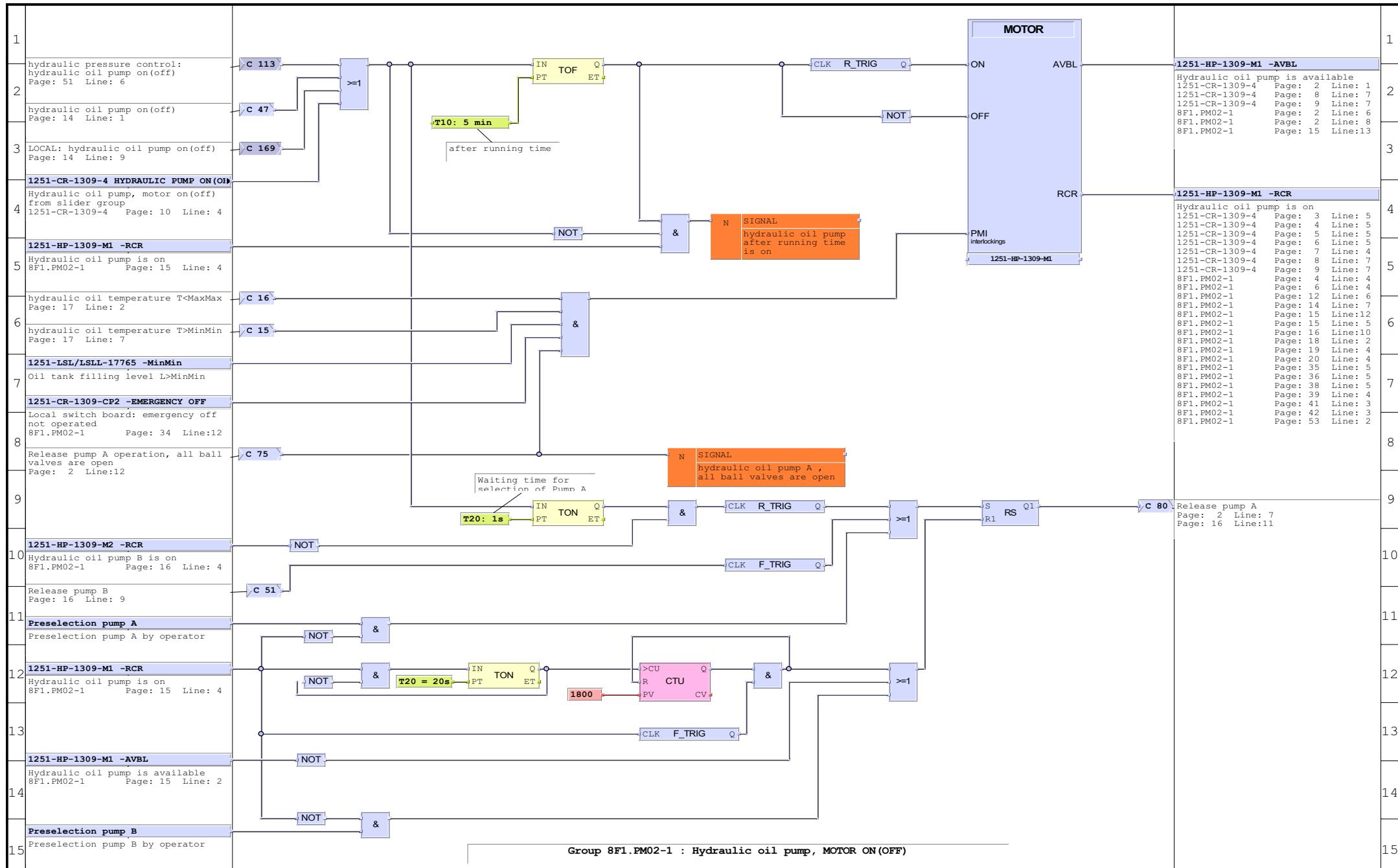
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				check	PTD-AD-RTG	Customer No:			Sheet 77 Drawing No.	Page:
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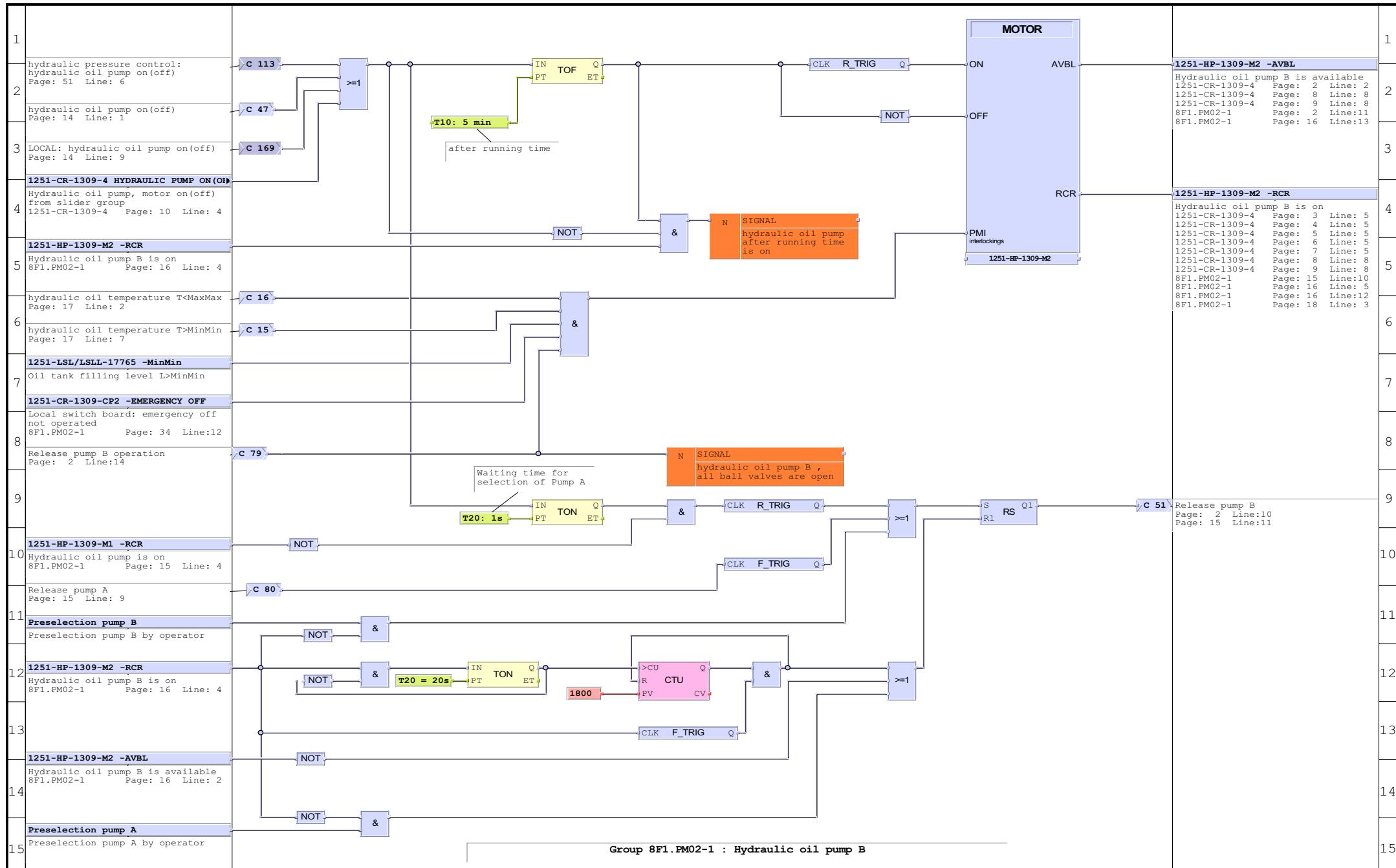




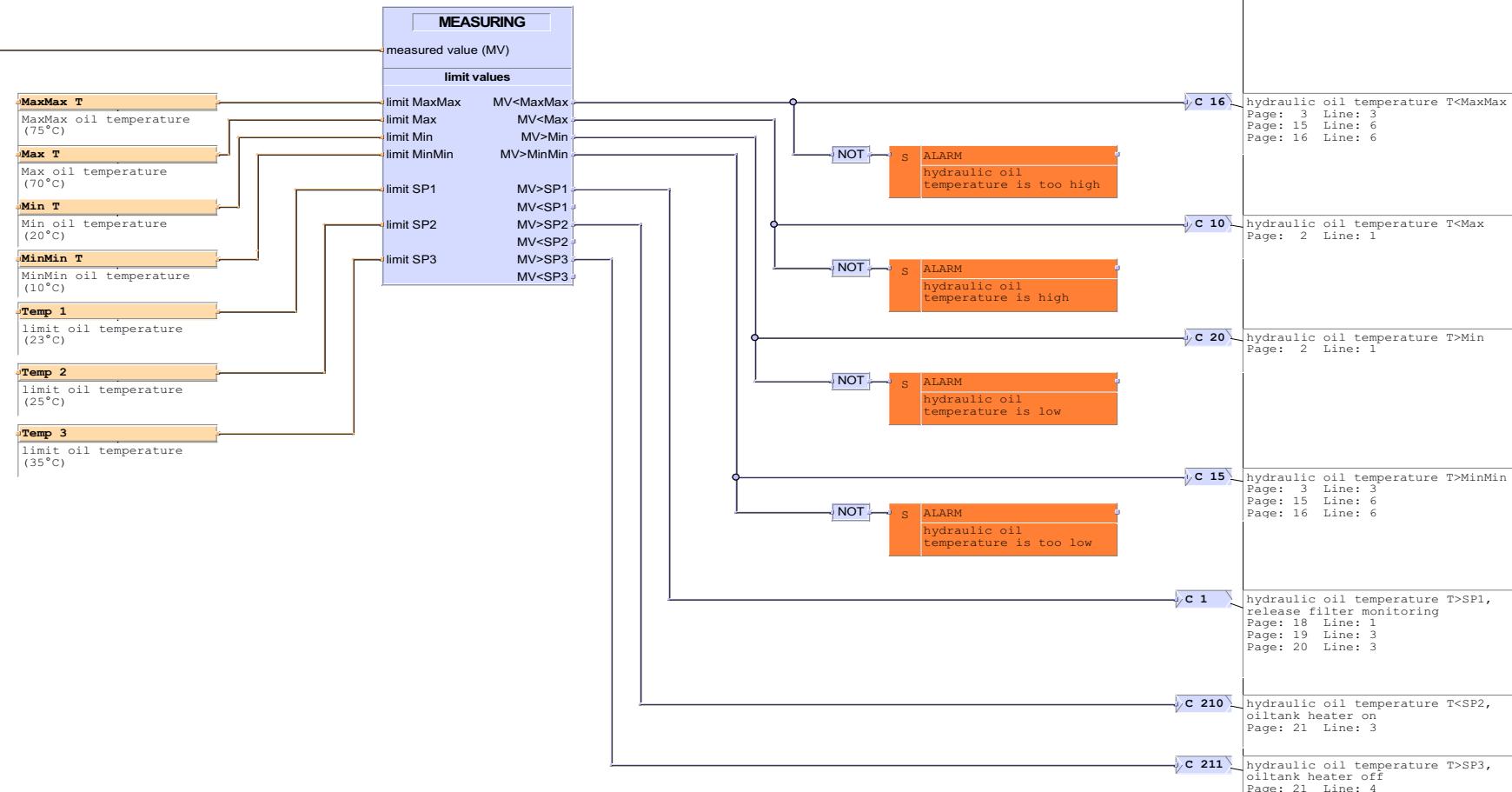
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Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Page: 14	
								of 154	KXEO-01517-003346704 8F1.PM02-1	



2			Date	22.03.2022	Codeword CENTIWAL Project No: KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram HPGR_PM02 8F1.PM02-1_Hydraulic	Customer Flour-Salfa - AMSA Centinela			8F1.PM02
			Drawn	PTD-AD-BNU	Customer No:					Chile	
			check	PTD-AD-RTG							
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Req'd.	Req'd.	Printed:	19.10.2022	Sheet 81 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-1 Page: 15

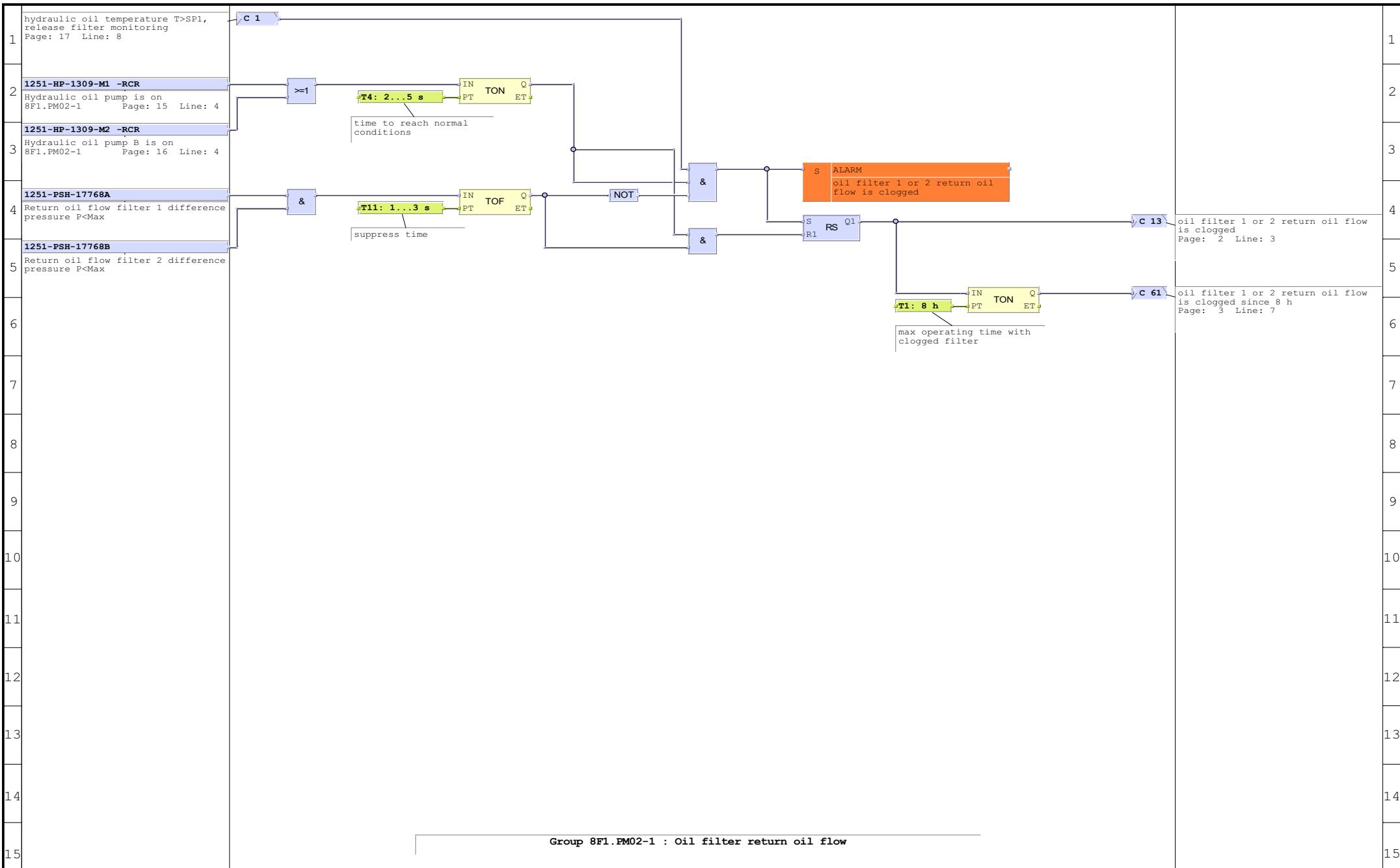


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			Drawn	PTD-AD-BWU	Customer No:				Sheet 82 of 154	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02-1
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022			Page: 16

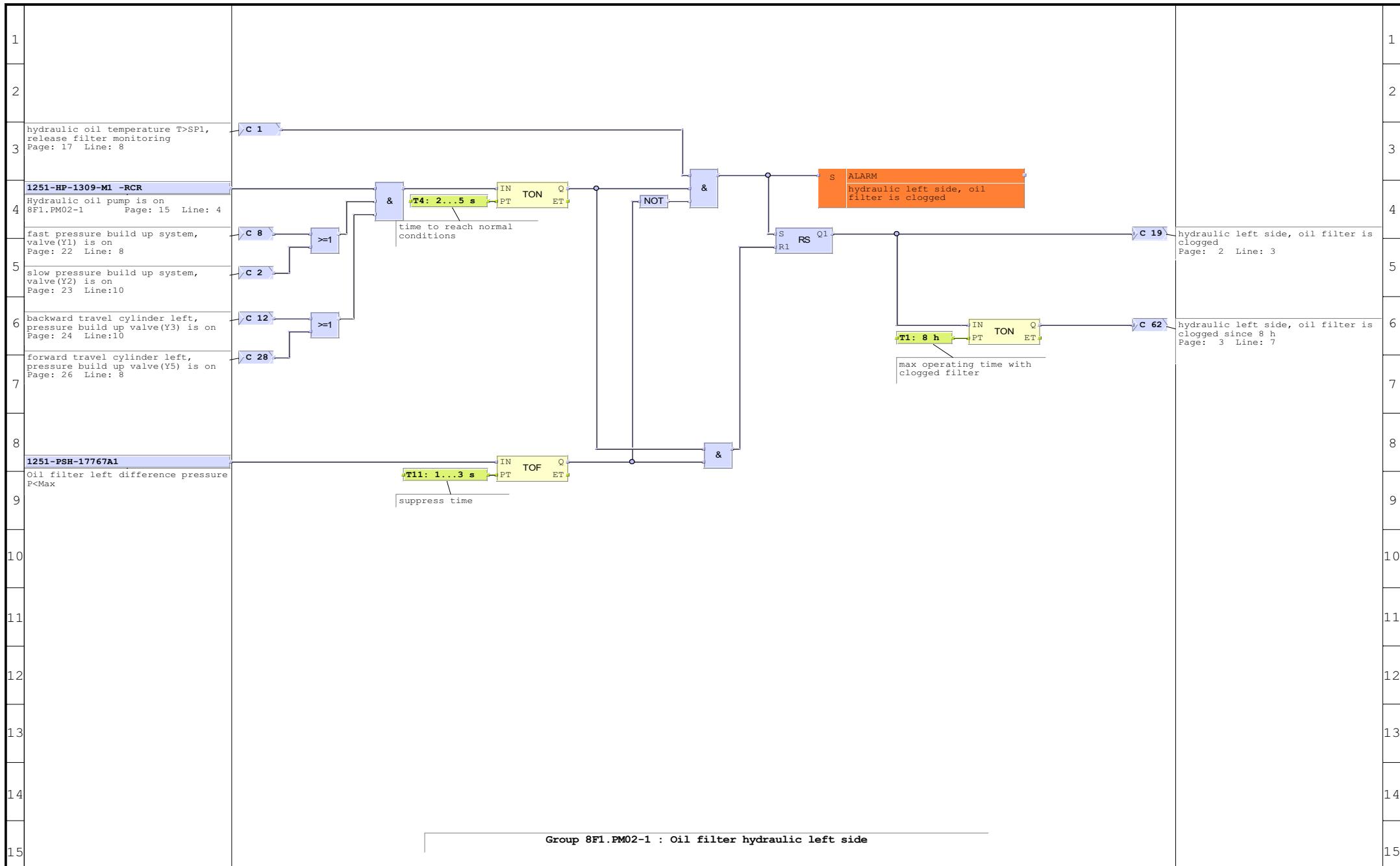


Group 8F1.PM02-1 : Hydraulic oil tank temperature

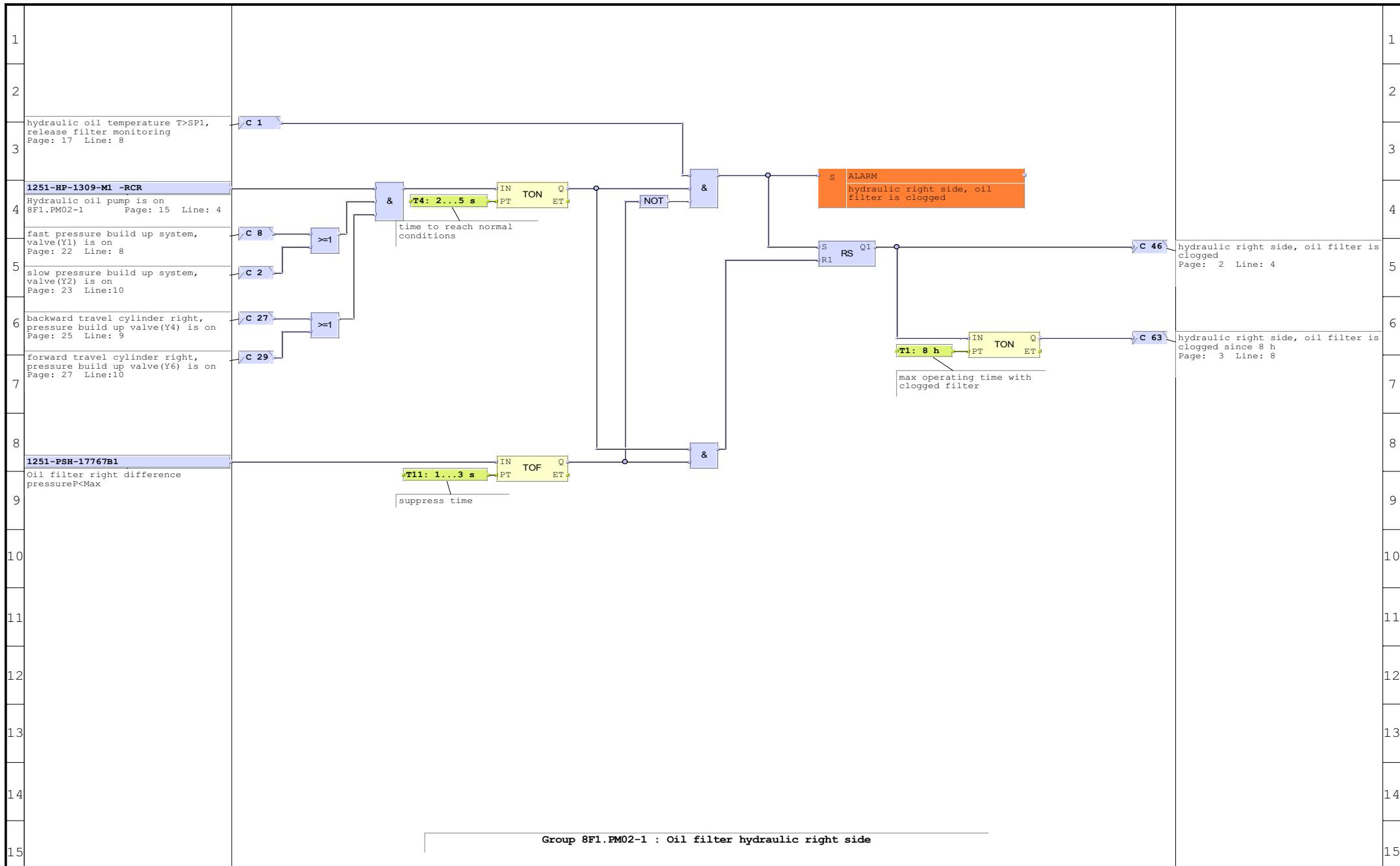
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Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	KXEO-01517-003346704



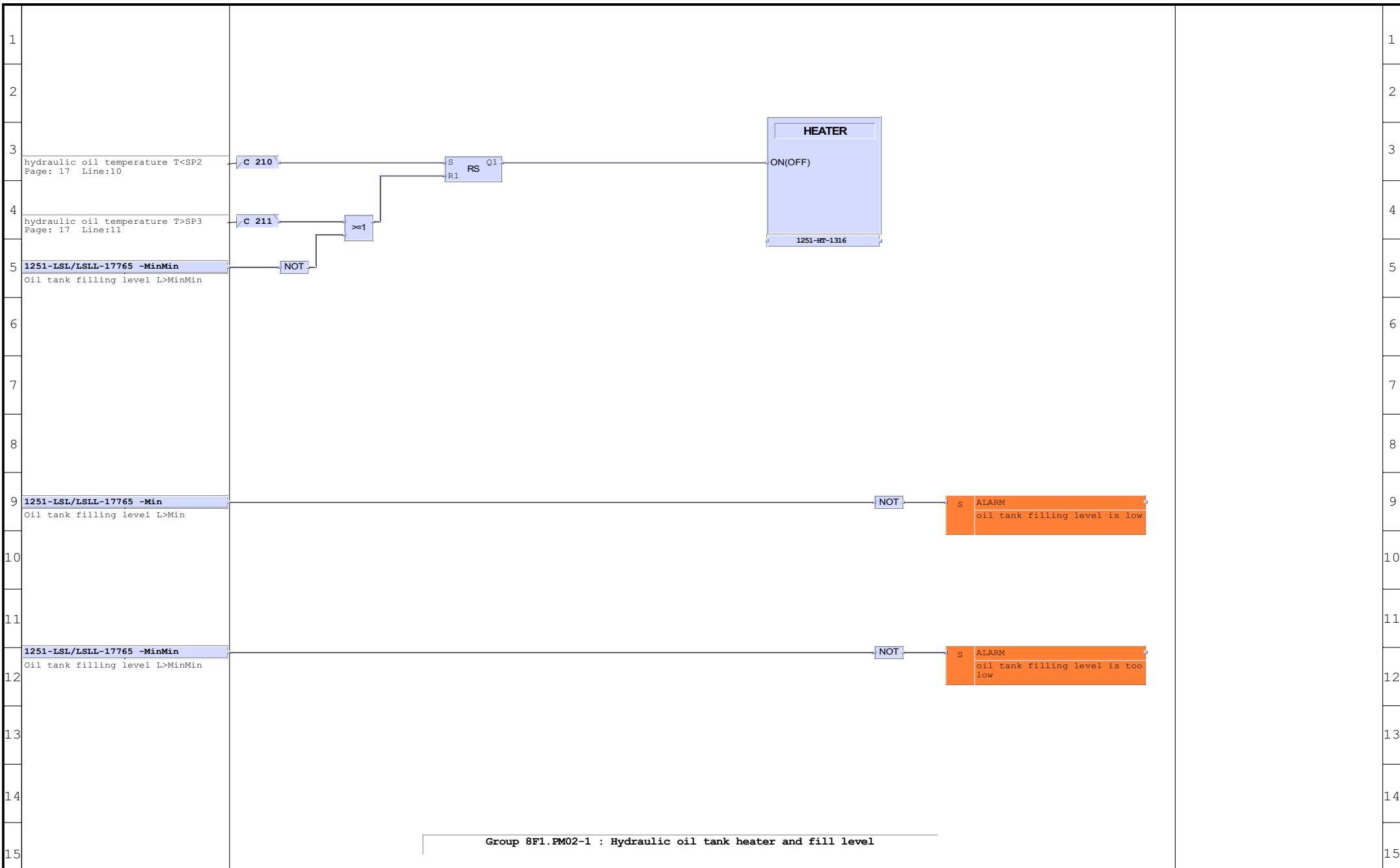
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			Drawn	PTD-AD-BWU	Project No: KXEO-01517			Sheet 84	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02-1	Page: 18
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	of 154	



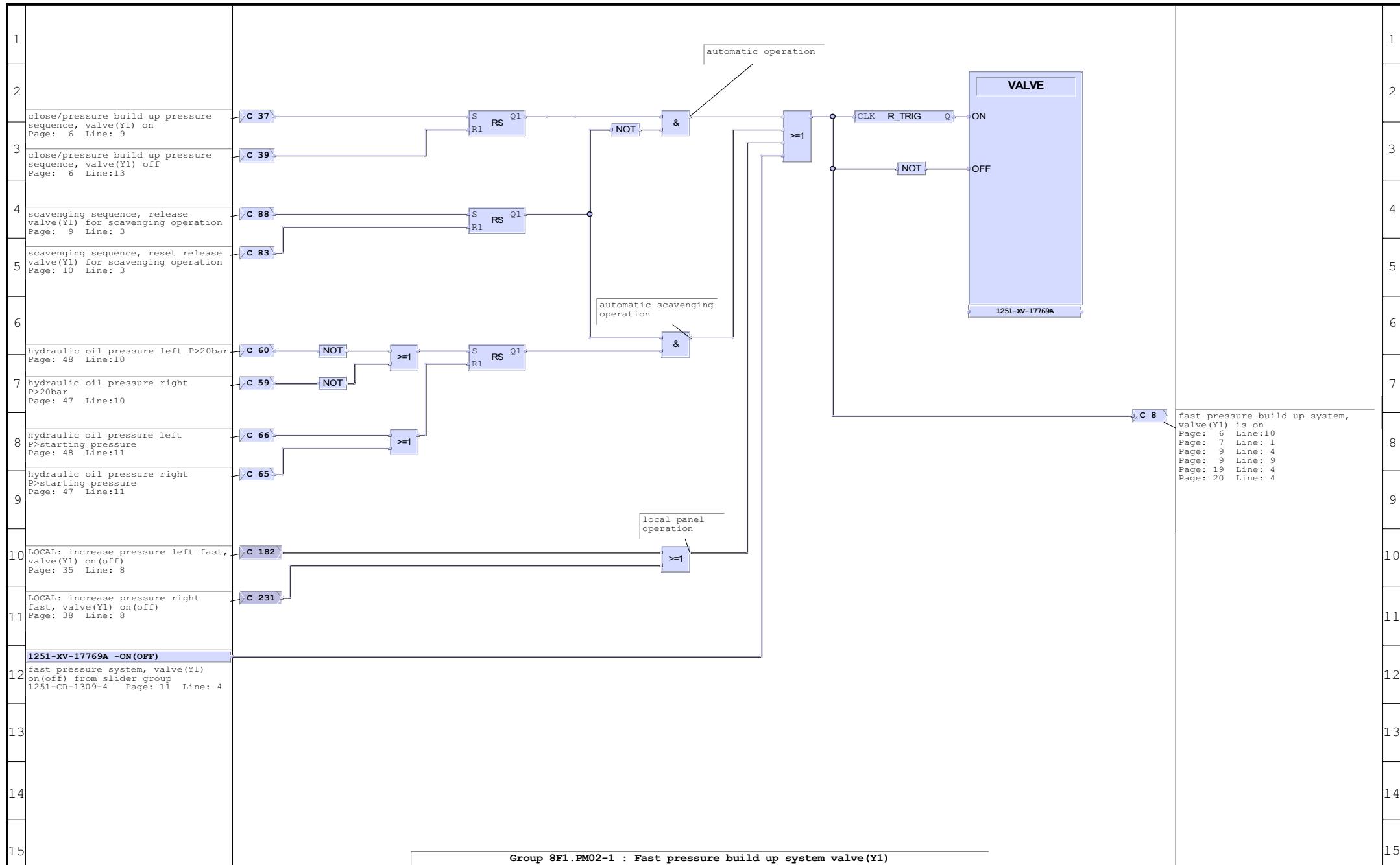
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				check	PTD-AD-RTG	Customer No:		8F1.PM02-1_Hydraulic	Drawing No.	Group:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	Page: 19
of	154					KXEO-01517-003346704	8F1.PM02-1			



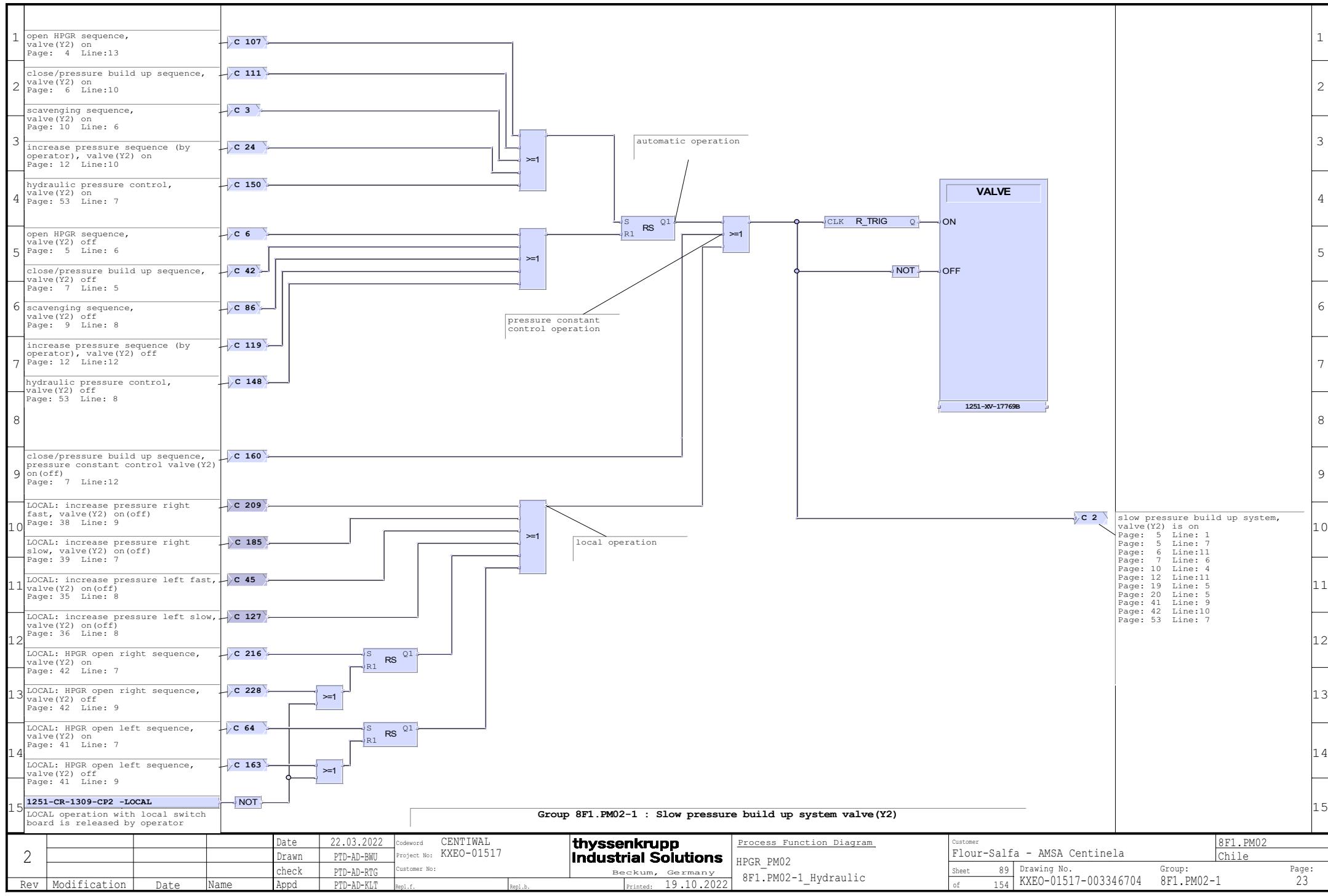
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				check	PTD-AD-RTG	Customer No:		8F1.PM02-1_Hydraulic	Drawing No.	Group:	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	KXEO-01517-003346704 8F1.PM02-1	Page: 20

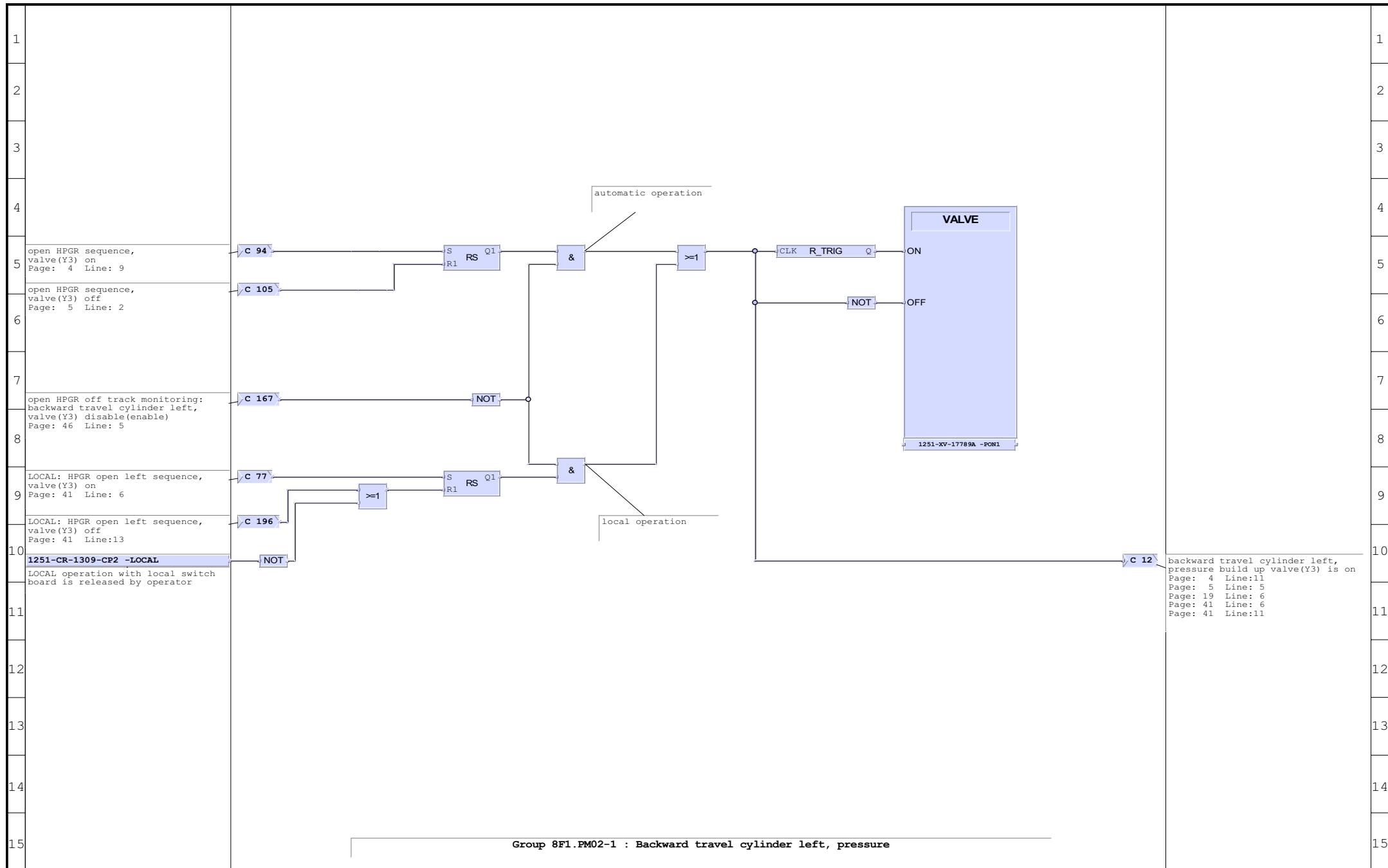


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			Drawn	PTD-AD-BWU	Project No: KXEO-01517			Sheet 87 of 154	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02-1	Page: 21
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022			

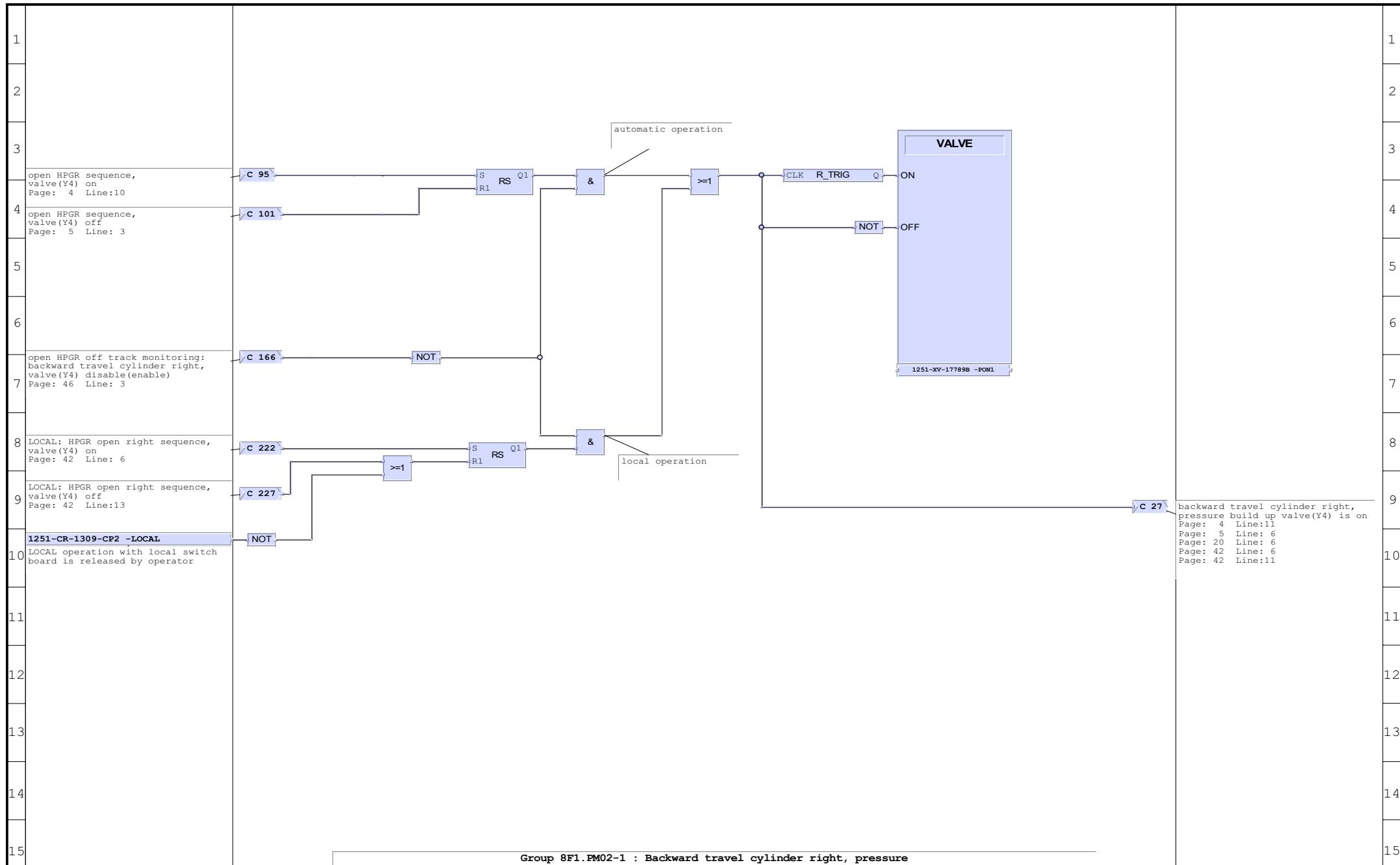


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				Appd	PTD-AD-KLT	Repl.f.		Printed: 19.10.2022	KXEO-01517-003346704	Page: 22
Rev	Modification	Date	Name			Repl.b.			of 154	

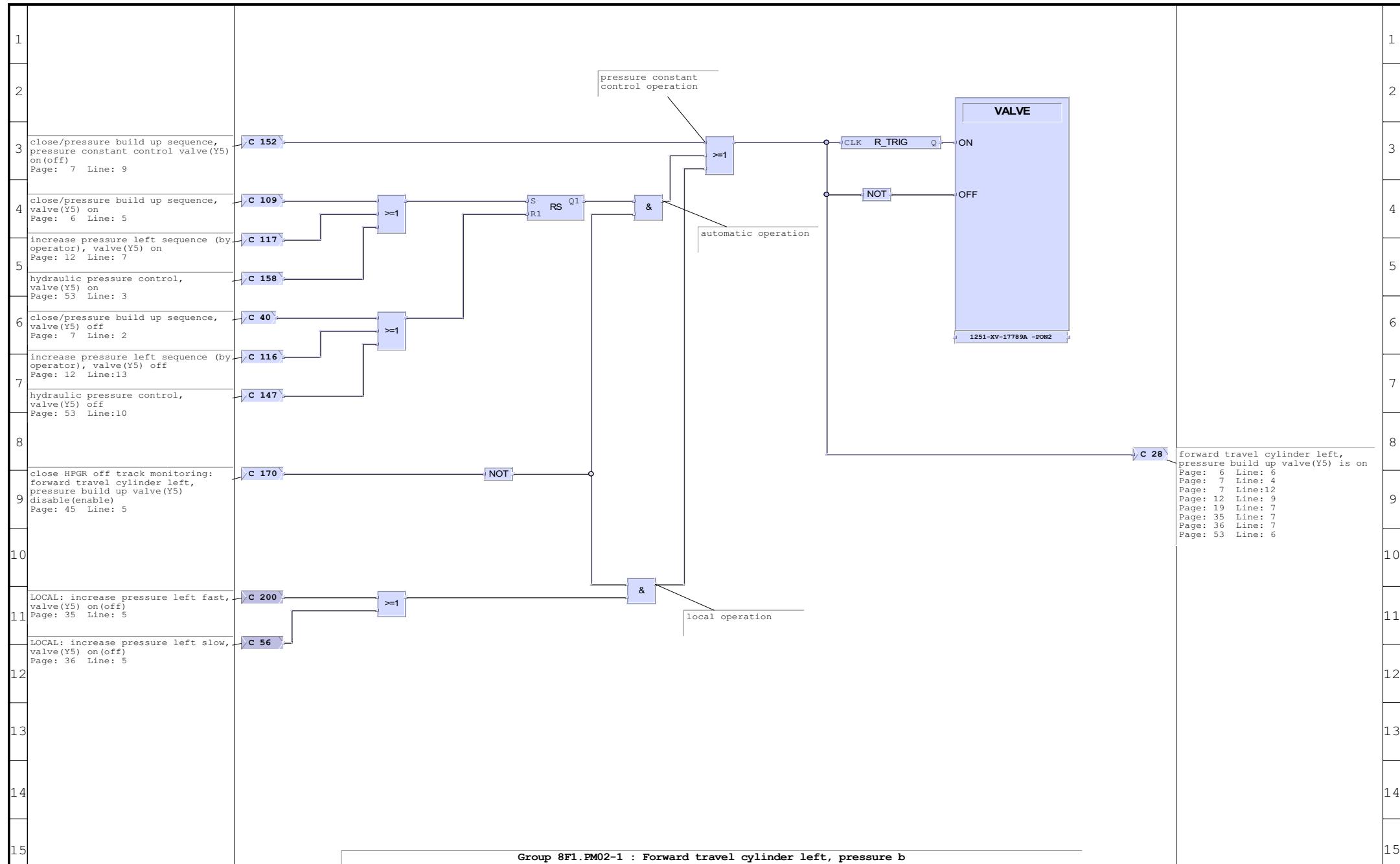




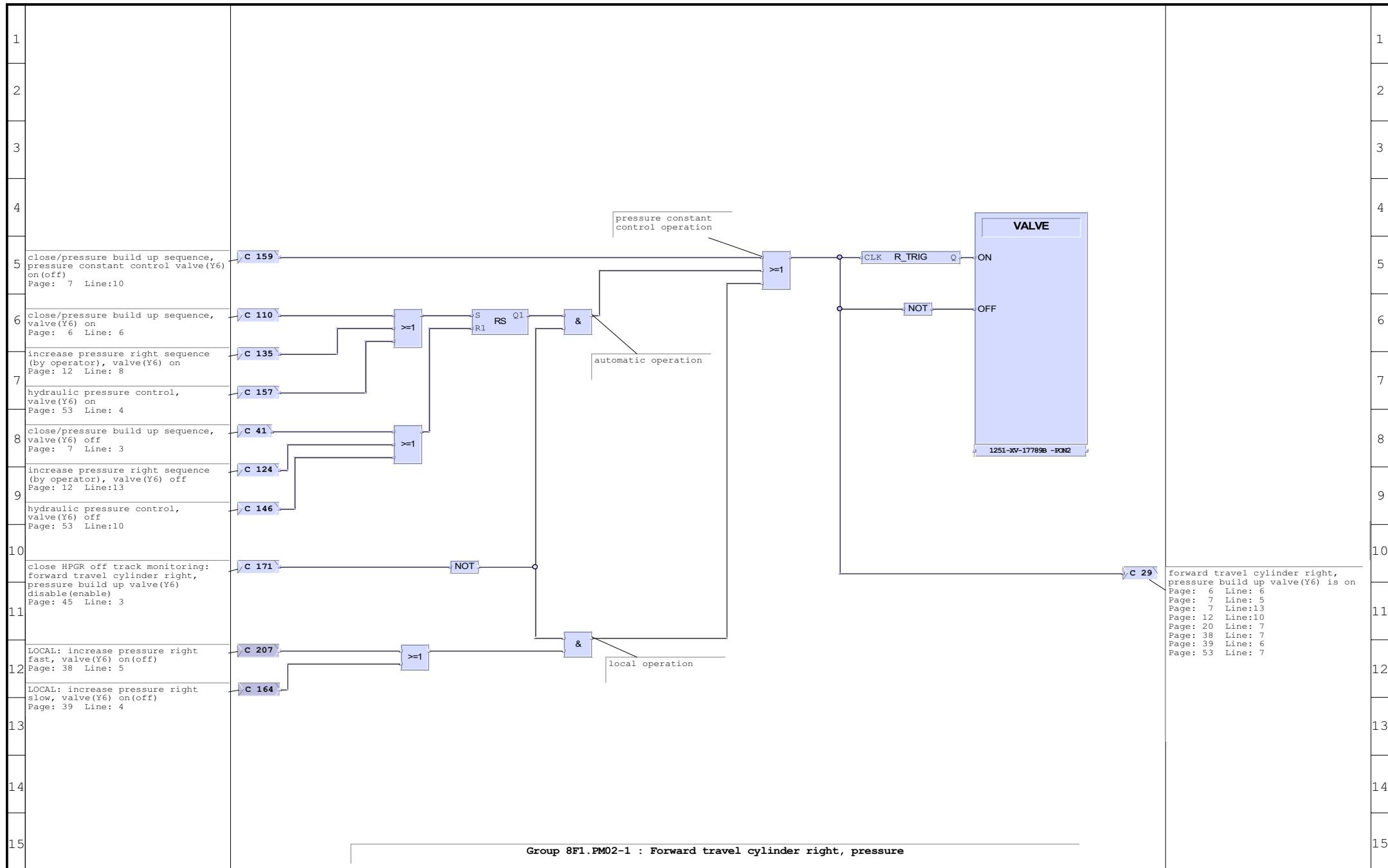
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Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Sheet 90 of 154	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02-1	Page: 24



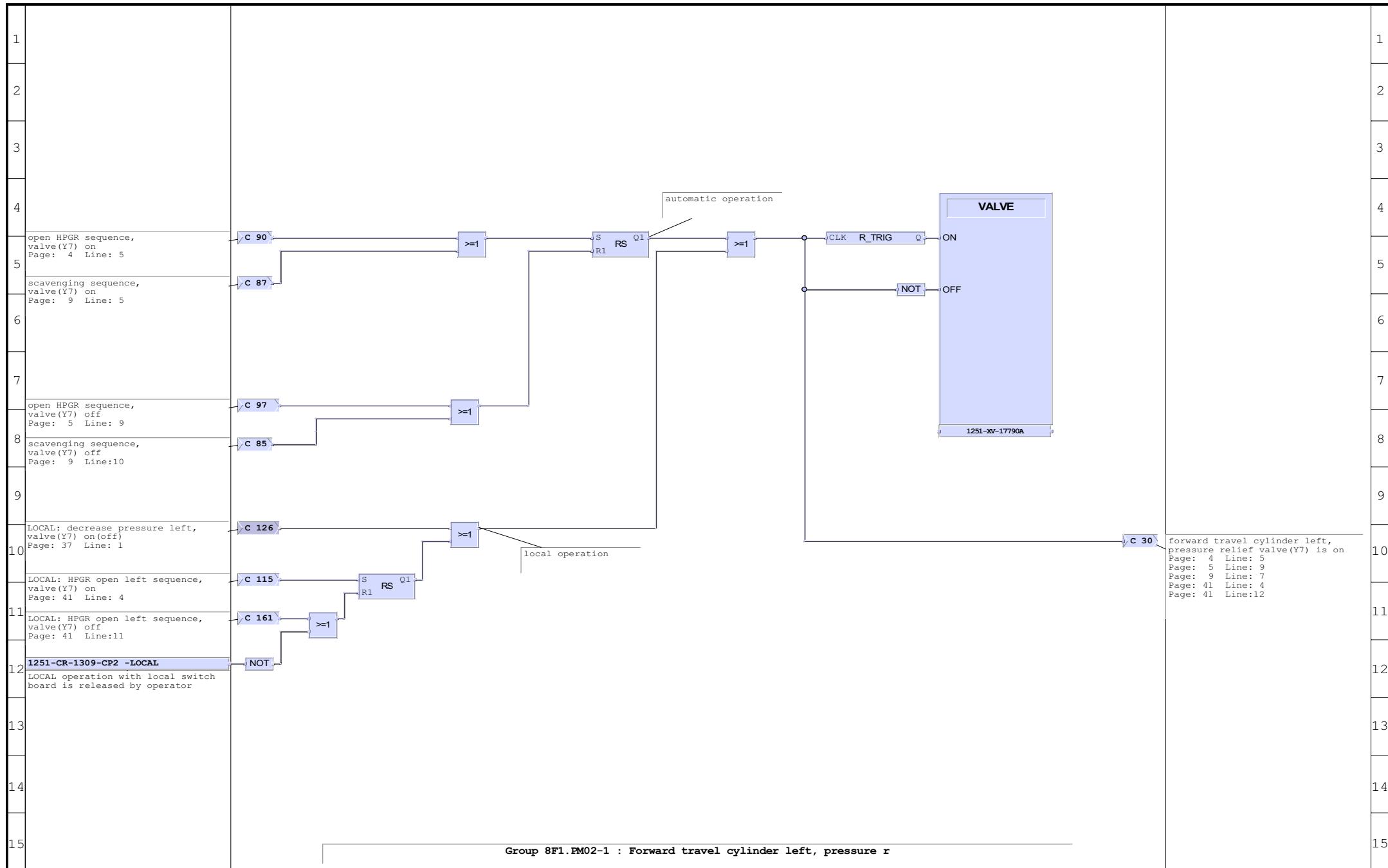
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				check	PTD-AD-RTG	Customer No:		8F1.PM02-1_Hydraulic	Drawing No.	Group:	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	KXEO-01517-003346704 8F1.PM02-1	Page: 25



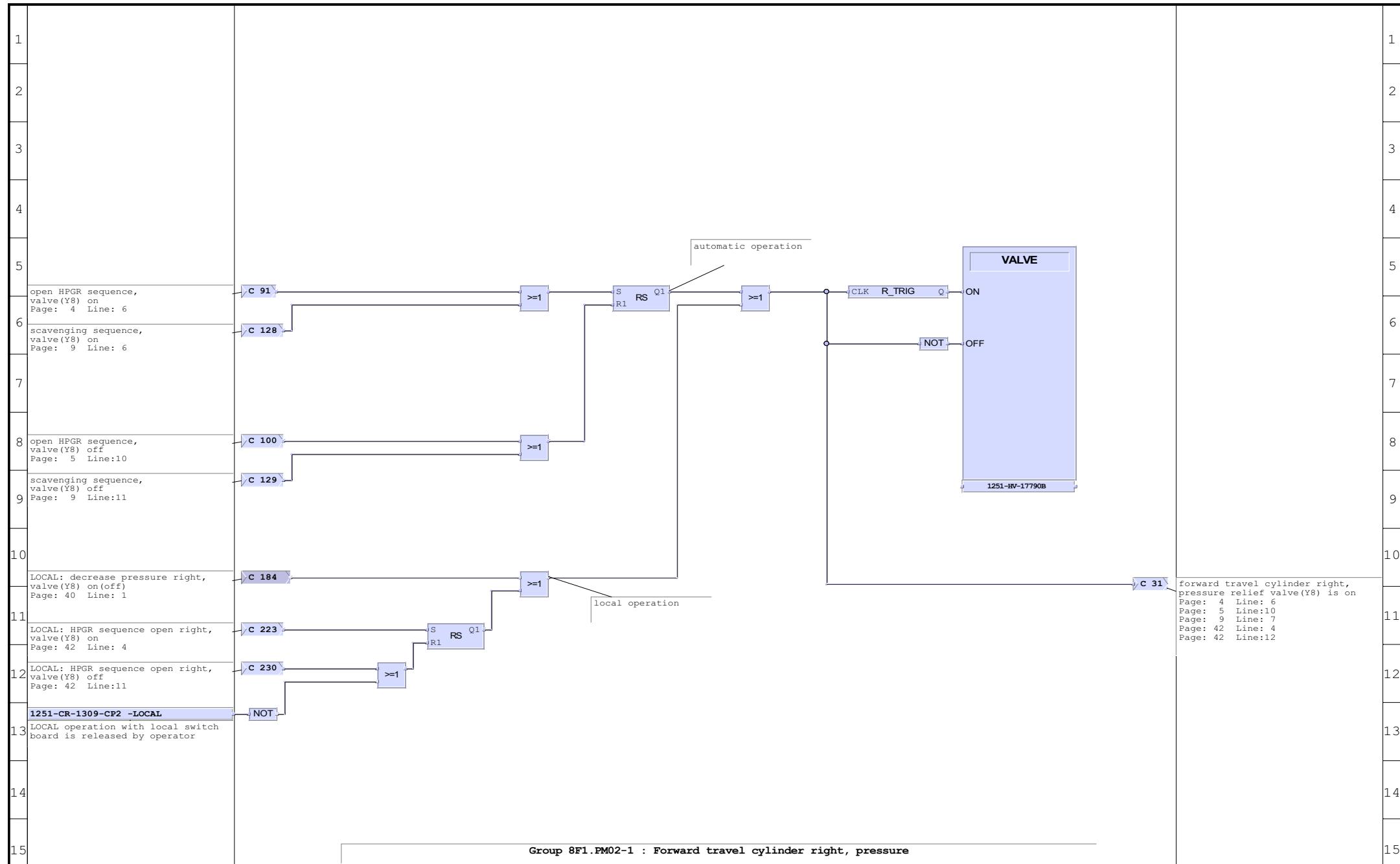
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				check	PTD-AD-RTG	Customer No:		8F1.PM02-1_Hydraulic	Drawing No.	Group:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	Page: 26
of	154					KXEO-01517-003346704	8F1.PM02-1			



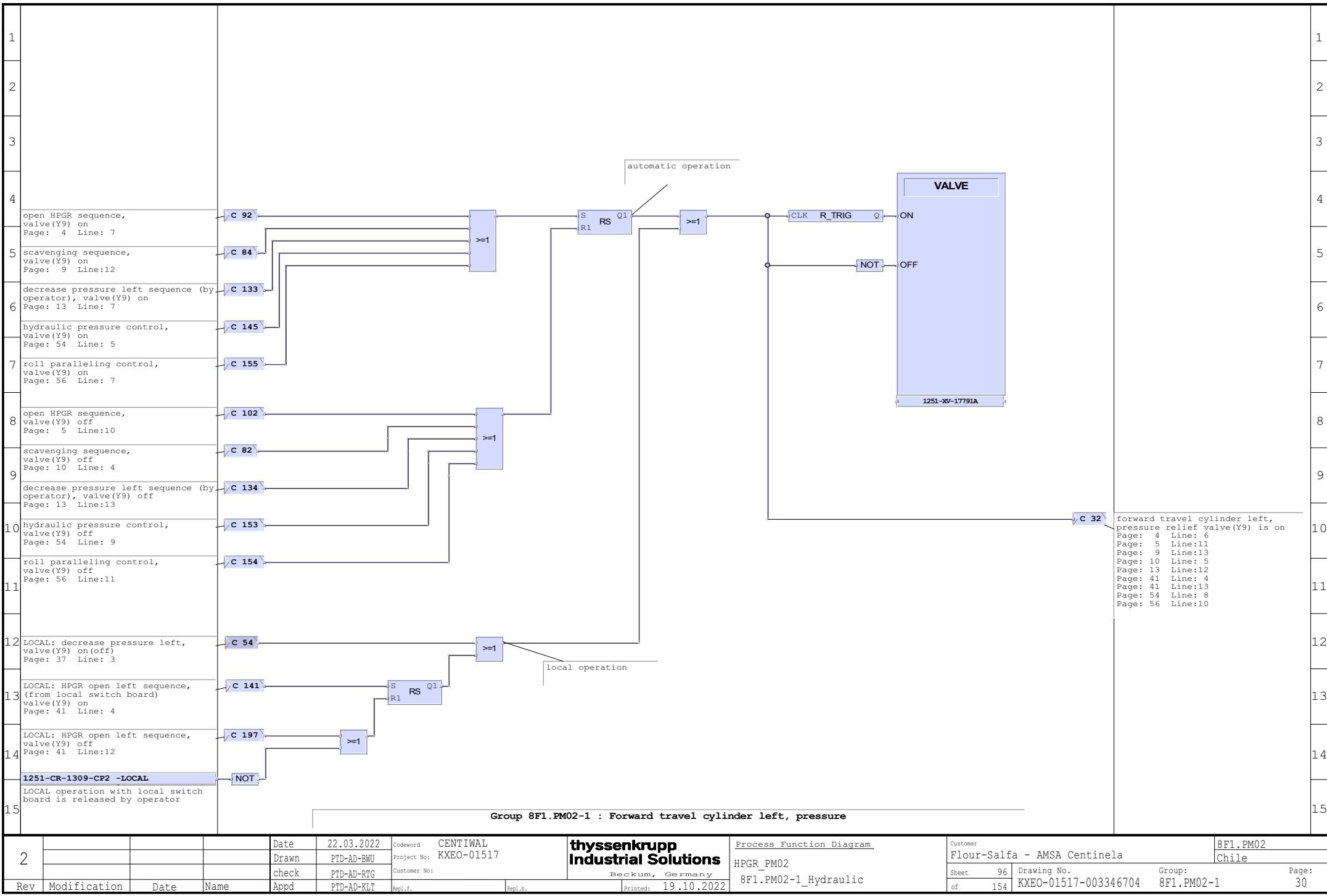
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				check	PTD-AD-RTG	Customer No:			Sheet 93 Drawing No.	Page:
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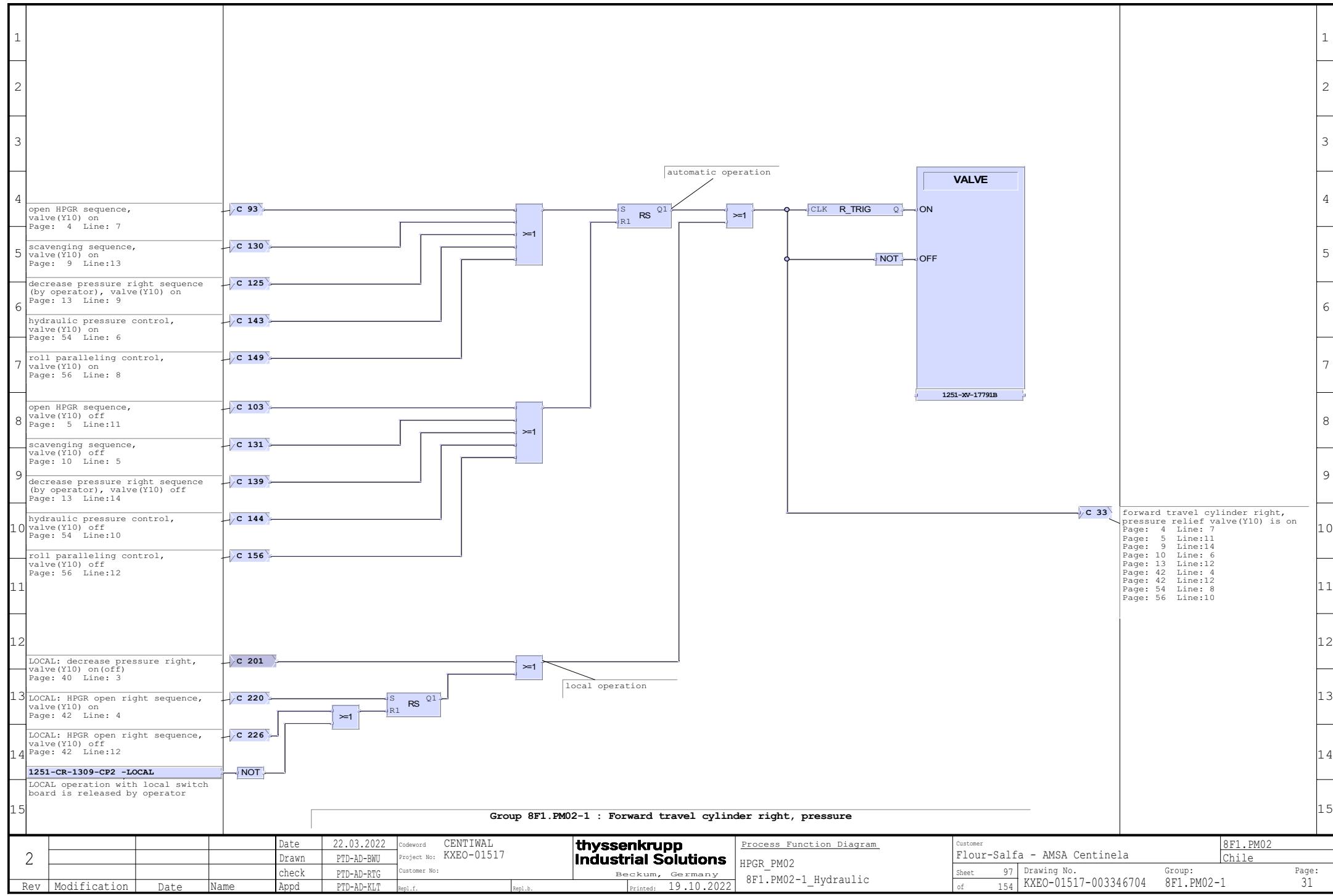


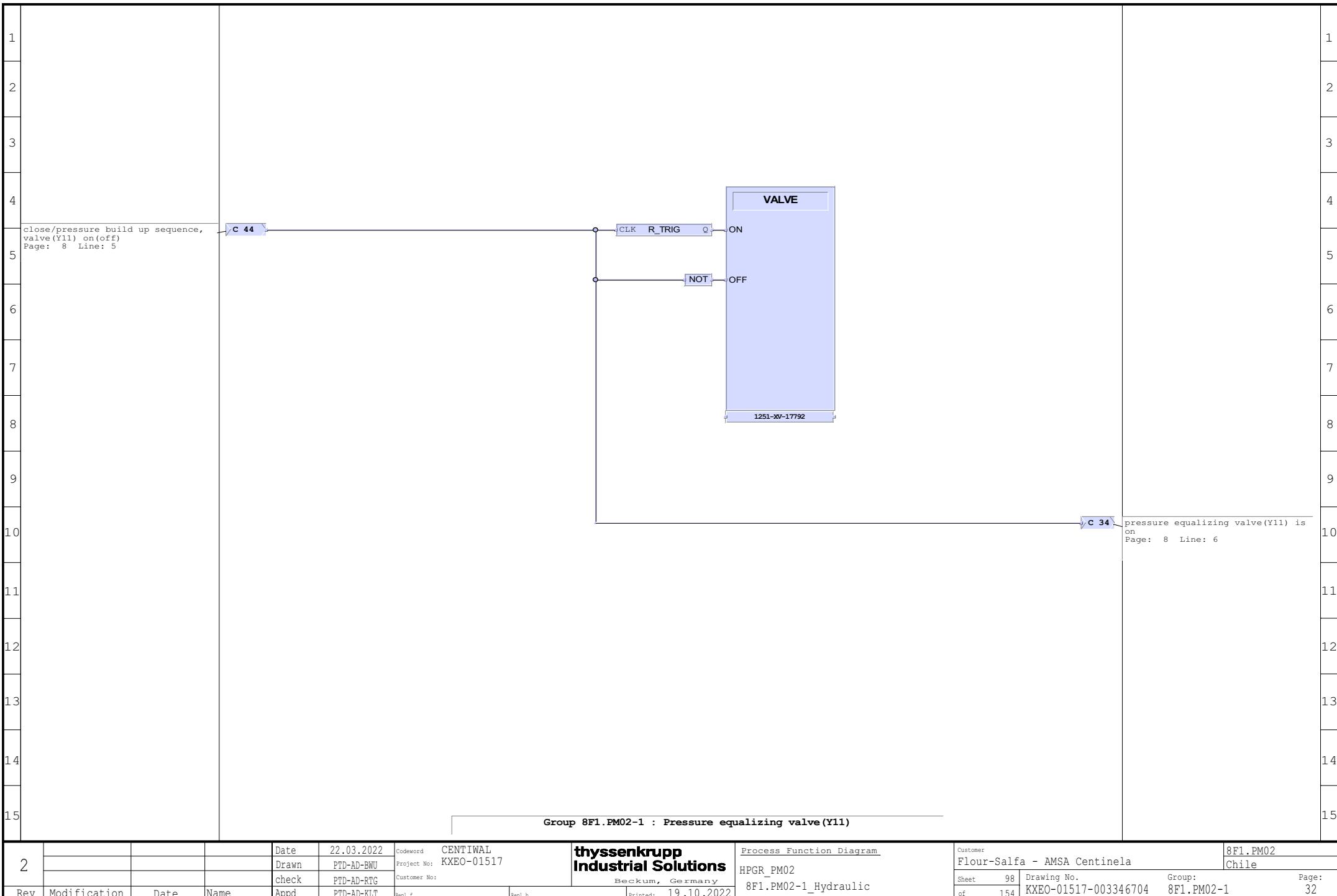
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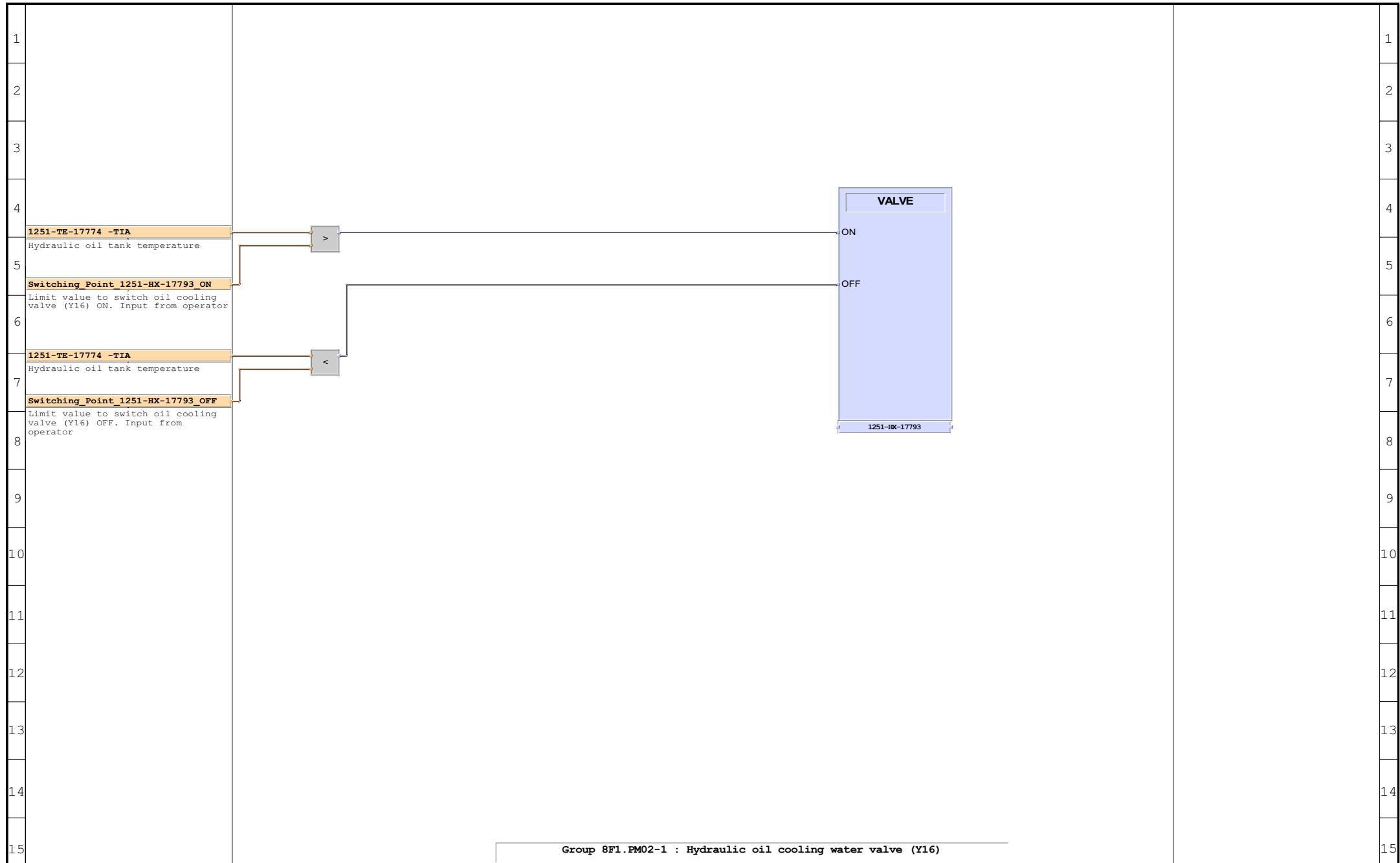


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				check	PTD-AD-RTG	Customer No:			Drawing No.	Group:
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Rev	Modification	Date	Name			Repl.b.			of 154	

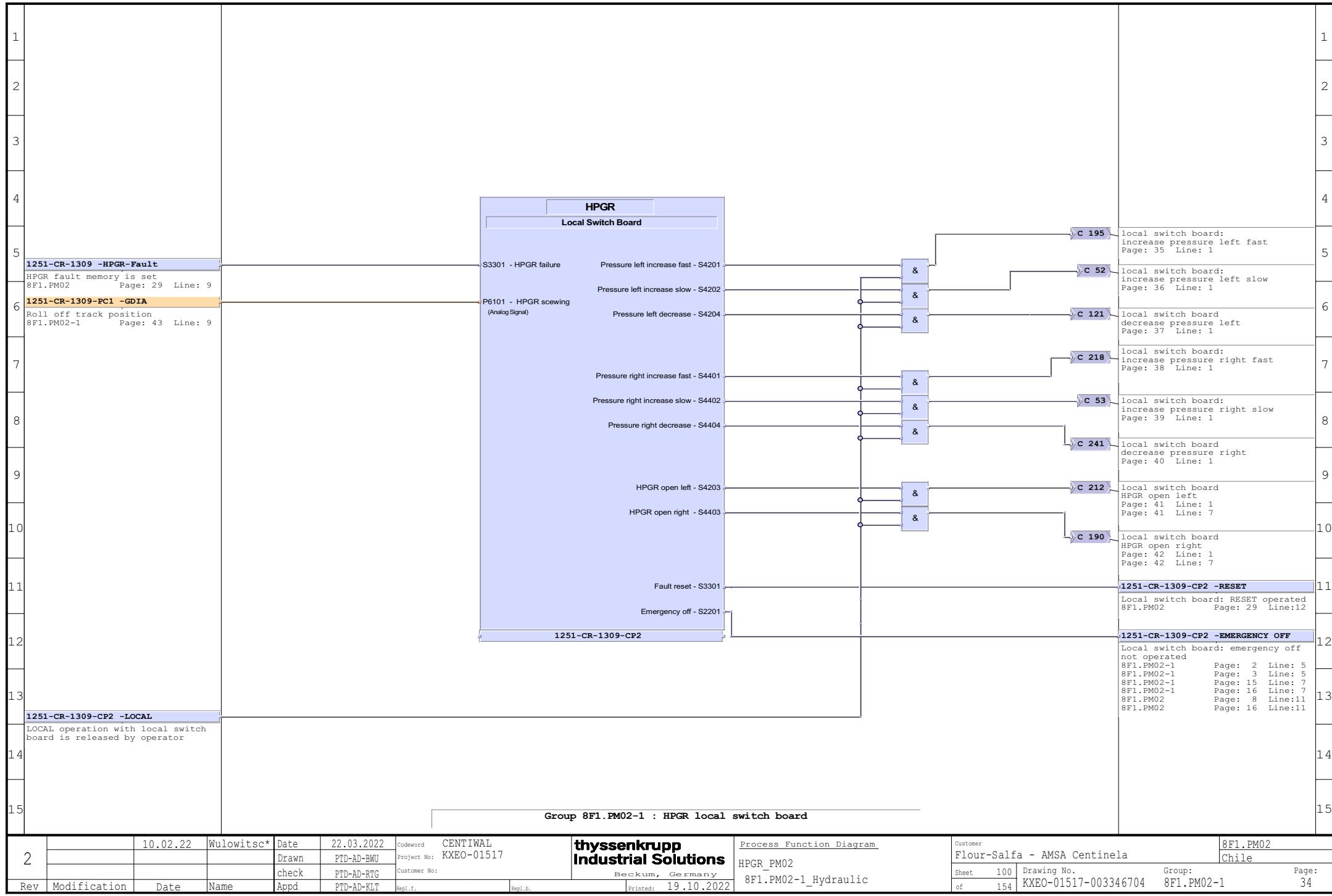


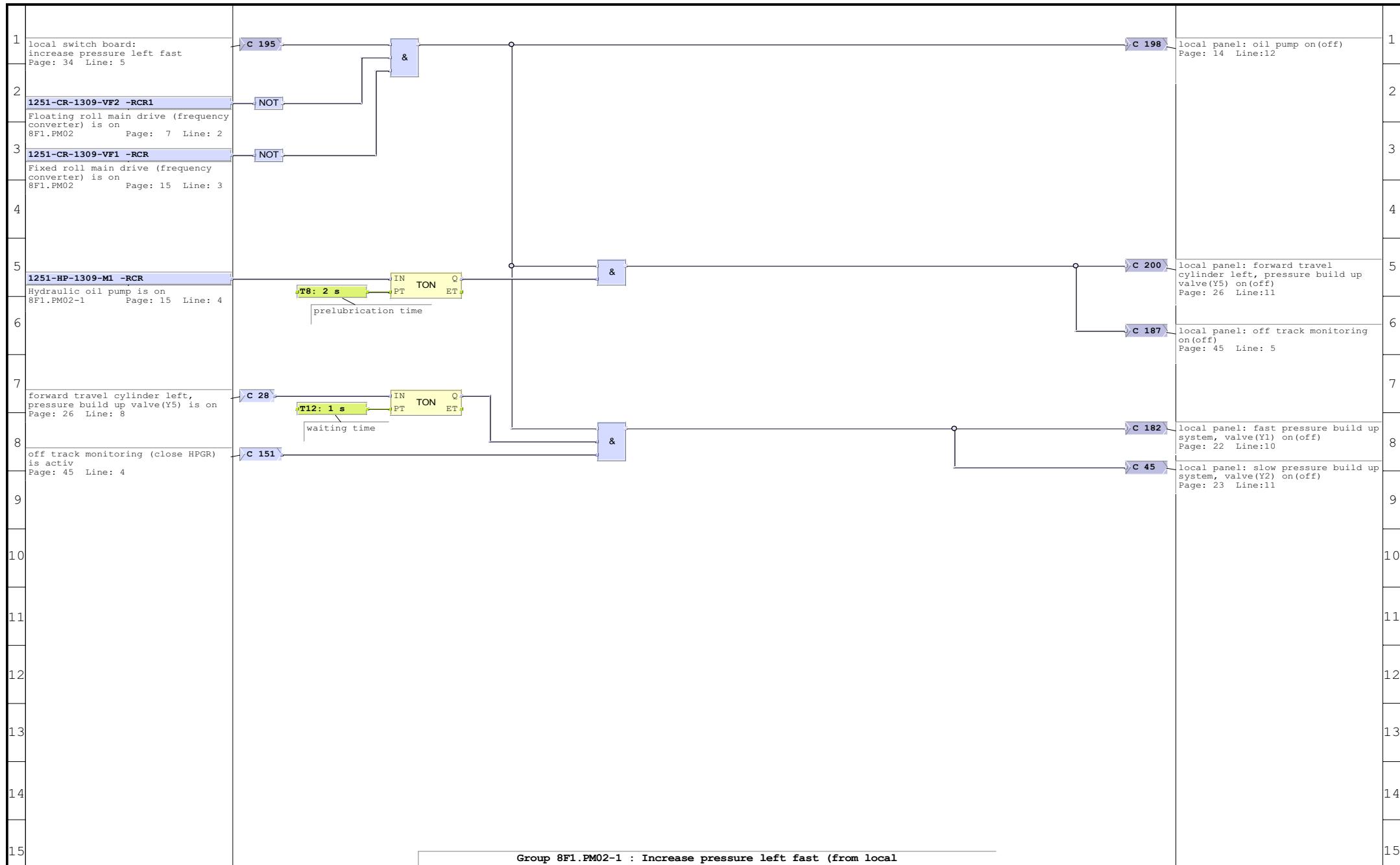




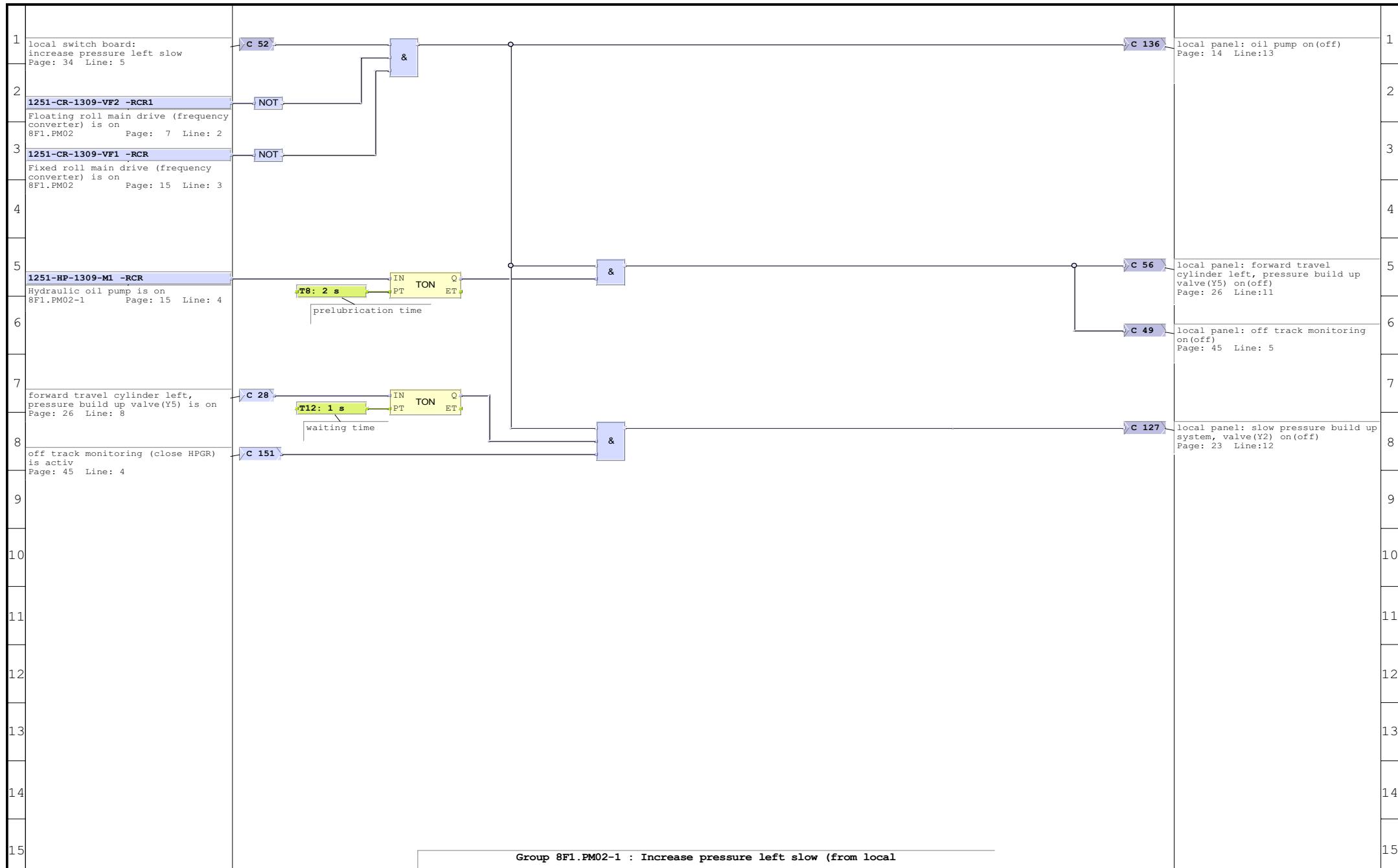


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	check	PTD-AD-RTG	Customer No:			8F1.PM02-1_Hydraulic	Sheet 99 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-1 Page: 33
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022



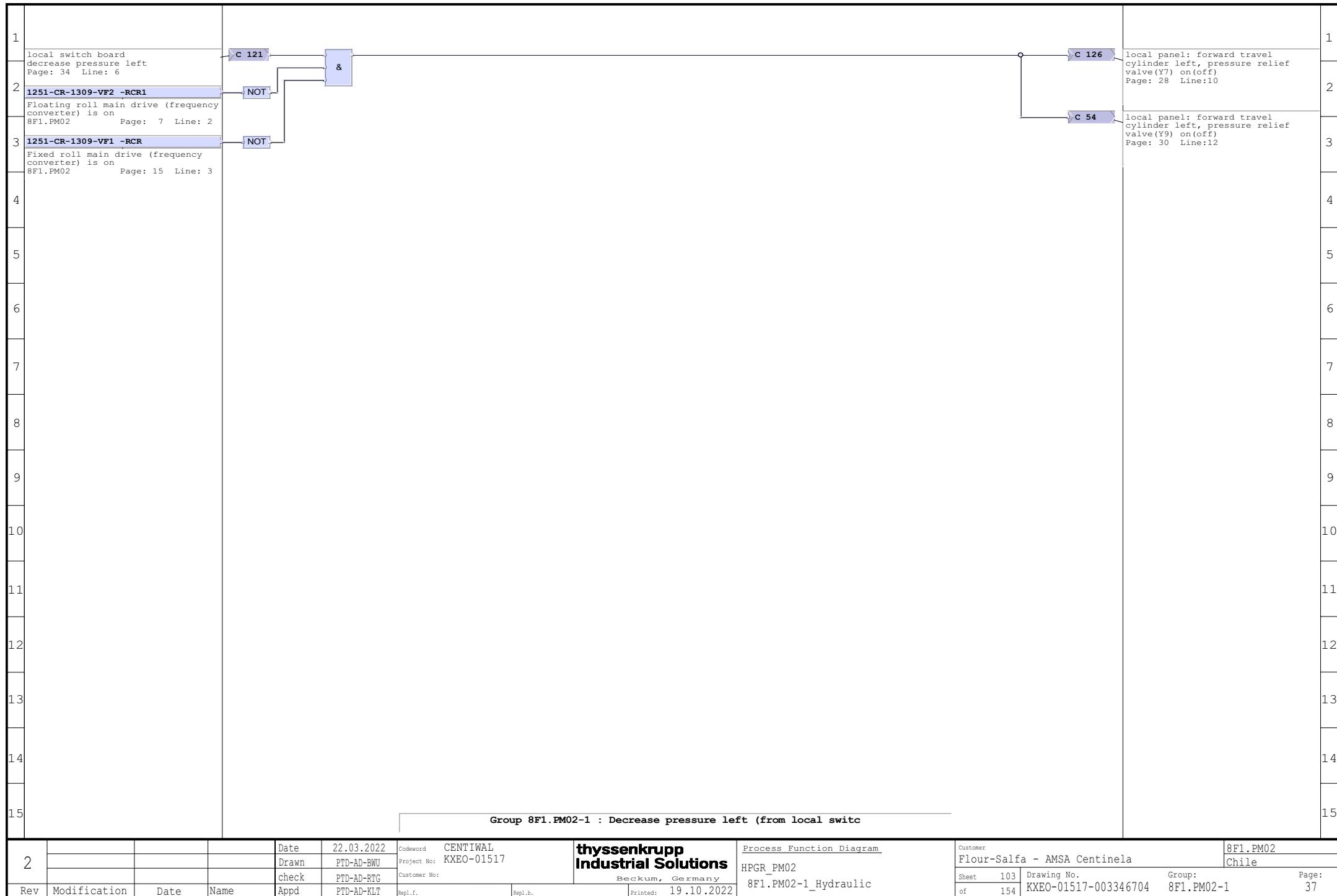


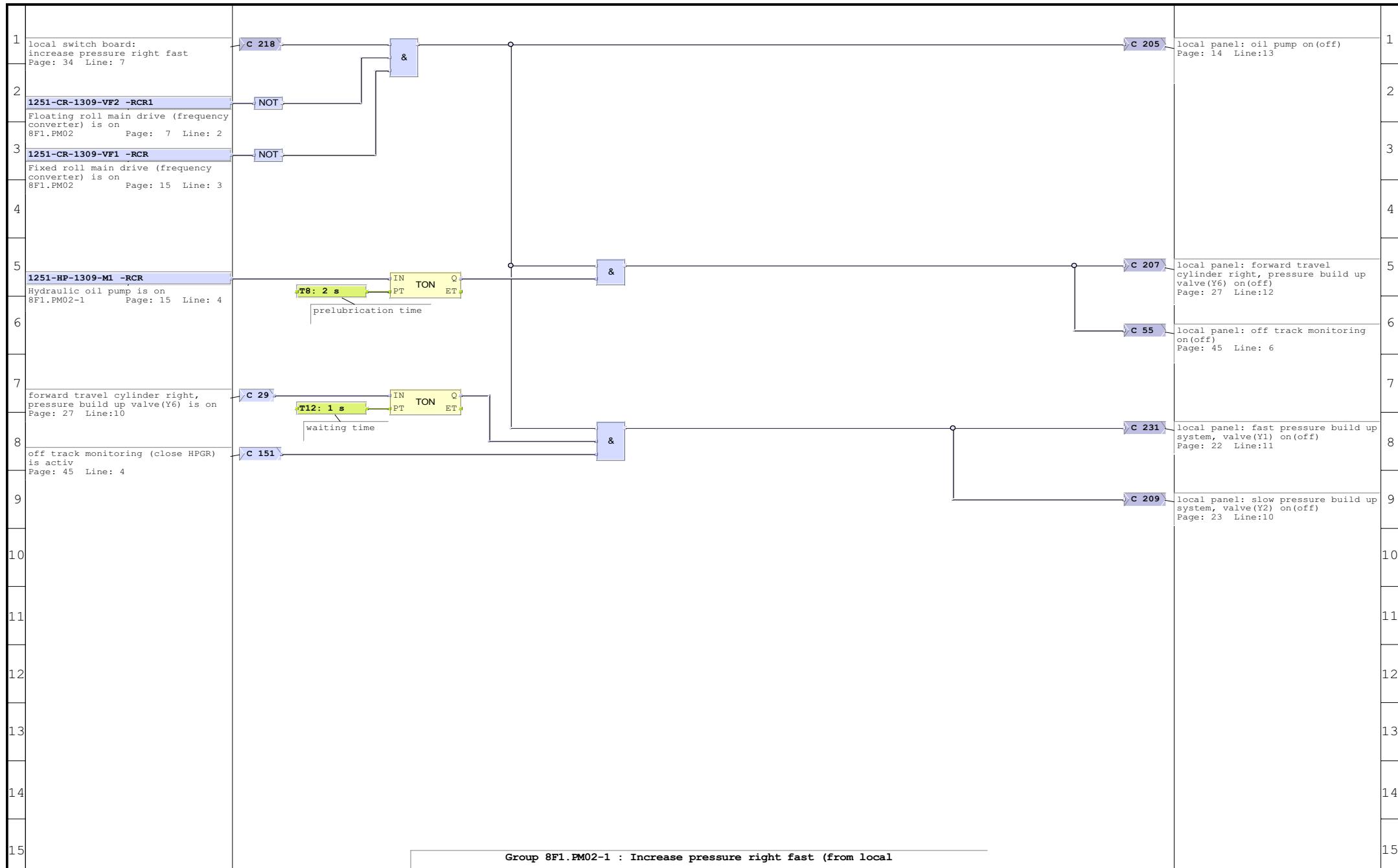
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				check	PTD-AD-RTG	Customer No:			Sheet 101 Drawing No.	Group: Page:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154 KXEO-01517-003346704	8F1.PM02-1 35



Group 8F1.PM02-1 : Increase pressure left slow (from local

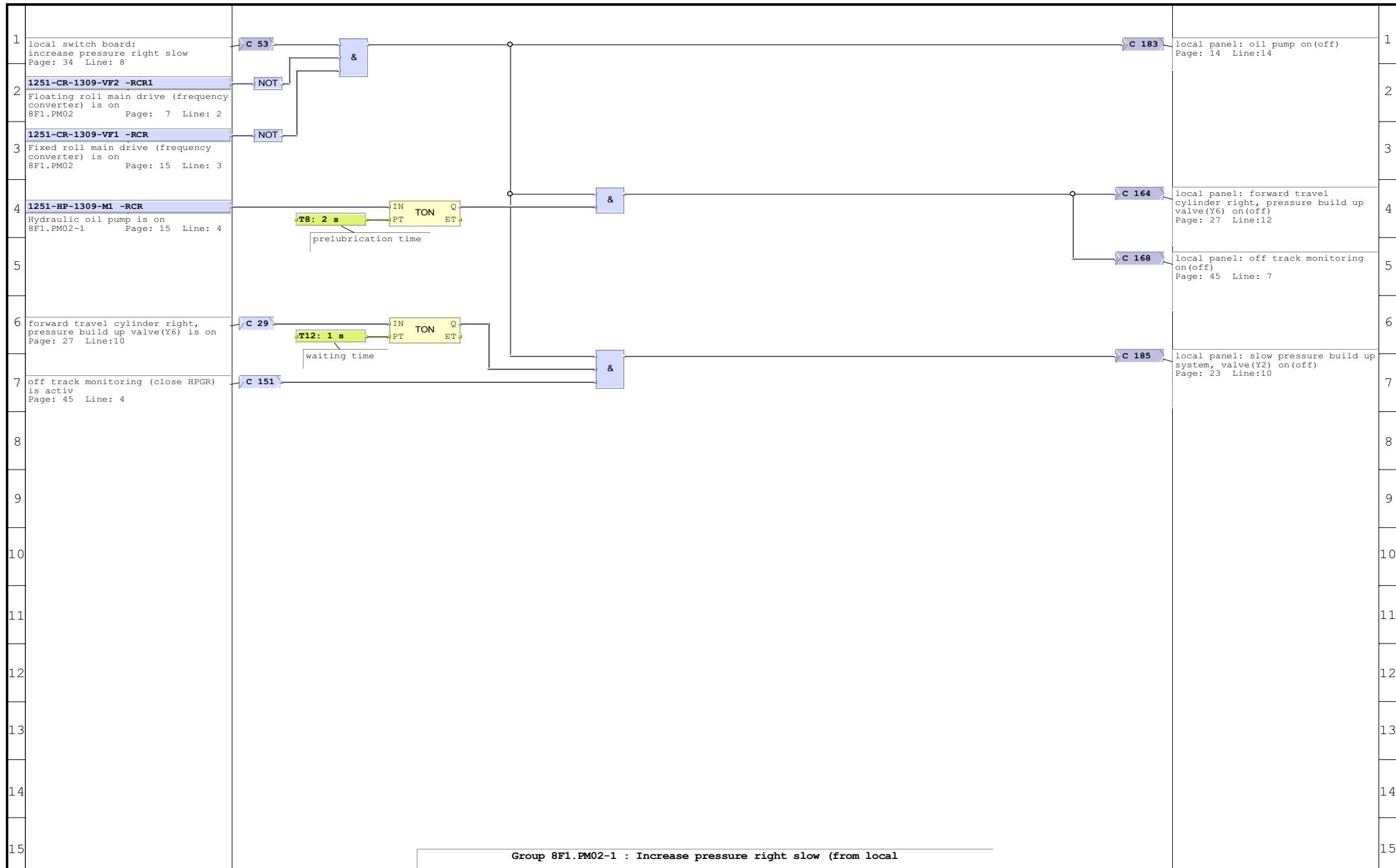
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			Drawn	PTD-AD-BWU	Customer No:			Drawing No.			Chile
			check	PTD-AD-RTG	Repl.f.			Sheet 102 of 154	Group: 8F1.PM02-1	Page: 36	KXEO-01517-003346704
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.b.	Printed: 19.10.2022				





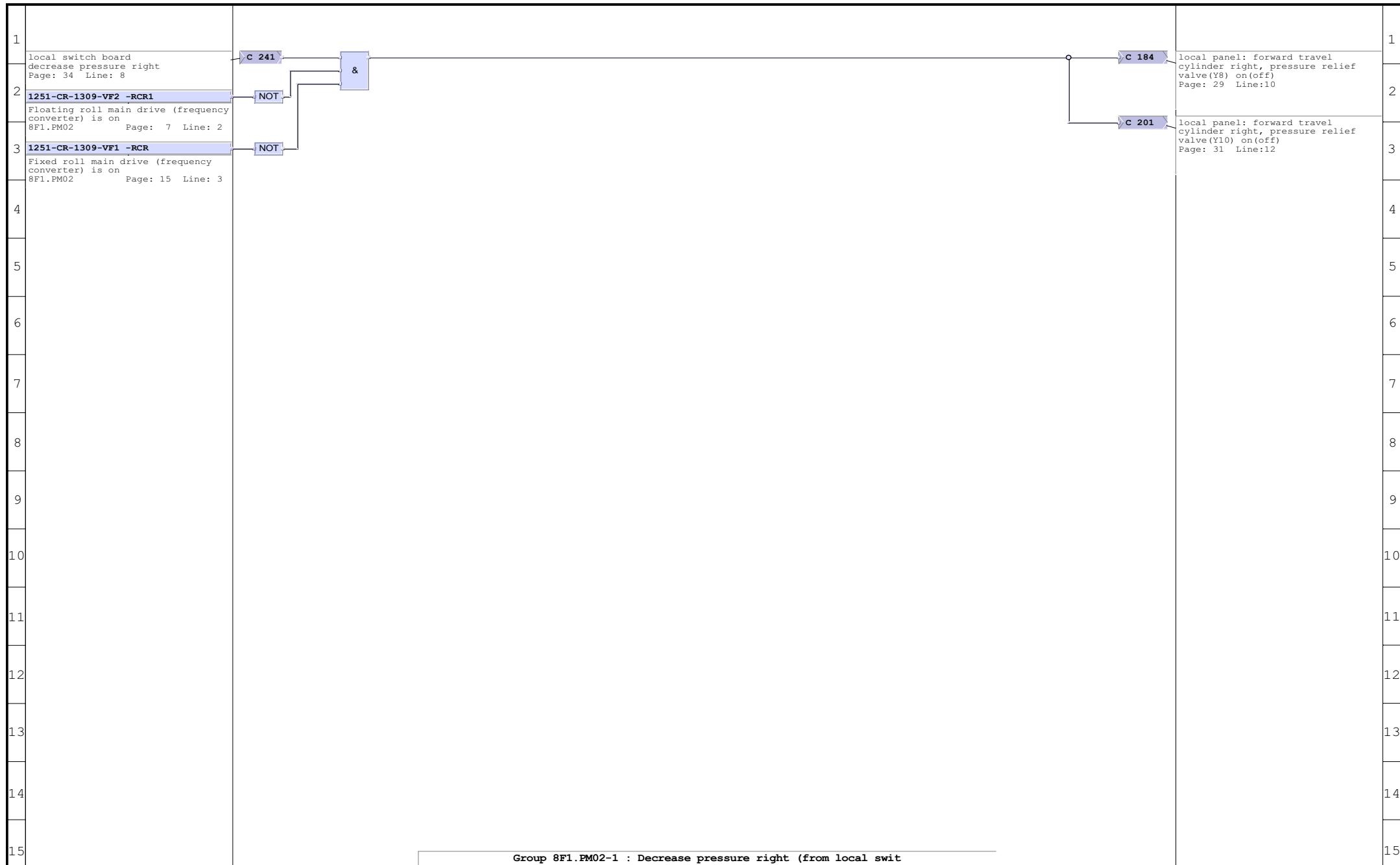
Group 8F1.PM02-1 : Increase pressure right fast (from local

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			Drawn	PTD-AD-BWU	Customer No:			Sheet 104 Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-1			Chile Page: 38
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022			



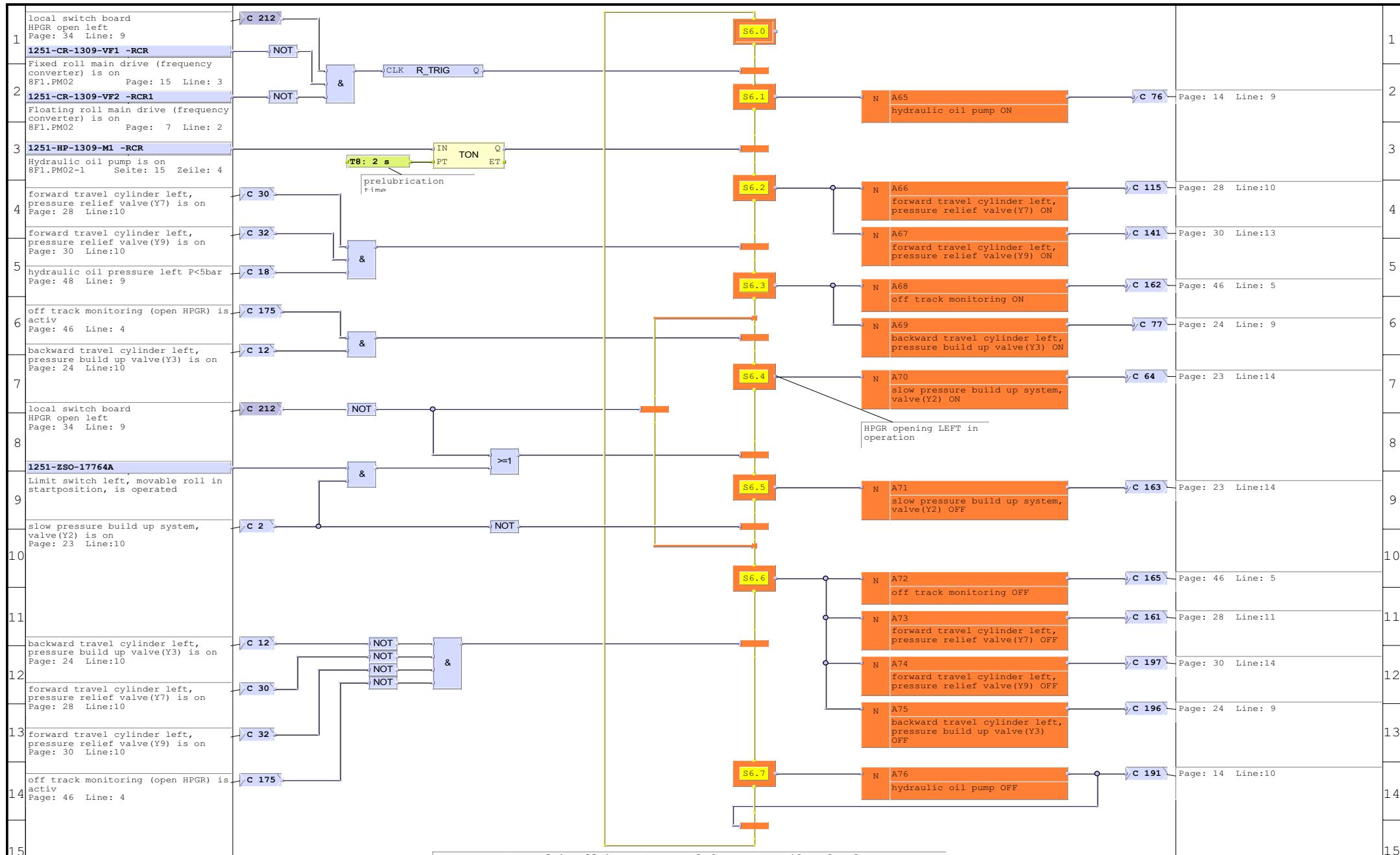
Group 8F1.PM02-1 : Increase pressure right slow (from local)

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			Drawn	PTD-AD-BNU	Project No: KXEO-01517			Chile		
			check	PTD-AD-RTG	Customer No:					
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	Page: 39



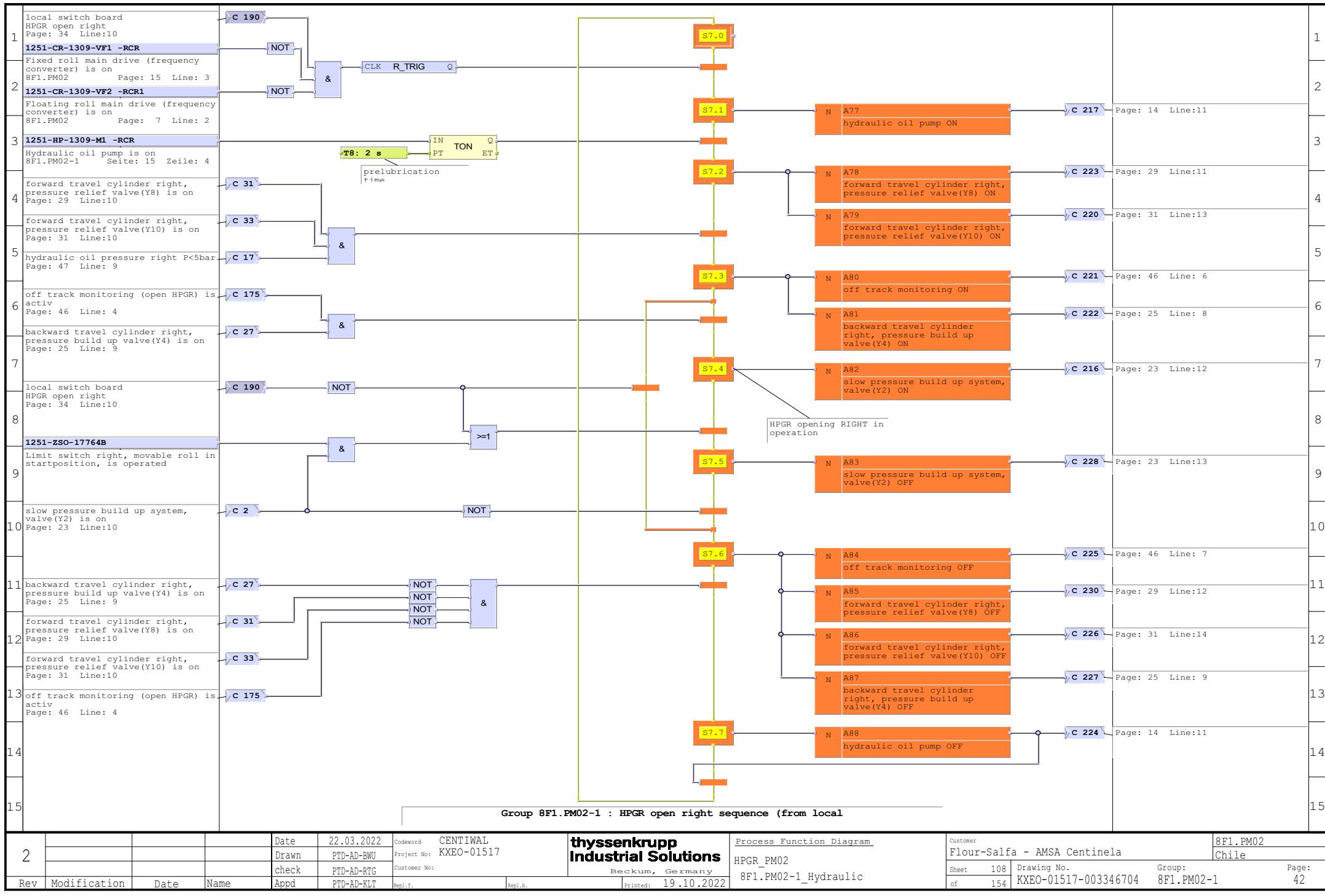
Group 8F1.PM02-1 : Decrease pressure right (from local swit

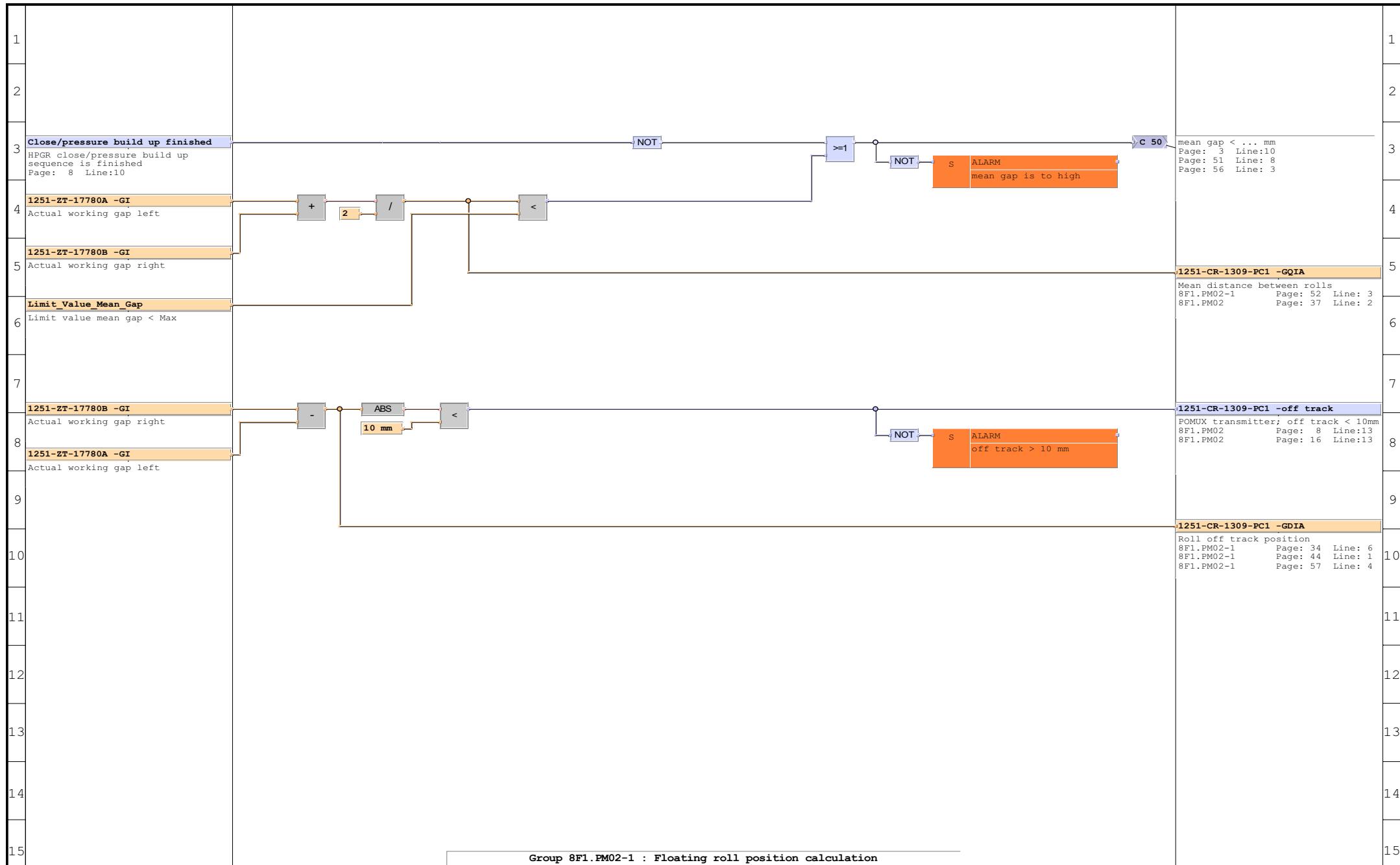
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				Drawn	PTD-AD-BWU	Project No: KXEO-01517			Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:			Sheet 106 Drawing No.	Group: 8F1.PM02-1
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	Page: 40



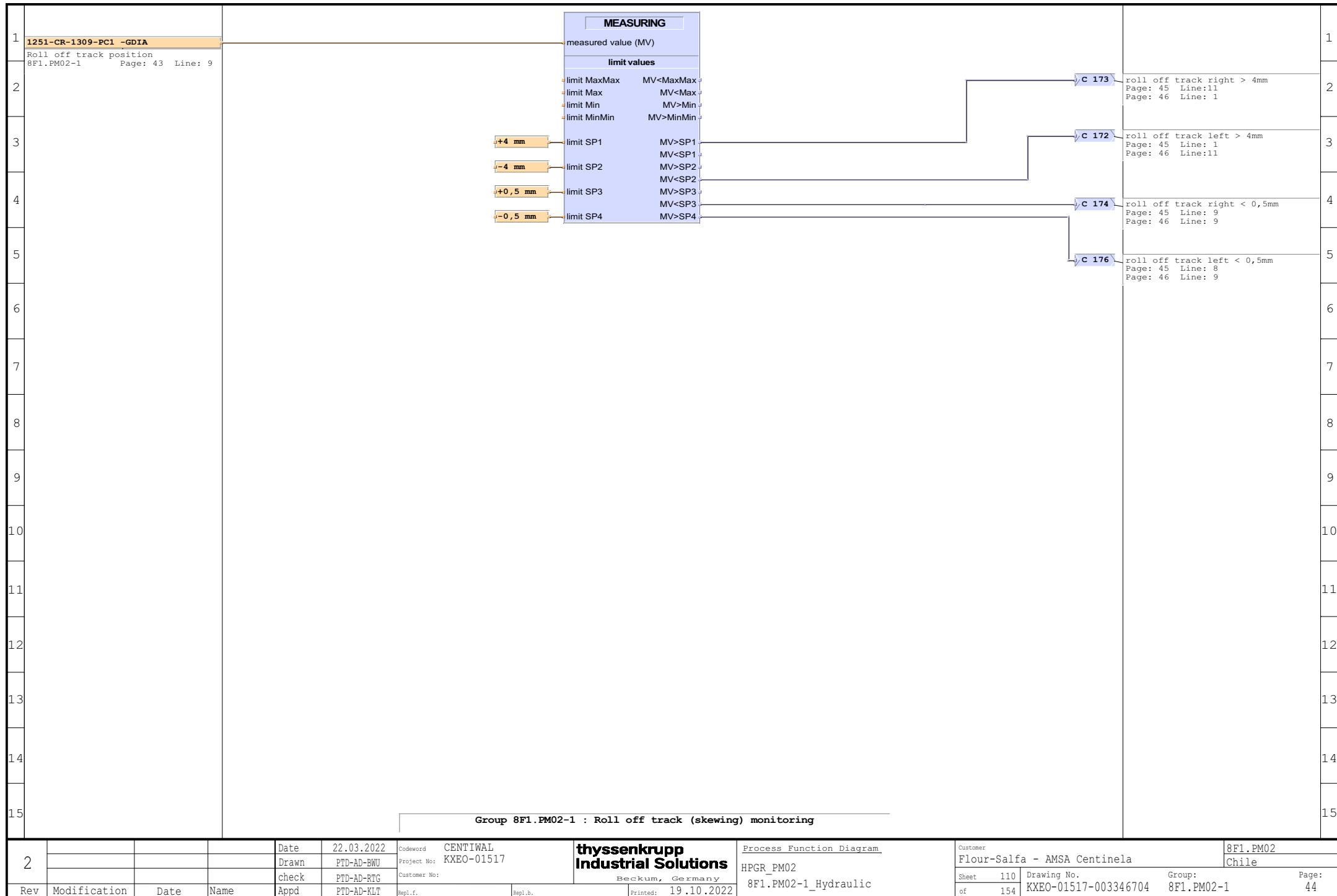
Group 8F1.PM02-1 : HPGR open left sequence (from local s)

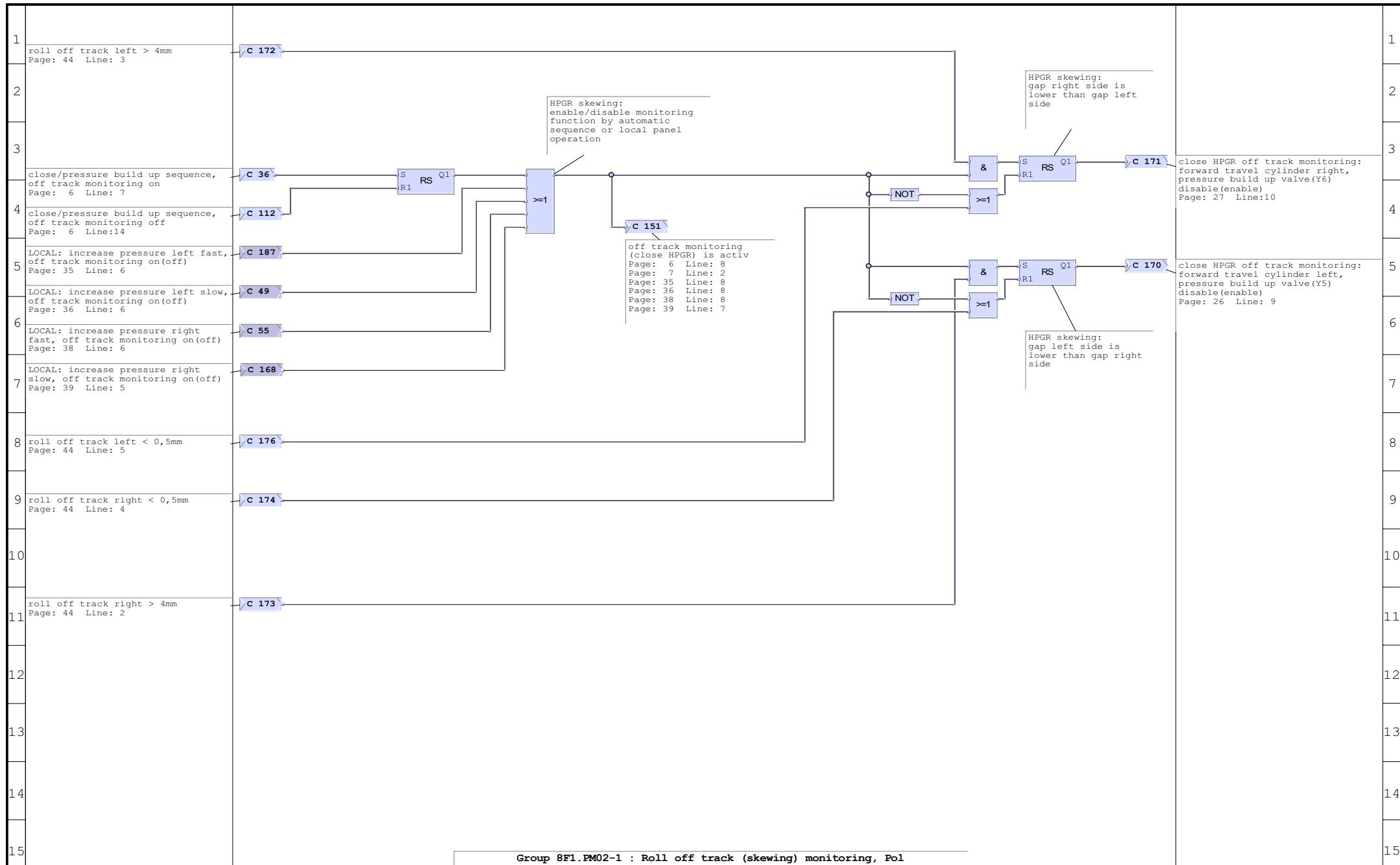
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				Drawn	PTD-AD-BWU	Project No.	KXEO-01517				Sheet	107	Drawing No.	KXEO-01517-003346704
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Customer No.	Repl.f.	Repl.b.	Printed:	19.10.2022	of	154	8F1.PM02-1	Page: 41





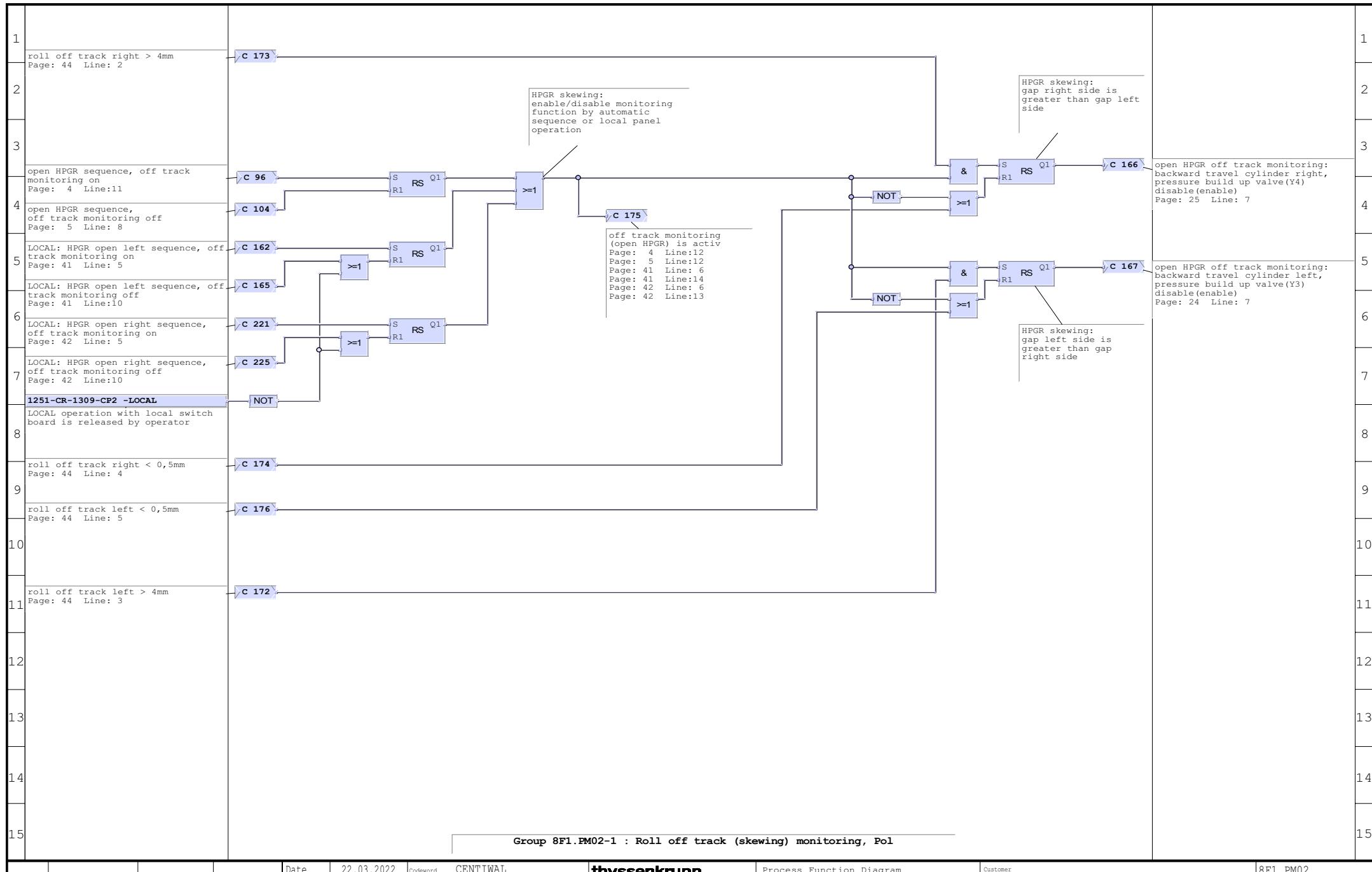
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				Drawn	PTD-AD-BWU	Project No: KXEO-01517			Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:			Drawing No.	Page:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	KXEO-01517-003346704	8F1.PM02-1
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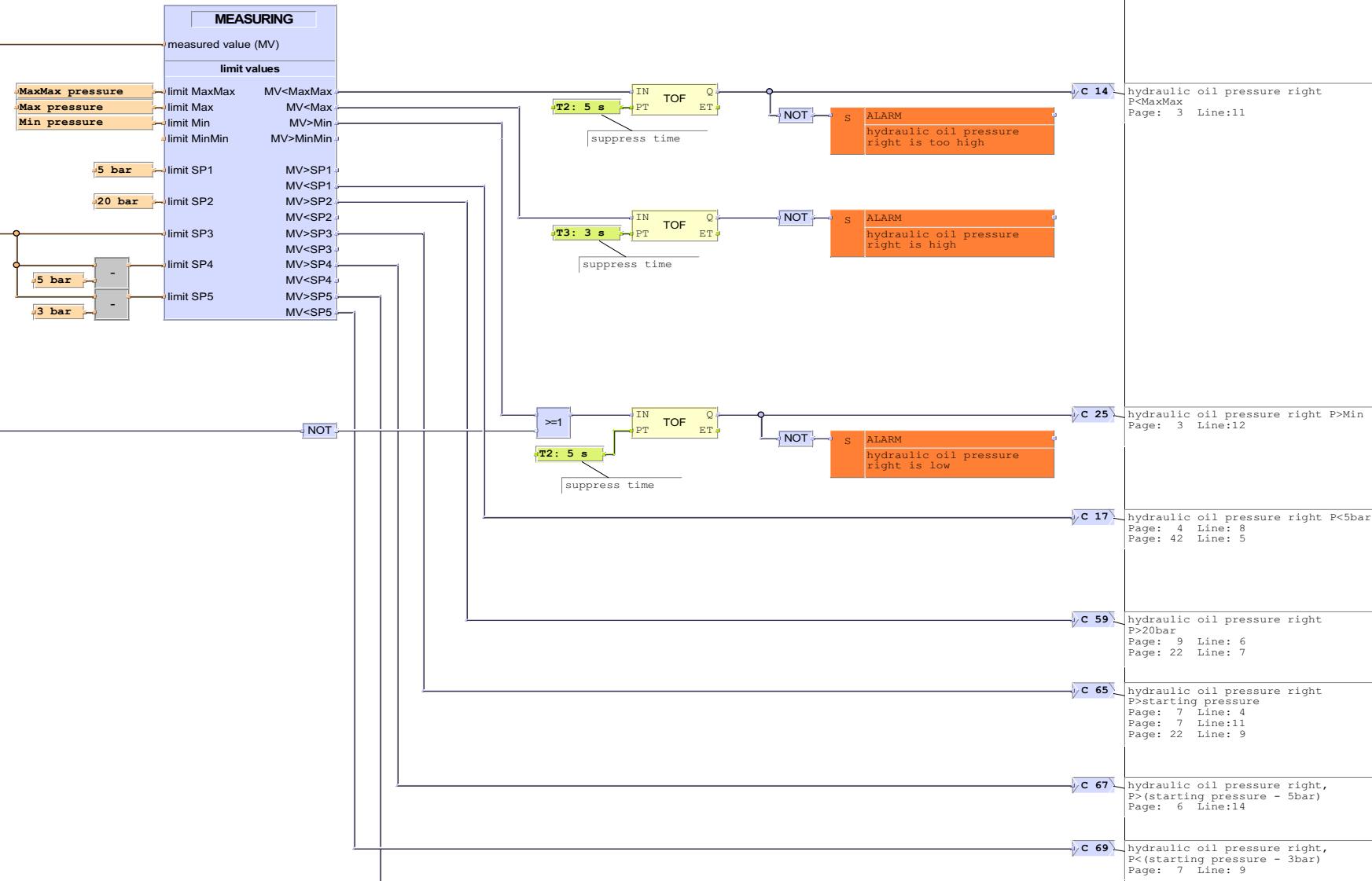
Group 8F1.PM02-1 : Roll off track (skewing) monitoring, Pol

2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram HPGR_PM02 8F1.PM02-1_Hydraulic	Customer	8F1.PM02	
				Drawn	PTD-AD-BWU	Project No. KXEO-01517			Flour-Salfa - AMSA Centinela	Chile	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Sheet	Drawing No.	Group:	Page:
								111	KXEO-01517-003346704	8F1.PM02-1	45
								of 154			



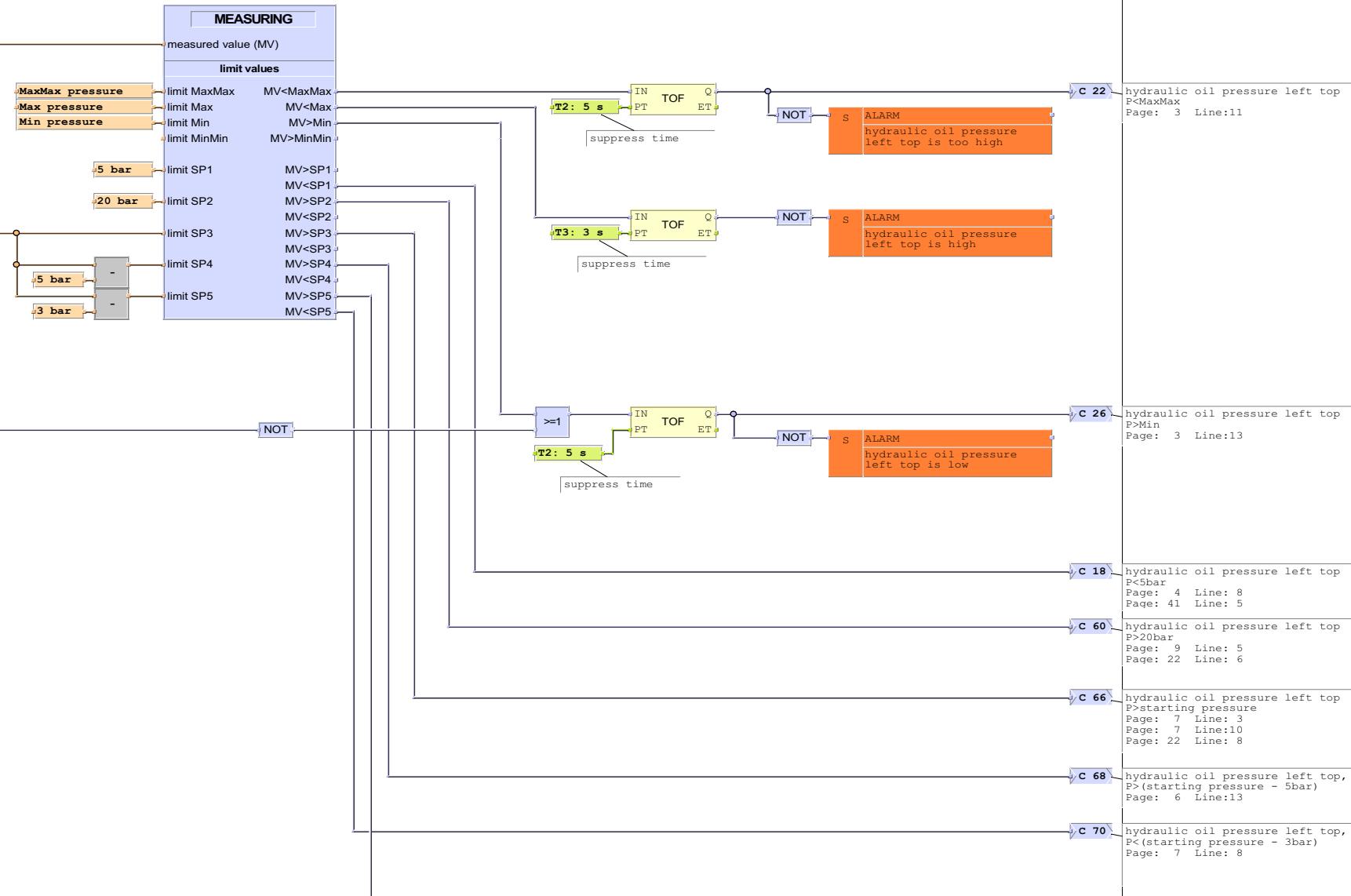
Group 8F1.PM02-1 : Roll off track (skewing) monitoring, Pol

2			Date	22.03.2022	Codeword CENTIWAL Project No: KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram HPGR_PM02 8F1.PM02-1_Hydraulic	Customer Flour-Salfa - AMSA Centinela			8F1.PM02
			Drawn	PTD-AD-BNU	Customer No:			Chile			
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	Sheet of 112 154	Drawing No. Group: Page: KXEO-01517-003346704 8F1.PM02-1 46



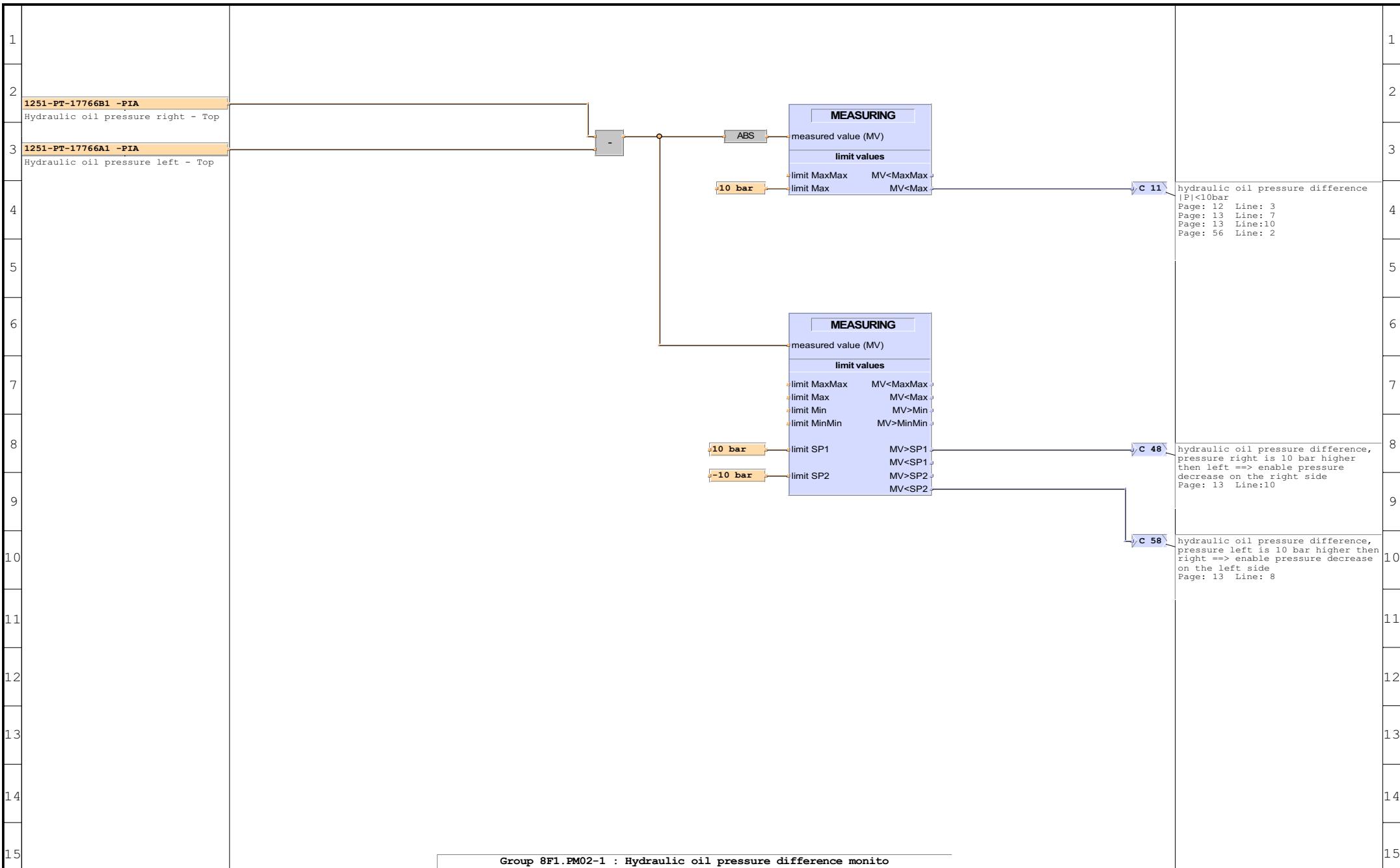
Group 8F1.PM02-1 : Hydraulic oil pressure right - Top

2		10.02.22	Wulowitsc*	Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
				Drawn	PTD-AD-BWU	Project No: KXEO-01517		HPGR_PM02	Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:		8F1.PM02-1_Hydraulic	Drawing No.	Page:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	KXEO-01517-003346704	8F1.PM02-1
									of 154	Page: 47



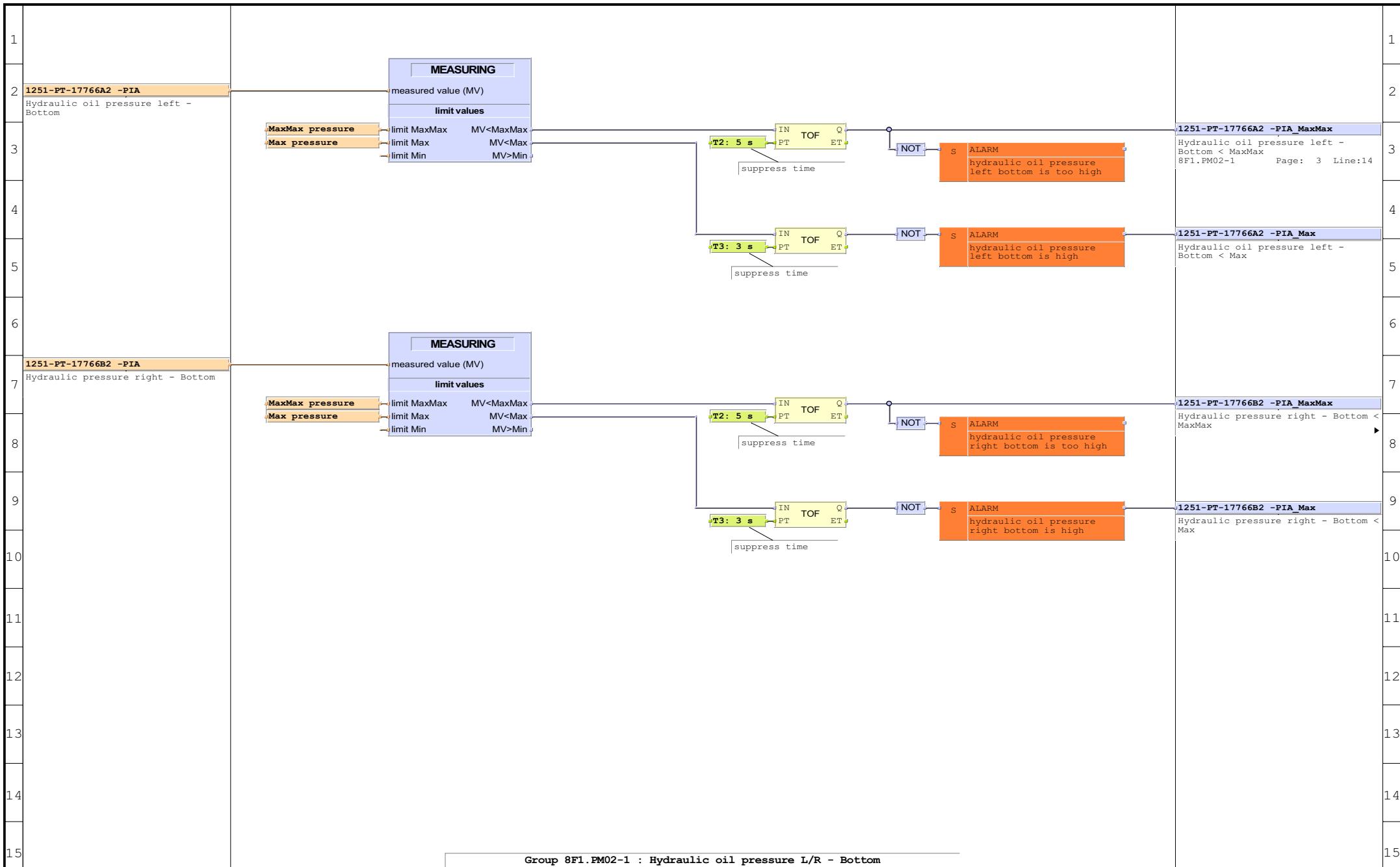
Group 8F1.PM02-1 : Hydraulic oil pressure left - Top

2				Date	22.03.2022	Codeword CENTIWAL	thyssenkrupp Industrial Solutions	Process Function Diagram HPGR_PM02	Customer Flour-Salfa - AMSA Centinela	8F1.PM02
				Drawn	PTD-AD-BWU	Project No. KXEO-01517				Chile
				check	PTD-AD-RTG	Customer No:	Beckum, Germany	8F1.PM02-1_Hydraulic	Sheet 114 Drawing No.	Page: 48
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154 KXEO-01517-003346704	Group: 8F1.PM02-1

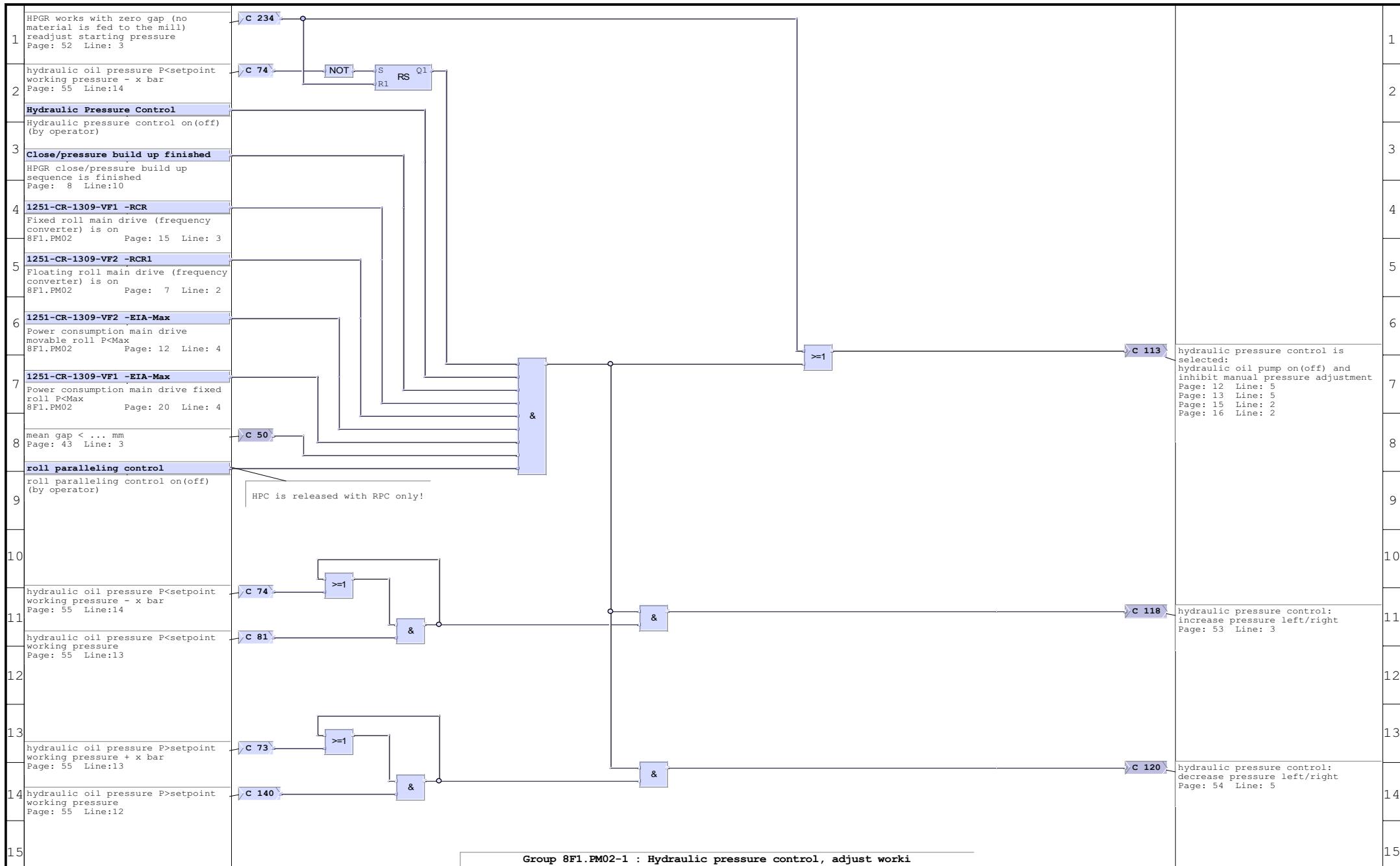


Group 8F1.PM02-1 : Hydraulic oil pressure difference monitor

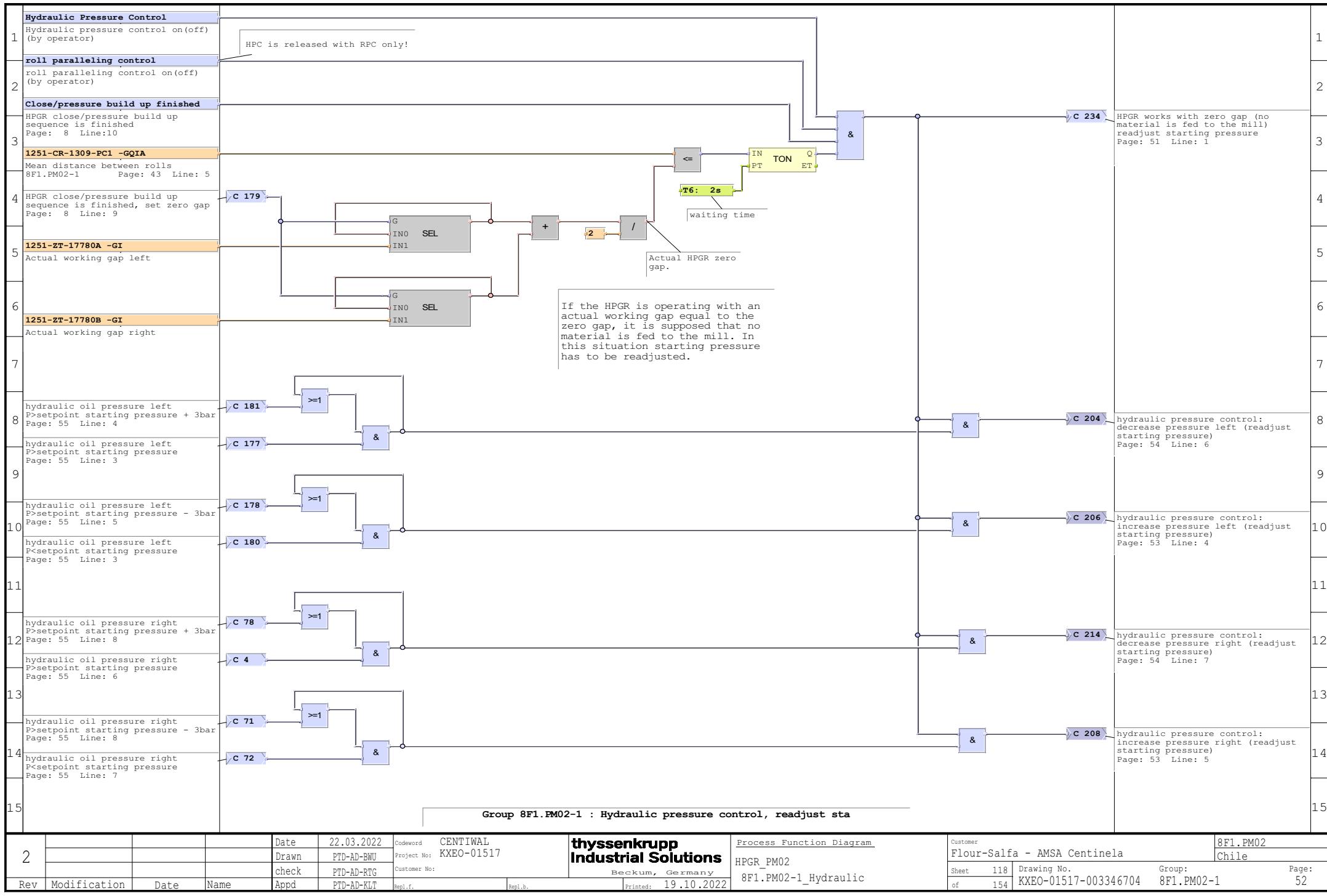
2				Date	22.03.2022	Codeword Project No:	CENTIWAL KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> <small>Beckum, Germany</small>	<u>Process Function Diagram</u> HPGR_PM02 8F1.PM02-1_Hydraulic	Customer Flour-Salfa - AMSA Centinela		8F1.PM02	
				Drawn	PTD-AD-BWU	Customer No:				Sheet of	115 154	Drawing No. Group: KXEO-01517-003346704 8F1.PM02-1	Chile Page: 49
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.		Printed: 19.10.2022				

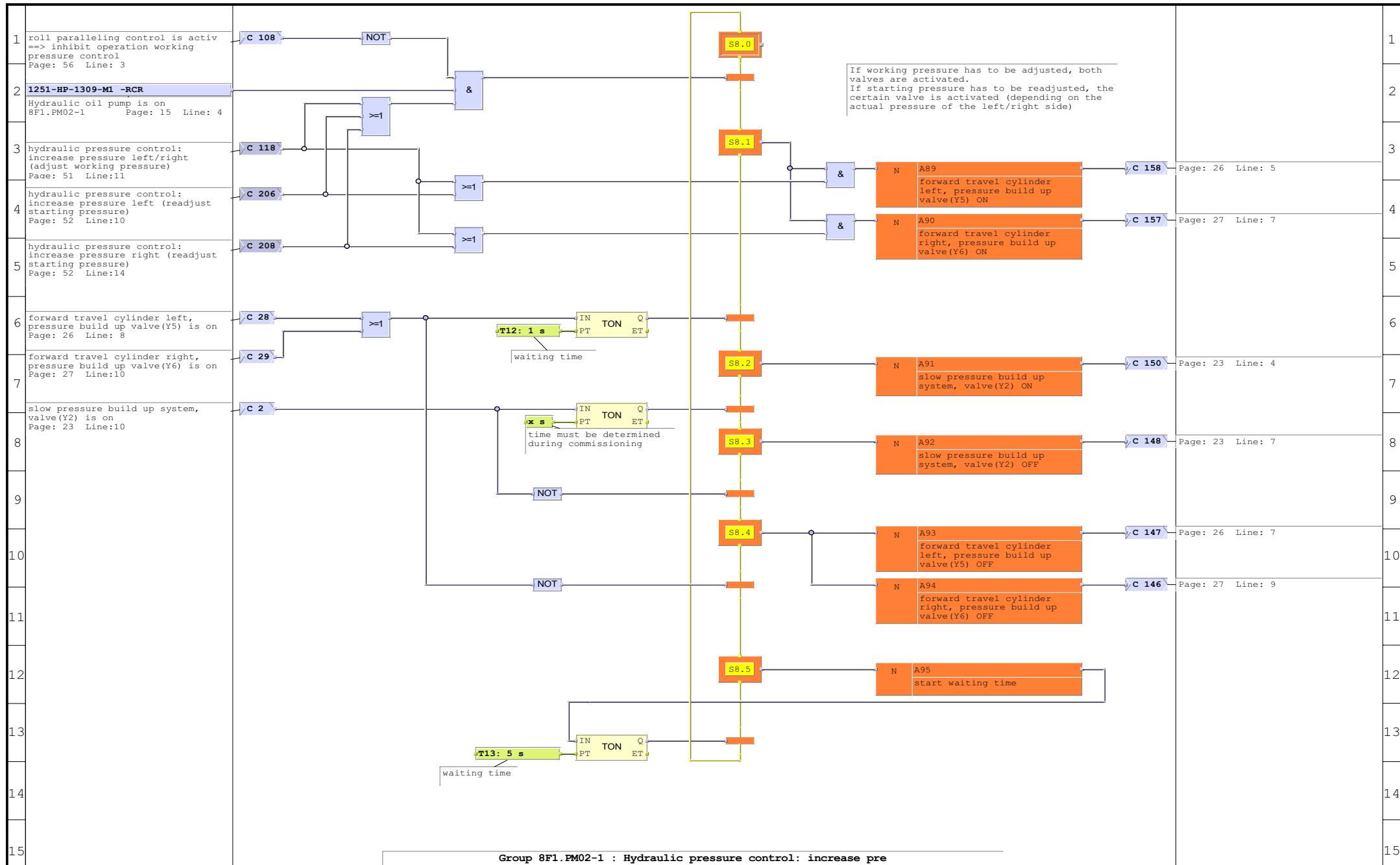


2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer Flour-Salfa - AMSA Centinela	8F1.PM02
				Drawn	PTD-AD-BWU	Project No: KXEO-01517				Chile
				check	PTD-AD-RTG	Customer No:				
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Sheet 116 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-1 Page: 50



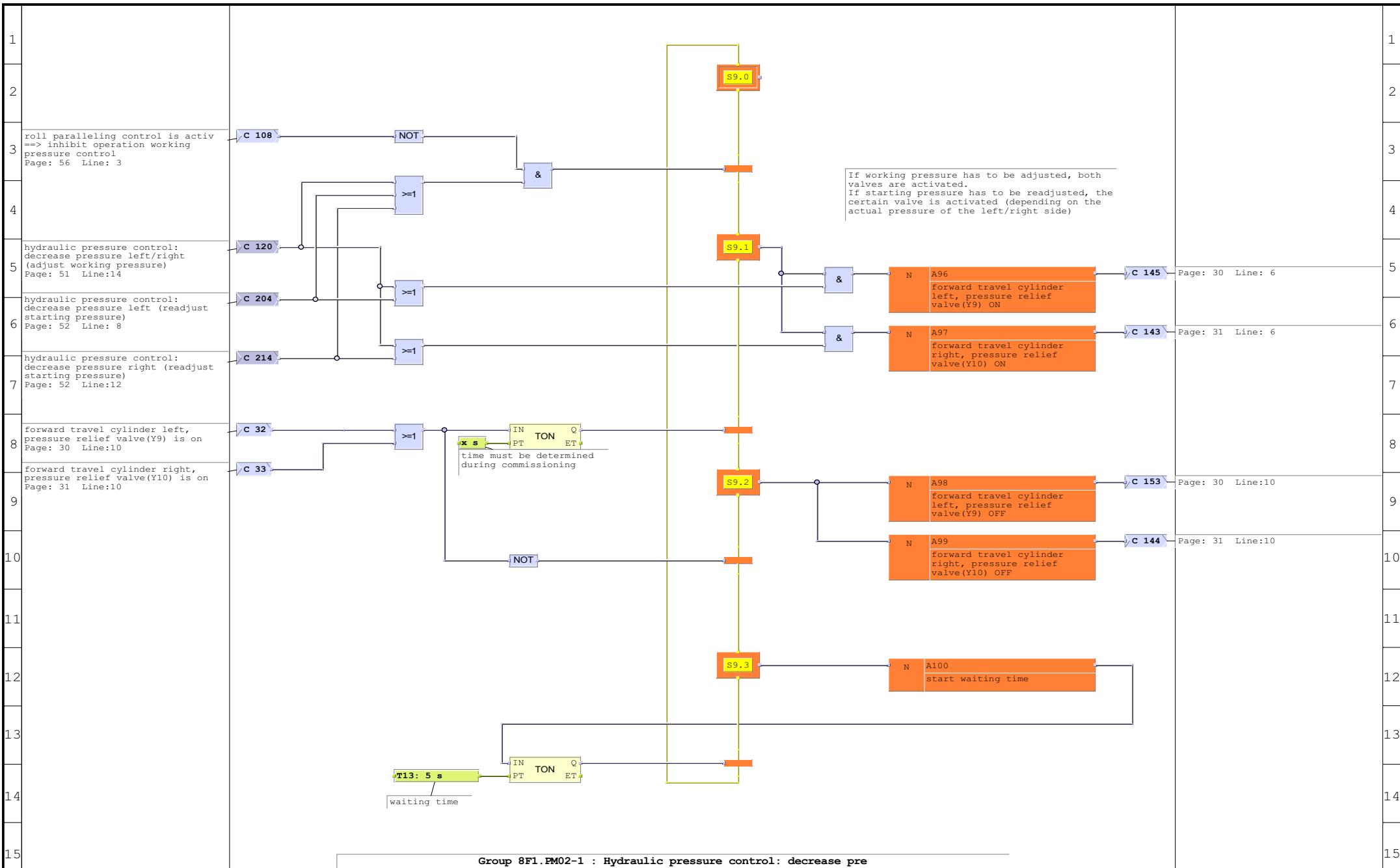
2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
				Drawn	PTD-AD-BWU	Project No. KXEO-01517			Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:			Drawing No.	Page:
									KXEO-01517-003346704	8F1.PM02-1
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	Page: 51





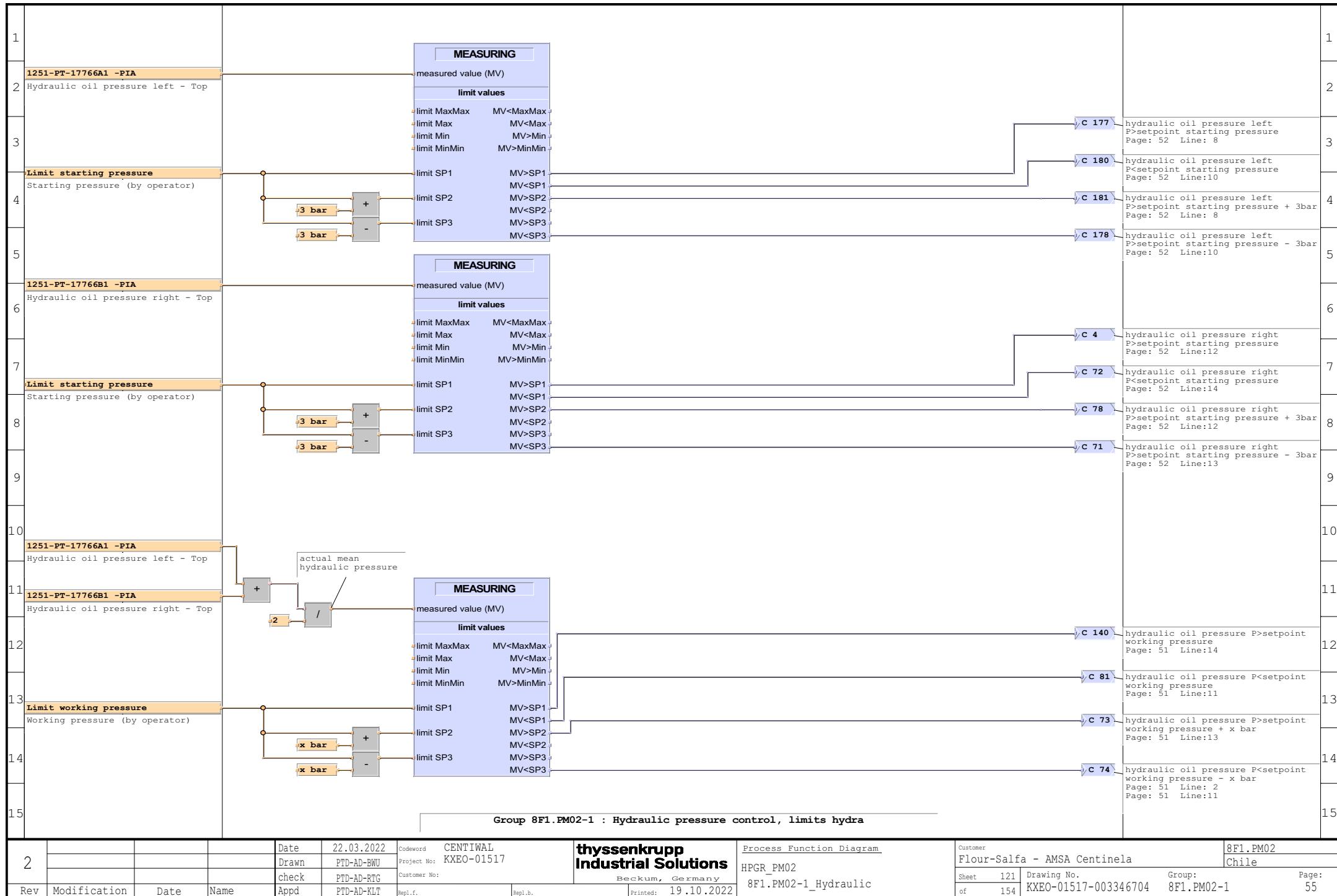
Group 8F1.PM02-1 : Hydraulic pressure control: increase pre

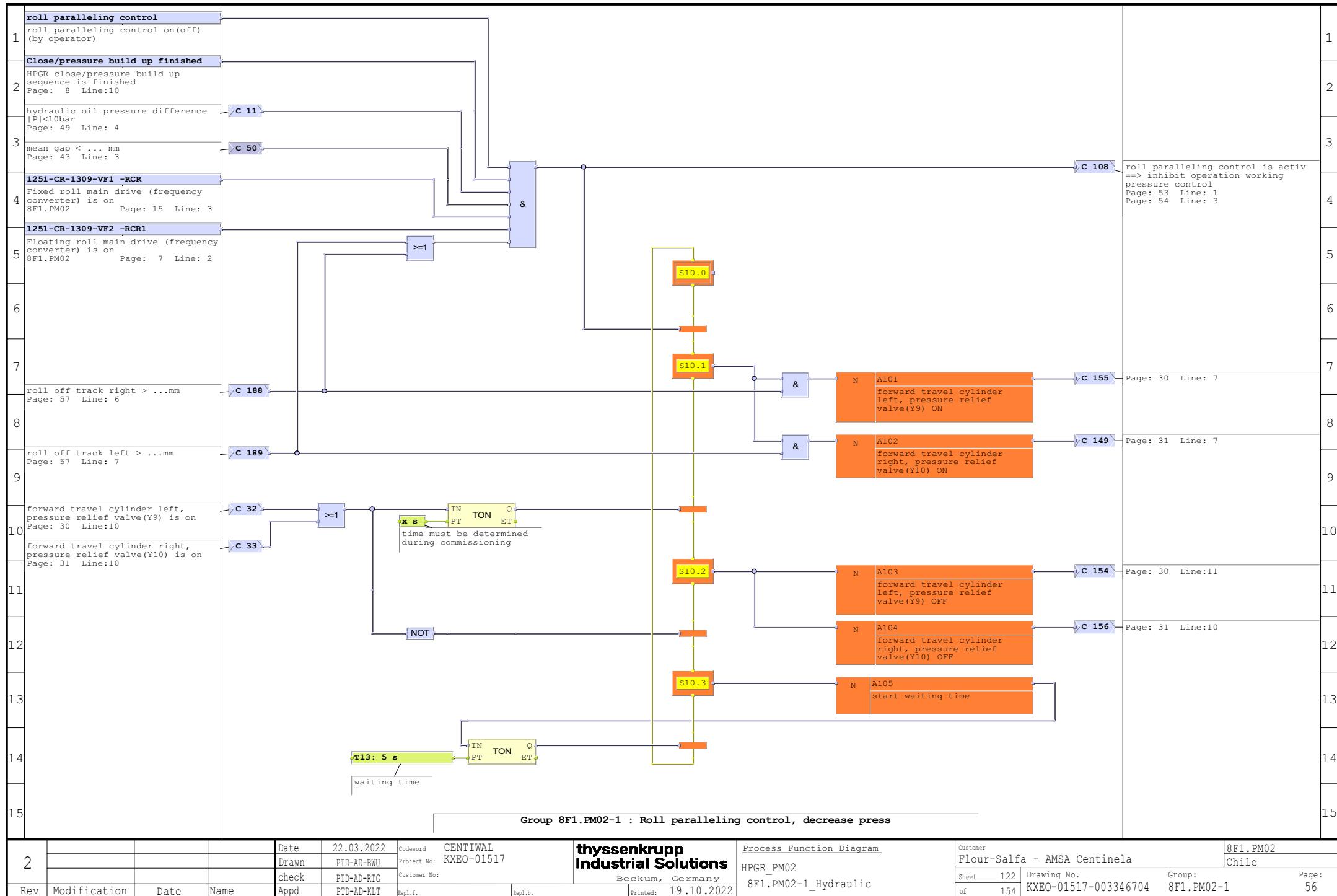
2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Project No.: KXEO-01517 Customer No.: Beckum, Germany	Process Function Diagram HPGR_PM02 8F1.PM02-1_Hydraulic	Customer	8F1.PM02		
				Drawn	PTD-AD-BWU	check			Flour-Salfa - AMSA Centinela	Chile		
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	Sheet 119 of 154	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02-1	Page: 53

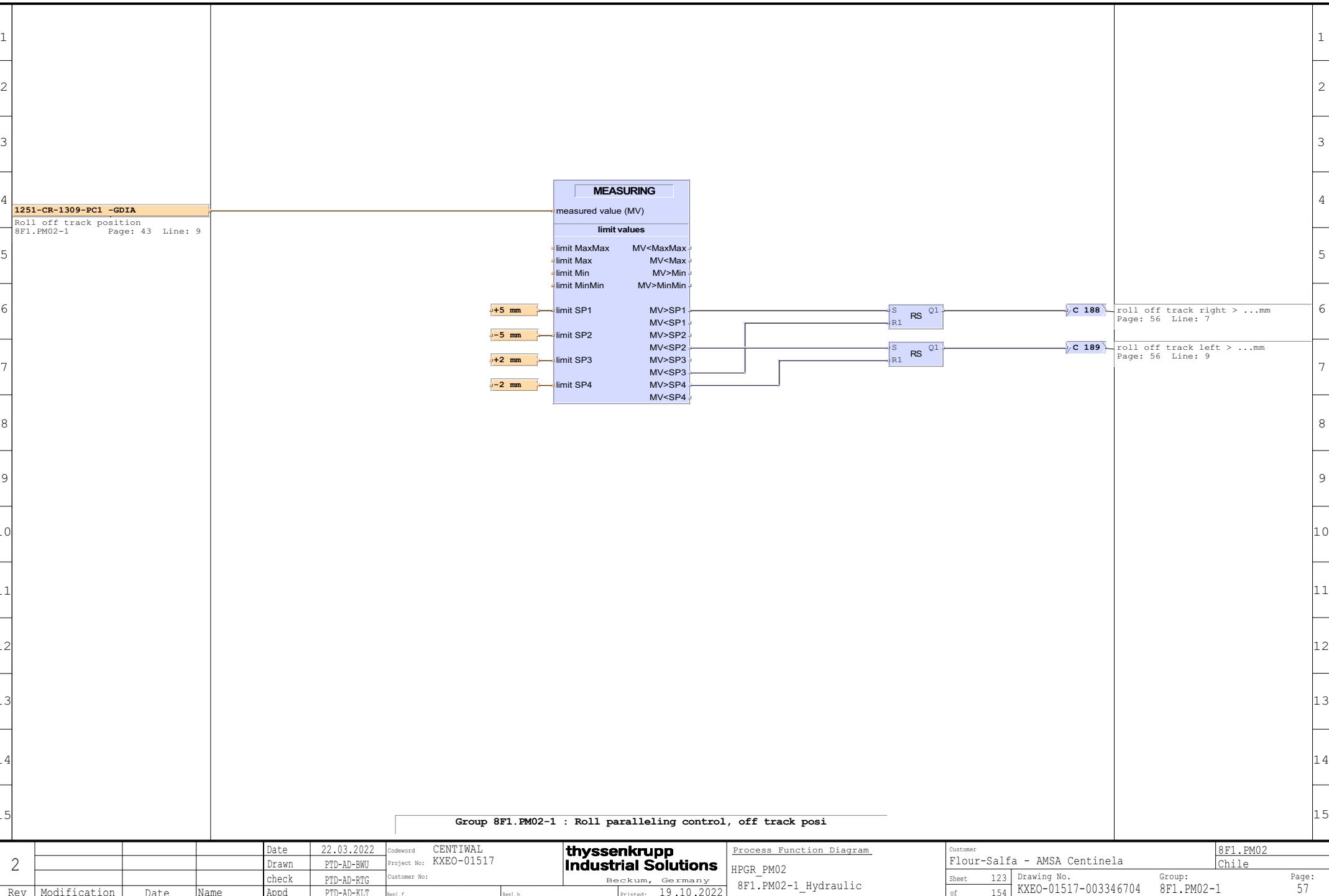


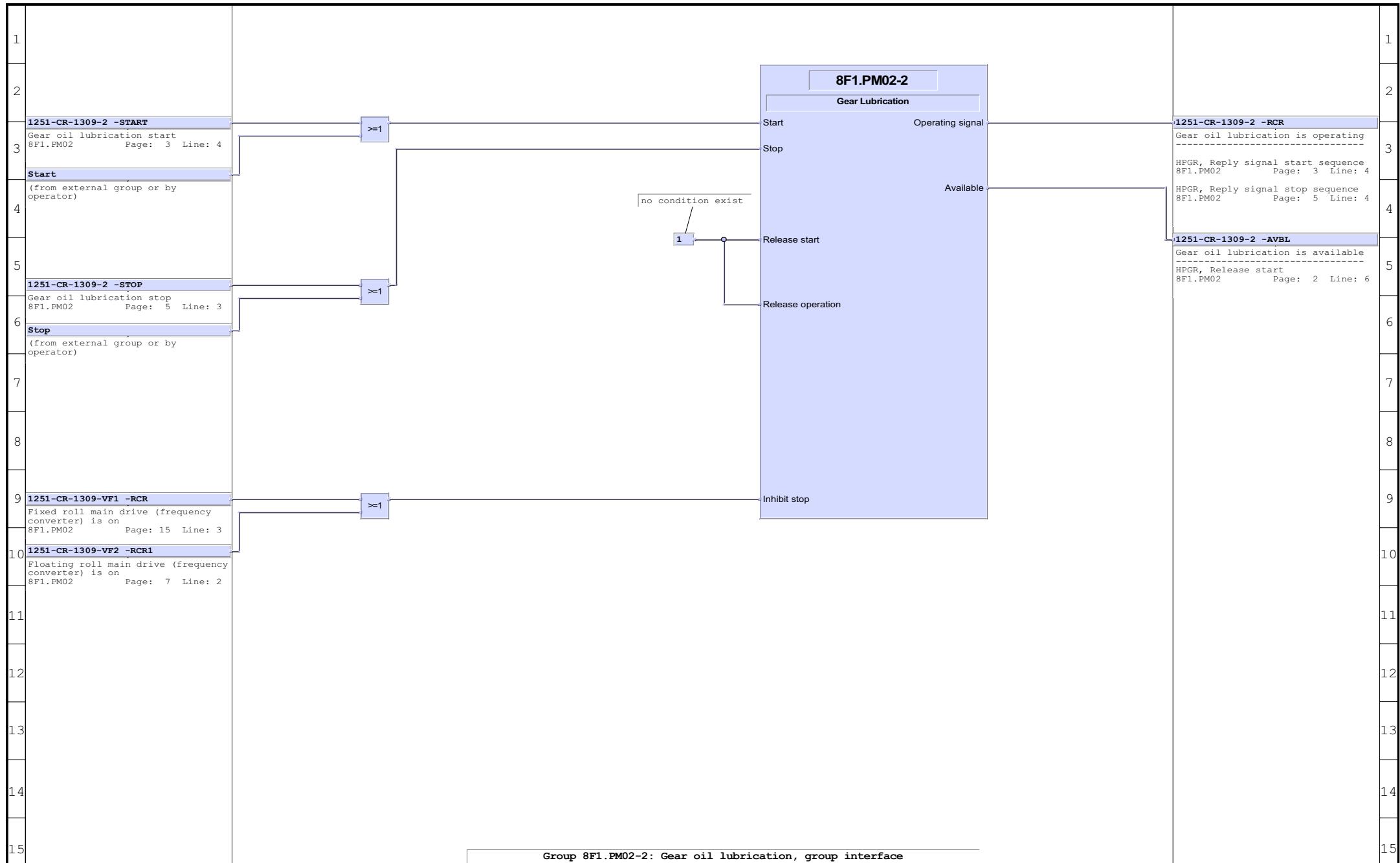
Group 8F1.PM02-1 : Hydraulic pressure control: decrease pre

2	Date	22.03.2022	Codeword	CENTIWAL	thyssenkrupp Industrial Solutions <small>Beckum, Germany</small>	Process Function Diagram HPGR_PM02 8F1.PM02-1_Hydraulic	Customer Flour-Salfa - AMSA Centinela			8F1.PM02
	Drawn	PTD-AD-BWU	Project No:	KXEO-01517			Customer Flour-Salfa - AMSA Centinela			Chile
	check	PTD-AD-RTG	Customer No:				Sheet	120	Drawing No.	Page:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	of 154 KXEO-01517-003346704 8F1.PM02-1 54







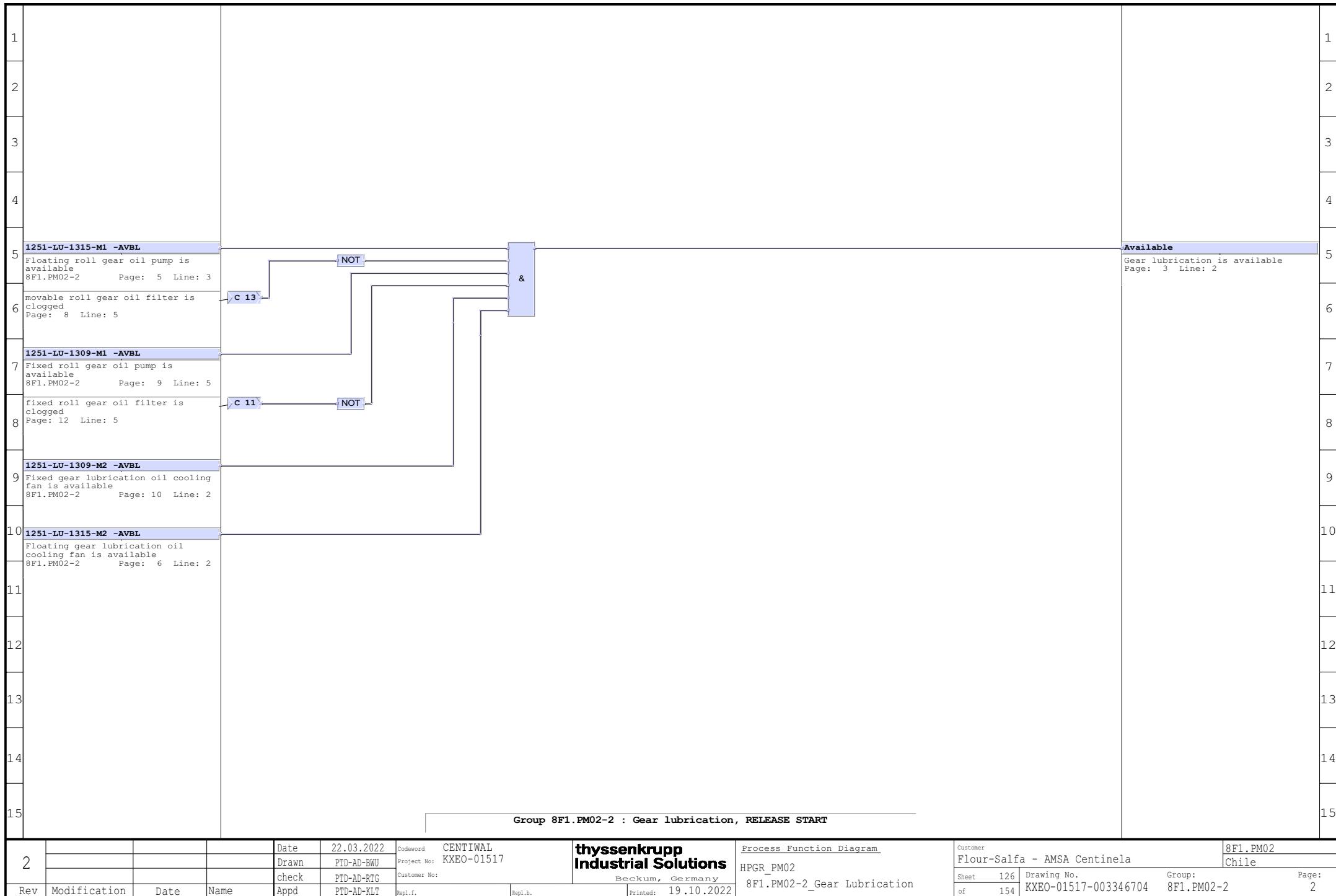


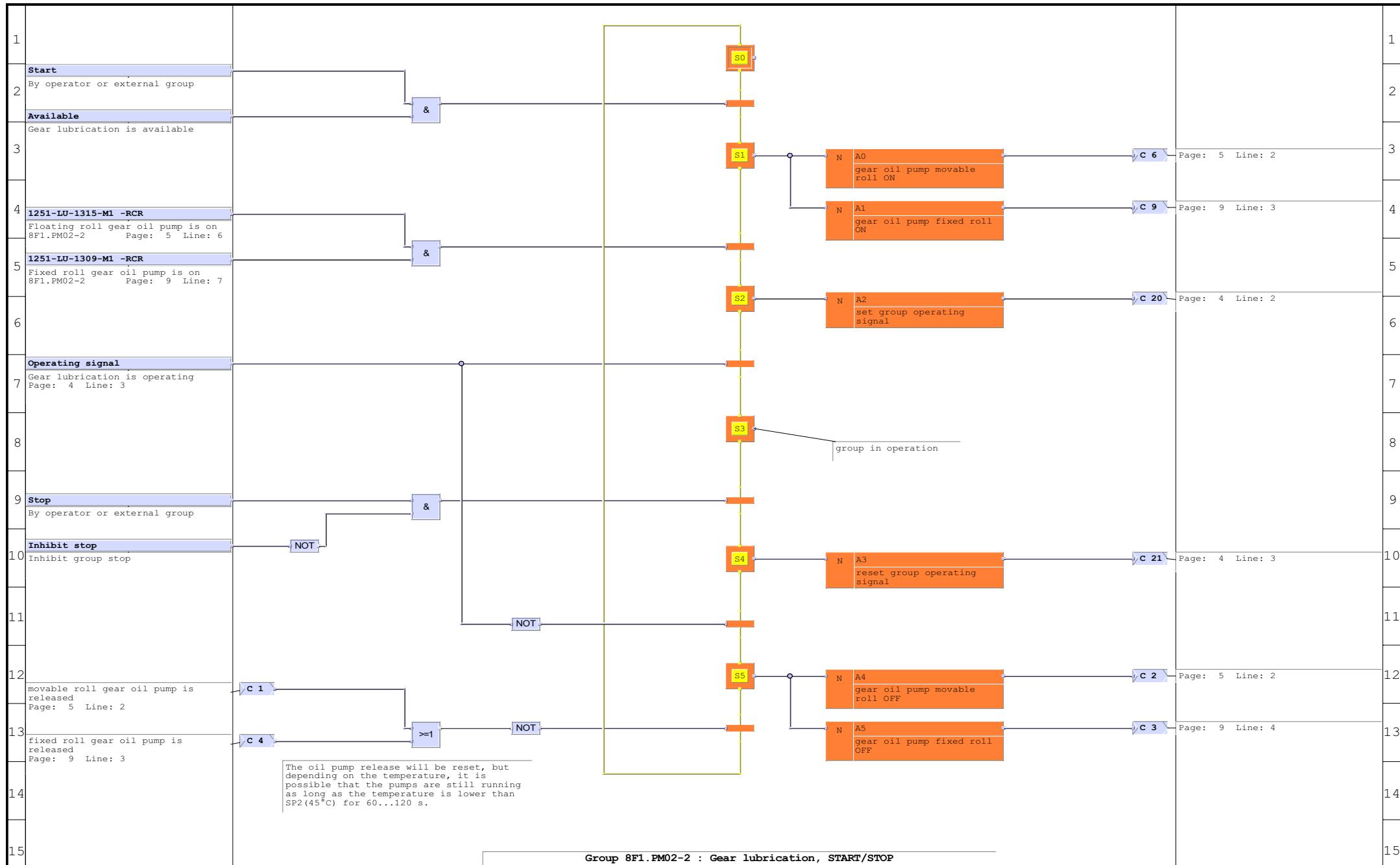
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Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02-2 Page: 1

1  
INTERFACE IN- AND OUTPUTS  
8F1.PM02-2

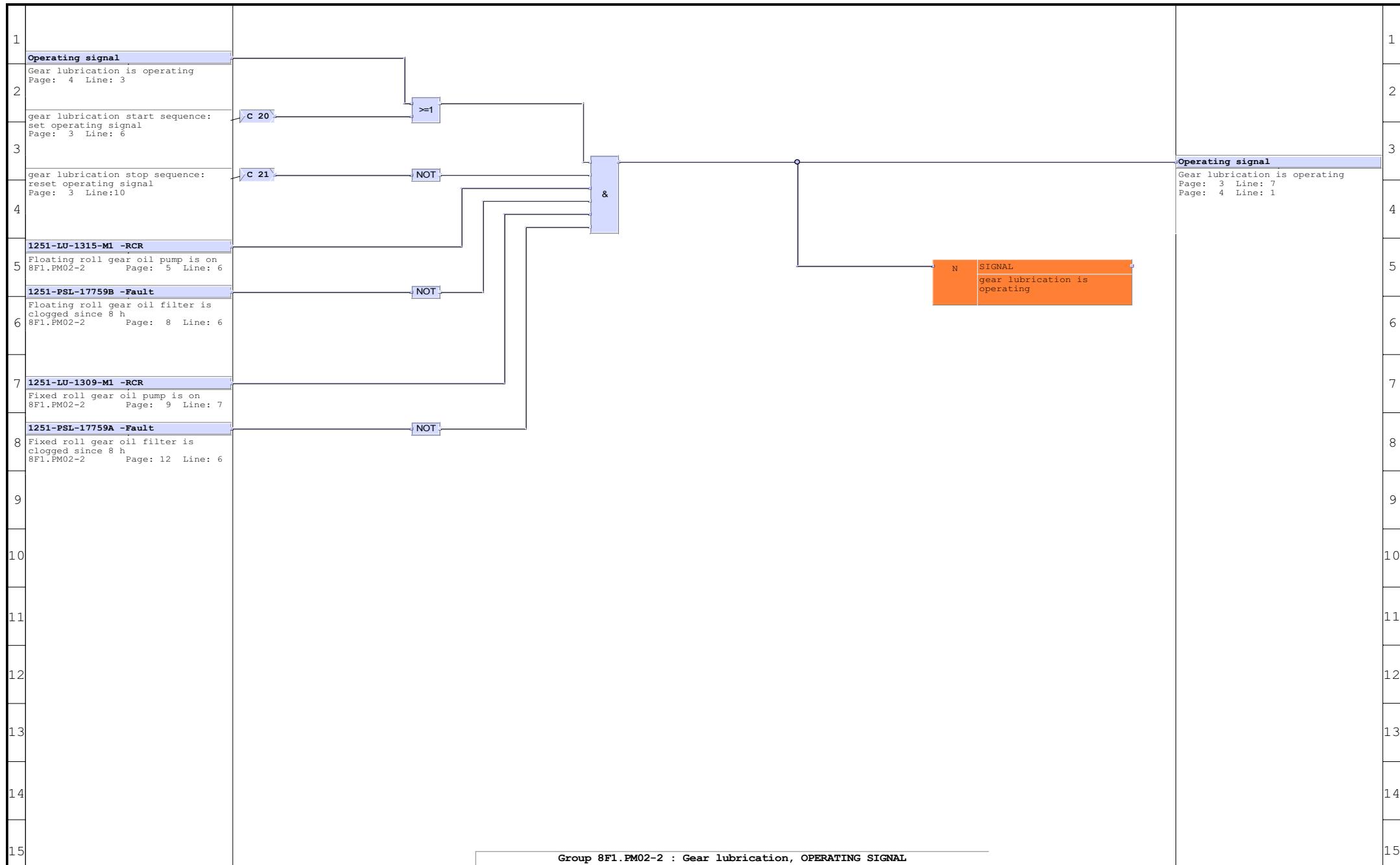
2	Name	Var-Art	Attrib	Init-Wert	Langname	Phys. Adr.	Verwendung	2
3	Inhibit stop	VAR_INPUT			Inhibit group stop	3 B/-1	15/38	3
4	Start	VAR_INPUT			By operator or external group	3 B/-1	15/92	4
5	Stop	VAR_INPUT			By operator or external group	3 B/-1	15/43	5
6	Available	VAR_OUTPUT			Gear lubrication is available	2 A/-1	99/70	6
7	Operating signal	VAR_OUTPUT			Gear lubrication is operating	3 B/-1	15/87	7
8						3 B/-1	15/58	8
9						4 C/-1	15/94	9
10						4 C/-1	99/82	10
11								11
12								12
13								13
14								14
15								15

2	19.10.22	10461396	Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
	23.08.22	10461396	Drawn	PTD-AD-BWU	Project No: KXEO-01517		HPGR_PM02	Flour-Salfa - AMSA Centinela	Chile
	23.03.22	Wulowitzsc*	check	PTD-AD-RTG	Customer No:		8F1.PM02-2_Gear Lubrication	Sheet 125 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-2 Page:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	

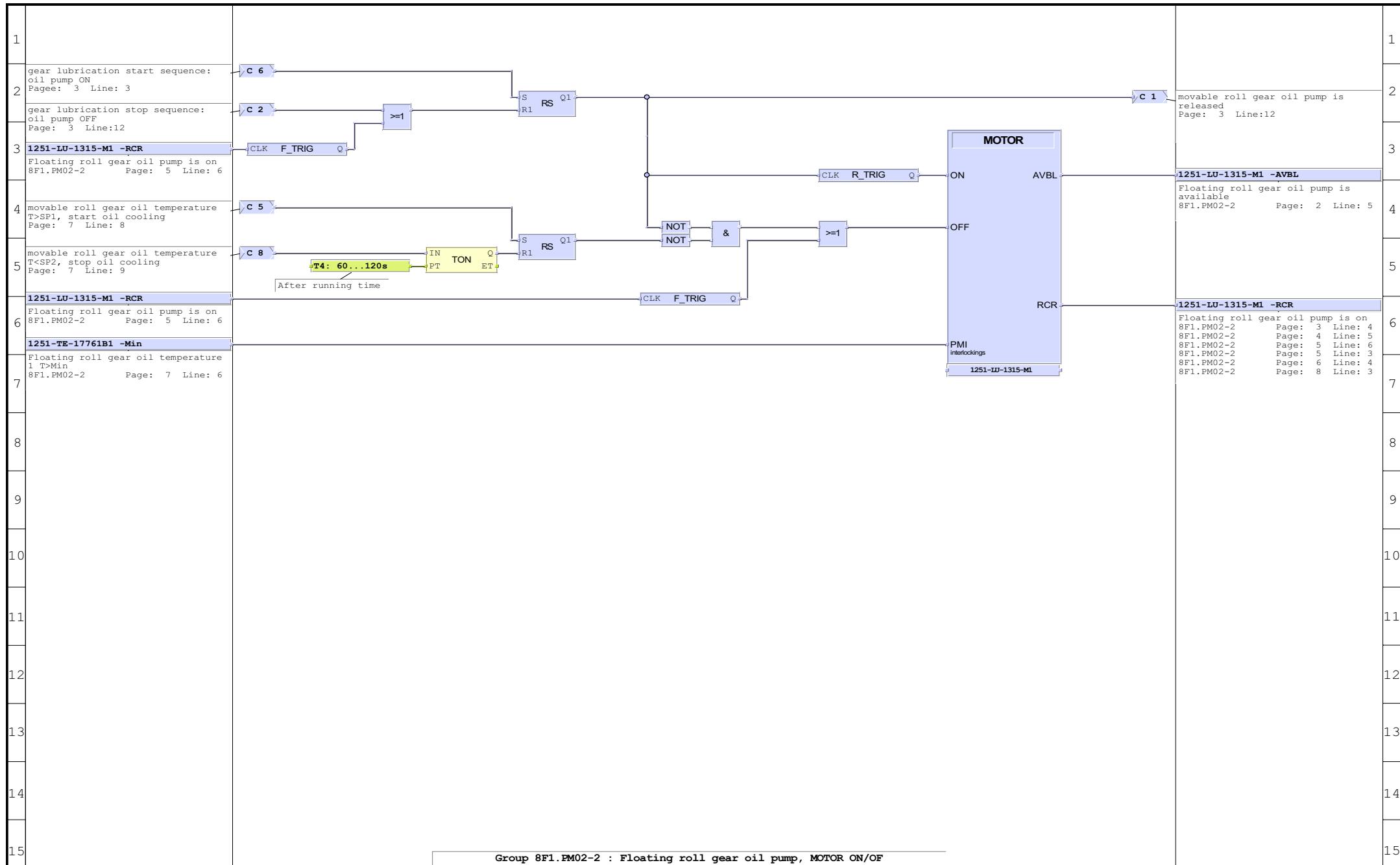




2	Date	22.03.2022	Codeword	CENTIWAL	thyssenkrupp Industrial Solutions	Process Function Diagram, HPGR_PM02 8F1.PM02-2_Gear Lubrication	Customer	8F1.PM02	
	Drawn	PTD-AD-BWU	Project No:	KXEO-01517			Flour-Salfa - AMSA Centinela	Chile	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	Page:
								19.10.2022	3
of								154	
								KXEO-01517-003346704	8F1.PM02-2

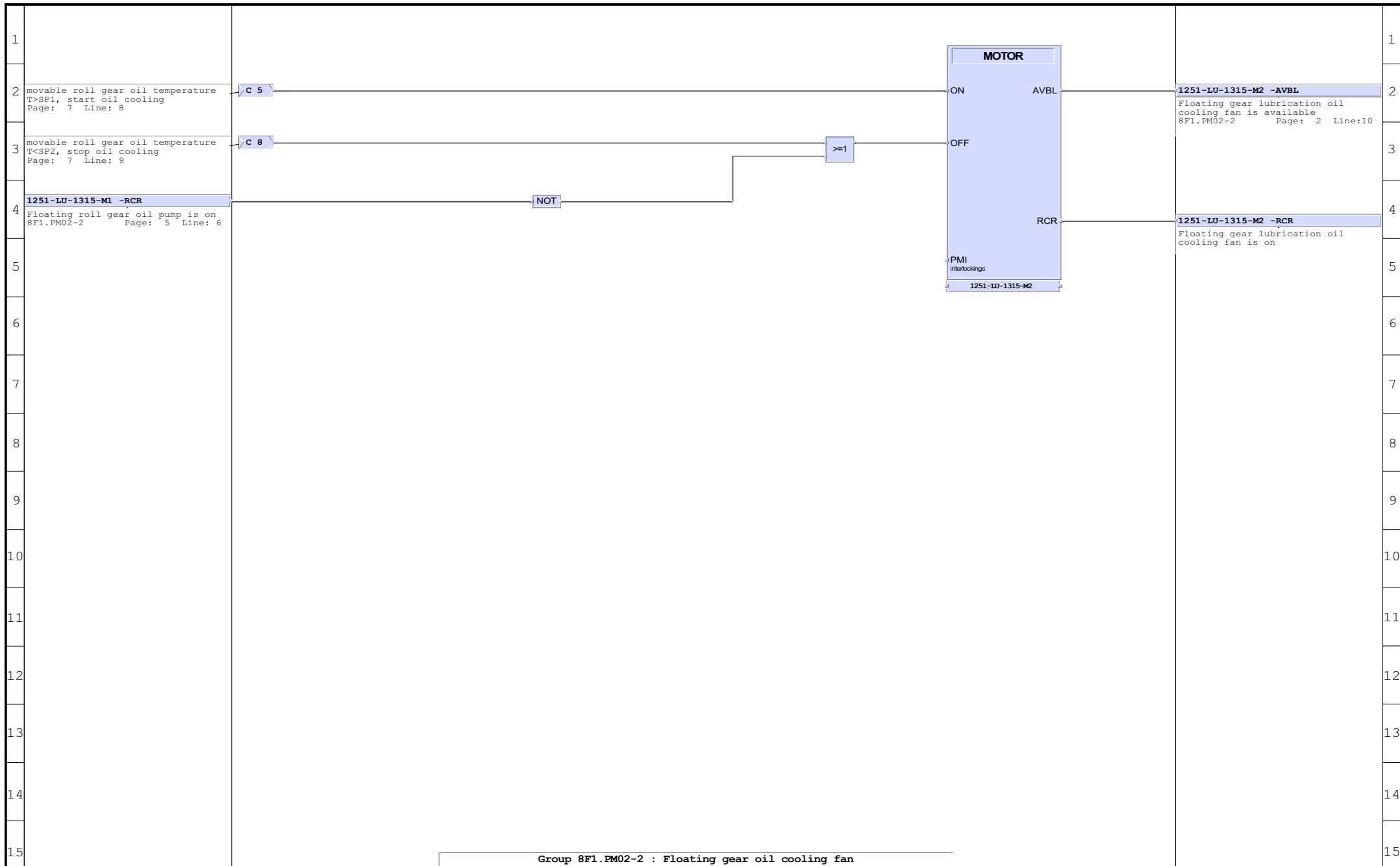


2			Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
			Drawn	PTD-AD-BWU	Project No: KXEO-01517			Flour-Salfa - AMSA Centinela	Chile
			check	PTD-AD-RTG	Customer No:		HPGR_PM02		
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Sheet 128 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-2 Page: 4
							Printed: 19.10.2022		

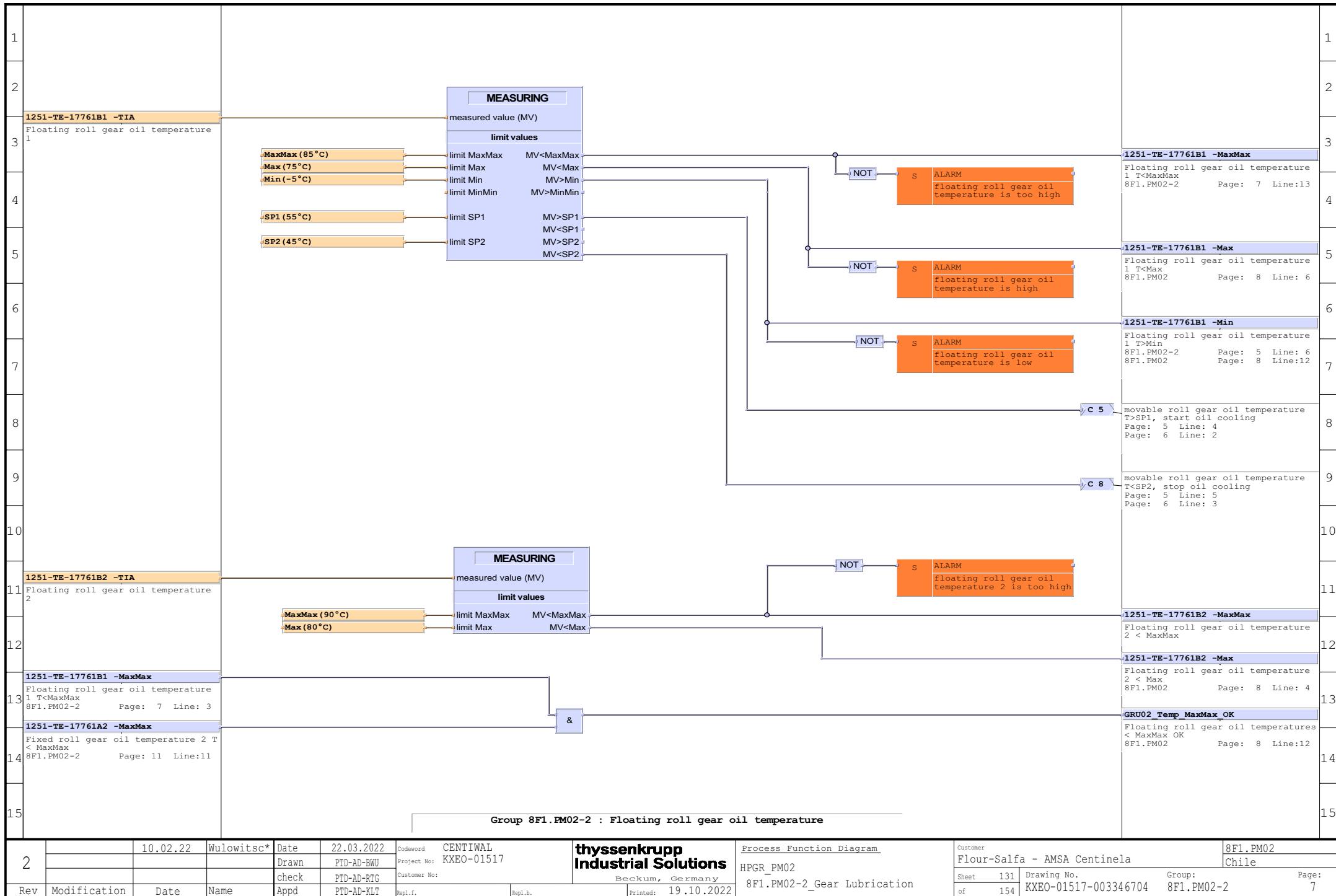


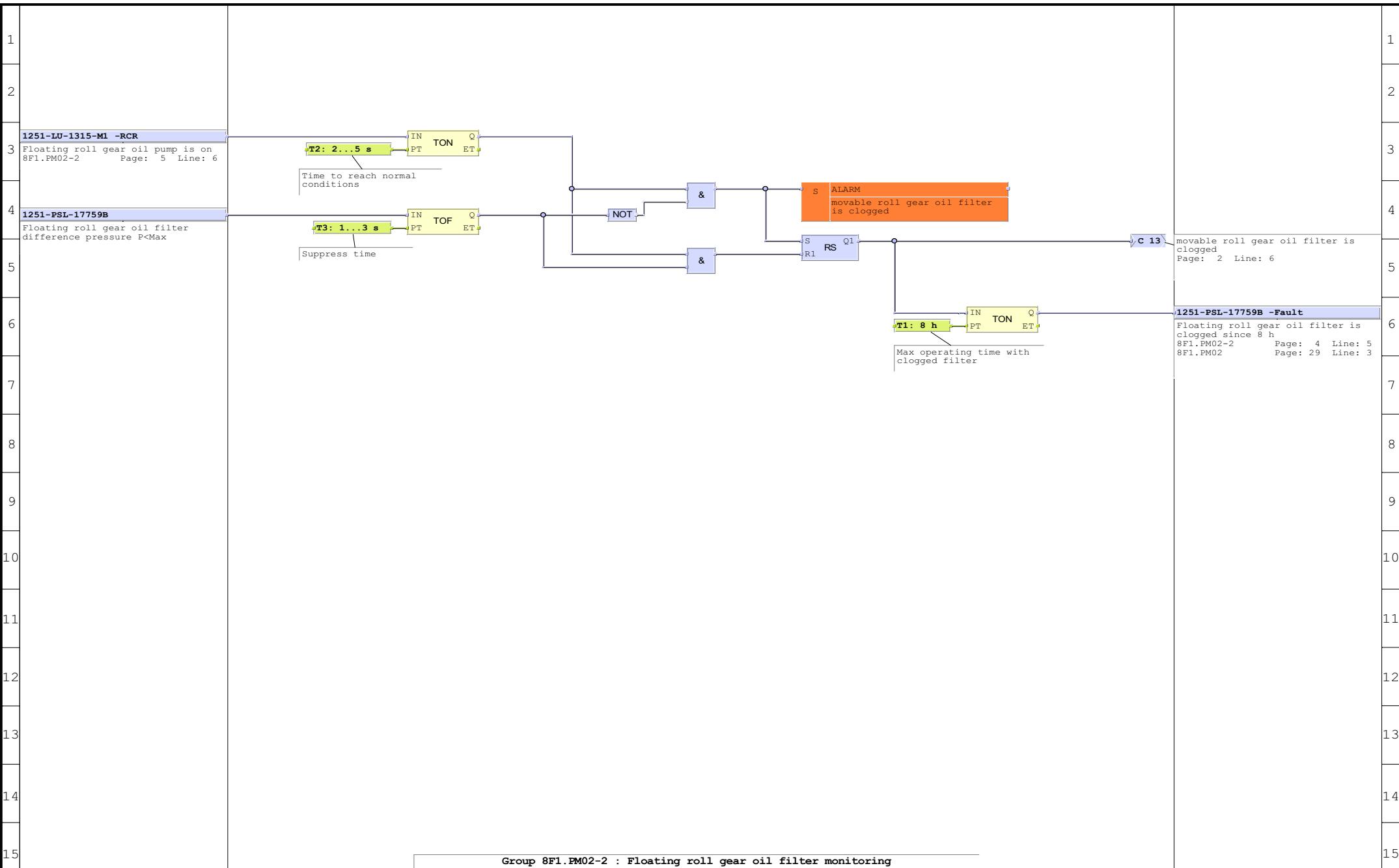
Group 8F1.PM02-2 : Floating roll gear oil pump, MOTOR ON/OFF

2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02	
				Drawn	PTD-AD-BWU	Project No. KXEO-01517		HPGR_PM02	Flour-Salfa - AMSA Centinela	Chile	
				check	PTD-AD-RTG	Customer No:		8F1.PM02-2_Gear Lubrication	Drawing No.	Group:	
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	KXEO-01517-003346704 8F1.PM02-2	Page: 5

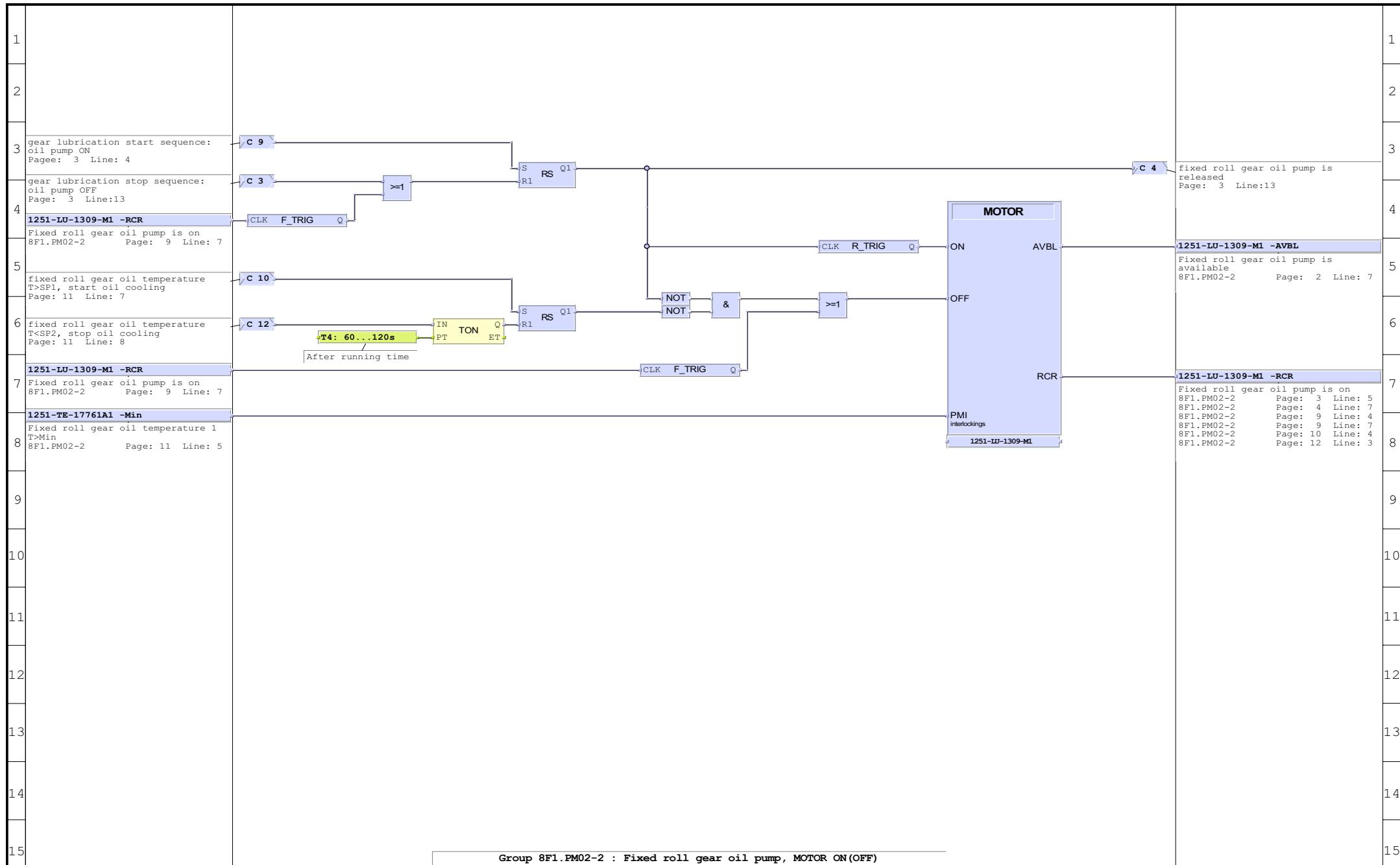


2		10.02.22	Wulowitsc*	Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer Flour-Salfa - AMSA Centinela Chile	8F1.PM02
				Drawn	PTD-AD-BWU	Project No: KXEO-01517		HPGR_PM02		
				check	PTD-AD-RTG	Customer No:		8F1.PM02-2_Gear Lubrication		
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	KXEO-01517-003346704 8F1.PM02-2

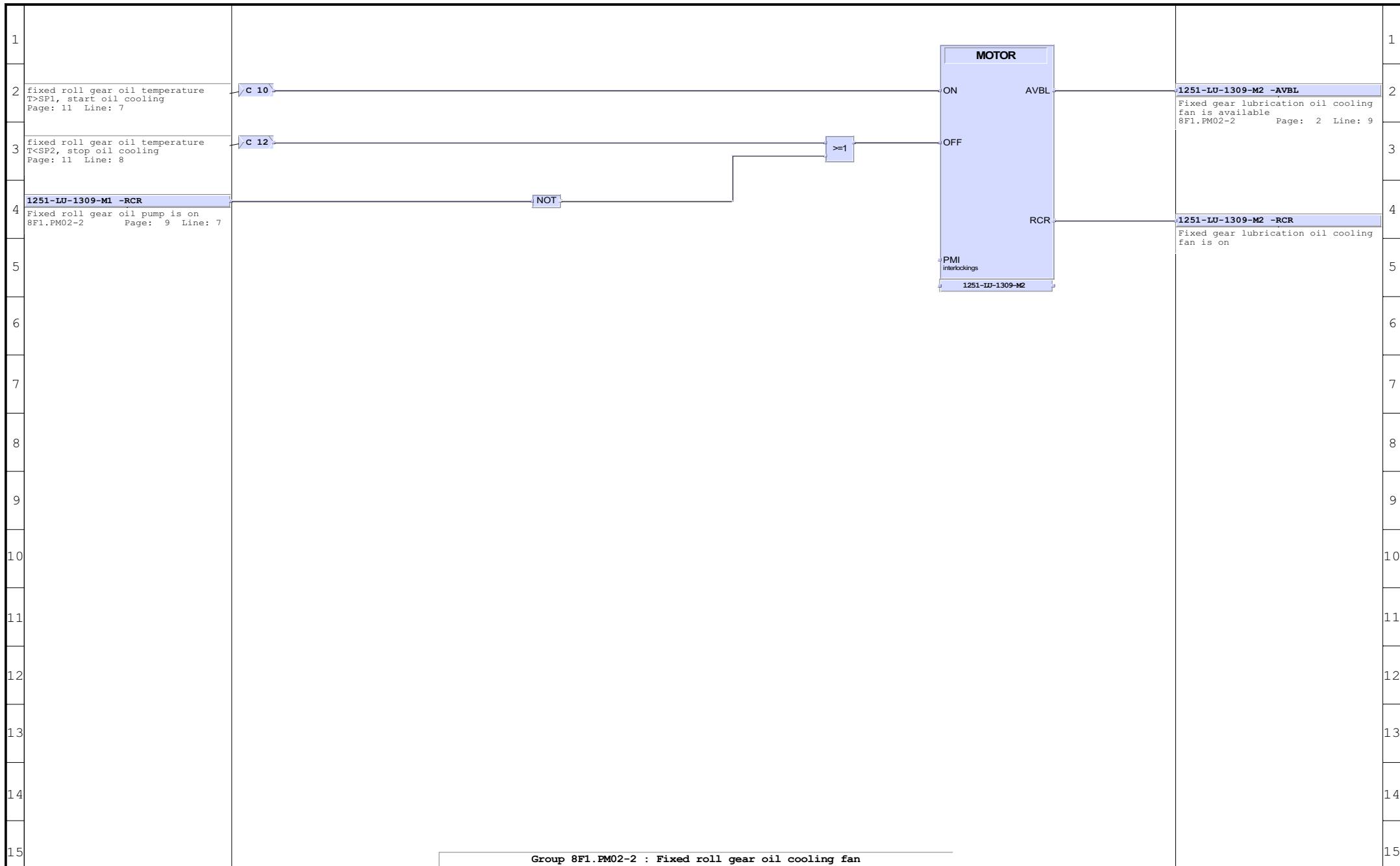




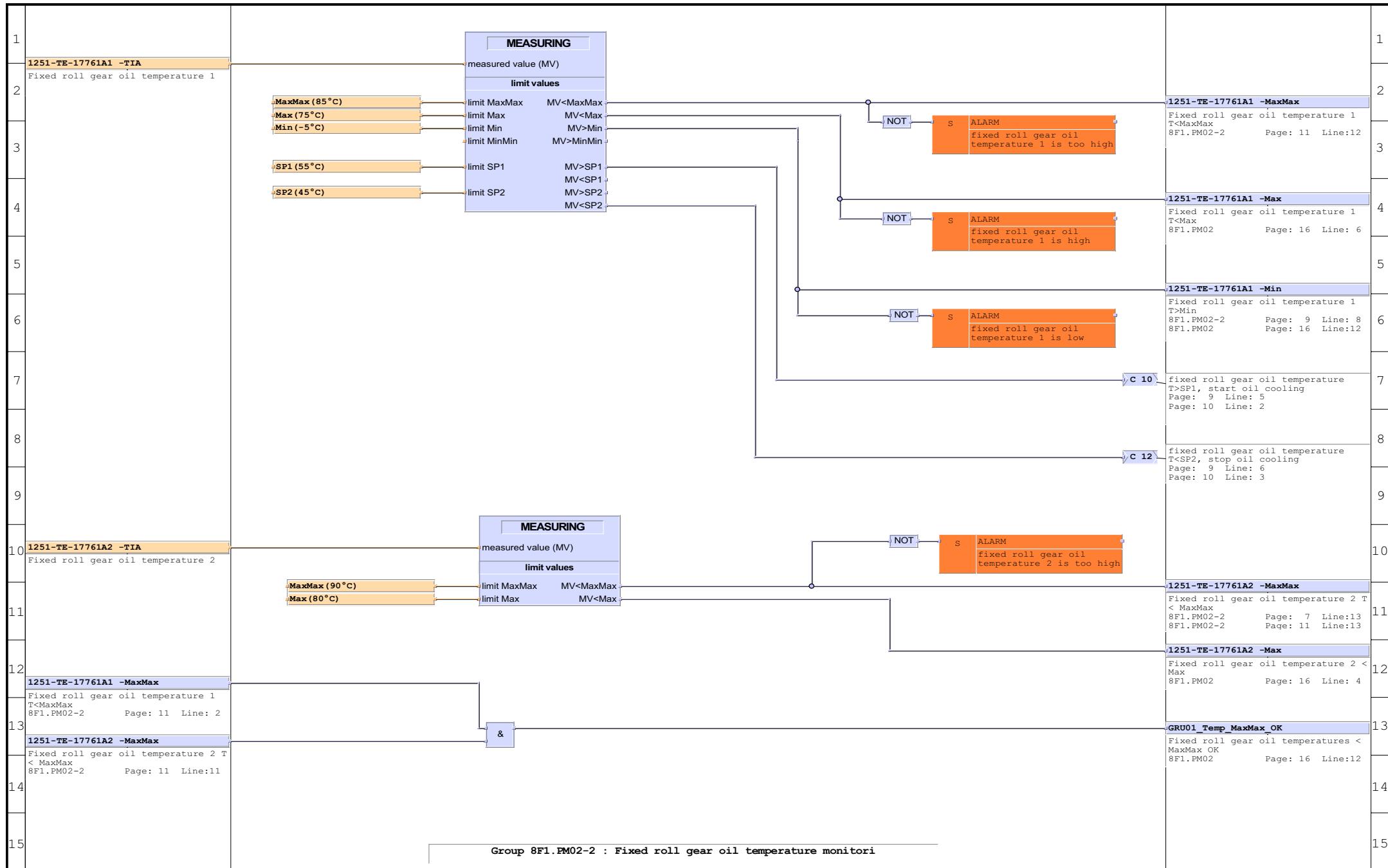
2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
				Drawn	PTD-AD-BWU	Project No: KXEO-01517		HPGR_PM02	Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:		8F1.PM02-2_Gear Lubrication	Drawing No.	Page:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	KXEO-01517-003346704	8F1.PM02-2
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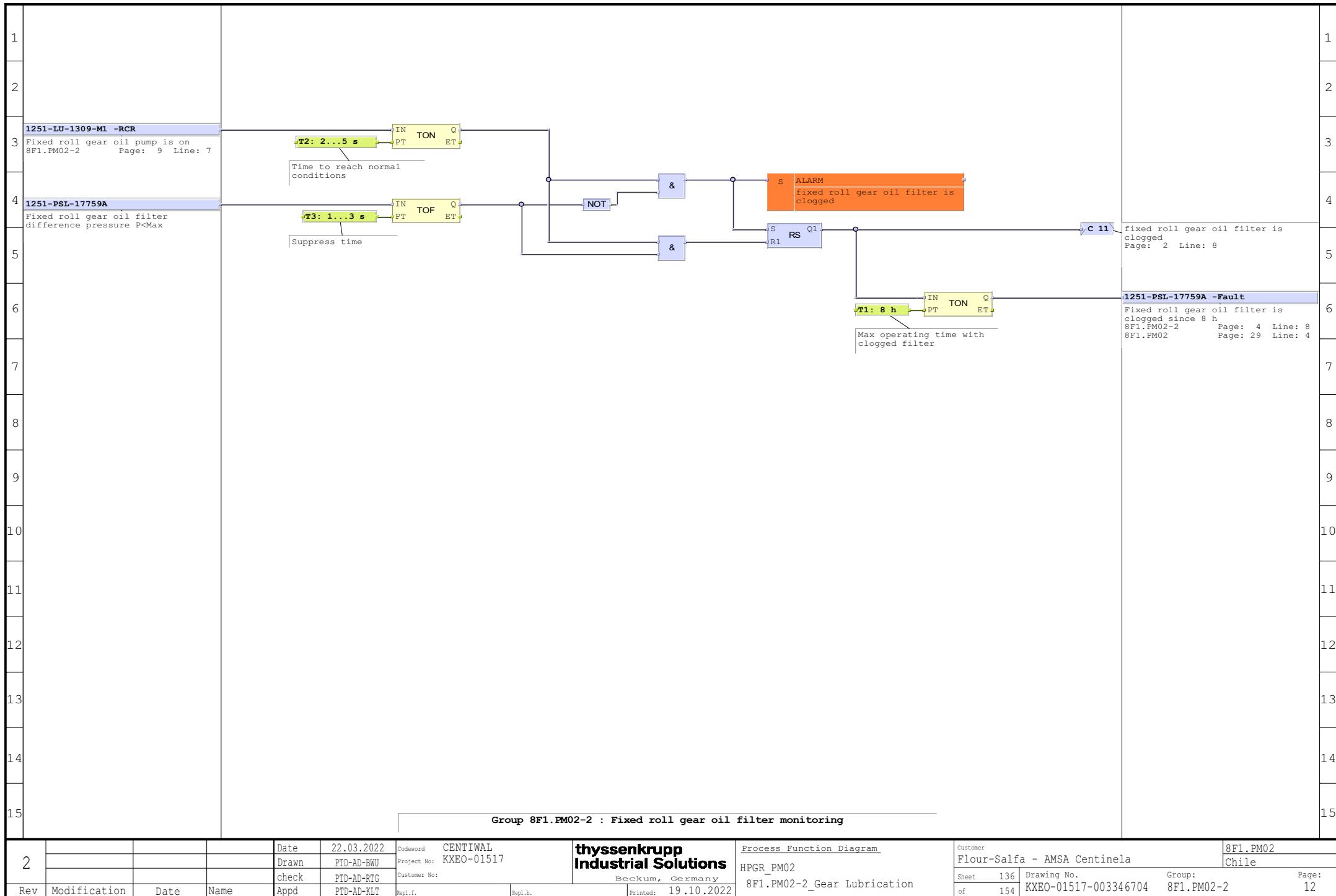
2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
				Drawn	PTD-AD-BWU	Project No: KXEO-01517		HPGR_PM02	Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:		8F1.PM02-2_Gear Lubrication	Drawing No.	Group:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	KXEO-01517-003346704	Page: 9

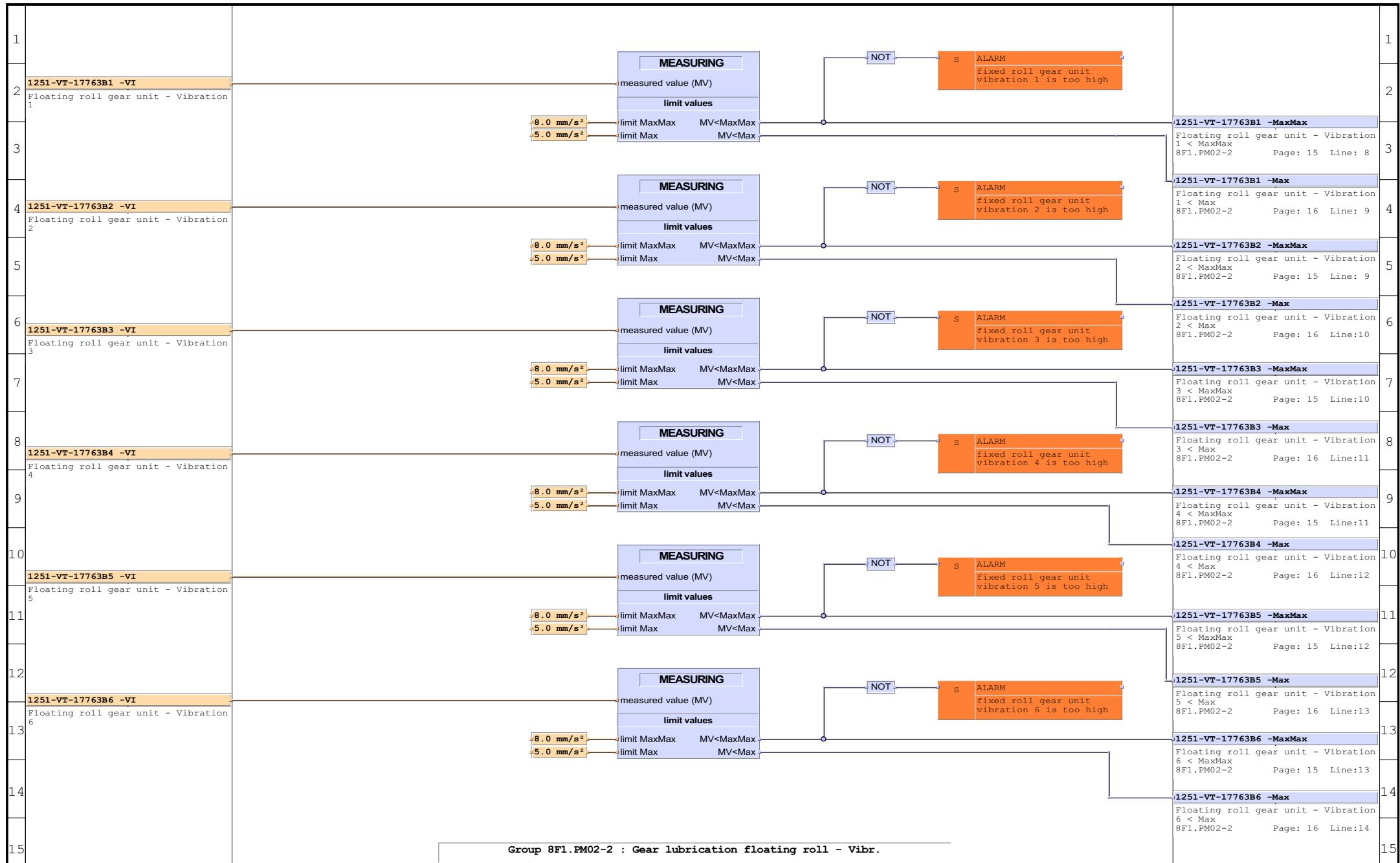


2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer	8F1.PM02
				Drawn	PTD-AD-BWU	Project No: KXEO-01517		HPGR_PM02	Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:		8F1.PM02-2_Gear Lubrication	Sheet 134 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-2 Page: 10
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022		

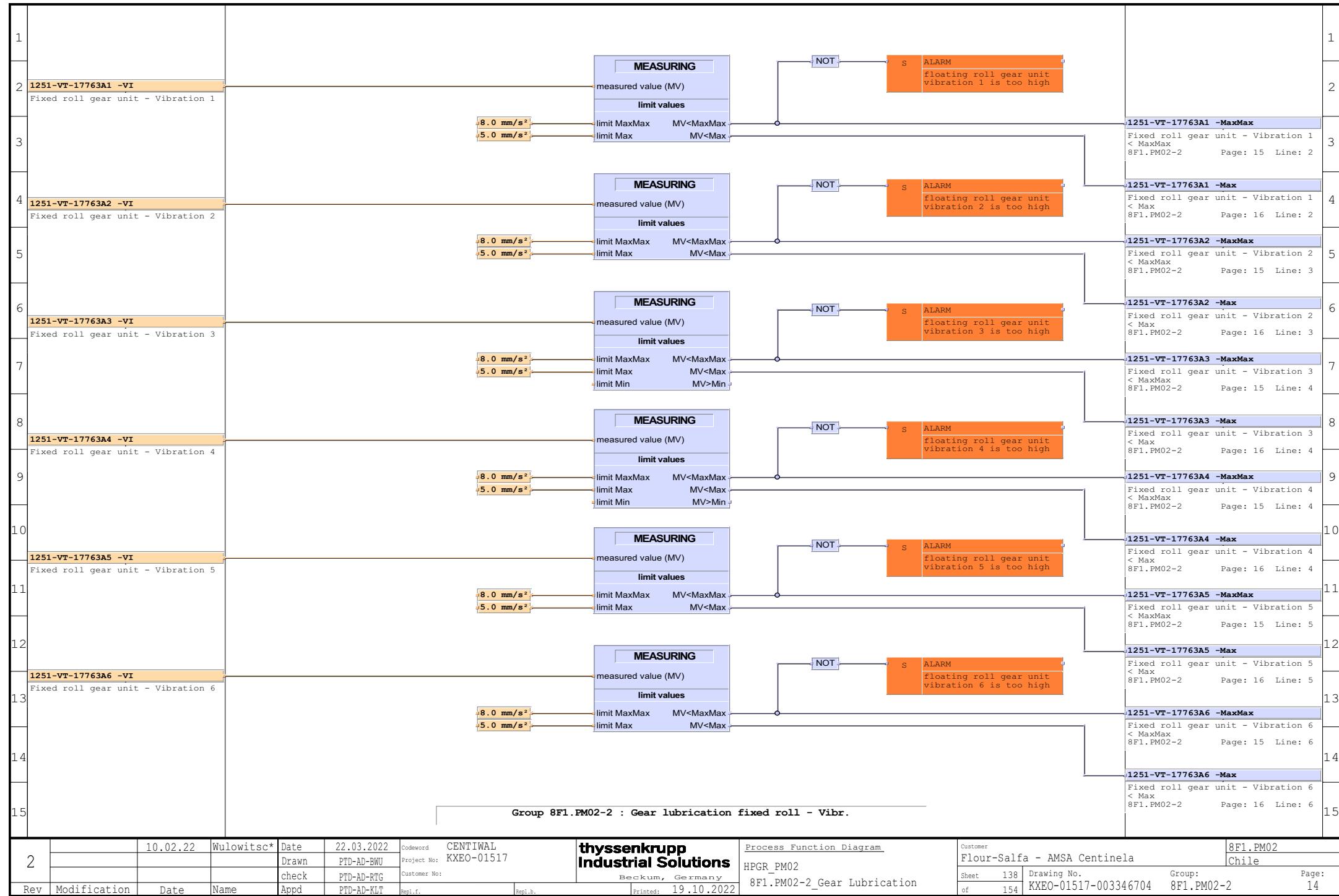


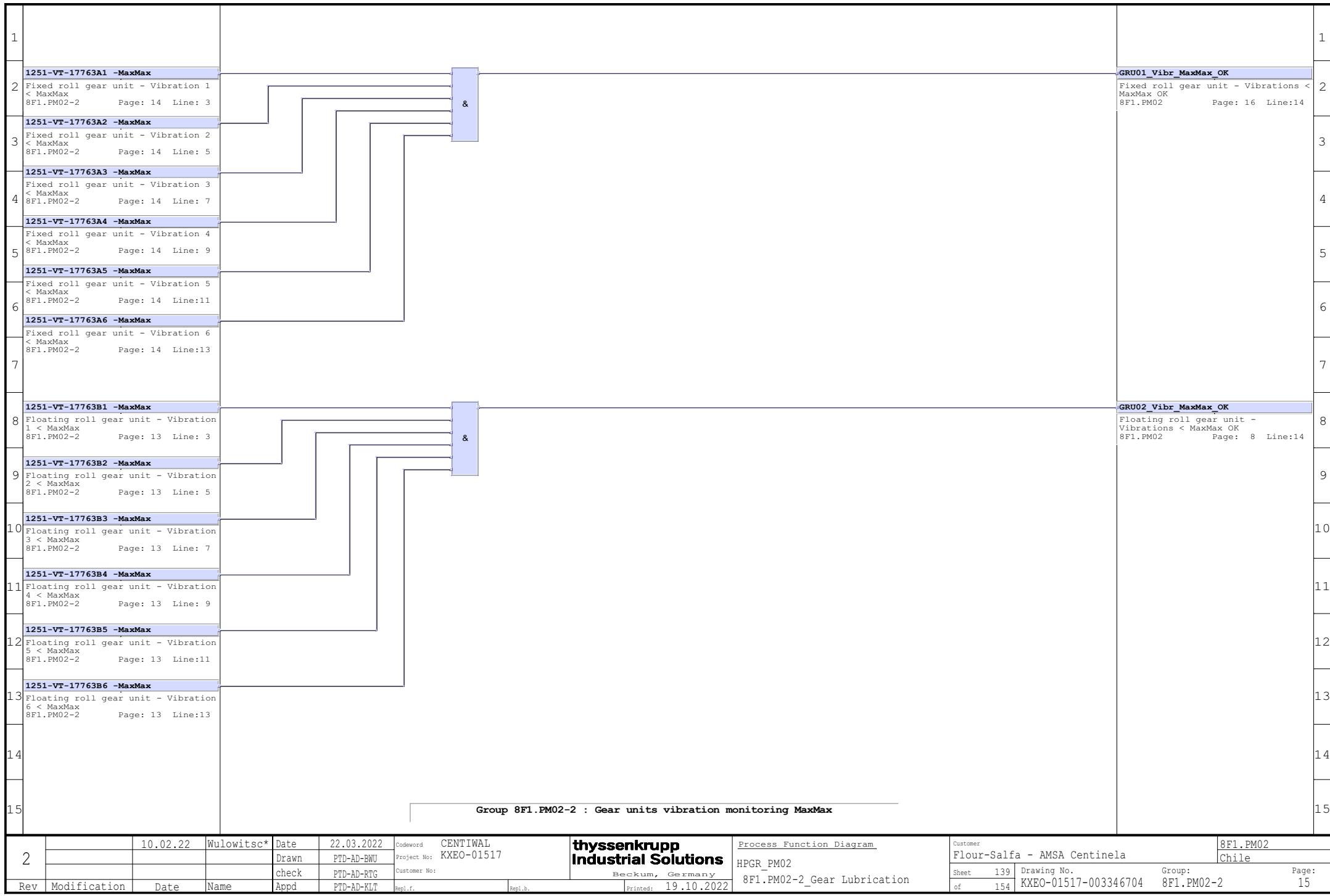
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		Drawn	PTD-AD-BWU	Project No.	KXEO-01517			HPGR_PM02	Flour-Salfa - AMSA Centinela	Chile
		check	PTD-AD-RTG	Customer No:				8F1.PM02-2_Gear Lubrication	Drawing No.	Group:
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022	Page: 11

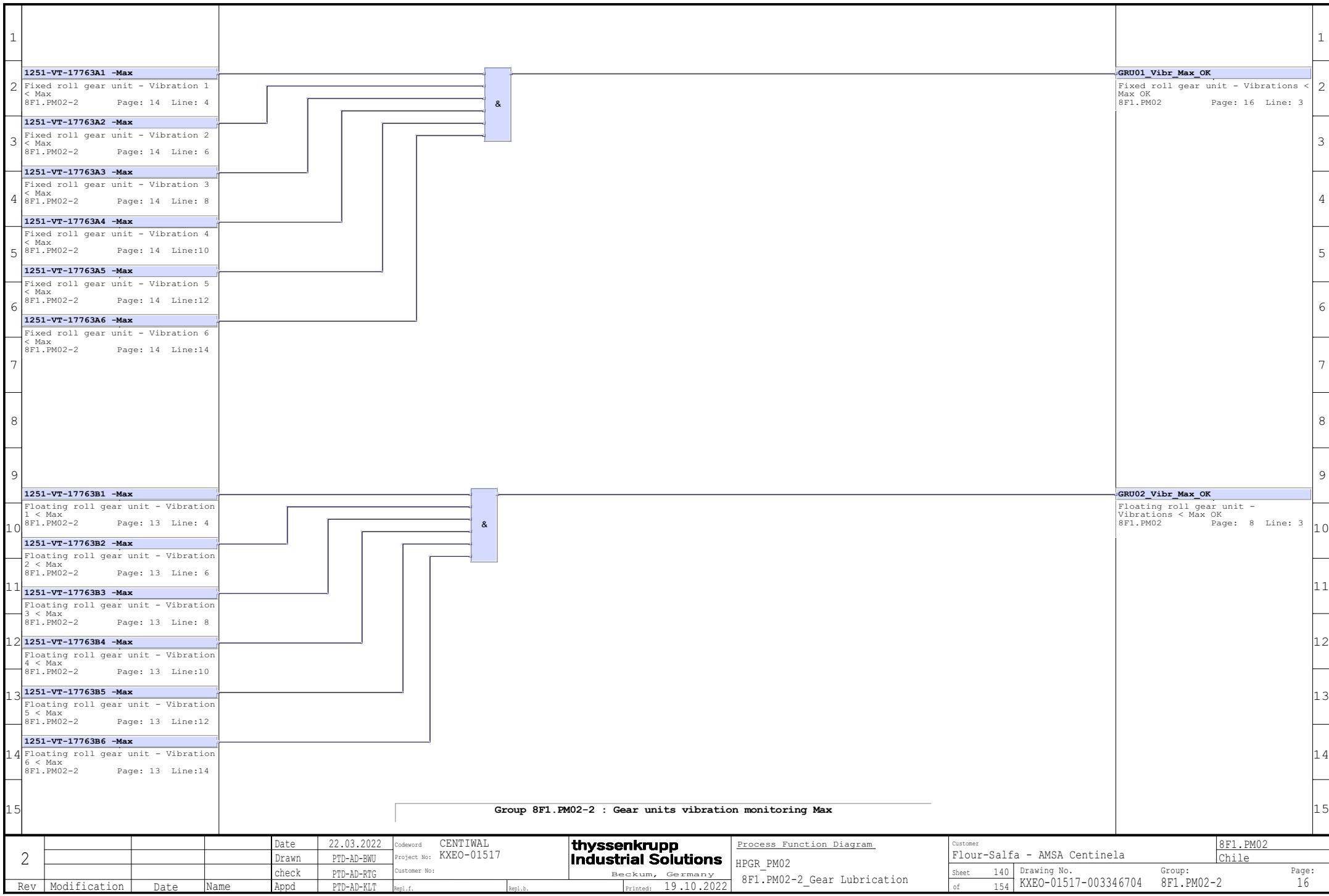




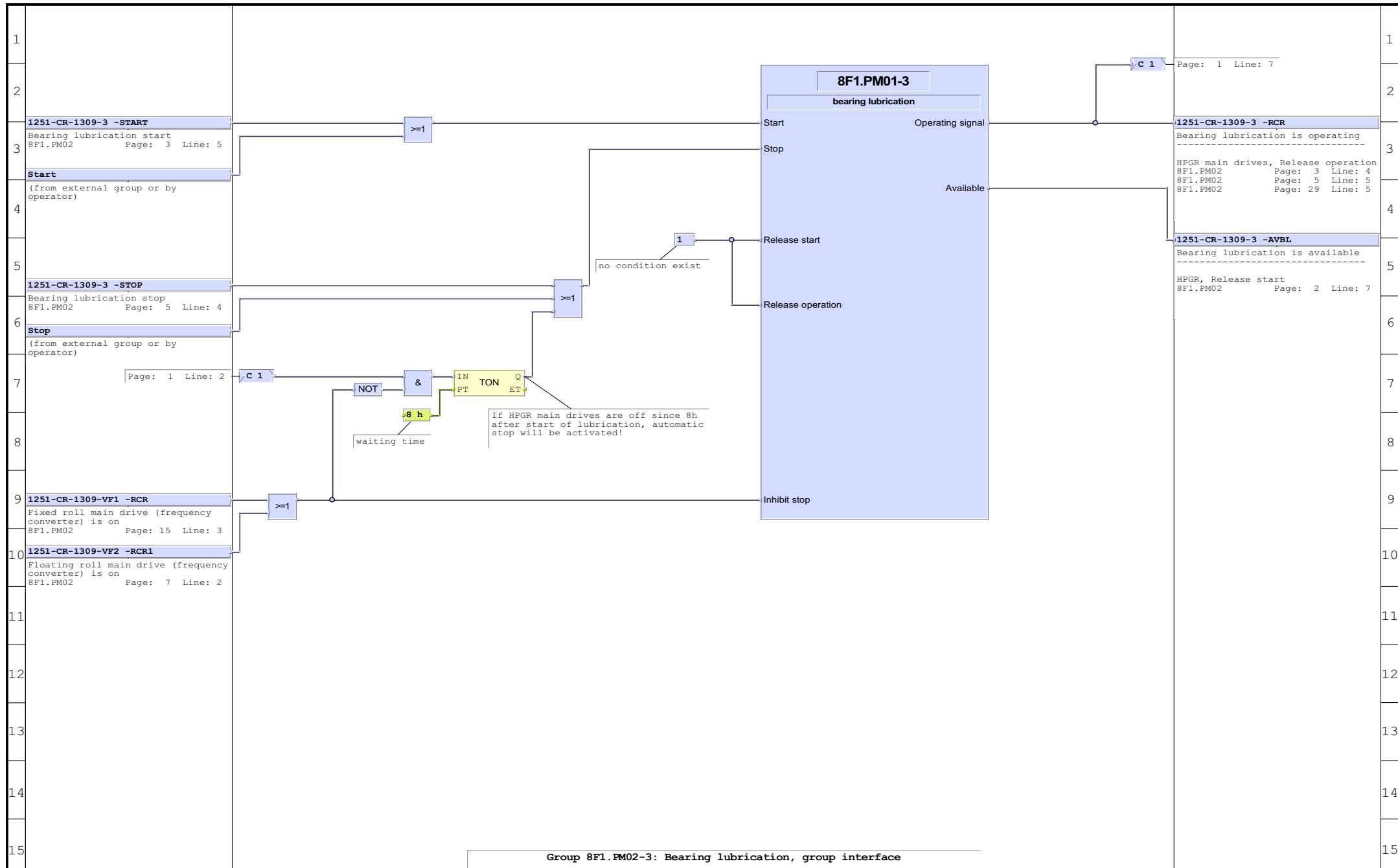
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				Drawn	PTD-AD-BWU	Project No. KXEO-01517			Flour-Salfa - AMSA Centinela	Chile
				check	PTD-AD-RTG	Customer No:			Sheet 137 Drawing No. KXEO-01517-003346704	Group: 8F1.PM02-2 Page: 13
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	of 154	







1															1
2															2
3	<b>1251-OT-17762A -TRQ</b> Fixed roll gear unit - Torque														3
4															4
5	<b>1251-OT-17762B -TRQ</b> Floating roll gear unit - Torque														5
6															6
7															7
8															8
9															9
10															10
11															11
12															12
13															13
14															14
15															15
<b>Group 8F1.PM02-2 : Gear unit torque measurements</b>															
2				Date	22.03.2022	Codeword CENTIWAL Project No: KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram HPGR_PM02 8F1.PM02-2_Gear Lubrication	Customer Flour-Salfa - AMSA Centinela of	8F1.PM02 Chile					
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Sheet 141 of 154	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02-2	Page: 17			



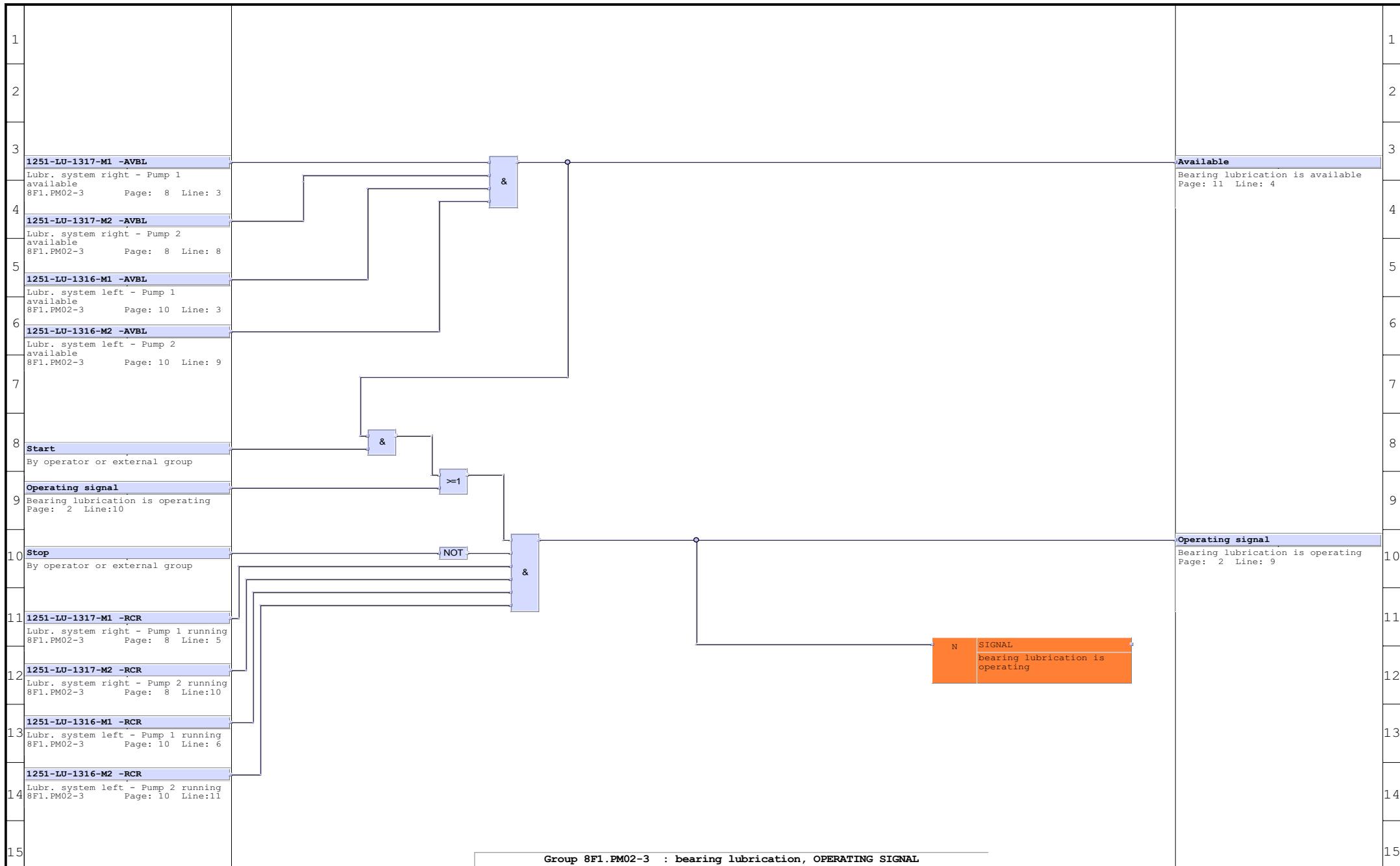
Group 8F1.PM02-3: Bearing lubrication, group interface

2		22.03.22	Wulowitsc*	Date	22.03.2022	Codeword CENTIWAL Project No: KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram HPGR_PM02 8F1.PM02-3_Bearing Lubrication	Customer Flour-Salfa - AMSA Centinela			8F1.PM02
				Drawn	PTD-AD-BNU	Group: Chile						
				check	PTD-AD-RTG	Sheet 142 of 154 Drawing No. KXEO-01517-003346704			Page: 1			
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed:	19.10.2022			

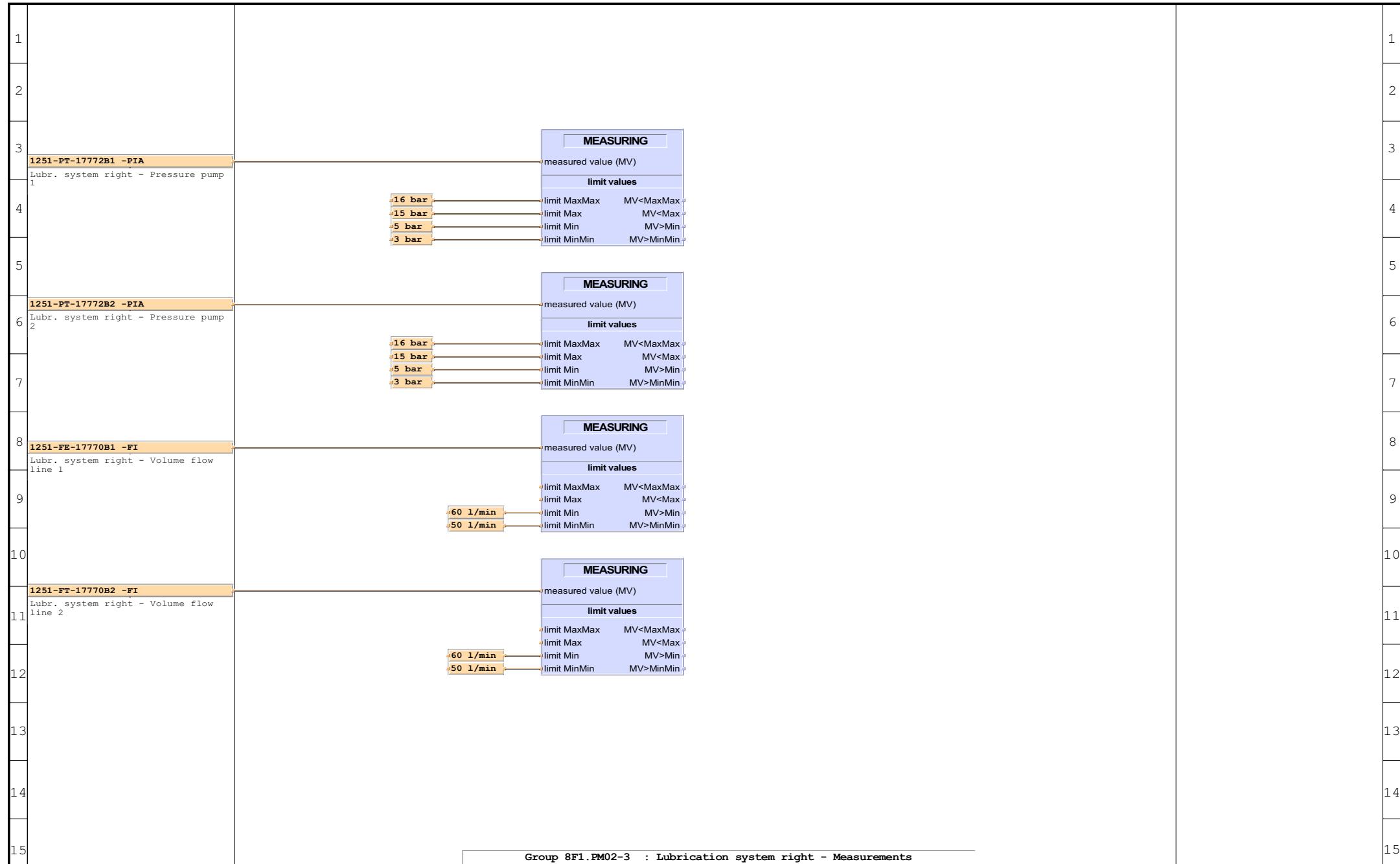
1  
INTERFACE IN- AND OUTPUTS  
8F1.PM02-3

2	Name	Var-Art	Attrib	Init-Wert	Langname	Phys. Adr.	Verwendung	2
3	Inhibit stop	VAR_INPUT			Inhibit group stop	12 B/4 15/73		3
	Release operation	VAR_INPUT			Release group operation	11 A/4 15/64		
	Release start	VAR_INPUT			Release group start	11 A/4 15/70		
	Start	VAR_INPUT			By operator or external group	2 A/-1 15/49		
4	Stop	VAR_INPUT			By operator or external group	11 A/4 15/82		4
						2 A/-1 15/37		
						12 B/4 15/79		
5	Available	VAR_OUTPUT			Bearing lubrication is available	2 A/-1 99/82		5
	Operating signal	VAR_OUTPUT			Bearing lubrication is operating	11 A/4 15/76		
						2 A/-1 15/44		
						2 A/-1 99/38		6
7								7
8								8
9								9
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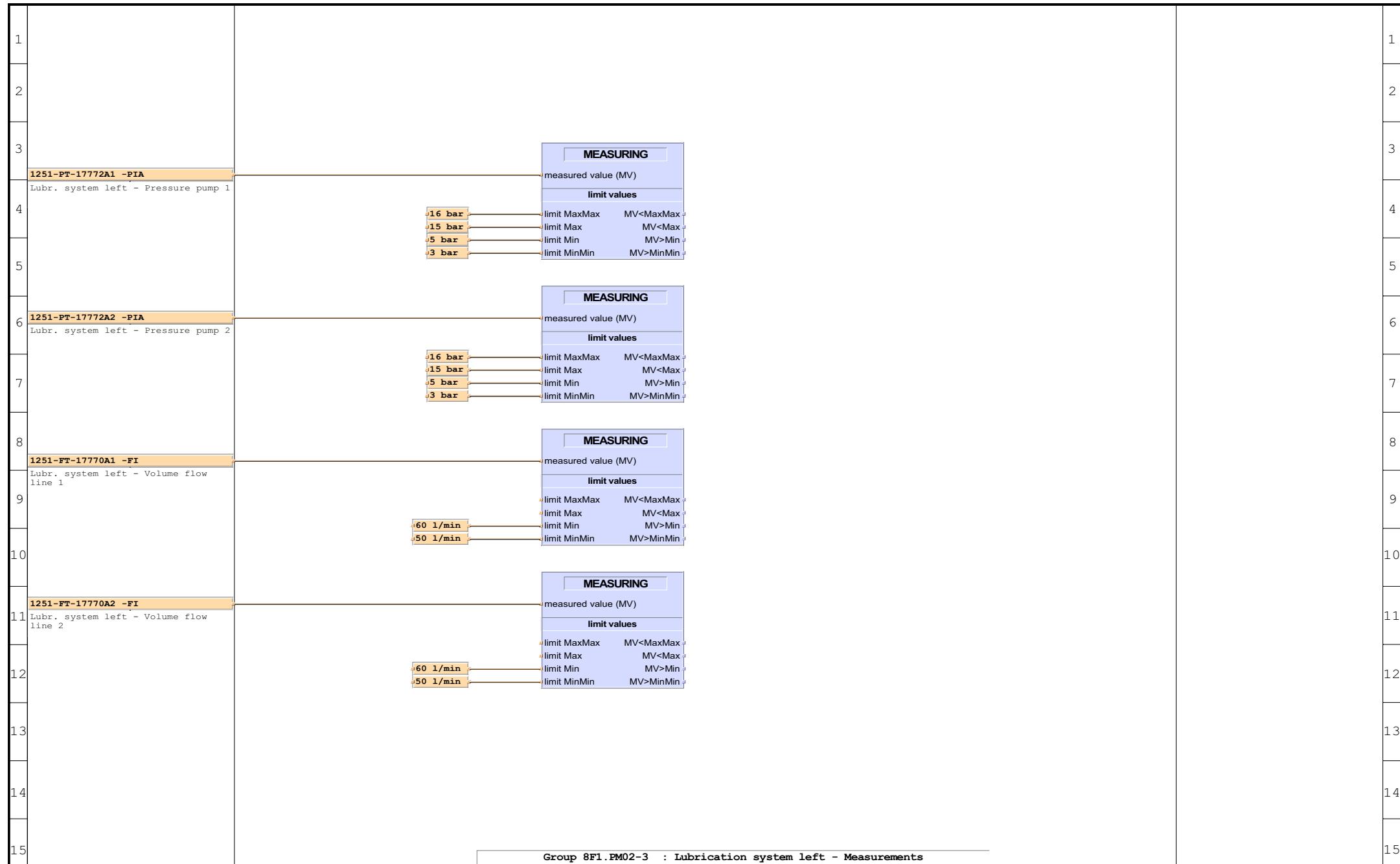
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	23.03.22	Wulowitzsc*	Drawn	PTD-AD-BWU	Project No: KXEO-01517		HPGR_PM02		
	22.03.22	Wulowitzsc*	check	PTD-AD-RTG	Customer No:		8F1.PM02-3_Bearing Lubrication		
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022	Sheet 143 Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-3 Page: of 154



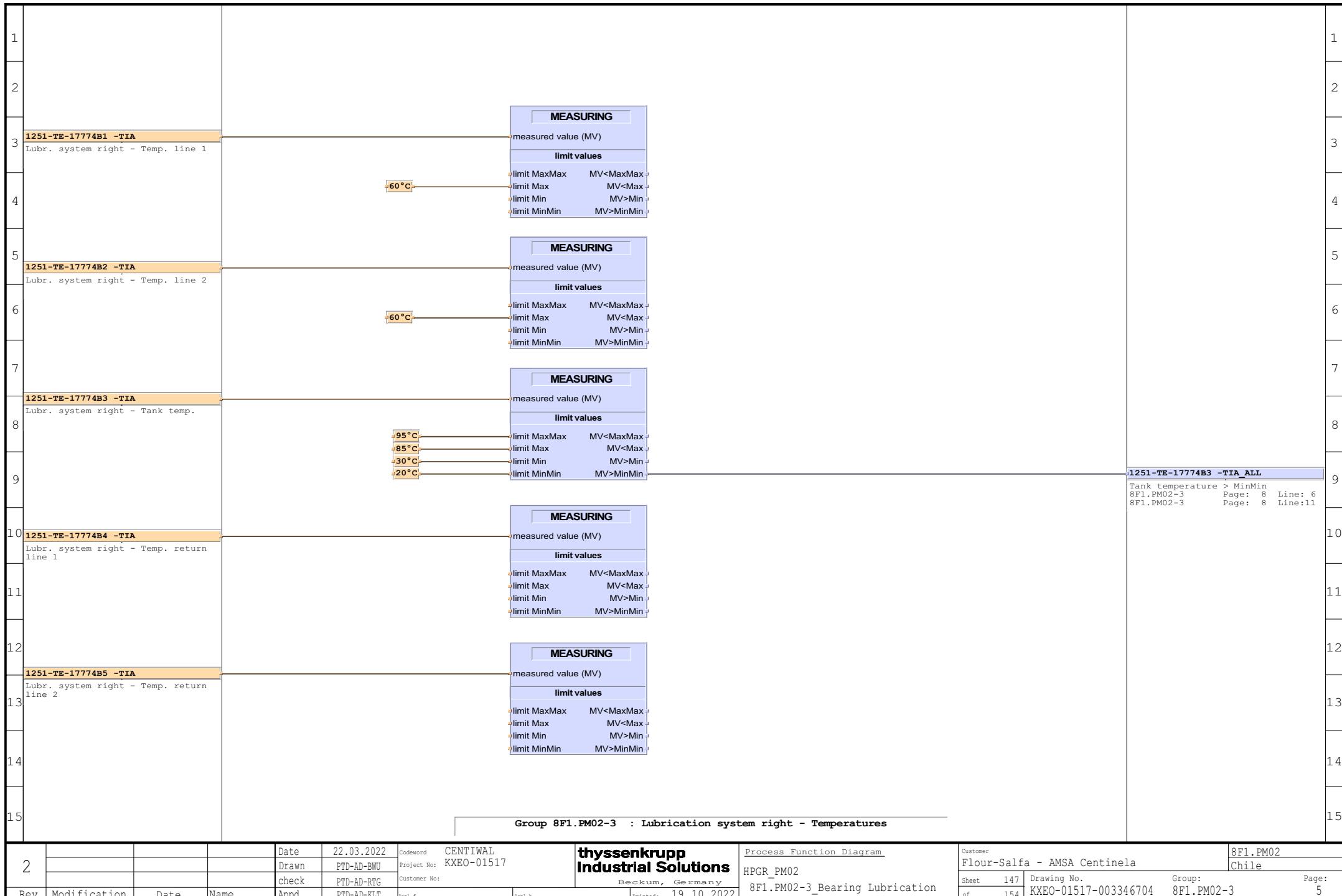
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				check	PTD-AD-RTG	Customer No:			8F1.PM02-3_Bearing Lubrication	Sheet 144 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-3 Page: 2
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.				

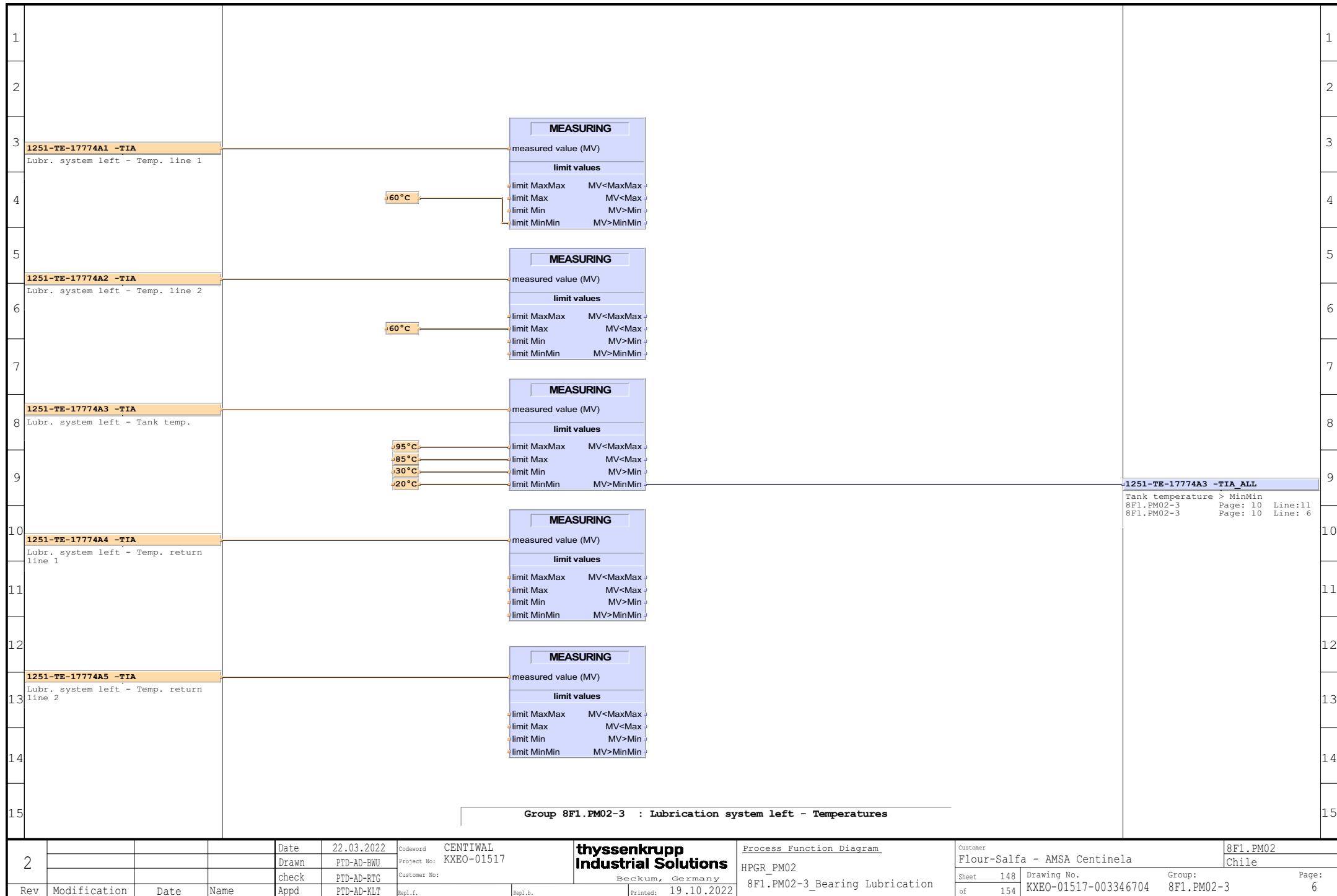


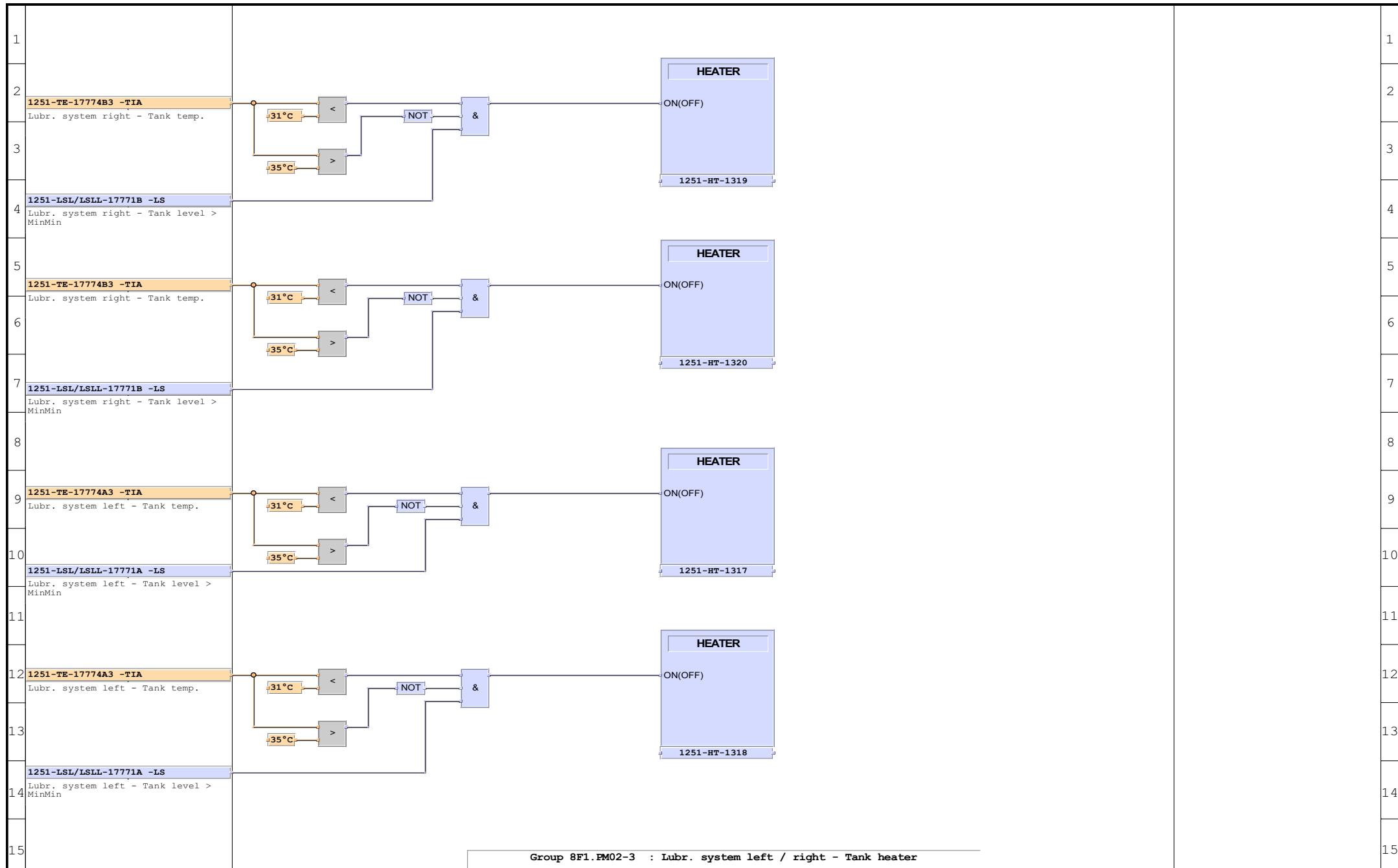
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				Drawn	PTD-AD-BWU	Project No: KXEO-01517		HPGR_PM02		
				check	PTD-AD-RTG	Customer No:		8F1.PM02-3_Bearing Lubrication	Sheet 145 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-3 Page: 3
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022		



2				Date	22.03.2022	Codeword CENTIWAL	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	Process Function Diagram	Customer Flour-Salfa - AMSA Centinela Chile	8F1.PM02
				Drawn	PTD-AD-BWU	Project No: KXEO-01517		HPGR_PM02		
				check	PTD-AD-RTG	Customer No:		8F1.PM02-3_Bearing Lubrication	Sheet 146 of 154	Drawing No. KXEO-01517-003346704 Group: 8F1.PM02-3 Page: 4
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022		

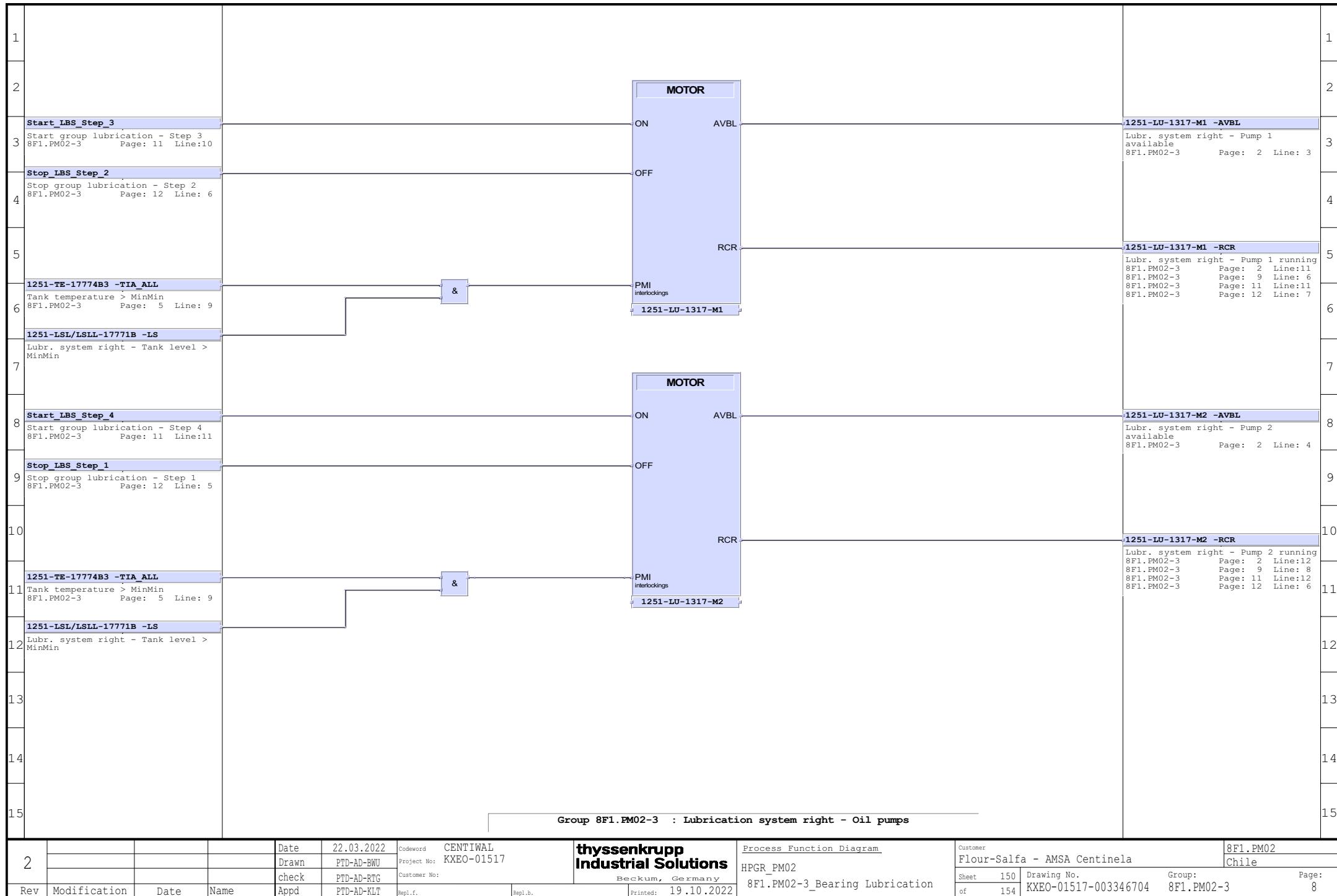


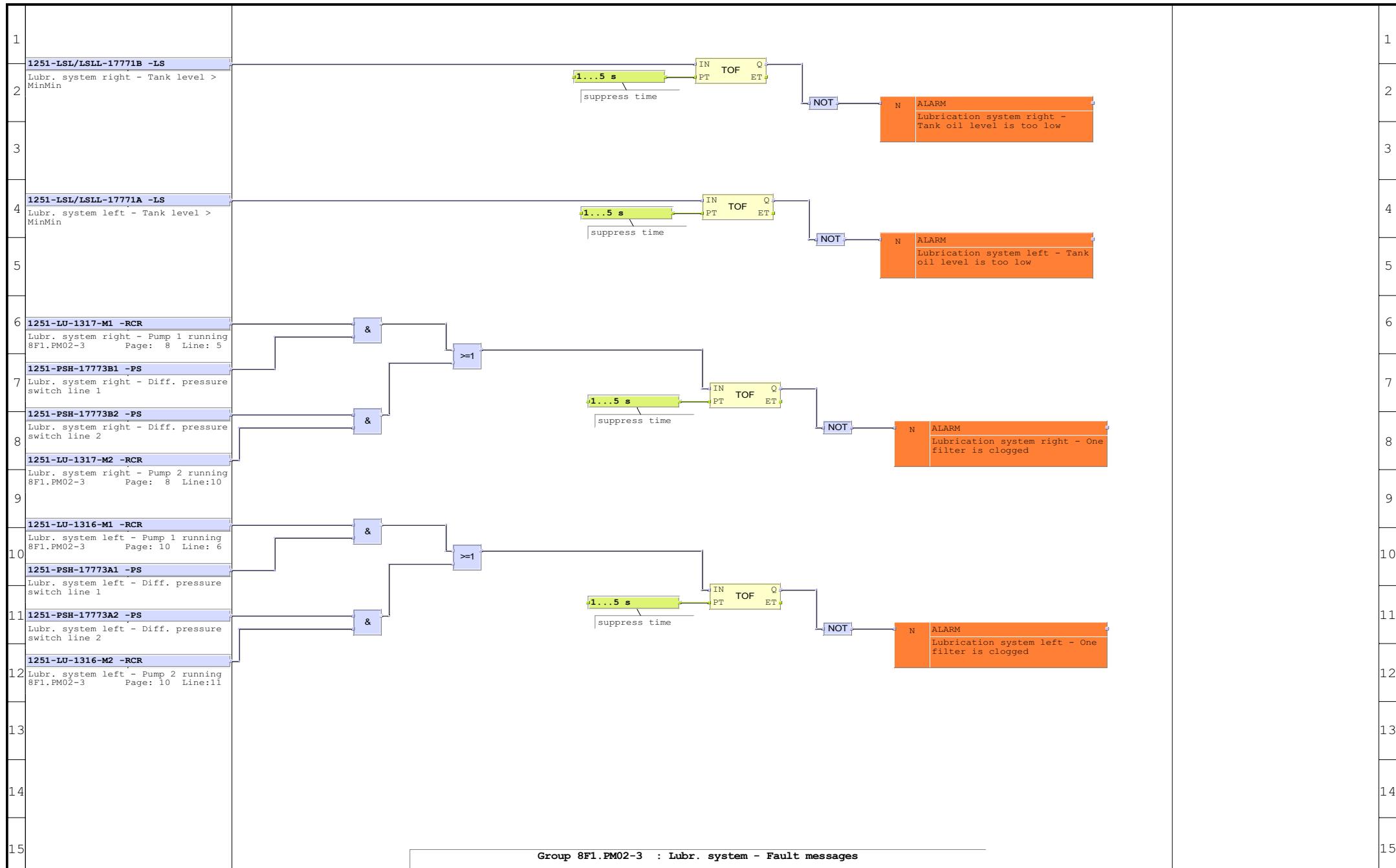




Group 8F1.PM02-3 : Lubr. system left / right - Tank heater

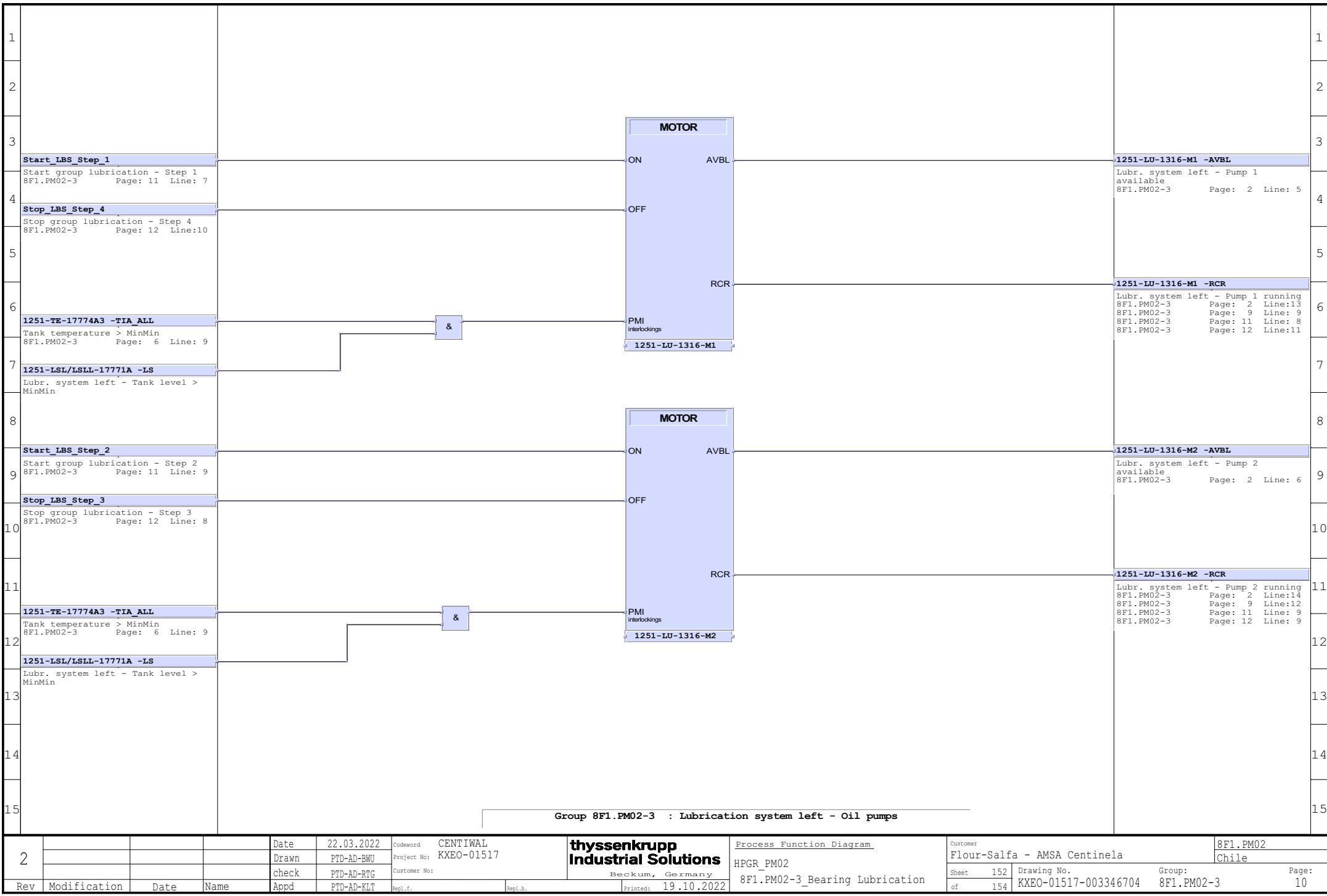
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			Drawn	PTD-AD-BNU	Customer No:					Chile
			check	PTD-AD-RTG	Repl.f.					
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.b.	Printed: 19.10.2022	Sheet 149 of 154	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02-3 Page: 7

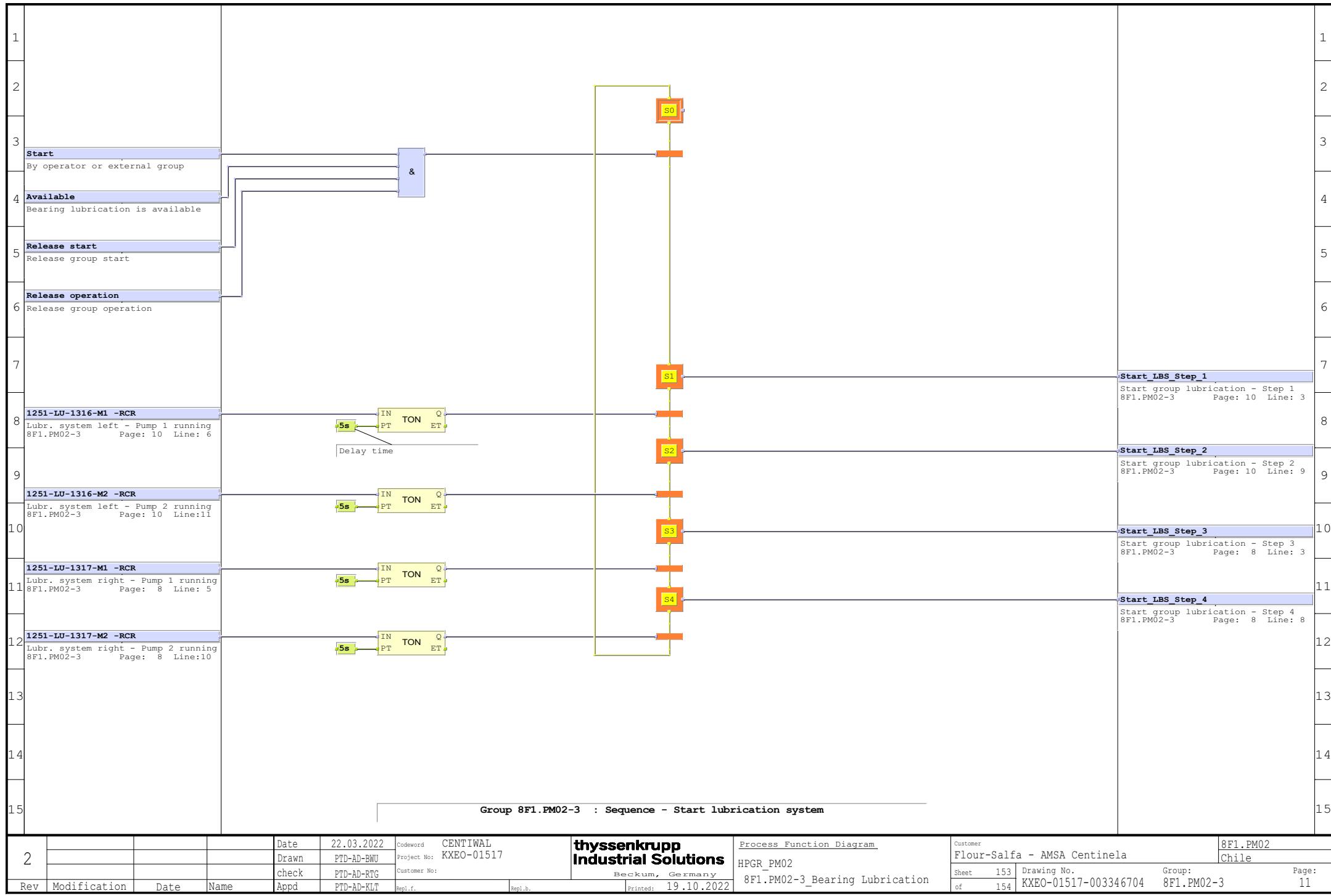


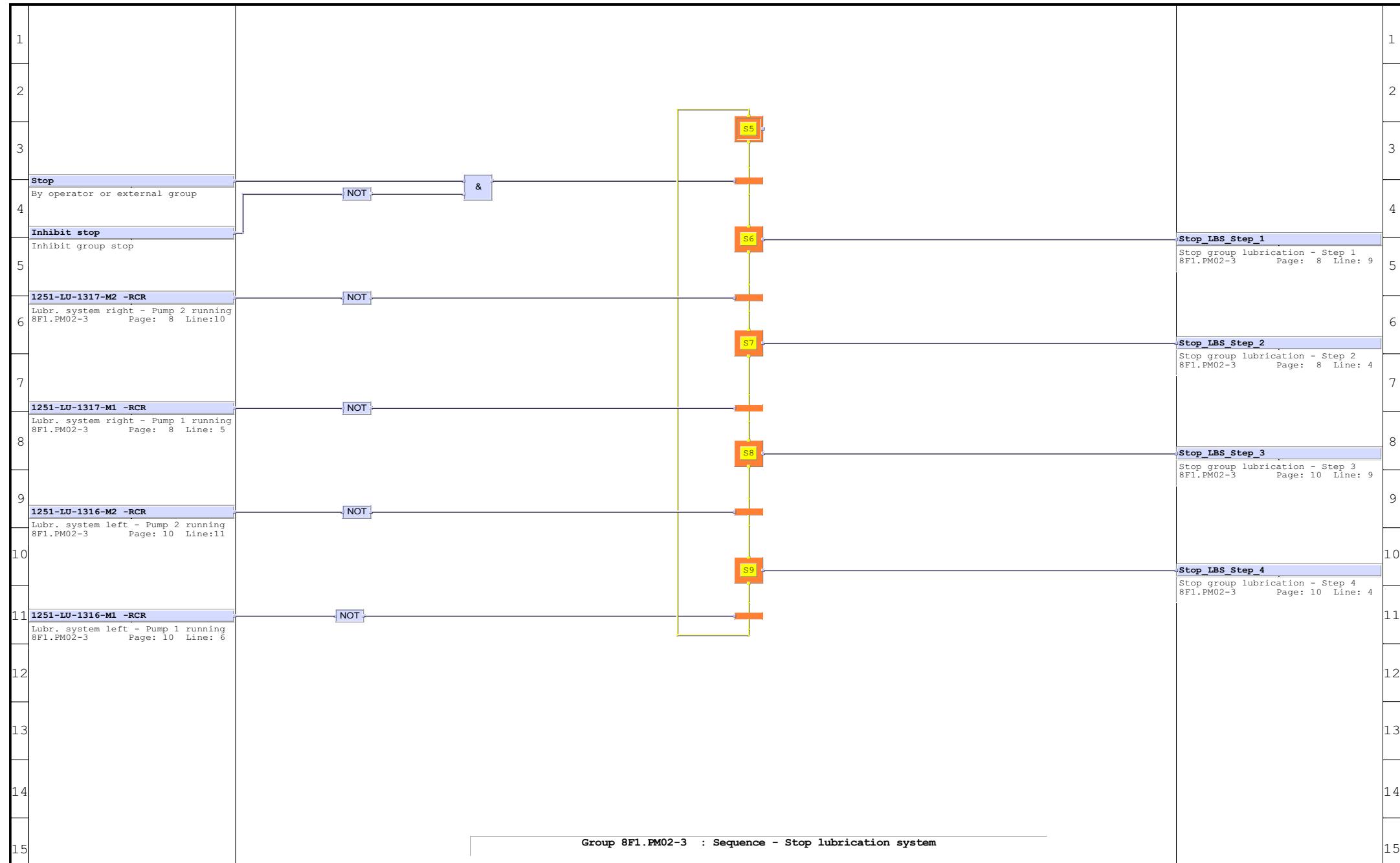


Group 8F1.PM02-3 : Lubr. system - Fault messages

2			Date	22.03.2022	Codeword CENTIWAL Project No: KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> Beckum, Germany	<u>Process Function Diagram</u> HPGR_PM02 8F1.PM02-3_Bearing Lubrication	Customer Flour-Salfa - AMSA Centinela			8F1.PM02
			Drawn	PTD-AD-BNU	Customer No:			Flour-Salfa - AMSA Centinela			Chile
			check	PTD-AD-RTG	Repl.f.			Flour-Salfa - AMSA Centinela			Page: 9
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.b.	Printed: 19.10.2022	Sheet 151 of 154	Drawing No. KXEO-01517-003346704	Group: 8F1.PM02-3	







2				Date	22.03.2022	Codeword CENTIWAL Project No: KXEO-01517	<b>thyssenkrupp Industrial Solutions</b> <small>Beckum, Germany</small>	<u>Process Function Diagram</u> HPGR_PM02 8F1.PM02-3_Bearing Lubrication	Customer Flour-Salfa - AMSA Centinela			8F1.PM02		
			Drawn	PTD-AD-BWU	Customer No:				Group: KXEO-01517-003346704			Chile		
			check	PTD-AD-RTG					Sheet 154 of 154	Drawing No.	Page: 12			
Rev	Modification	Date	Name	Appd	PTD-AD-KLT	Repl.f.	Repl.b.	Printed: 19.10.2022						