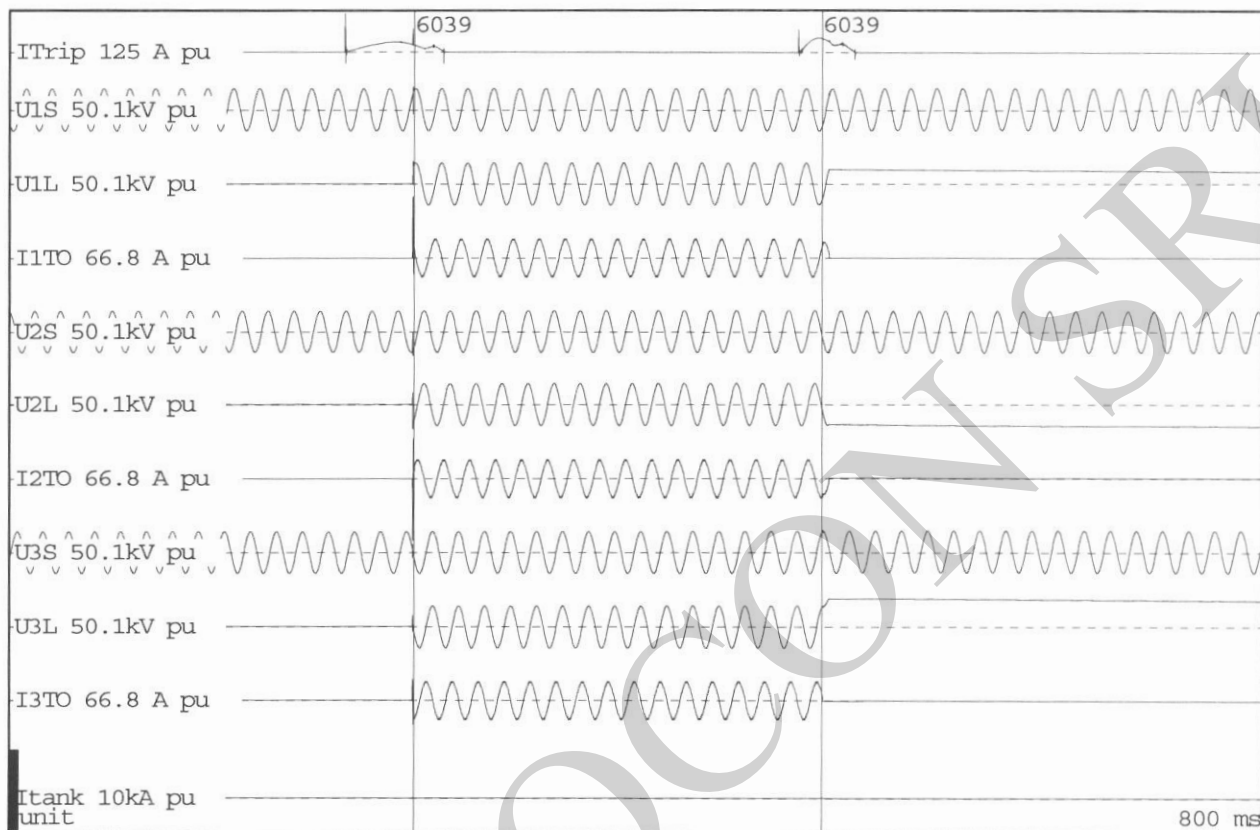




TDT 2108-10

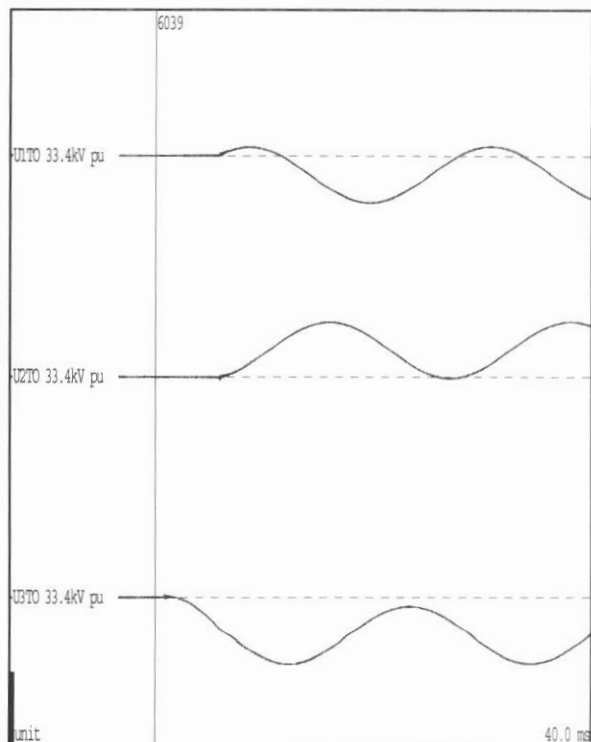
Cable charging current interrupting test

Page 84



TEST NUMBER: 100526-6039

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,07	9,03	9,05
Applied voltage, between phases	kV	15,7		
Make time	ms	43,8	43,8	43,8
Closing time	ms	-		
Breaking current, phase value	A	10,6	10,6	10,6
Average current, three phase	A	10,6		
Test voltage, phase value	kV	9,10	9,07	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	15,3		
Arc duration	ms	4,5	4,5	0,7
Break time	ms	19,8	19,8	16,0
Recovery voltage, peak value	kV	-21,5	24,9	-29,9
Supply voltage, peak value	kV	13,1	-13,0	13,3
Load voltage, peak value	kV	8,80	-12,1	17,3



Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

TEST NUMBERS

100526-6042	100526-6054
100526-6043	100526-6055
100526-6044	100526-6056
100526-6045	100526-6057
100526-6046	100526-6058
100526-6047	100526-6059
100526-6048	100526-6060
100526-6049	100526-6061
100526-6050	
100526-6051	
100526-6052	
100526-6053	

CONDITION BEFORE TESTS

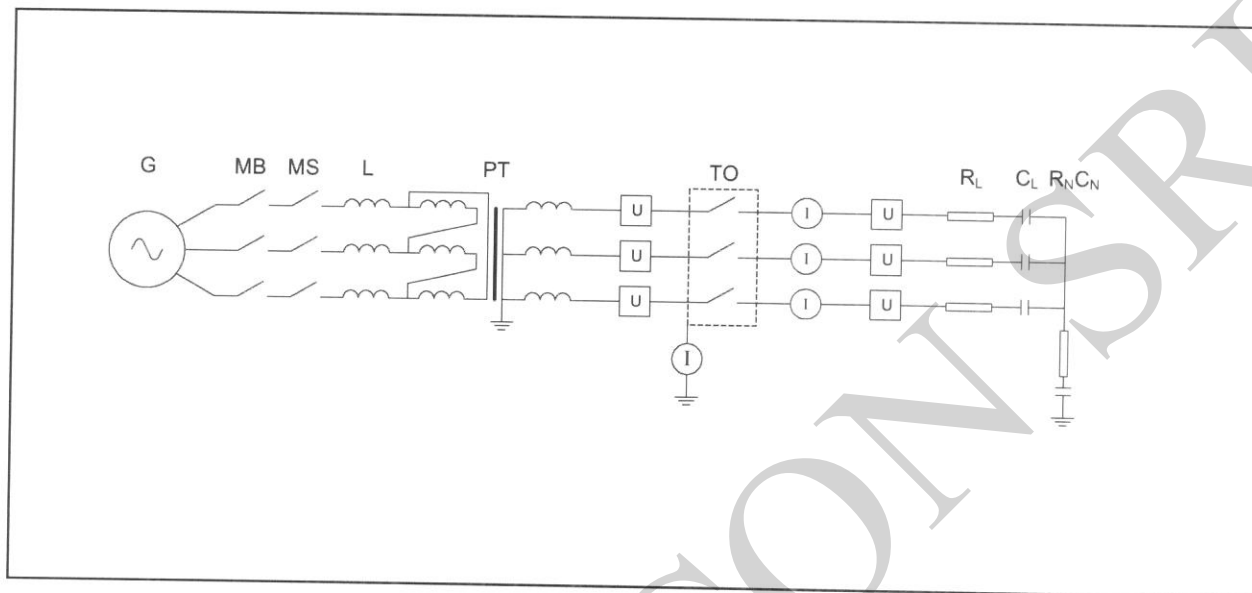
Recloser in same condition.

Supply to moving contacts.

Load on fixed contacts.

Frame earthed via an earth fault current indicating CT.

TEST-CIRCUIT S03



G	= Generator	TO	= Test Object	U	= Voltage Measurement to earth
MB	= Master Breaker	L	= Reactor	I	= Current Measurement
MS	= Make Switch	R	= Resistor		
PT	= Power Transformer	C	= Capacitor		

Supply		
Power	MVA	113
Frequency	Hz	60
Phase(s)		3
Voltage	kV	15,5
Current	kA	4,2
Impedance	Ω	2,13
Power factor		< 0,1
Neutral		earthed

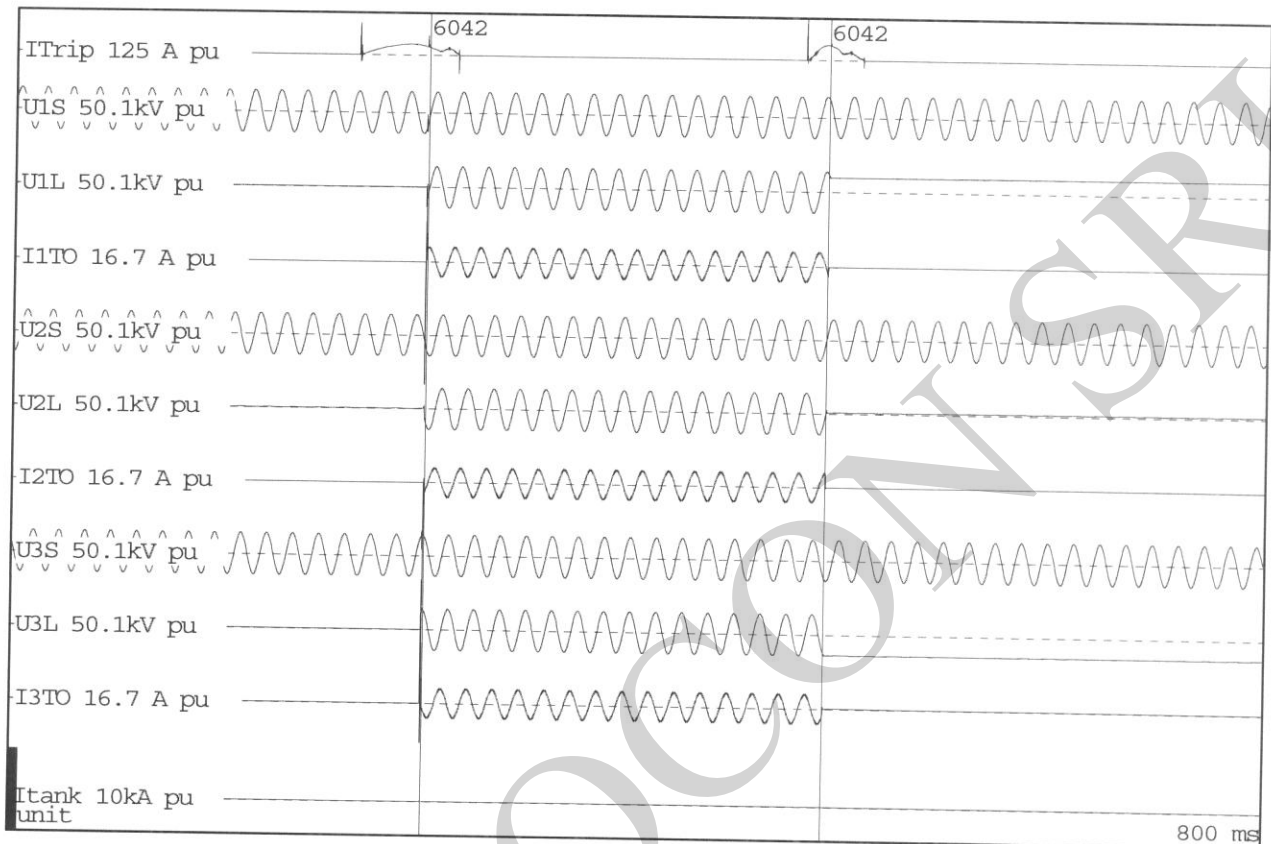
TRV control elements added (supply)		
C_1	μF	-
R_1 (in parallel)	Ω	-
C_s	μF	-
L_1	mH	-
C_d	nF	-
Neutral		-

Prospective TRV across TO		
Voltage	kV	15,5
u_c	kV	31,6
t_2	μs	7200

Load		
Impedance	Ω	895
Cos phi		< 0,1
Neutral		via RN CN

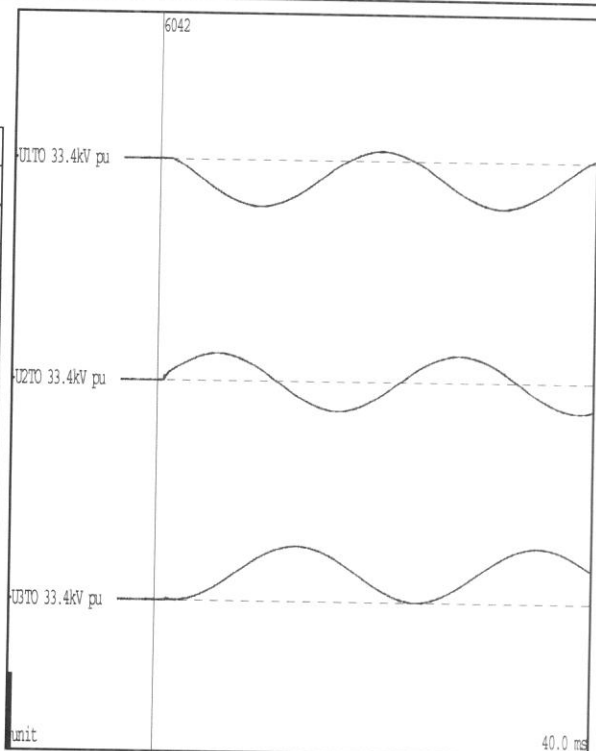
Capacitive load		
C_L	μF	0.5
R_L	Ω	116
L_L	mH	-
C_N	μF	0.03
R_N	Ω	1500
Frequency of inrush current	Hz	2750

Remarks: -



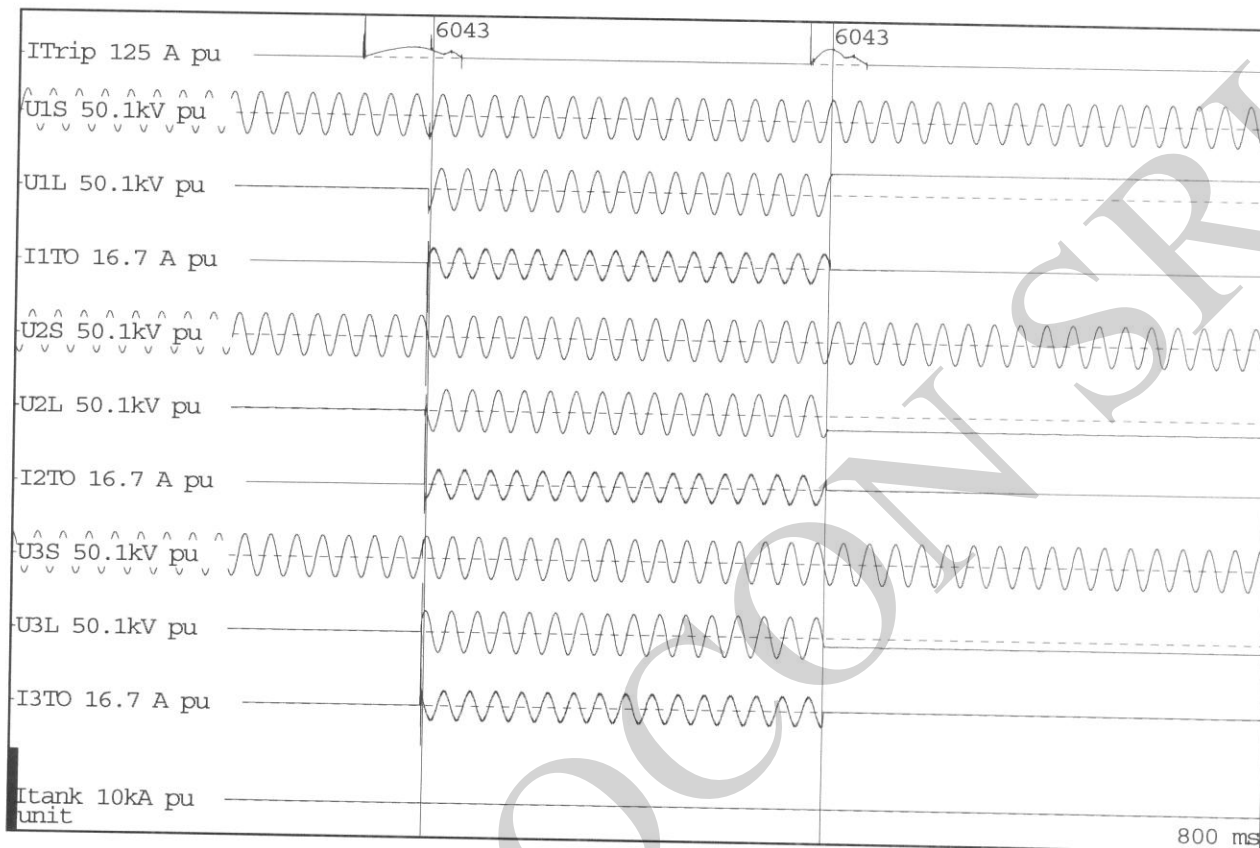
TEST NUMBER: 100526-6042

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	8,99	8,97	8,90
Applied voltage, between phases	kV	15,5		
Make time	ms	43,4	43,4	43,4
Closing time	ms	-		
Breaking current, phase value	A	2,05	2,05	2,05
Average current, three phase	A	2,05		
Test voltage, phase value	kV	8,99	8,99	8,93
Test voltage, between phases	kV	15,5		
Opening time	ms	14,8		
Arc duration	ms	1,7	0,5	0,5
Break time	ms	16,5	15,3	15,3
Recovery voltage, peak value	kV	-21,3	-13,3	25,1
Supply voltage, peak value	kV	13,3	13,0	12,9
Load voltage, peak value	kV	8,97	0,865	-12,3



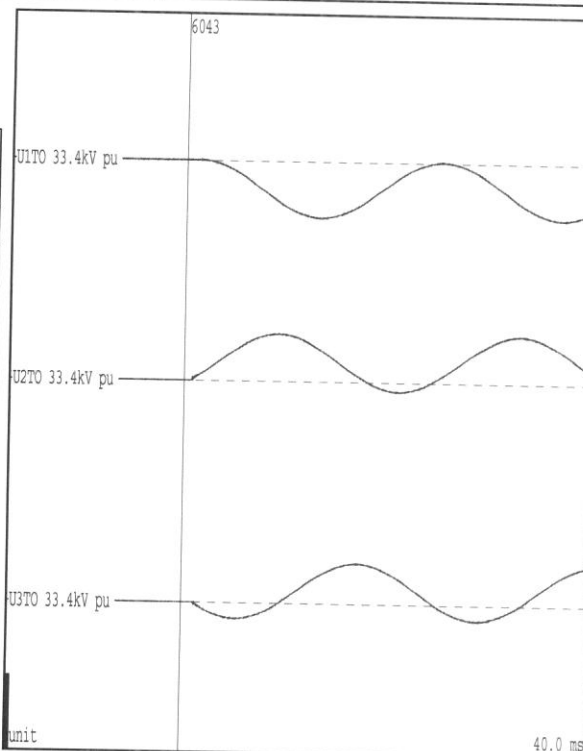
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



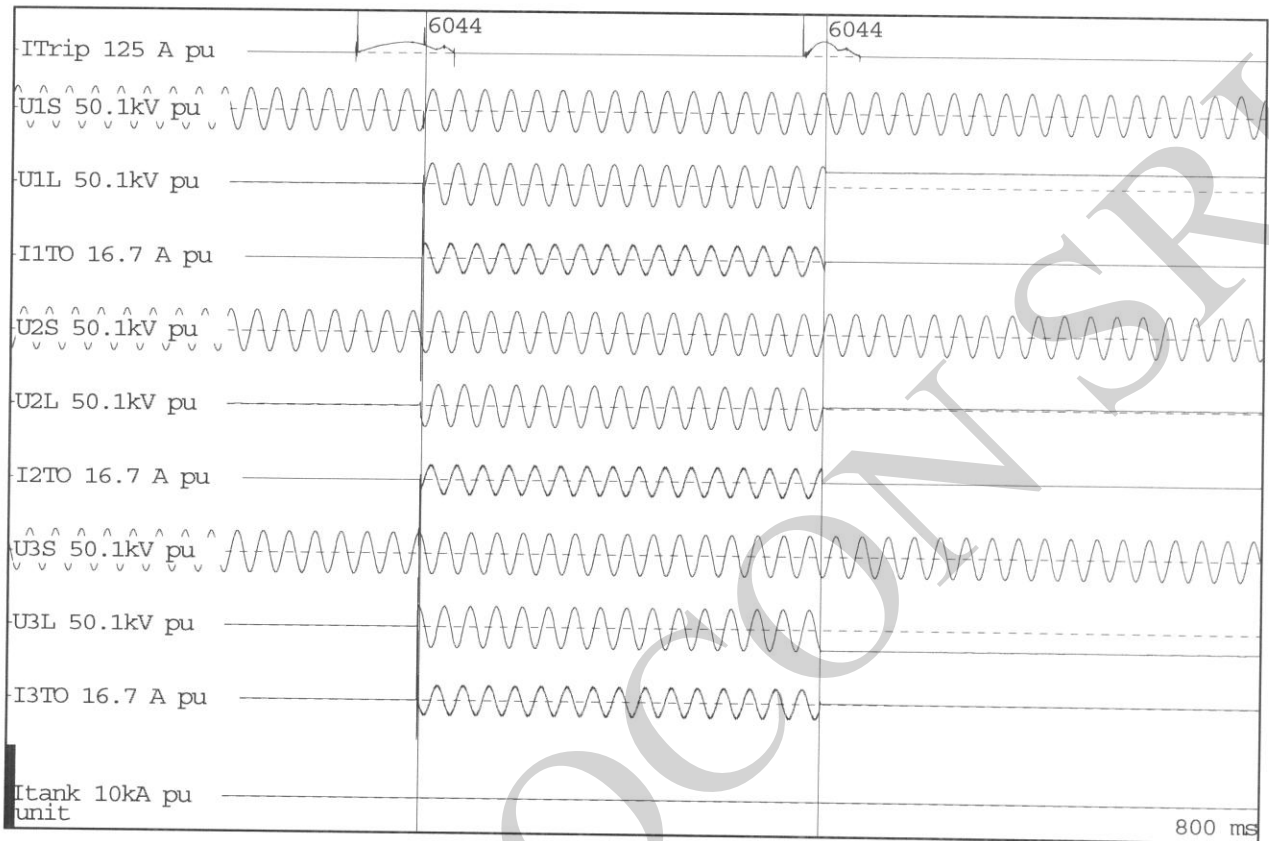
TEST NUMBER: 100526-6043

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,10	9,08	9,01
Applied voltage, between phases	kV	15,7		
Make time	ms	43,6	43,6	43,6
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,11	9,10	9,04
Test voltage, between phases	kV	15,7		
Opening time	ms	14,3		
Arc duration	ms	0,9	2,2	0,9
Break time	ms	15,2	16,5	15,2
Recovery voltage, peak value	kV	-25,5	21,6	18,3
Supply voltage, peak value	kV	13,4	-12,9	12,9
Load voltage, peak value	kV	13,0	-8,67	-5,39



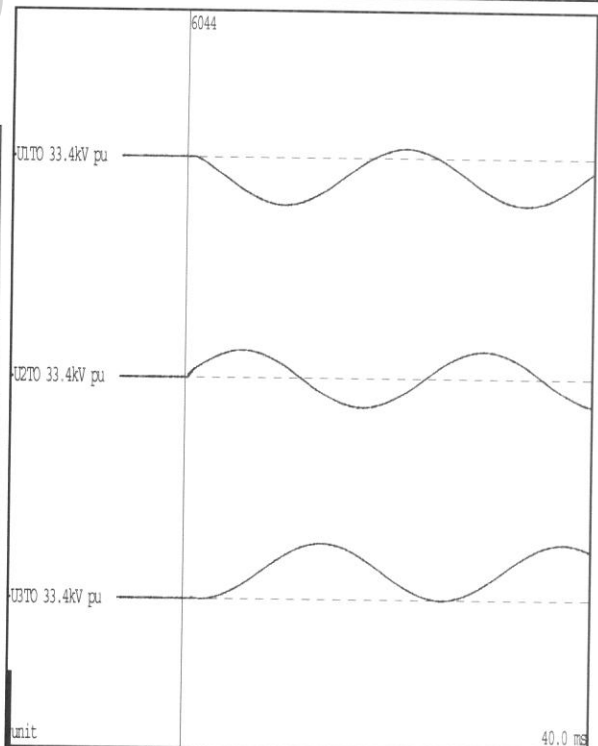
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



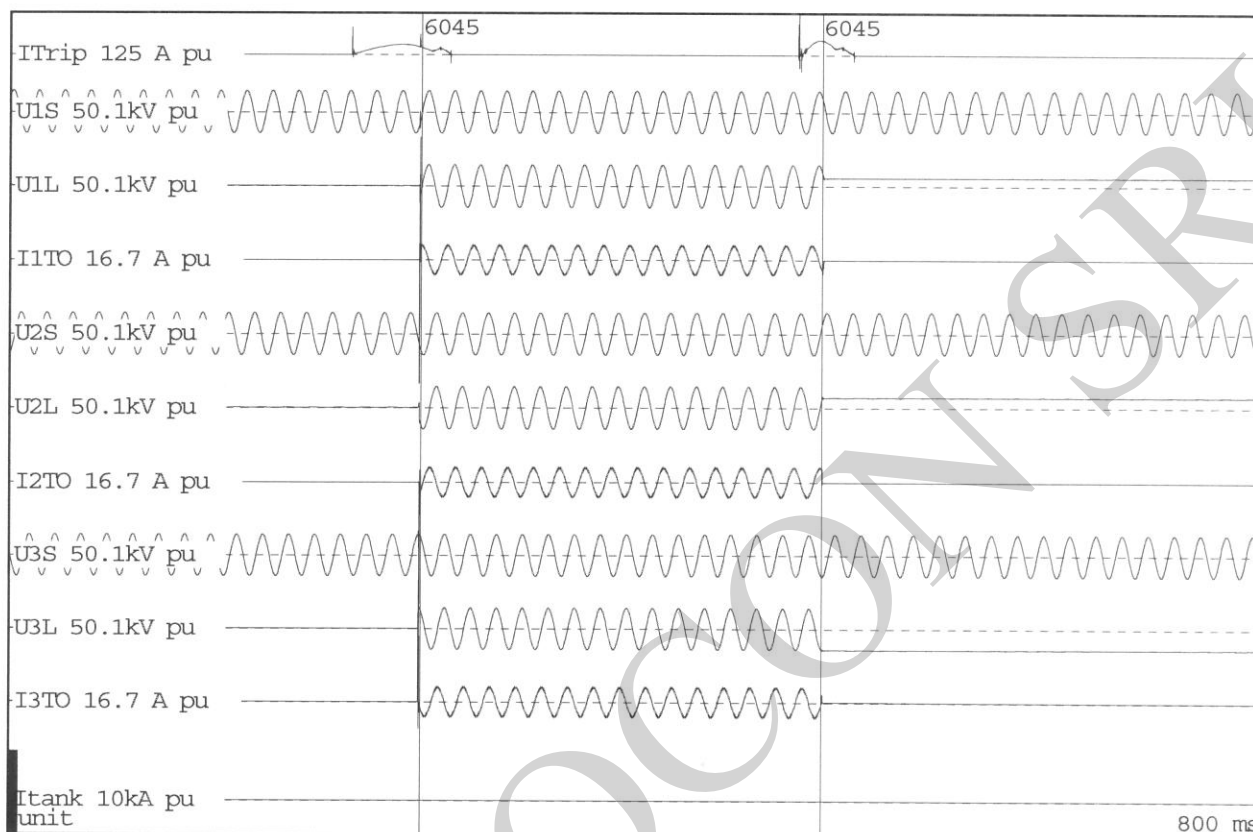
TEST NUMBER: 100526-6044

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,09	9,01
Applied voltage, between phases	kV	15,7		
Make time	ms	43,2	43,2	43,2
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,10	9,09	9,04
Test voltage, between phases	kV	15,7		
Opening time	ms	15,0		
Arc duration	ms	2,0	0,3	0,4
Break time	ms	17,0	15,3	15,4
Recovery voltage, peak value	kV	-21,7	-13,6	25,2
Supply voltage, peak value	kV	13,4	13,2	13,0
Load voltage, peak value	kV	9,13	0,880	-12,2



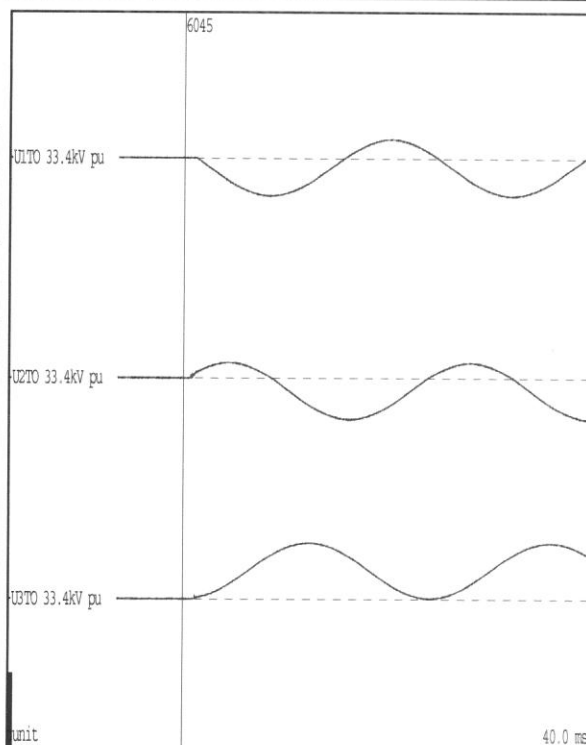
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



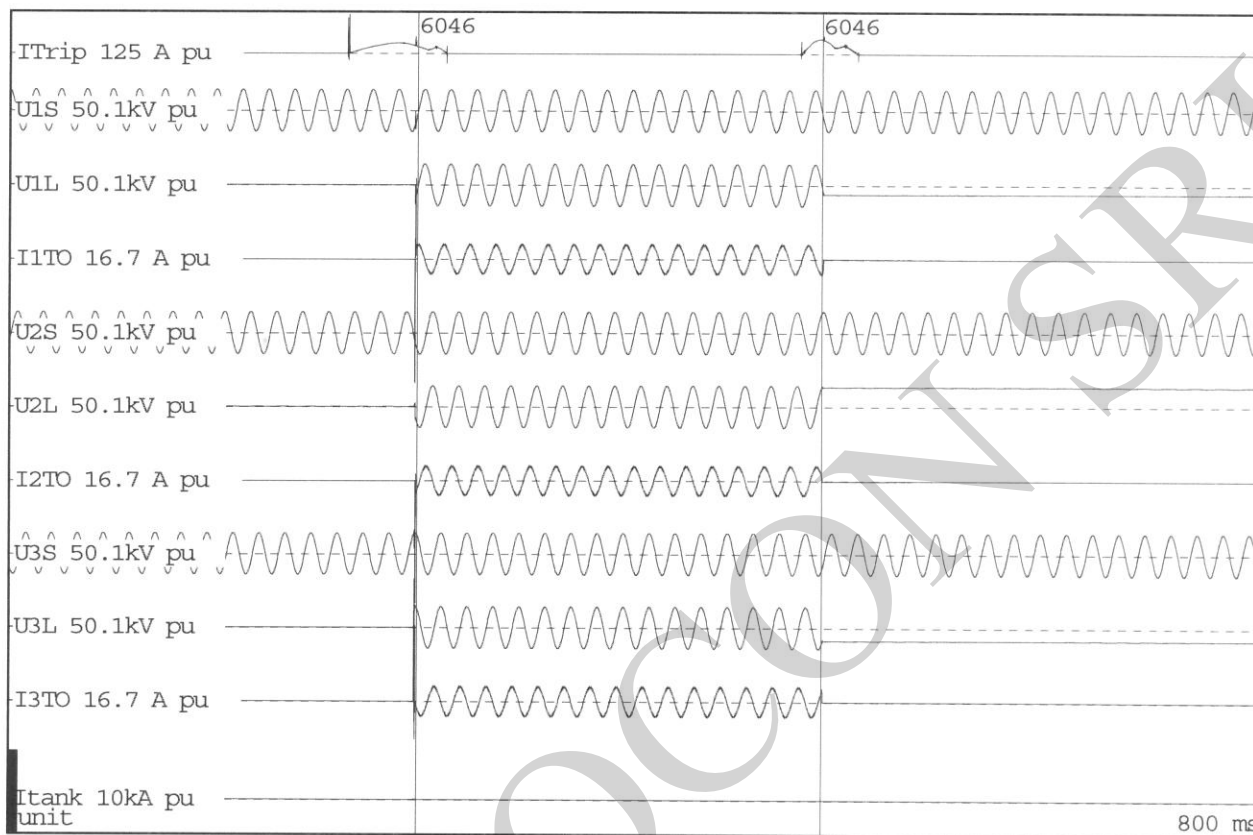
TEST NUMBER: 100526-6045

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,09	9,02
Applied voltage, between phases	kV	15,7		
Make time	ms	43,5	43,5	43,5
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,11	9,09	9,04
Test voltage, between phases	kV	15,7		
Opening time	ms	15,5		
Arc duration	ms	0,9	0,6	0,7
Break time	ms	16,4	16,1	16,2
Recovery voltage, peak value	kV	8,49	-18,7	25,8
Supply voltage, peak value	kV	13,3	13,2	13,0
Load voltage, peak value	kV	4,83	6,10	-12,8



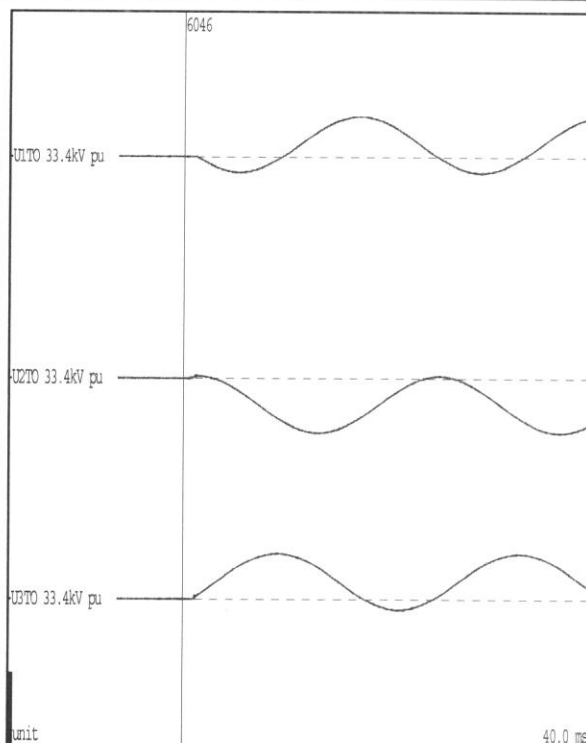
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



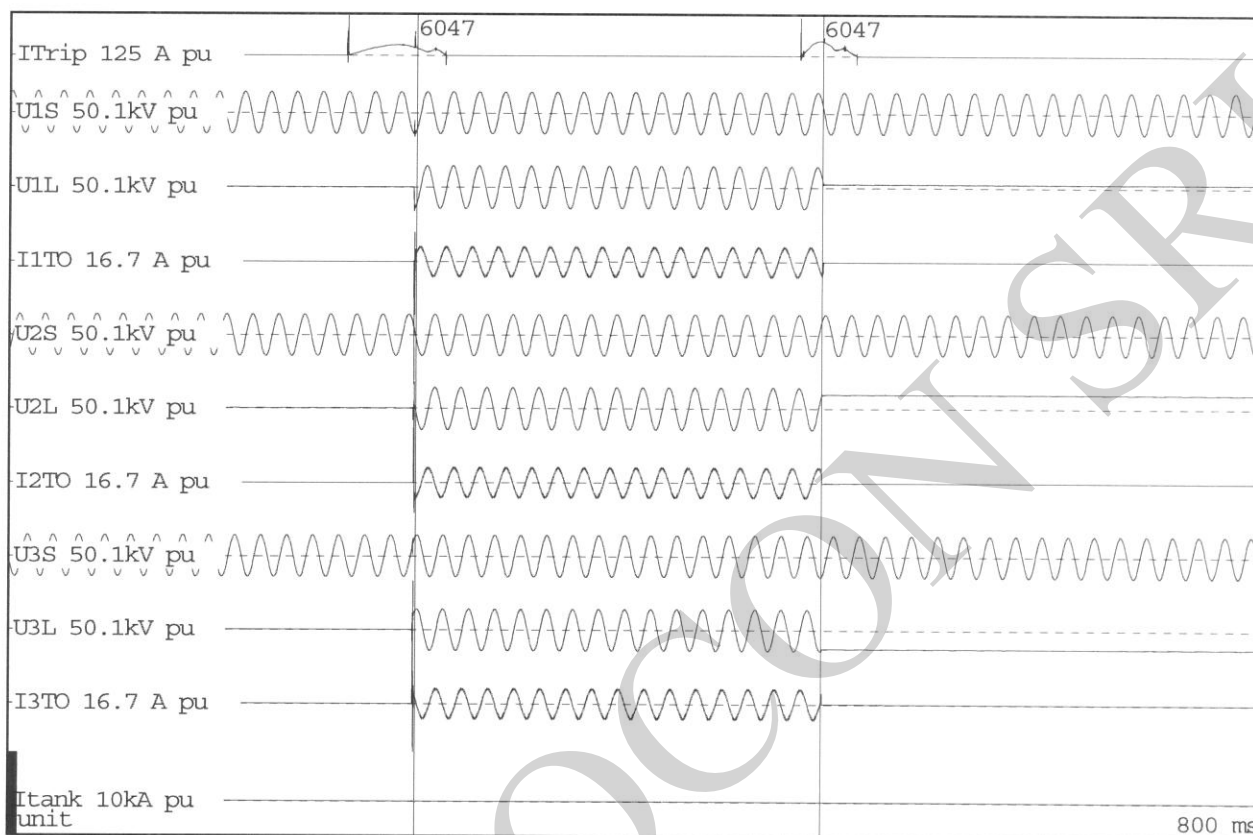
TEST NUMBER: 100526-6046

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,08	9,01
Applied voltage, between phases	kV	15,7		
Make time	ms	43,1	43,1	43,1
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,11	9,09	9,05
Test voltage, between phases	kV	15,7		
Opening time	ms	14,0		
Arc duration	ms	0,9	0,5	0,9
Break time	ms	14,9	14,5	14,9
Recovery voltage, peak value	kV	18,7	-24,8	20,7
Supply voltage, peak value	kV	13,2	13,3	12,9
Load voltage, peak value	kV	-5,51	12,1	-7,82



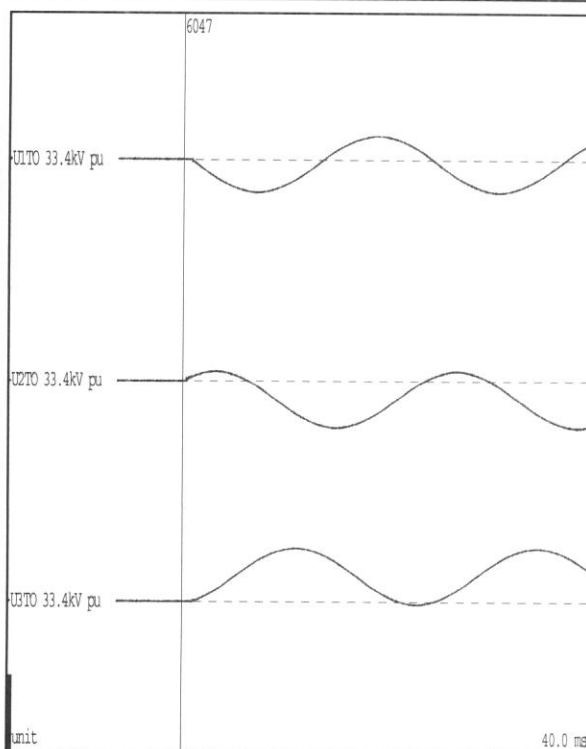
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



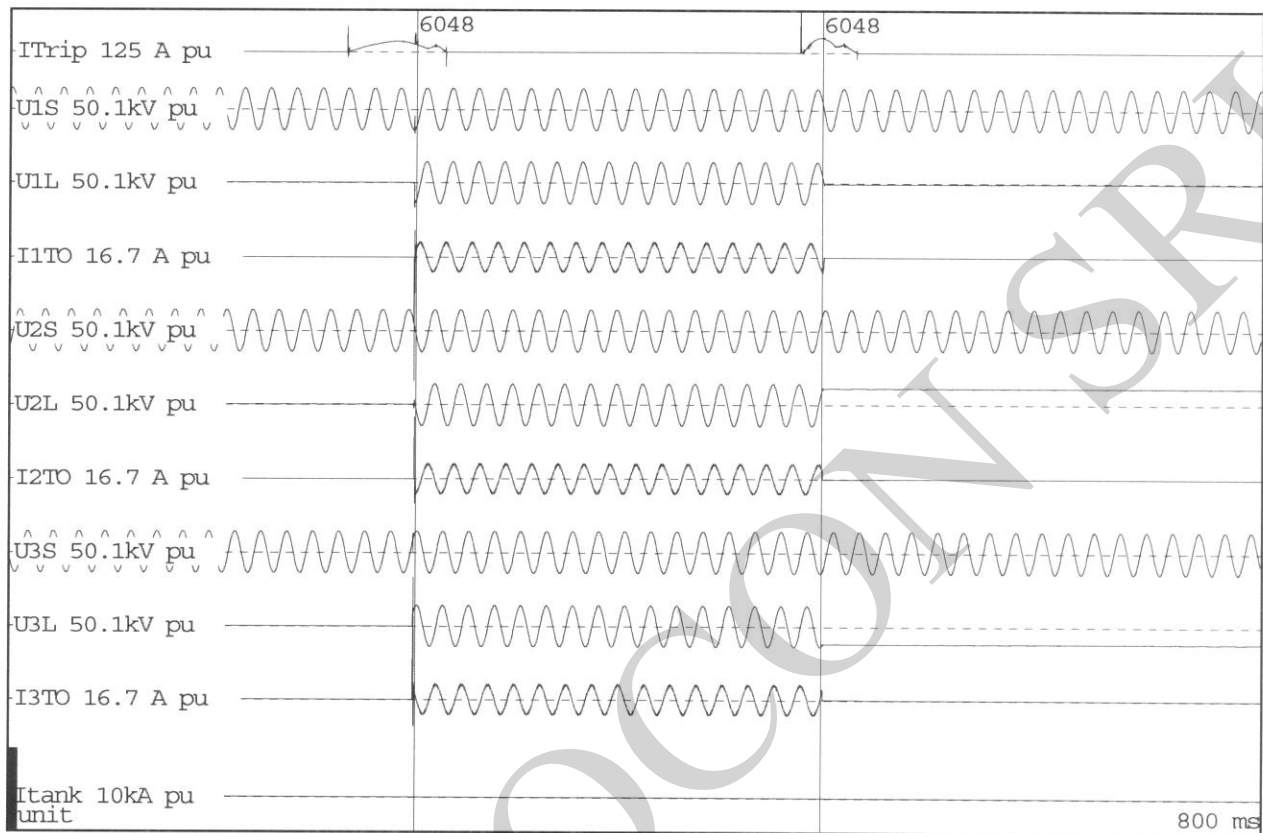
TEST NUMBER: 100526-6047

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,09	9,02
Applied voltage, between phases	kV	15,7		
Make time	ms	43,3	43,3	43,3
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,10	9,09	9,04
Test voltage, between phases	kV	15,7		
Opening time	ms	14,7		
Arc duration	ms	0,7	0,3	0,8
Break time	ms	15,4	15,0	15,5
Recovery voltage, peak value	kV	10,9	-21,4	24,1
Supply voltage, peak value	kV	13,1	13,1	12,9
Load voltage, peak value	kV	2,16	8,70	-11,3



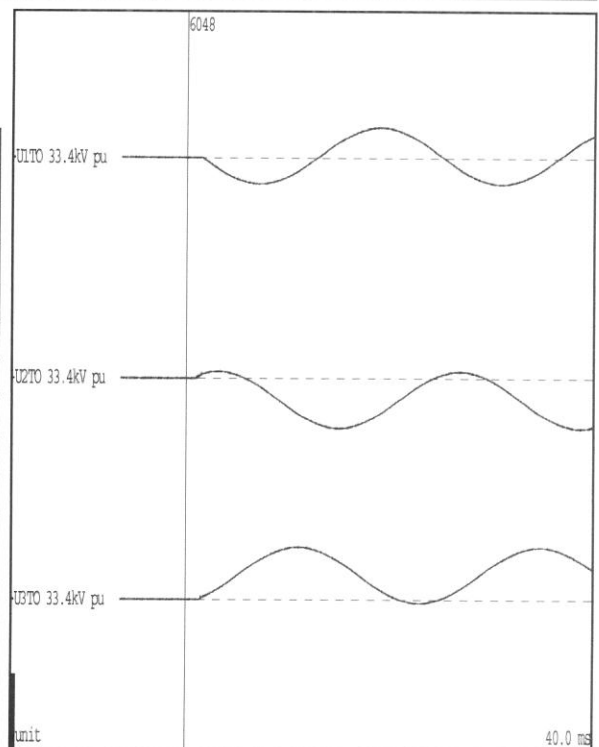
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



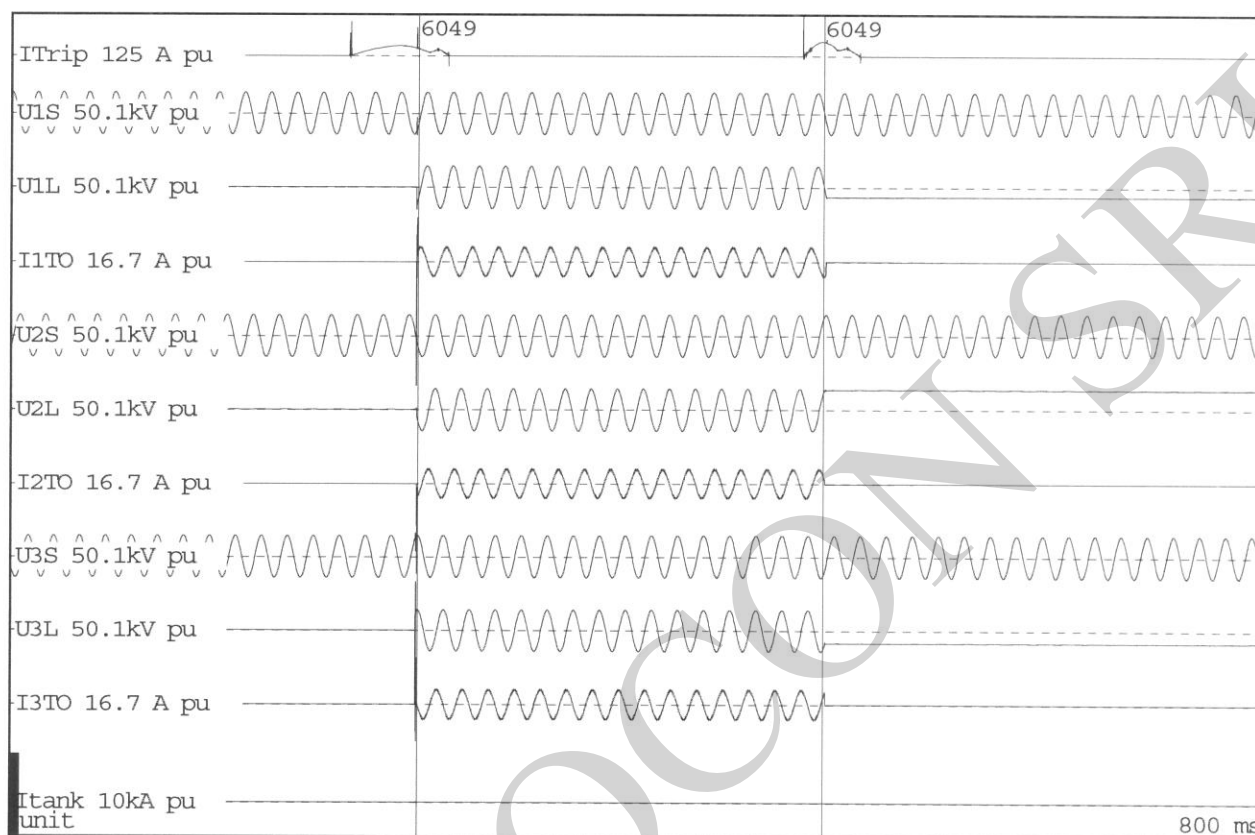
TEST NUMBER: 100526-6048

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,10	9,09	9,01
Applied voltage, between phases	kV	15,7		
Make time	ms	43,2	43,2	43,2
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,10	9,09	9,04
Test voltage, between phases	kV	15,7		
Opening time	ms	14,1		
Arc duration	ms	1,1	0,8	0,9
Break time	ms	15,2	14,9	15,0
Recovery voltage, peak value	kV	13,9	-22,8	23,8
Supply voltage, peak value	kV	13,2	13,3	12,9
Load voltage, peak value	kV	-0,698	10,1	-10,9



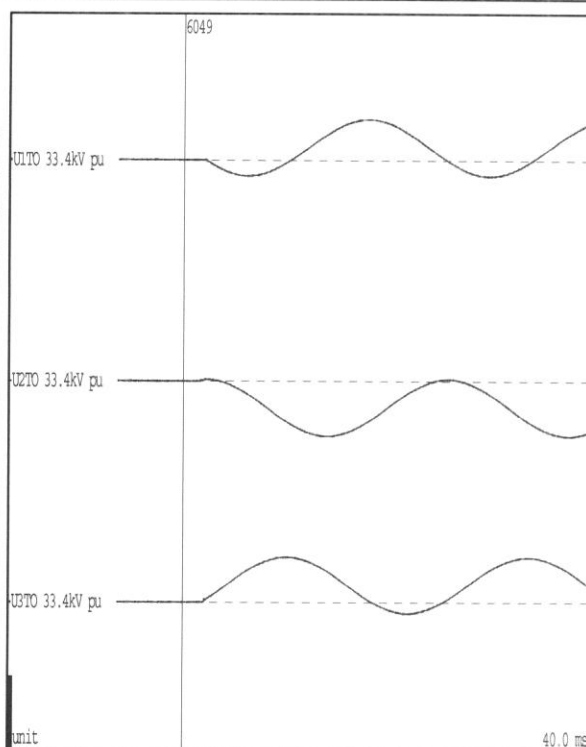
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



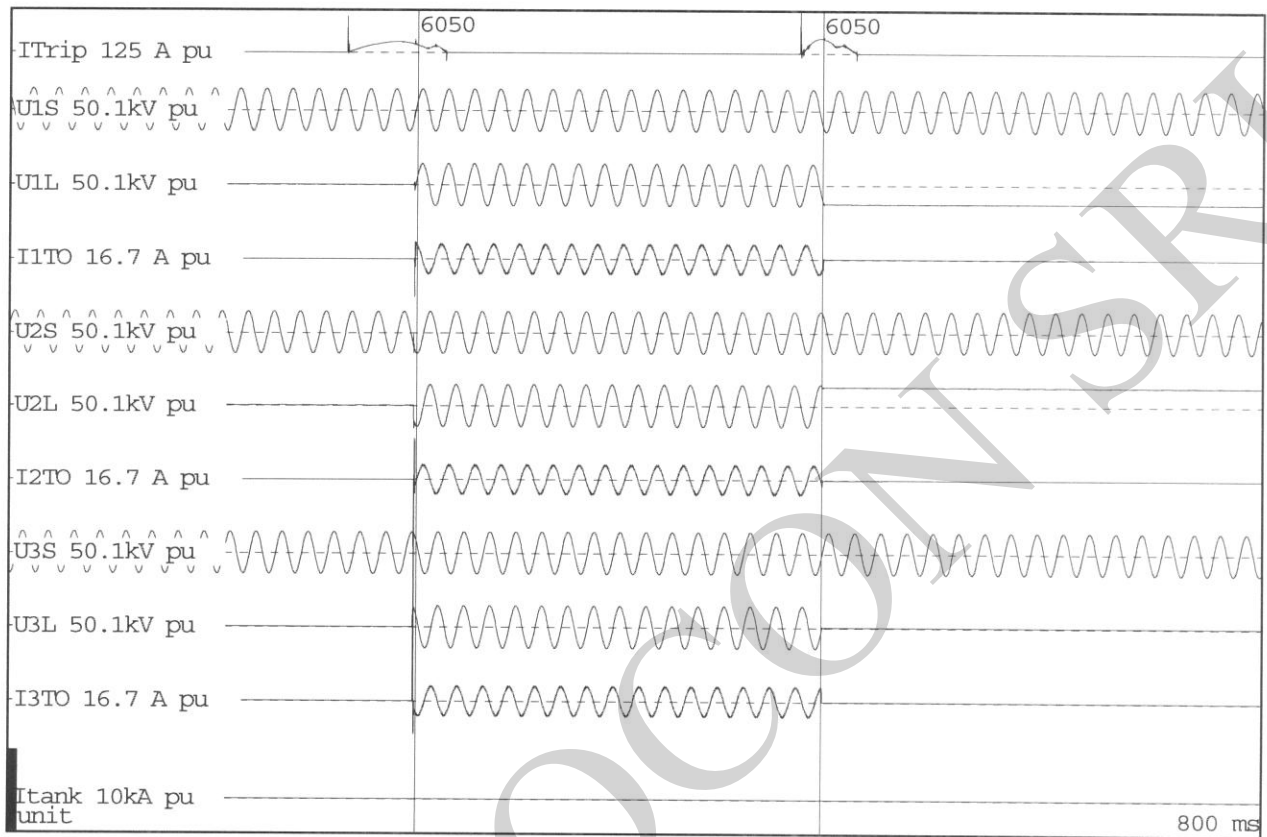
TEST NUMBER: 100526-6049

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,09	9,01
Applied voltage, between phases	kV	15,7		
Make time	ms	43,2	43,2	43,2
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,10	9,09	9,04
Test voltage, between phases	kV	15,7		
Opening time	ms	13,6		
Arc duration	ms	1,5	1,2	1,5
Break time	ms	15,1	14,8	15,1
Recovery voltage, peak value	kV	18,7	-25,0	20,3
Supply voltage, peak value	kV	13,1	13,2	12,9
Load voltage, peak value	kV	-5,63	12,3	-7,51



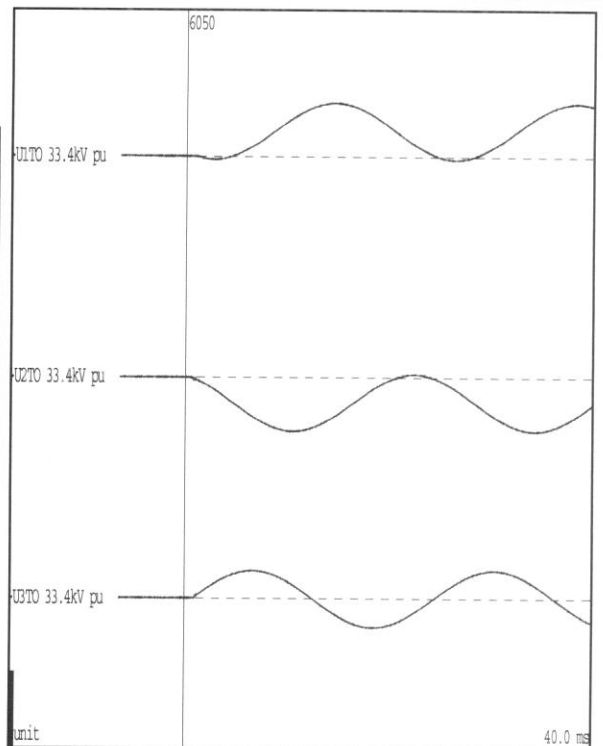
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



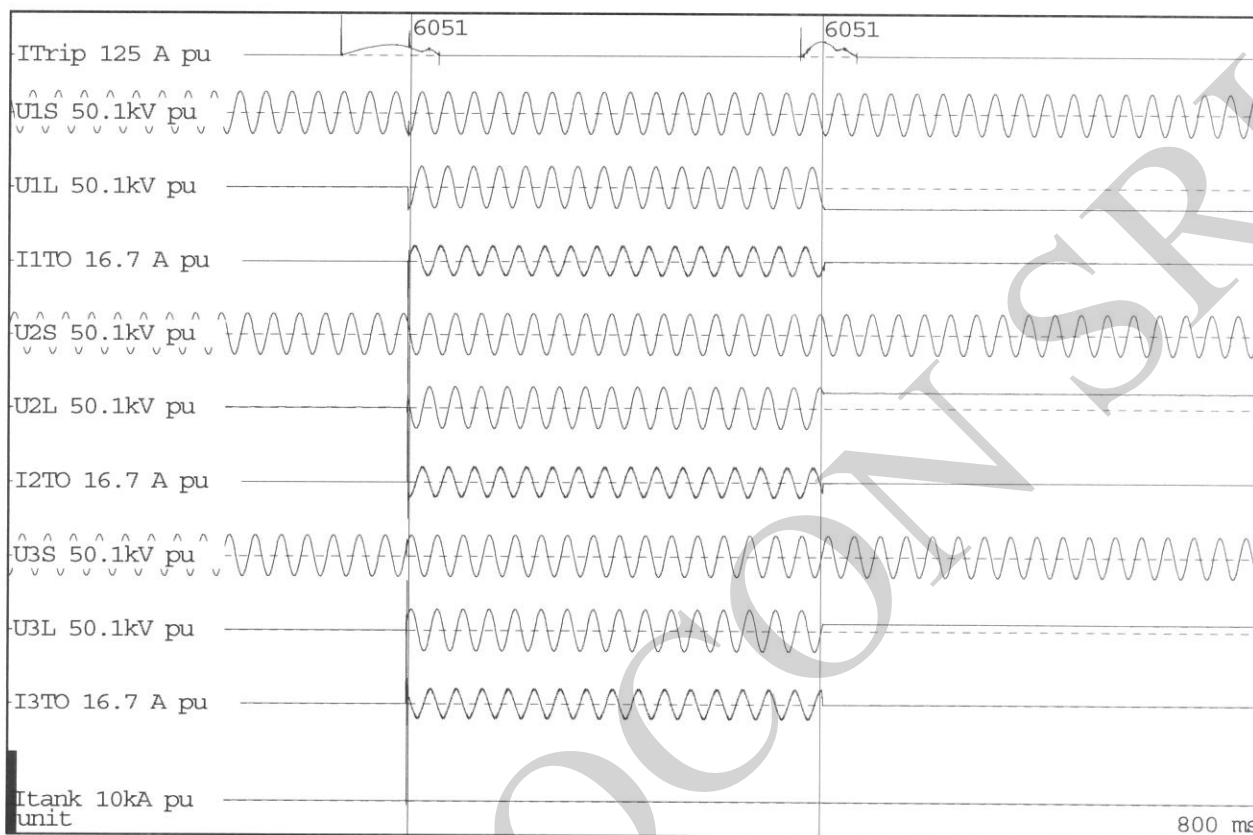
TEST NUMBER: 100526-6050

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,08	9,01
Applied voltage, between phases	kV	15,7		
Make time	ms	43,3	43,3	43,3
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,12	9,10	9,05
Test voltage, between phases	kV	15,7		
Opening time	ms	14,6		
Arc duration	ms	0,8	1,2	0,8
Break time	ms	15,4	15,8	15,4
Recovery voltage, peak value	kV	24,5	-24,5	-13,1
Supply voltage, peak value	kV	-13,1	13,1	-12,8
Load voltage, peak value	kV	-11,5	11,7	0,346

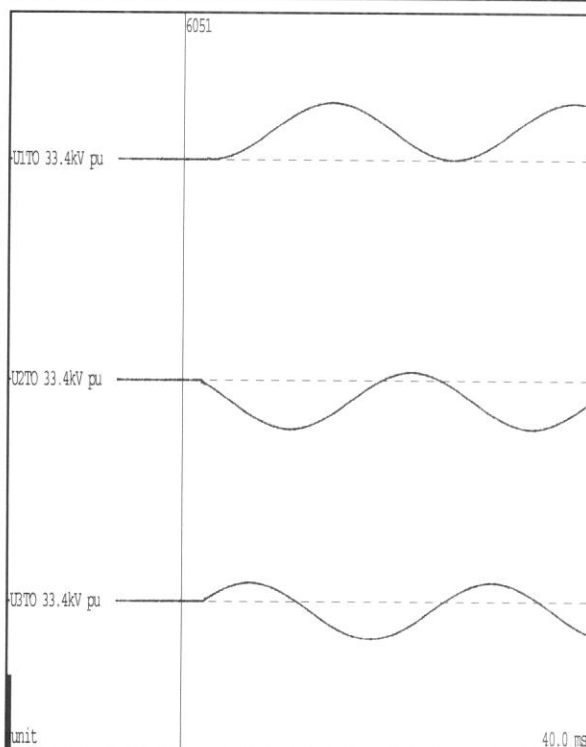


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

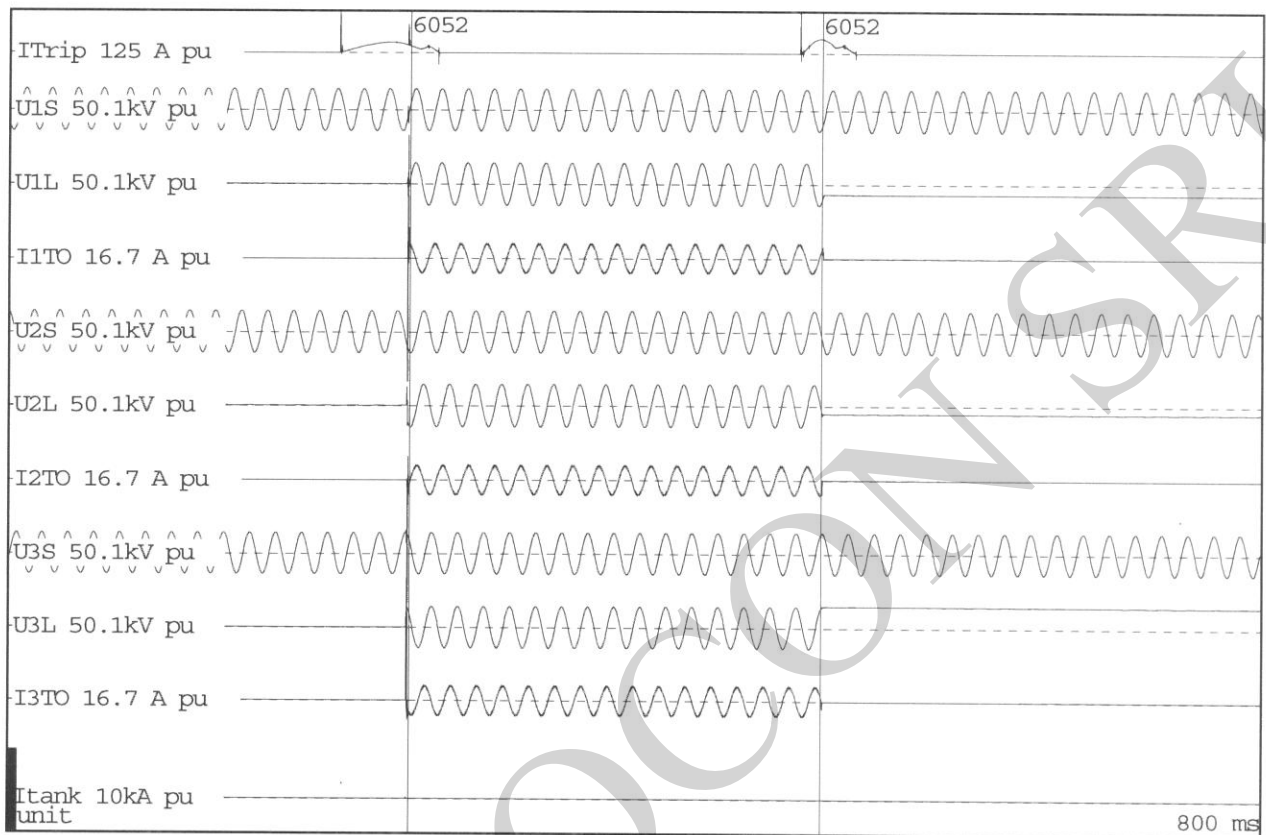

TEST NUMBER: 100526-6051

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,09	9,02
Applied voltage, between phases	kV	15,7		
Make time	ms	43,6	43,6	43,6
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,10	9,09	9,04
Test voltage, between phases	kV	15,7		
Opening time	ms	14,3		
Arc duration	ms	1,7	1,2	1,7
Break time	ms	16,0	15,5	16,0
Recovery voltage, peak value	kV	25,8	-22,2	-17,2
Supply voltage, peak value	kV	-13,2	13,0	12,9
Load voltage, peak value	kV	-13,0	9,37	4,44

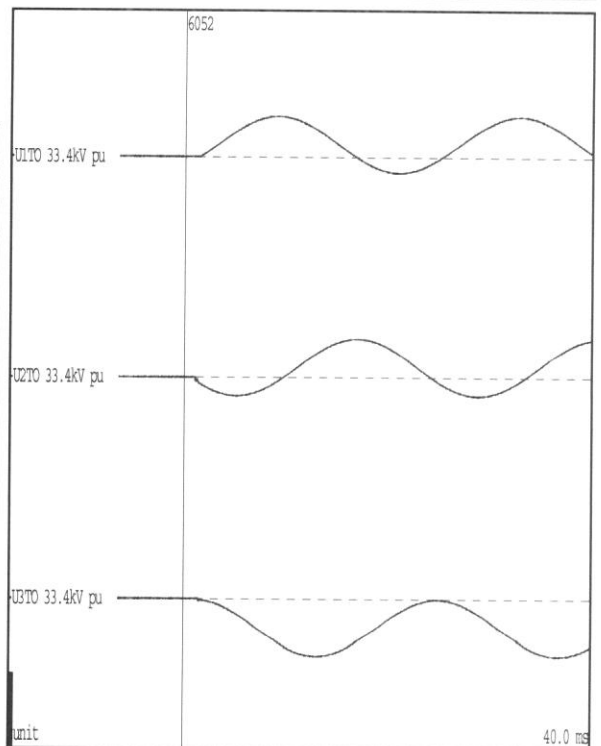


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

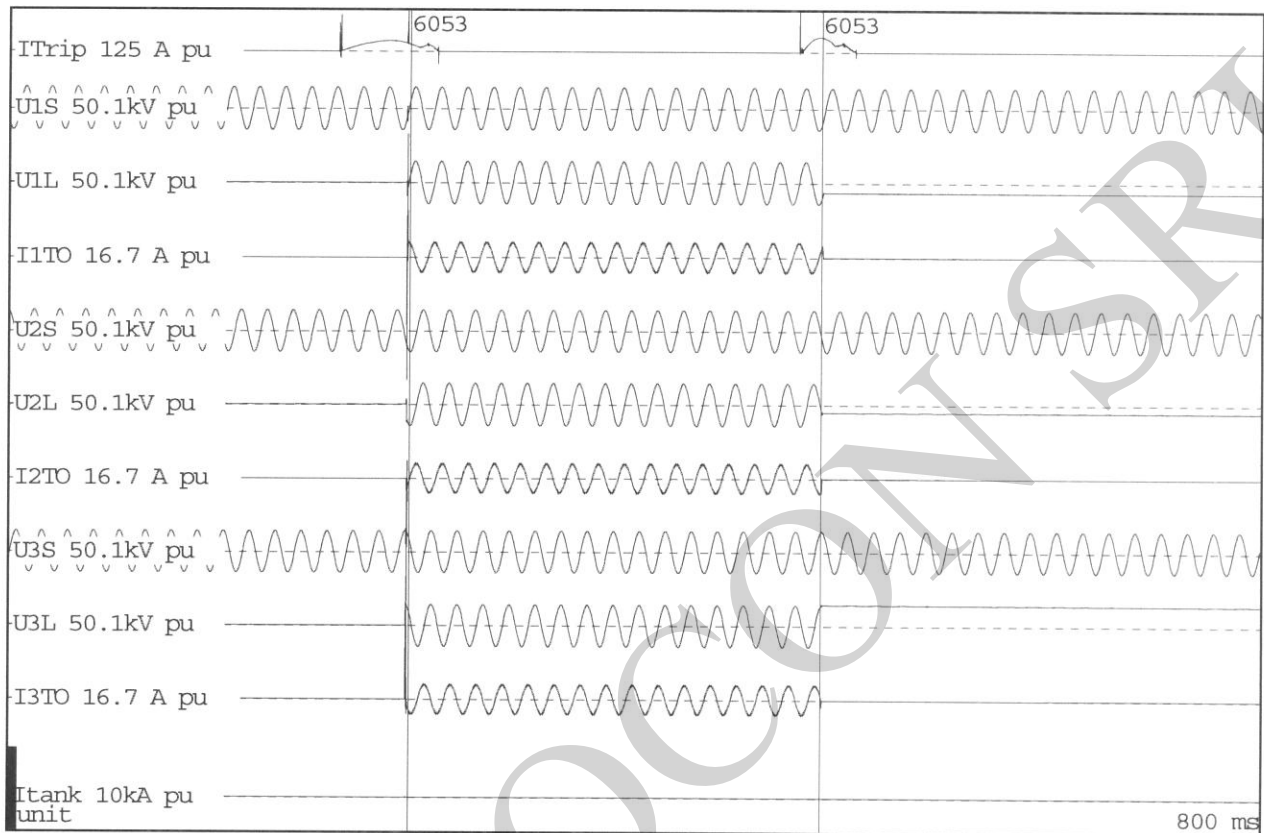

TEST NUMBER: 100526-6052

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,09	9,02
Applied voltage, between phases	kV	15,7		
Make time	ms	43,4	43,4	43,4
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,10	9,08	9,05
Test voltage, between phases	kV	15,7		
Opening time	ms	14,5		
Arc duration	ms	1,1	0,8	1,1
Break time	ms	15,6	15,3	15,6
Recovery voltage, peak value	kV	-7,25	17,3	-25,8
Supply voltage, peak value	kV	-13,3	-13,2	-12,9
Load voltage, peak value	kV	-5,98	-4,69	13,0



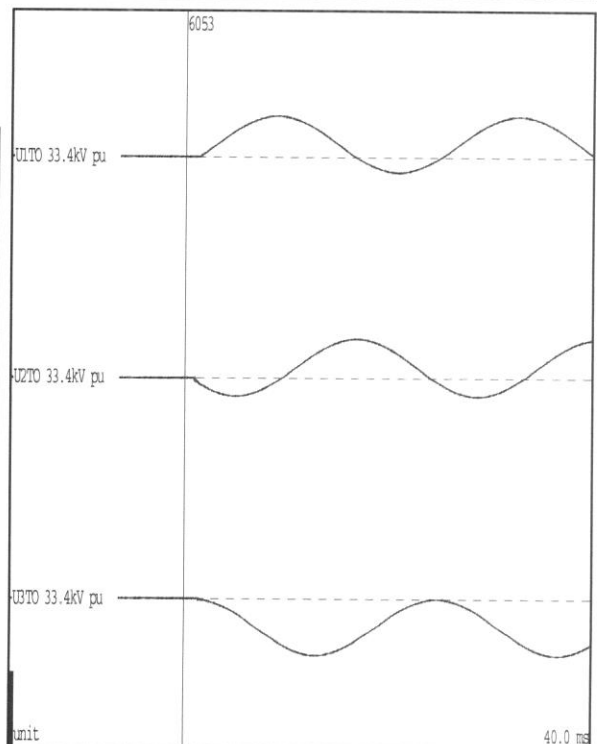
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



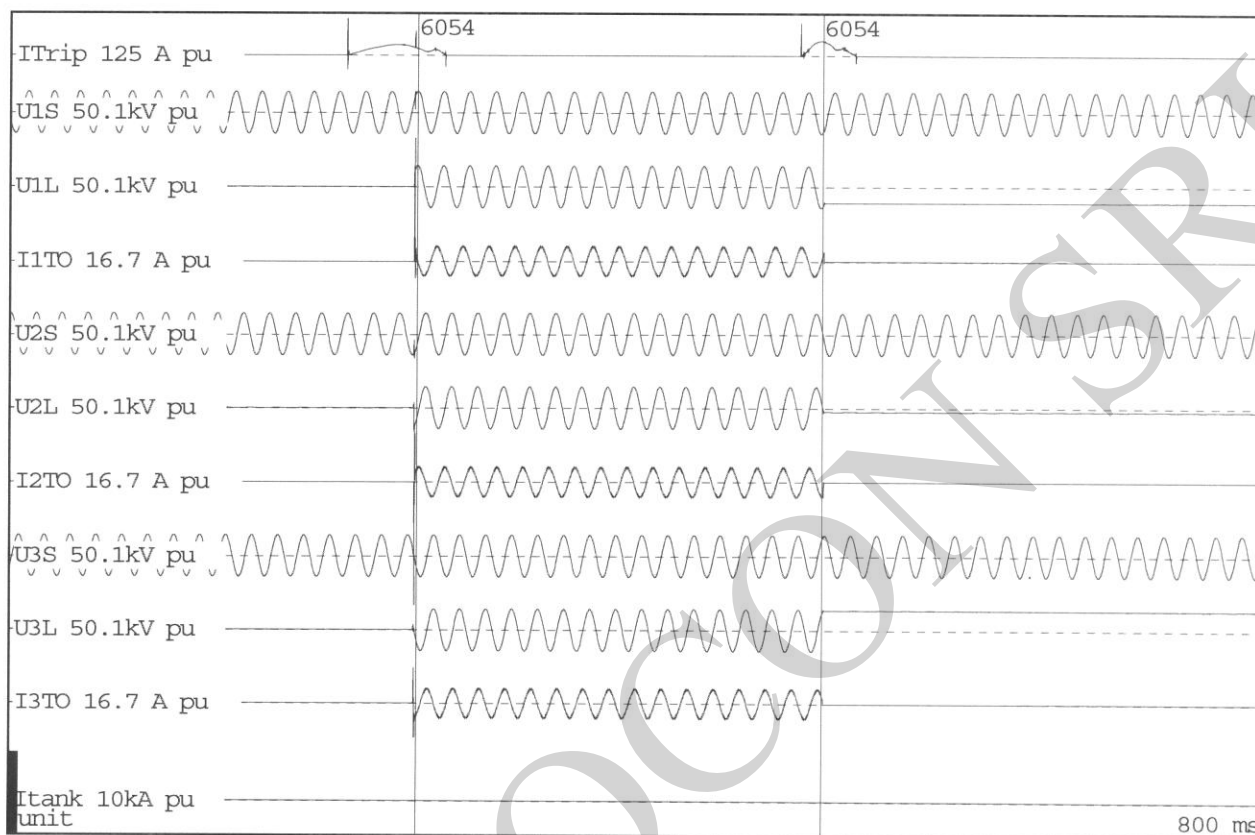
TEST NUMBER: 100526-6053

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,08	9,01
Applied voltage, between phases	kV	15,7		
Make time	ms	43,6	43,6	43,6
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,11	9,08	9,04
Test voltage, between phases	kV	15,7		
Opening time	ms	14,7		
Arc duration	ms	1,0	0,7	1,0
Break time	ms	15,7	15,4	15,7
Recovery voltage, peak value	kV	-7,24	17,5	-25,7
Supply voltage, peak value	kV	-13,2	-13,2	12,9
Load voltage, peak value	kV	-5,94	-4,87	12,9



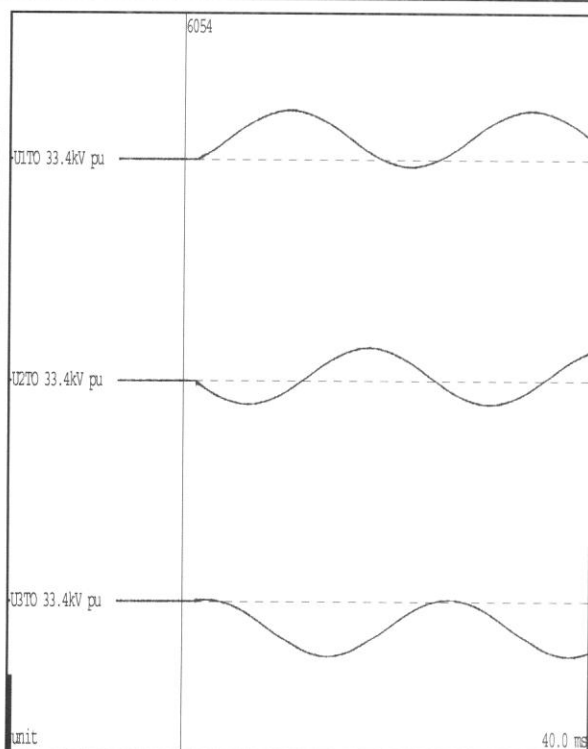
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



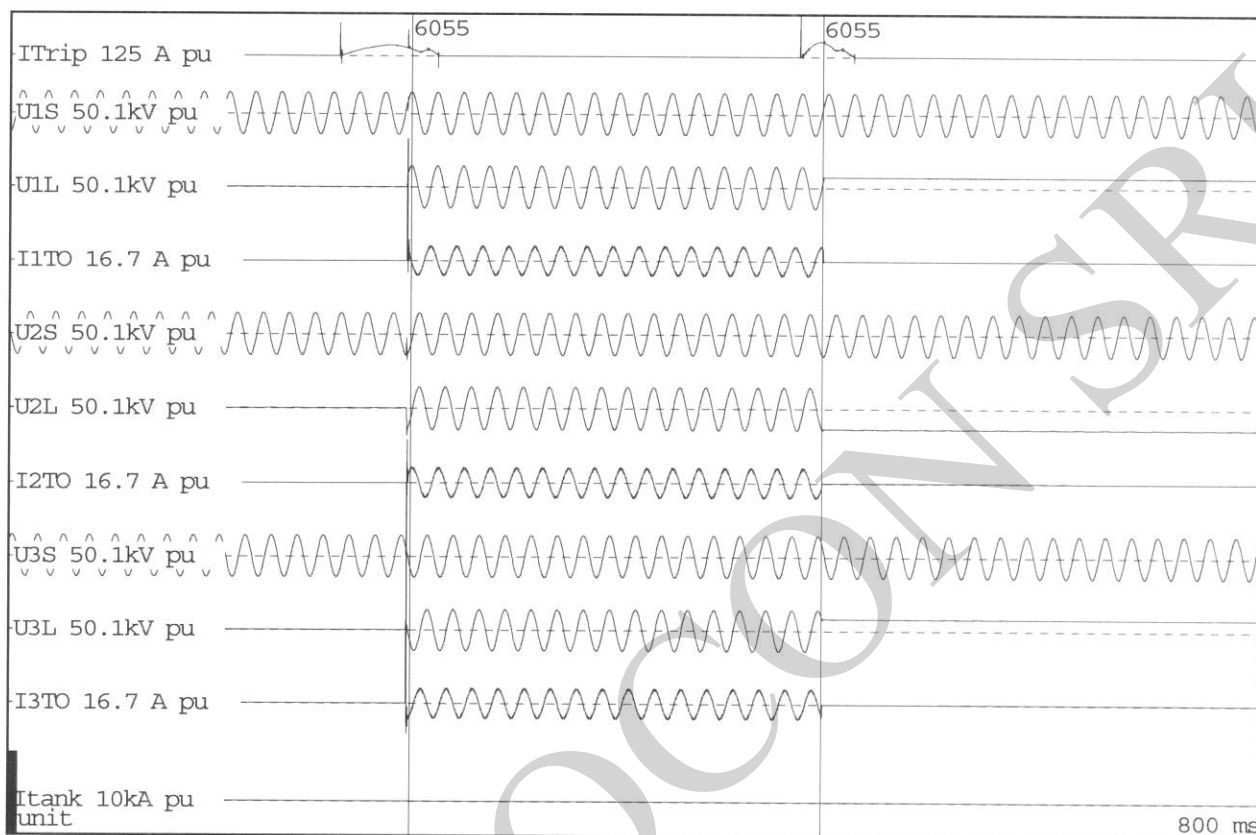
TEST NUMBER: 100526-6054

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,09	9,02
Applied voltage, between phases	kV	15,7		
Make time	ms	43,5	43,5	43,5
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,11	9,09	9,04
Test voltage, between phases	kV	15,7		
Opening time	ms	14,3		
Arc duration	ms	1,4	1,0	0,9
Break time	ms	15,7	15,3	15,2
Recovery voltage, peak value	kV	22,5	15,0	-24,7
Supply voltage, peak value	kV	-13,1	-12,9	13,1
Load voltage, peak value	kV	-9,63	-2,11	12,1

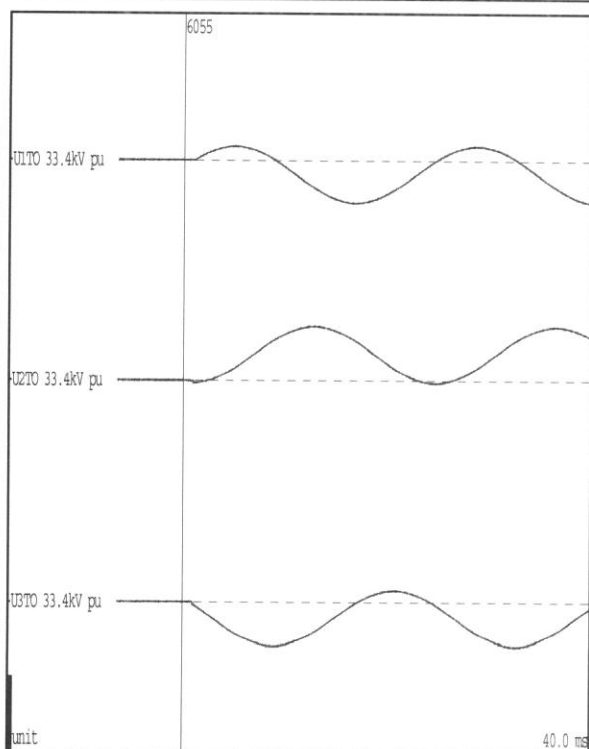


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

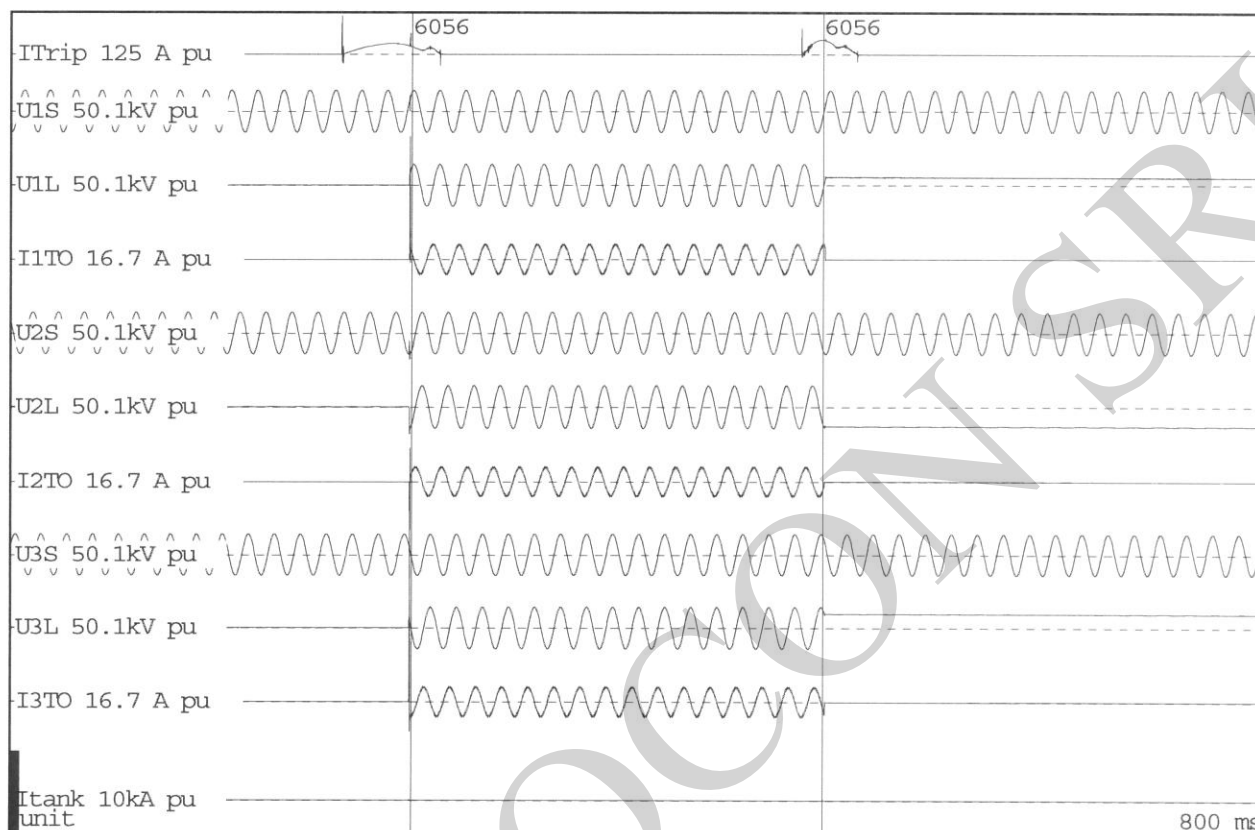

TEST NUMBER: 100526-6055

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,09	9,02
Applied voltage, between phases	kV	15,7		
Make time	ms	43,7	43,7	43,7
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,10	9,09	9,04
Test voltage, between phases	kV	15,7		
Opening time	ms	14,4		
Arc duration	ms	0,7	0,3	0,7
Break time	ms	15,1	14,7	15,1
Recovery voltage, peak value	kV	-19,4	24,7	-20,2
Supply voltage, peak value	kV	-13,0	-13,4	12,9
Load voltage, peak value	kV	6,31	-12,1	7,39



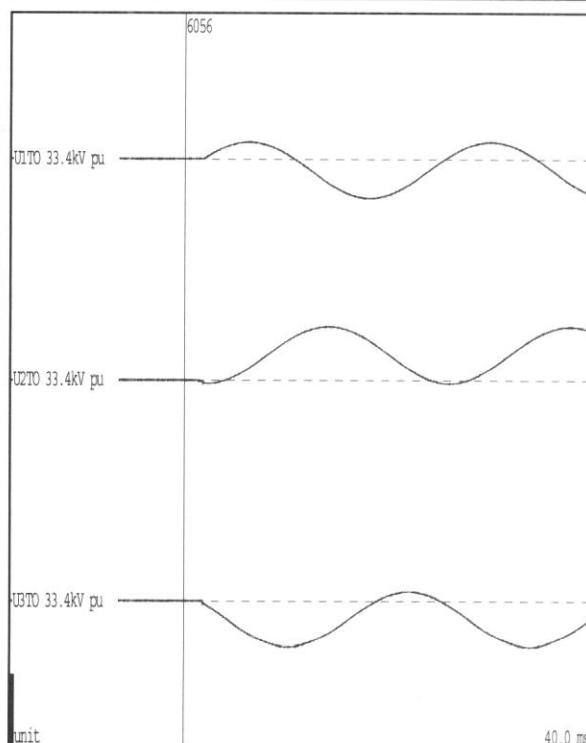
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



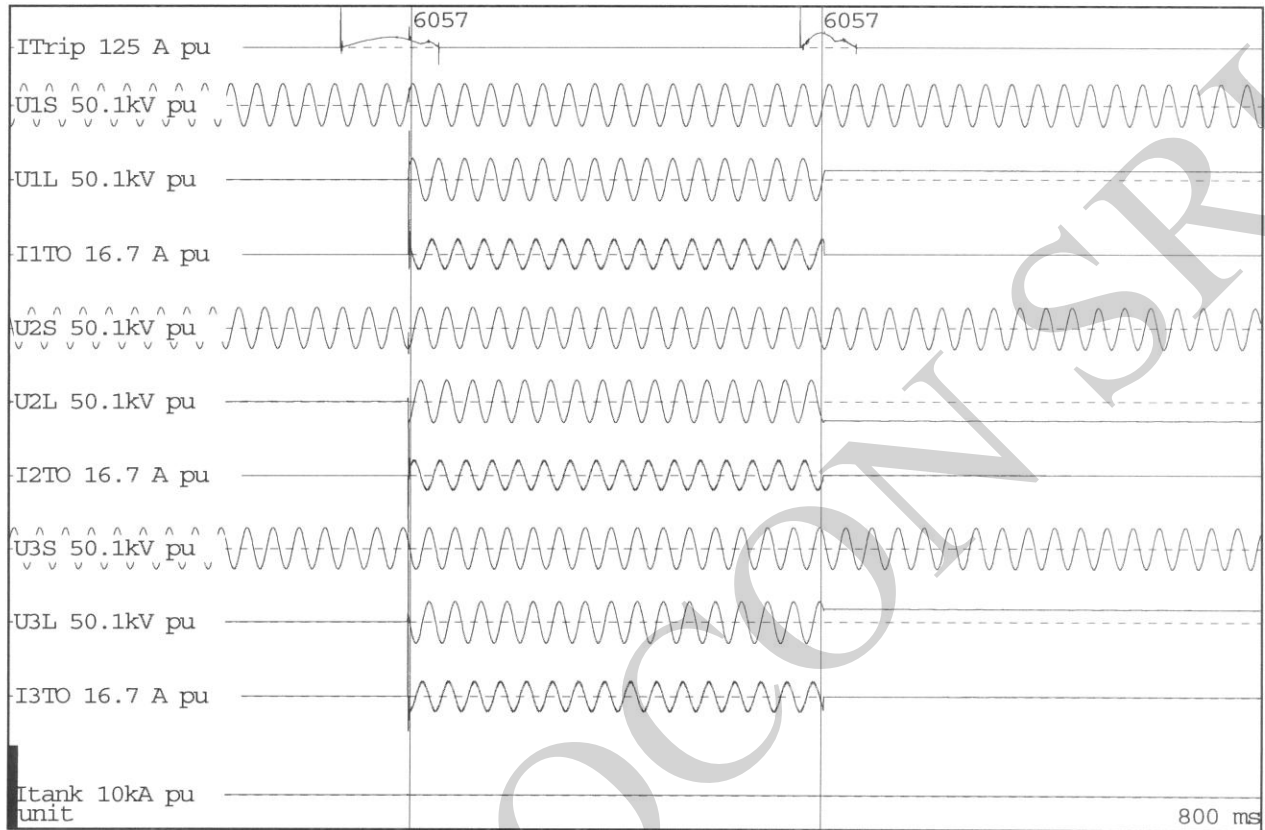
TEST NUMBER: 100526-6056

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,08	9,02
Applied voltage, between phases	kV	15,7		
Make time	ms	43,6	43,6	43,6
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,11	9,09	9,05
Test voltage, between phases	kV	15,7		
Opening time	ms	13,9		
Arc duration	ms	1,4	1,0	1,5
Break time	ms	15,3	14,9	15,4
Recovery voltage, peak value	kV	-17,8	24,3	-21,3
Supply voltage, peak value	kV	-13,0	-13,3	12,8
Load voltage, peak value	kV	4,78	-11,7	8,49



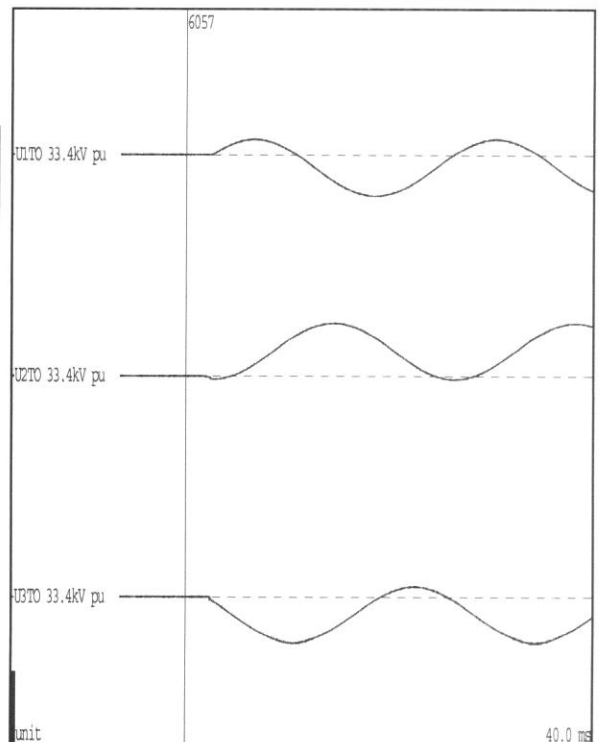
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



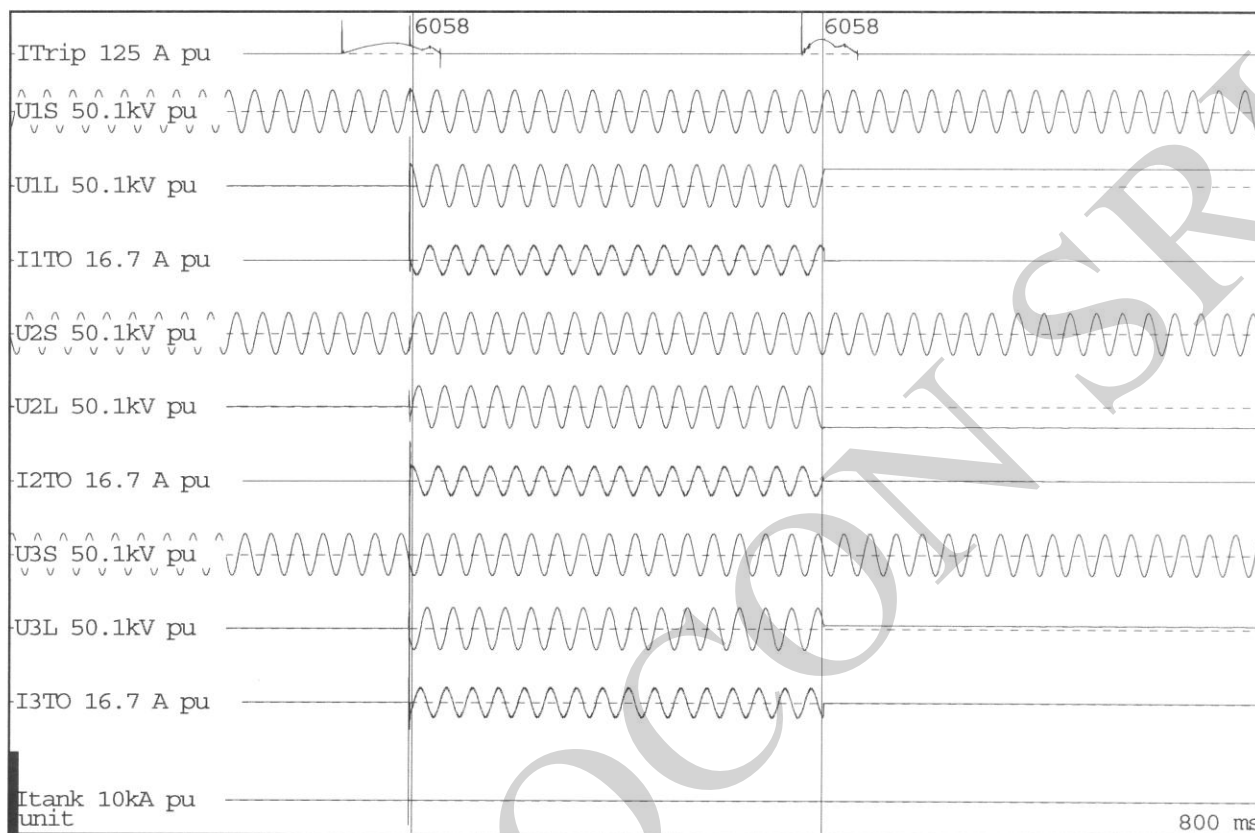
TEST NUMBER: 100526-6057

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,12	9,09	9,02
Applied voltage, between phases	kV	15,7		
Make time	ms	44,0	44,0	44,0
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,11	9,10	9,05
Test voltage, between phases	kV	15,7		
Opening time	ms	14,1		
Arc duration	ms	1,7	1,4	1,7
Break time	ms	15,8	15,5	15,8
Recovery voltage, peak value	kV	-18,7	24,2	-21,0
Supply voltage, peak value	kV	-13,1	-13,4	-12,9
Load voltage, peak value	kV	5,64	-11,6	8,15



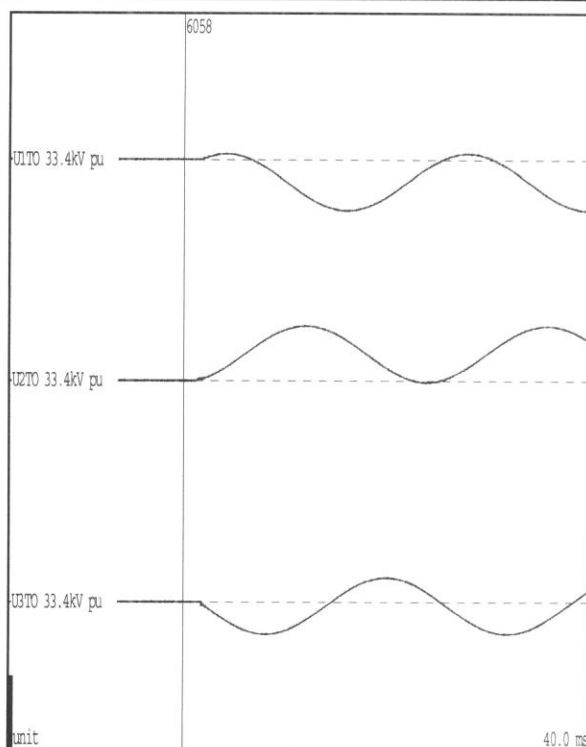
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



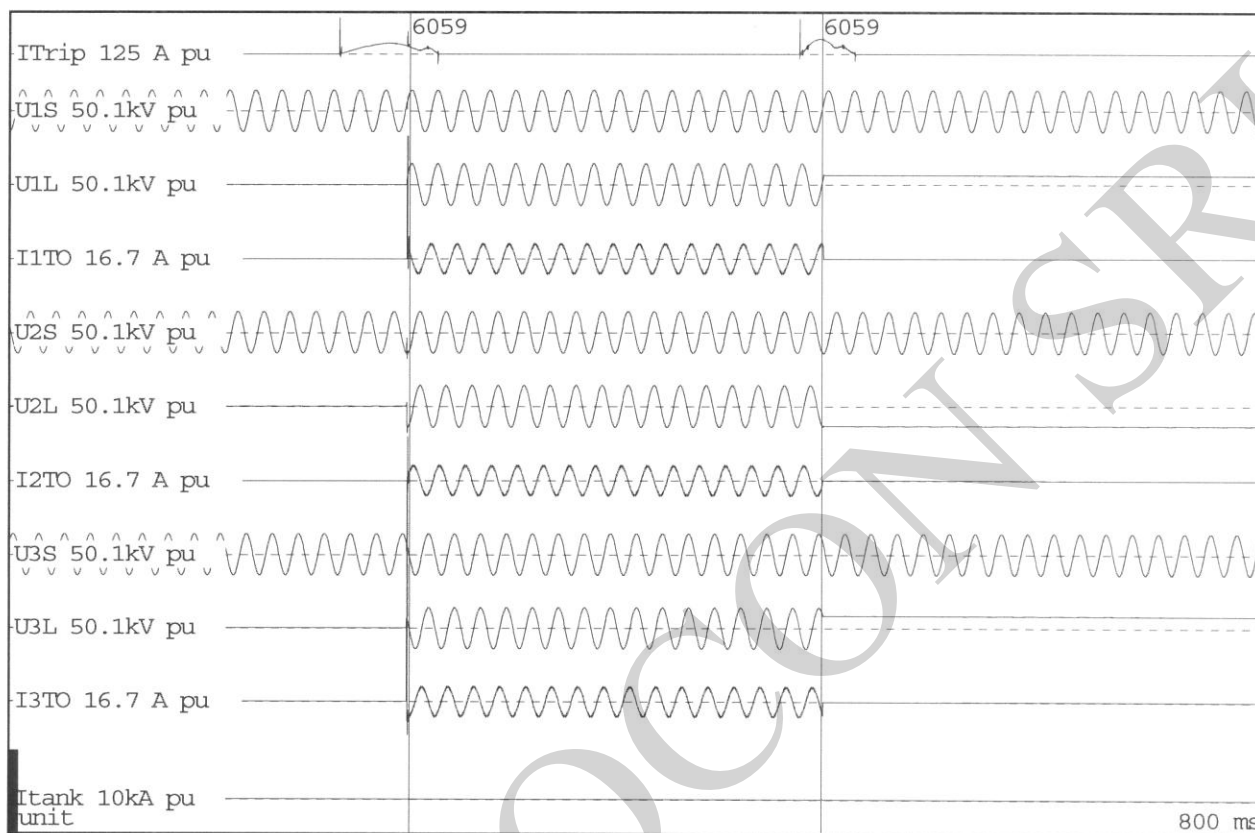
TEST NUMBER: 100526-6058

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,10	9,08	9,01
Applied voltage, between phases	kV	15,7		
Make time	ms	43,0	43,0	43,0
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,11	9,10	9,04
Test voltage, between phases	kV	15,7		
Opening time	ms	13,6		
Arc duration	ms	1,3	0,2	1,3
Break time	ms	14,9	13,8	14,9
Recovery voltage, peak value	kV	-23,1	25,0	10,8
Supply voltage, peak value	kV	13,2	-13,2	12,9
Load voltage, peak value	kV	10,3	-12,3	2,04



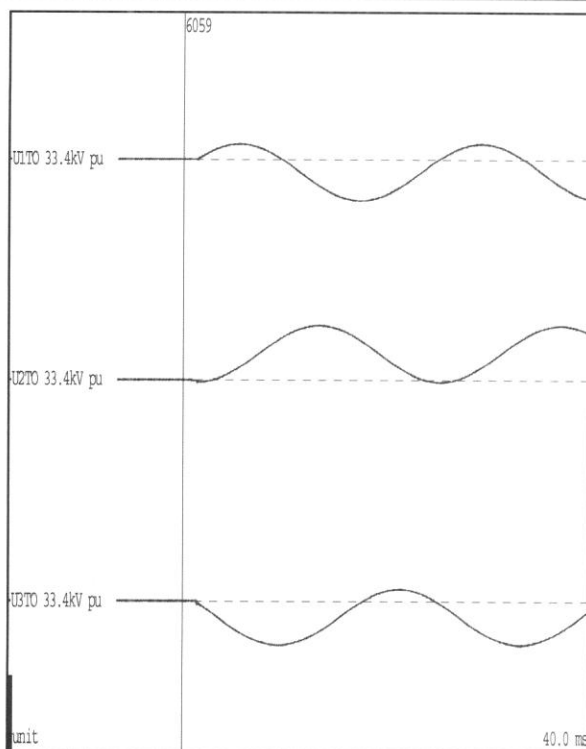
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



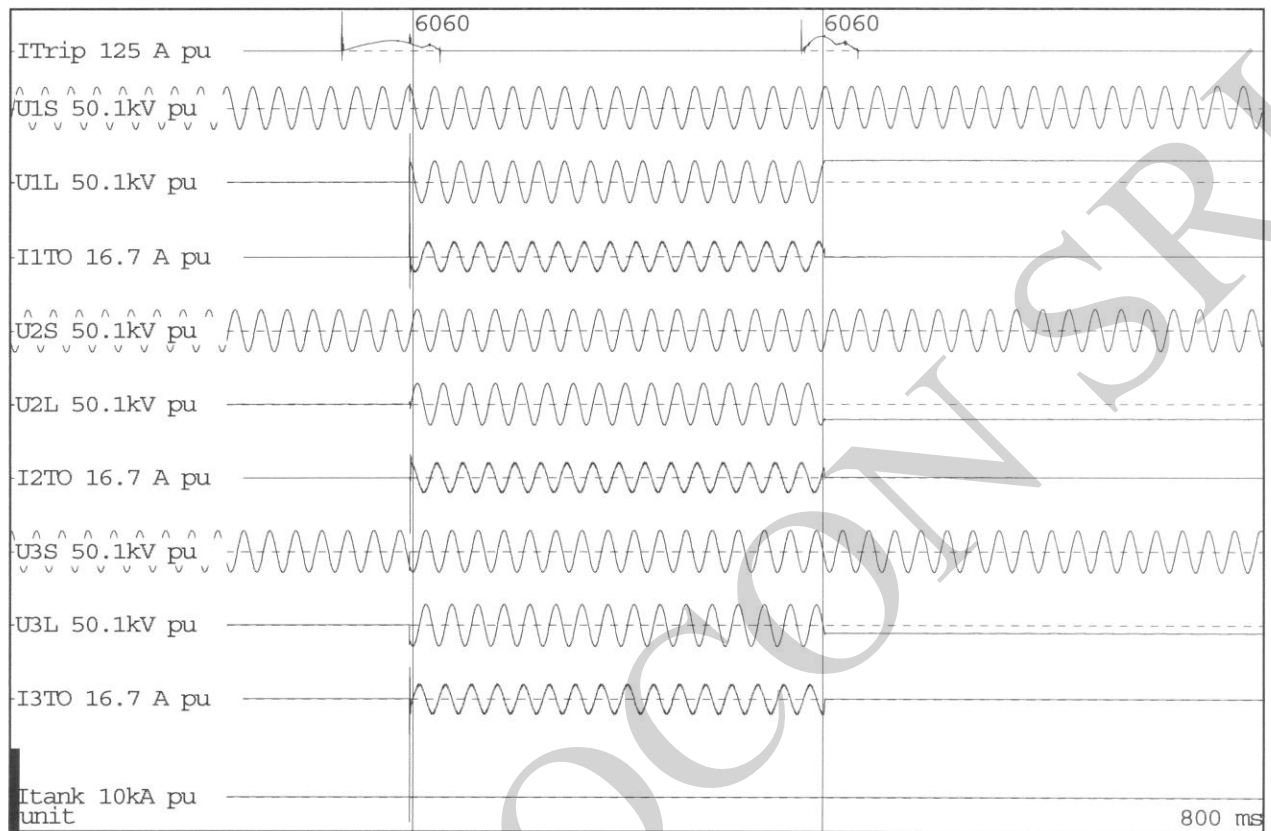
TEST NUMBER: 100526-6059

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,09	9,01
Applied voltage, between phases	kV	15,7		
Make time	ms	43,3	43,3	43,3
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,11	9,10	9,05
Test voltage, between phases	kV	15,7		
Opening time	ms	14,5		
Arc duration	ms	1,0	0,6	1,0
Break time	ms	15,5	15,1	15,5
Recovery voltage, peak value	kV	-18,8	24,7	-20,2
Supply voltage, peak value	kV	-13,0	-13,3	12,8
Load voltage, peak value	kV	5,81	-12,0	7,45



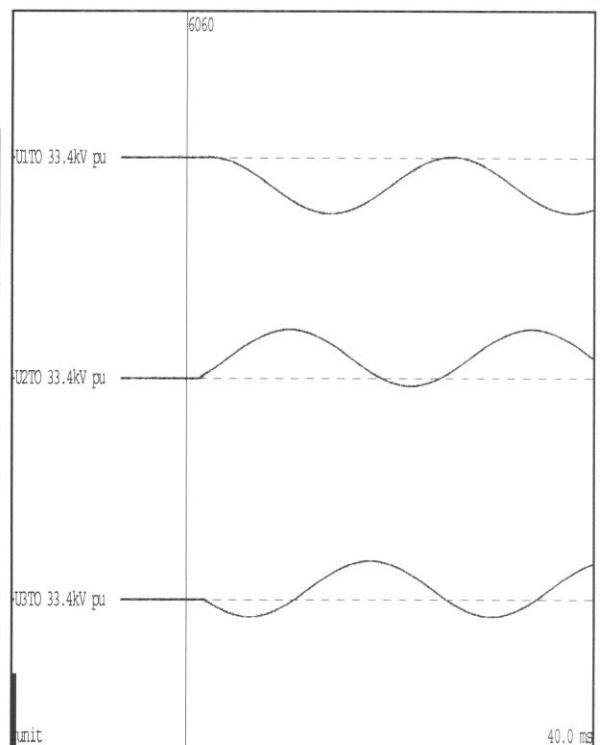
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



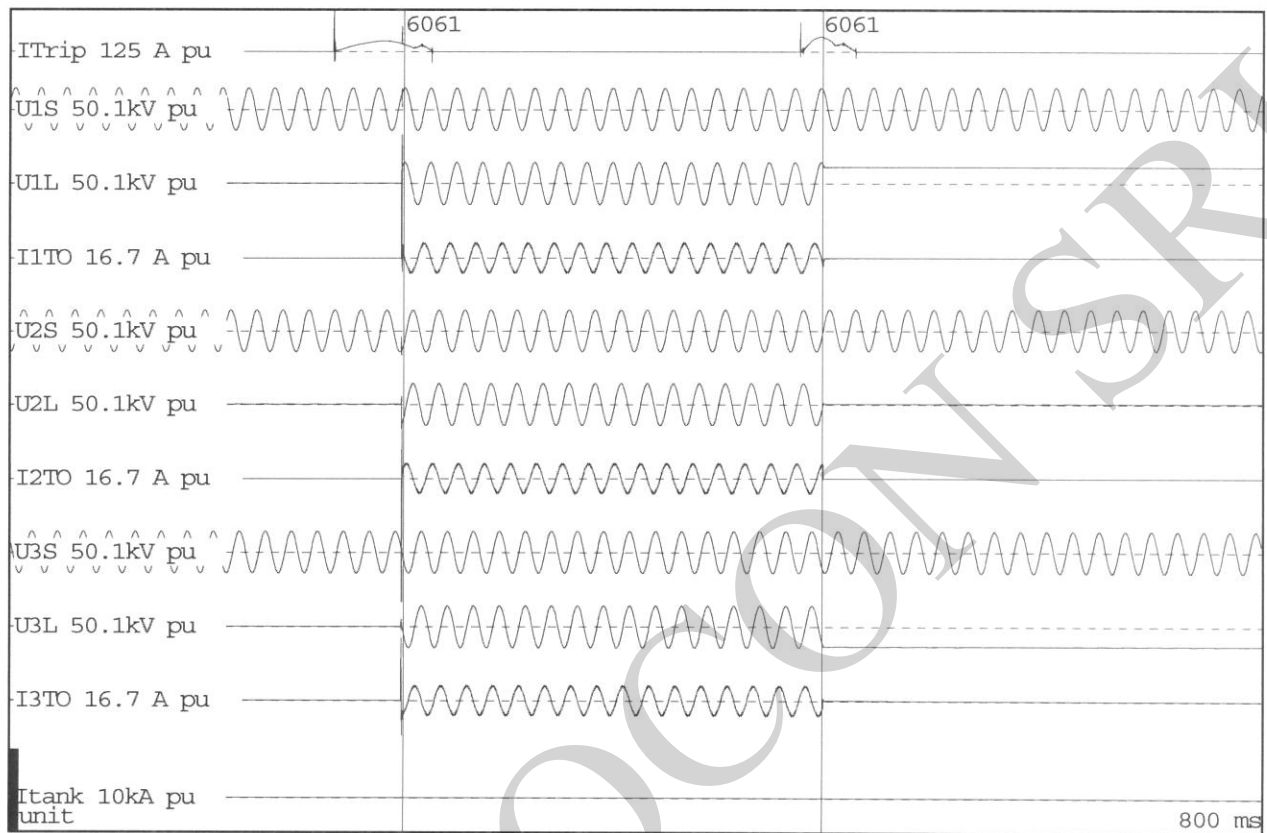
TEST NUMBER: 100526-6060

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,08	9,01
Applied voltage, between phases	kV	15,7		
Make time	ms	43,6	43,6	43,6
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,11	9,09	9,05
Test voltage, between phases	kV	15,7		
Opening time	ms	13,9		
Arc duration	ms	1,4	1,6	1,4
Break time	ms	15,3	15,5	15,3
Recovery voltage, peak value	kV	-25,6	22,2	17,7
Supply voltage, peak value	kV	13,4	-13,0	13,0
Load voltage, peak value	kV	12,9	-9,31	-4,73



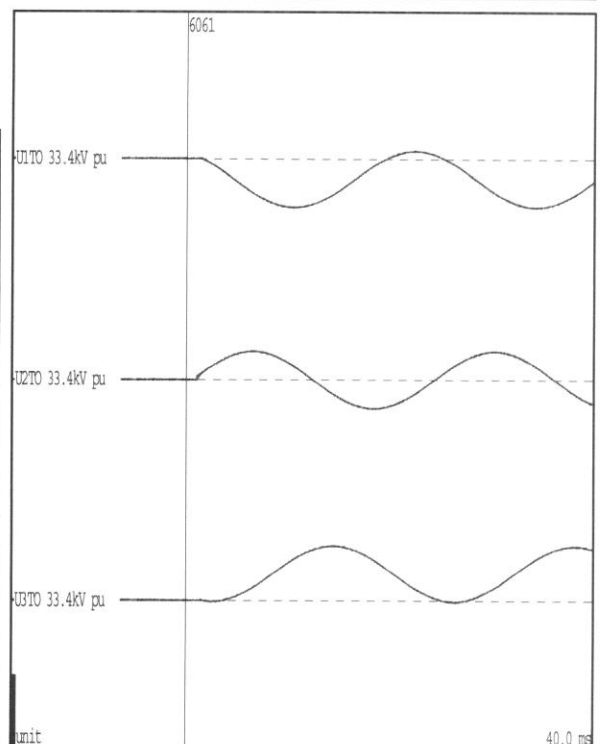
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



TEST NUMBER: 100526-6061

Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,11	9,09	9,02
Applied voltage, between phases	kV	15,7		
Make time	ms	43,5	43,5	43,5
Closing time	ms	-		
Breaking current, phase value	A	2,07	2,07	2,07
Average current, three phase	A	2,07		
Test voltage, phase value	kV	9,11	9,09	9,05
Test voltage, between phases	kV	15,7		
Opening time	ms	14,4		
Arc duration	ms	1,3	0,8	0,8
Break time	ms	15,7	15,2	15,2
Recovery voltage, peak value	kV	-22,3	-13,1	24,9
Supply voltage, peak value	kV	13,4	13,1	13,0
Load voltage, peak value	kV	9,83	0,378	-11,9



Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

TEST NUMBERS

100526-6070	100527-6023	100527-6035
100526-6071	100527-6024	100527-6036
100526-6072	100527-6025	100527-6037
100526-6073	100527-6026	100527-6038
100527-6015	100527-6027	100527-6039
100527-6016	100527-6028	100527-6040
100527-6017	100527-6029	100527-6041
100527-6018	100527-6030	100527-6042
100527-6019	100527-6031	
100527-6020	100527-6032	
100527-6021	100527-6033	
100527-6022	100527-6034	

CONDITION BEFORE TESTS

Recloser in same condition.

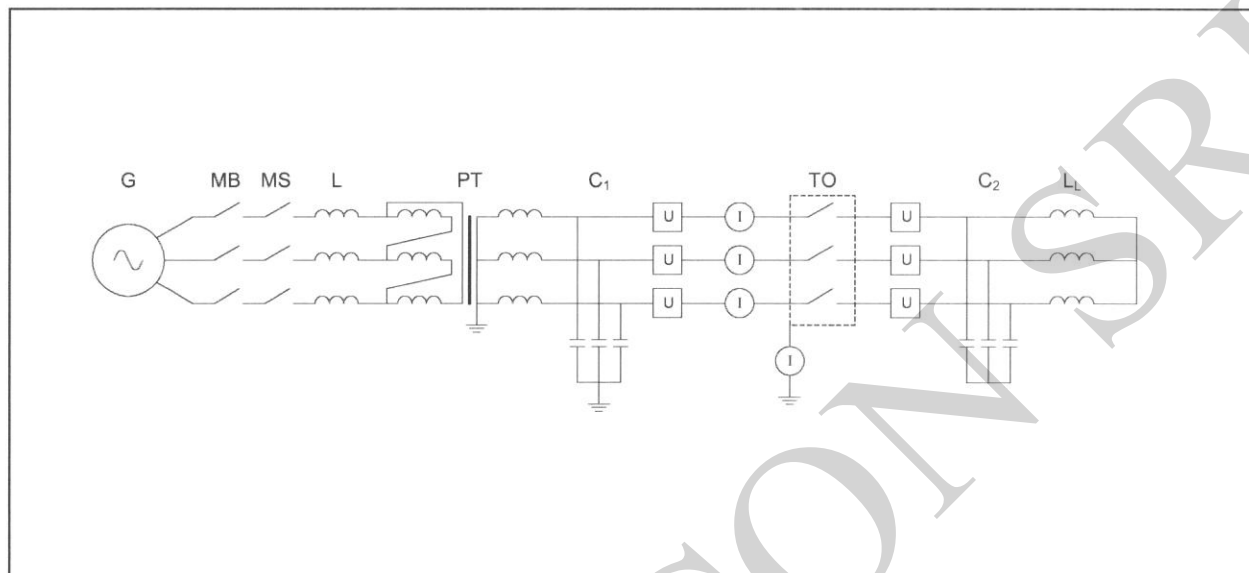
Supply to moving contacts.

Load on fixed contacts.

Frame earthed via an earth fault current indicating CT.

Recovery voltage maintained for 1 sec after the final interruption.

TEST-CIRCUIT S05



G	= Generator	TO	= Test Object	U	= Voltage Measurement to earth
MB	= Master Breaker	L	= Reactor	I	= Current Measurement
MS	= Make Switch	R	= Resistor		
PT	= Power Transformer	C	= Capacitor		

Supply		
Power	MVA	430
Frequency	Hz	60
Phase(s)		3
Voltage	kV	15,5
Current	kA	16
Impedance	Ω	0,559
Power factor		< 0,1
Neutral		earthed

TRV control elements added (supply)		
C ₁	μ F	0,008
R ₁ (in parallel)	Ω	-
R ₁ (in series)	Ω	-
L ₁	mH	-
C _d	nF	-
Neutral		earthed

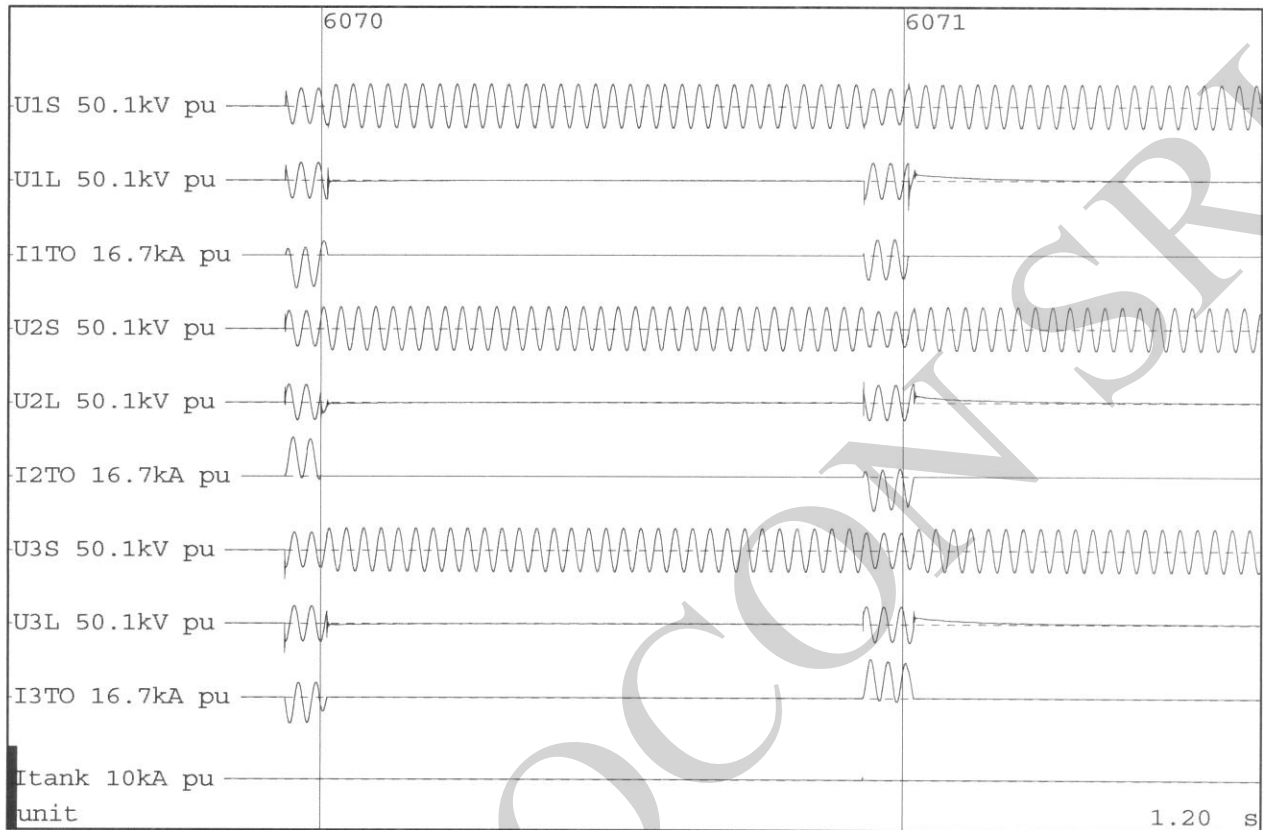
Load		
Impedance	Ω	2,637
Power factor		< 0,1
Neutral		Not earthed

TRV control elements added (load)		
C ₂	nF	0,8
R ₂ (in parallel)	Ω	-
Neutral		Not earthed

Prospective TRV of load		
E ₂	kV	34,1
T ₂	μ s	16
		-
t _d	μ s	< 2
Rate of rise	kV/ μ s	2,58

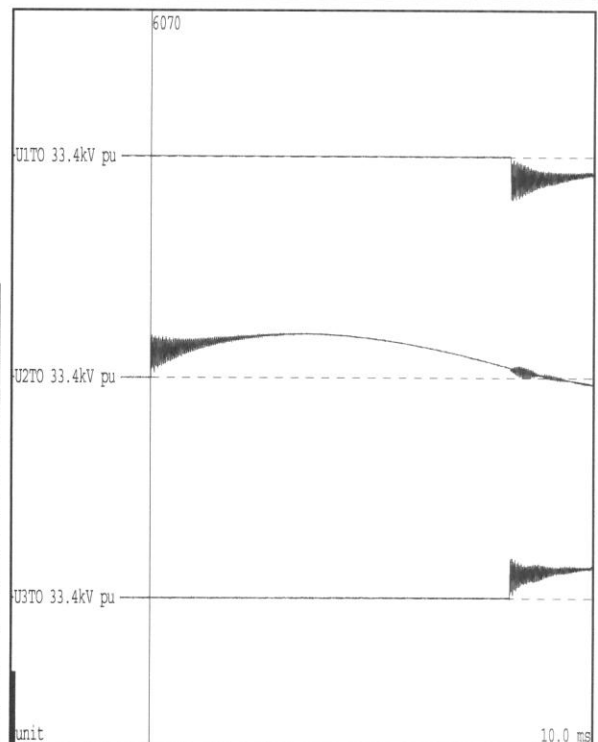
Inductive load element		
X _L (L _L)	Ω	2,58

Remarks: Due to limitations of the testplant, the required X/R ratio > 4



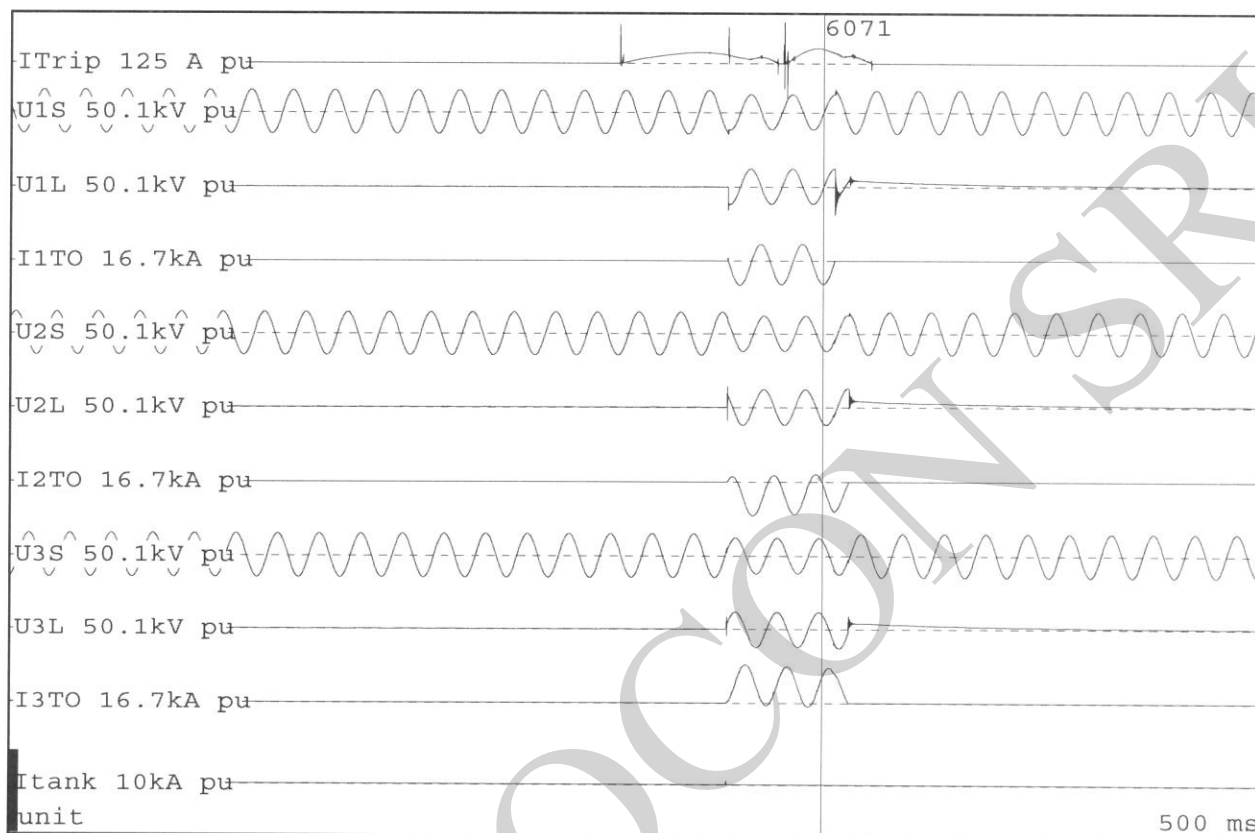
TEST NUMBER: 100526-6070

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	2,89	2,88	2,88
Average current, three phase	kA	2,88		
Breaking current, DC-component	%	55	53	25
Recovery voltage, phase value	kV	9,37	9,29	9,35
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-20,1	19,7	18,2
Arc duration	ms	6,3	0,1	6,3
Opening time	ms	-		
Break time	ms	-	-	-



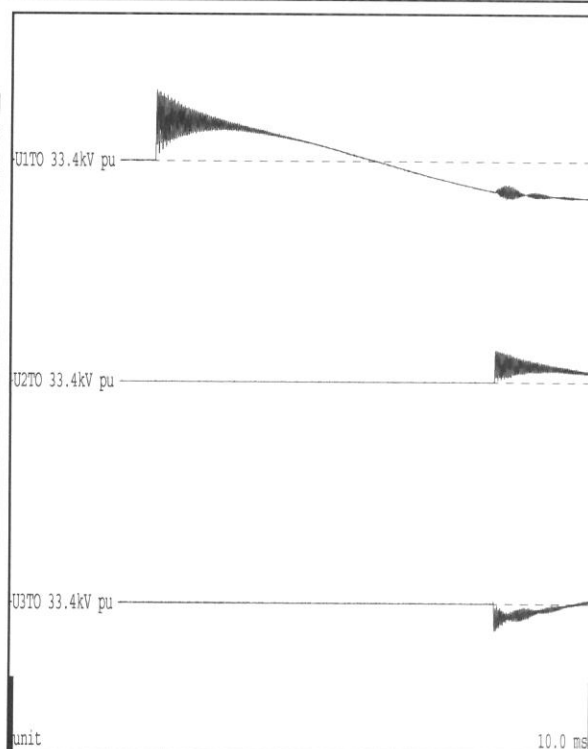
Voltage opening coil - Vd.c. Gas pressure at 20 °C - MPa
Operating pressure

Remarks: Recloser closed.



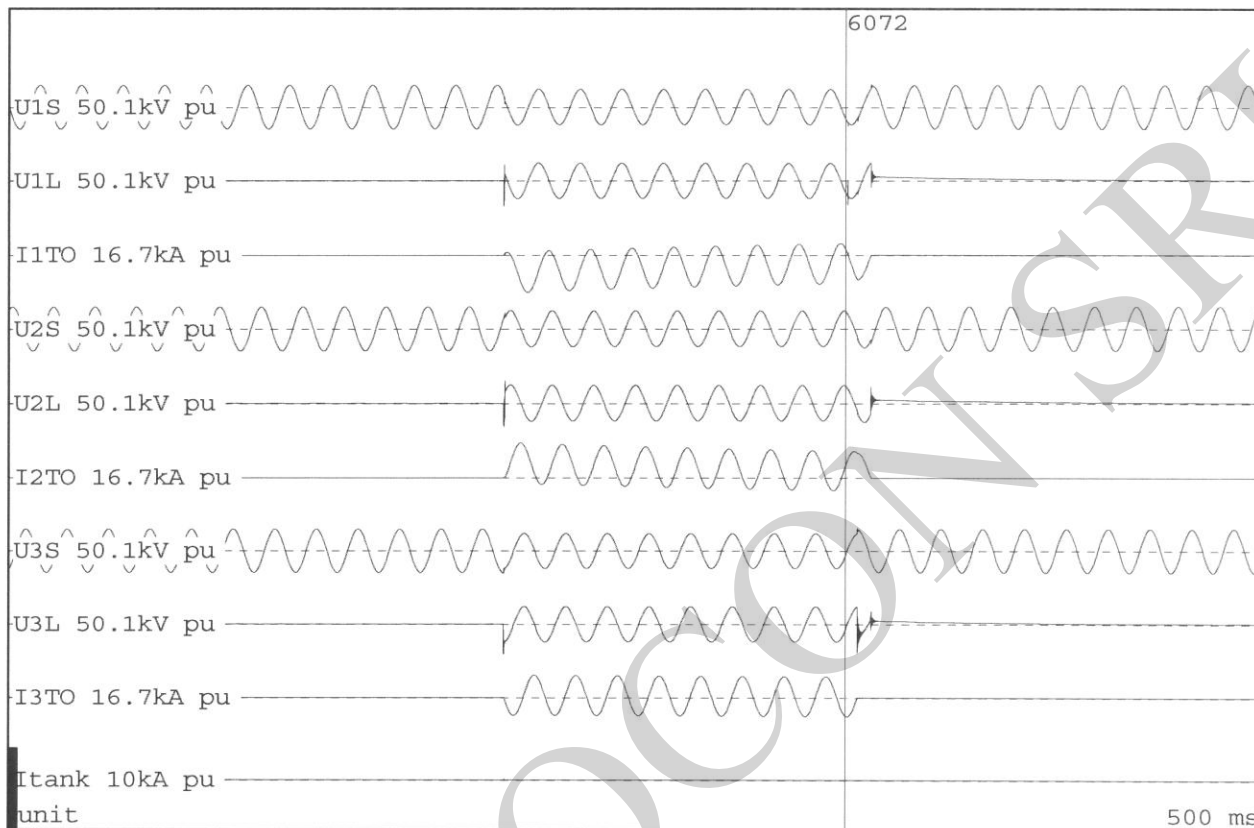
TEST NUMBER: 100526-6071

Time interval since previous test	min	-		
Time interval between operations	s	0,515		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,42	9,39	9,42
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	-5,04	-6,94	7,90
Breaking current, phase value	kA	2,90	2,88	2,89
Average current, three phase	kA	2,89		
Breaking current, DC-component	%	19	60	78
Recovery voltage, phase value	kV	9,33	9,33	9,36
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	32,5	14,4	-12,3
Make time	ms	-	-	-
Arc duration	ms	4,7	10,6	10,6
Opening time	ms	-		
Break time	ms	-	-	-

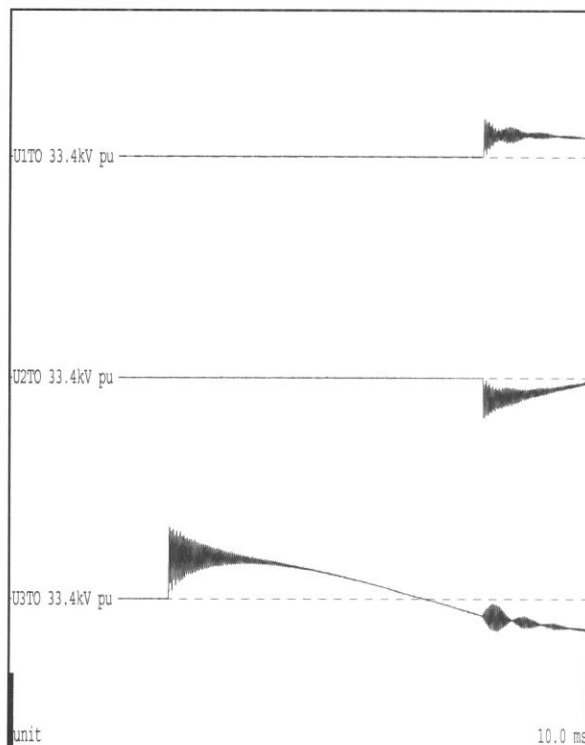


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

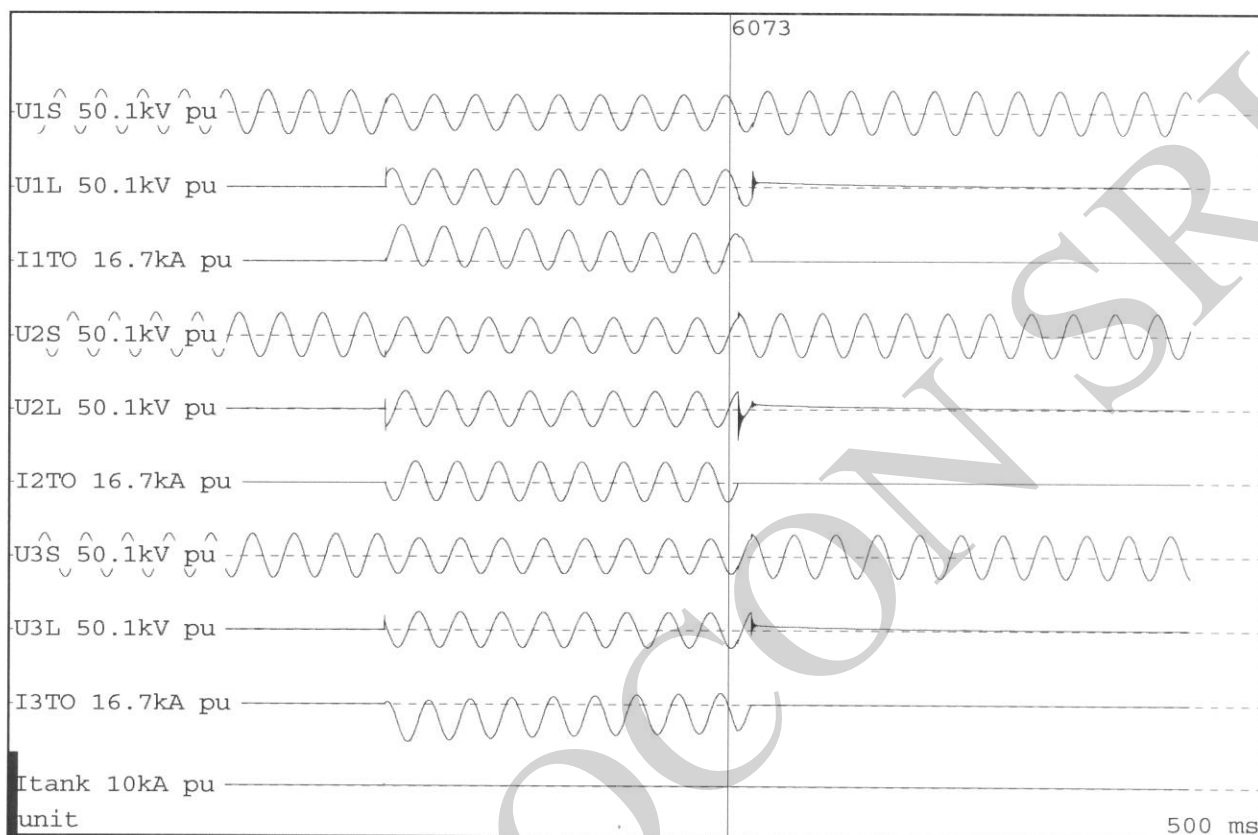

TEST NUMBER: 100526-6072

Time interval since previous test	min	-		
Time interval between operations	s	1,04		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,43	9,40	9,42
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	-7,54	7,02	4,65
Breaking current, phase value	kA	2,88	2,86	2,87
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	41	34	7
Recovery voltage, phase value	kV	9,37	9,34	9,34
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	17,4	-18,1	32,5
Make time	ms	-	-	-
Arc duration	ms	10,1	10,1	4,7
Opening time	ms	-		
Break time	ms	-	-	-



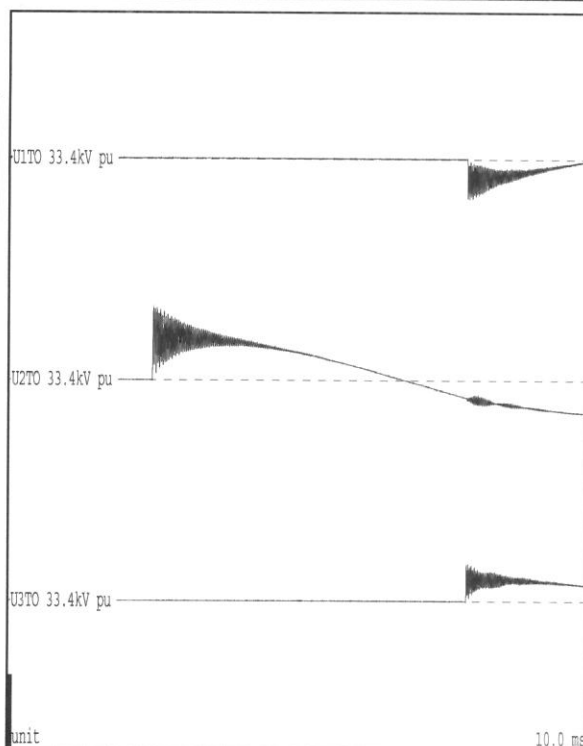
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



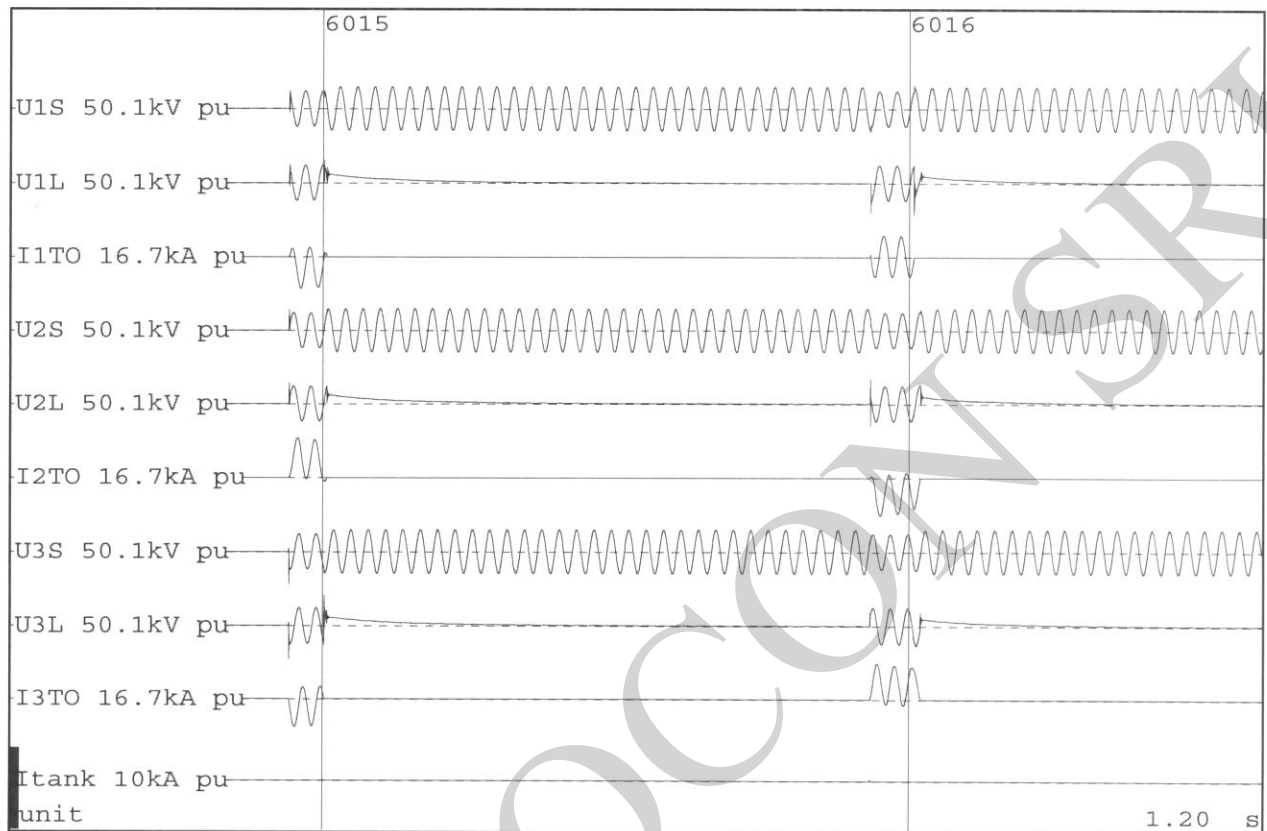
TEST NUMBER: 100526-6073

Time interval since previous test	min	-		
Time interval between operations	s	0,989		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,50	9,47	9,50
Applied voltage, between phases	kV	16,4		
Making current, peak	kA	7,42	-3,83	-7,66
Breaking current, phase value	kA	2,89	2,88	2,88
Average current, three phase	kA	2,88		
Breaking current, DC-component	%	37	7	42
Recovery voltage, phase value	kV	9,39	9,35	9,40
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-18,5	33,6	17,0
Make time	ms	-	-	-
Arc duration	ms	9,1	3,7	9,1
Opening time	ms	-		
Break time	ms	-	-	-



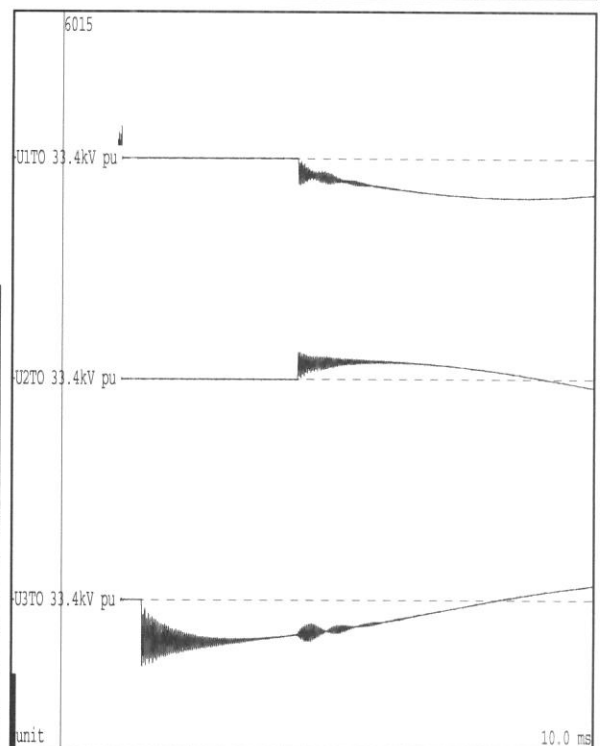
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



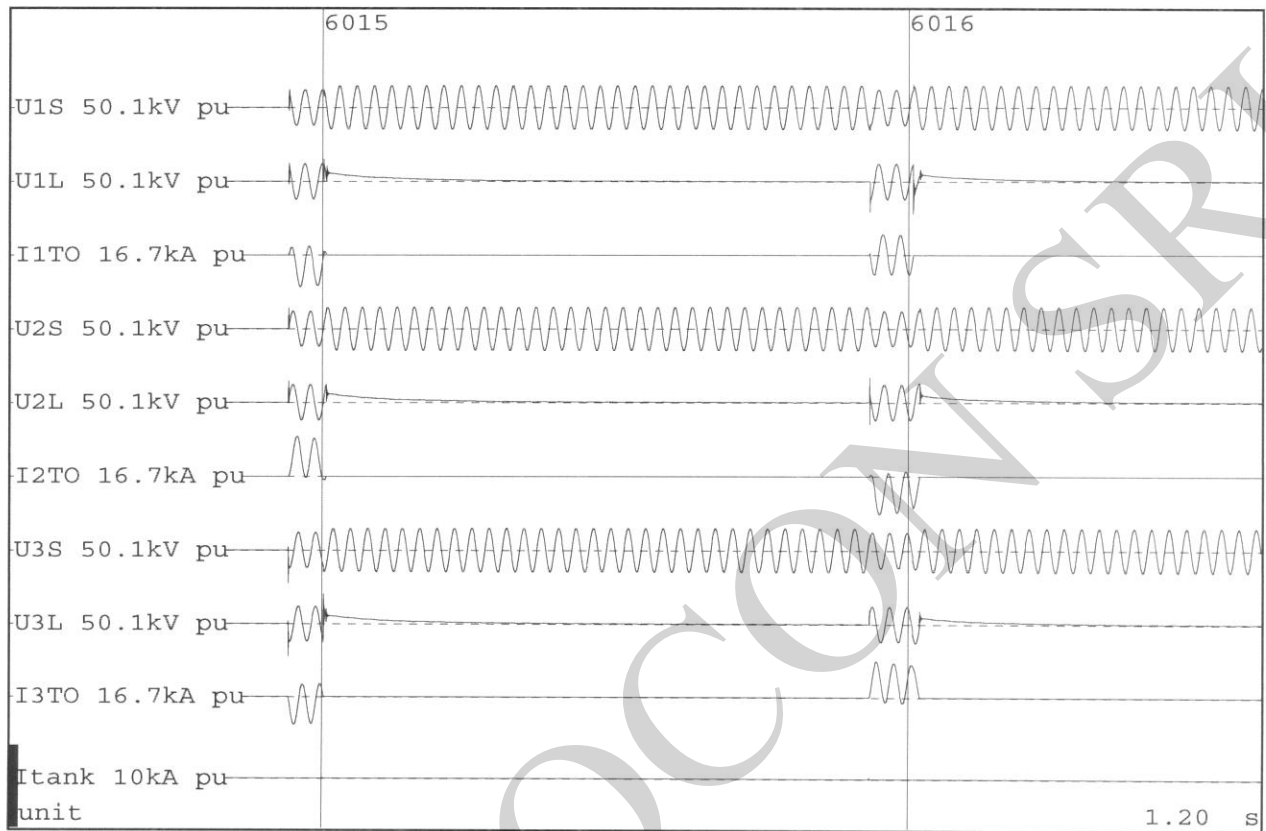
TEST NUMBER: 100527-6015

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	2,89	2,83	2,88
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	51	100	34
Recovery voltage, phase value	kV	9,33	9,30	9,30
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	-11,0	12,2	-30,0
Arc duration	ms	3,7	2,1	-2,4
Opening time	ms	-		
Break time	ms	-	-	-



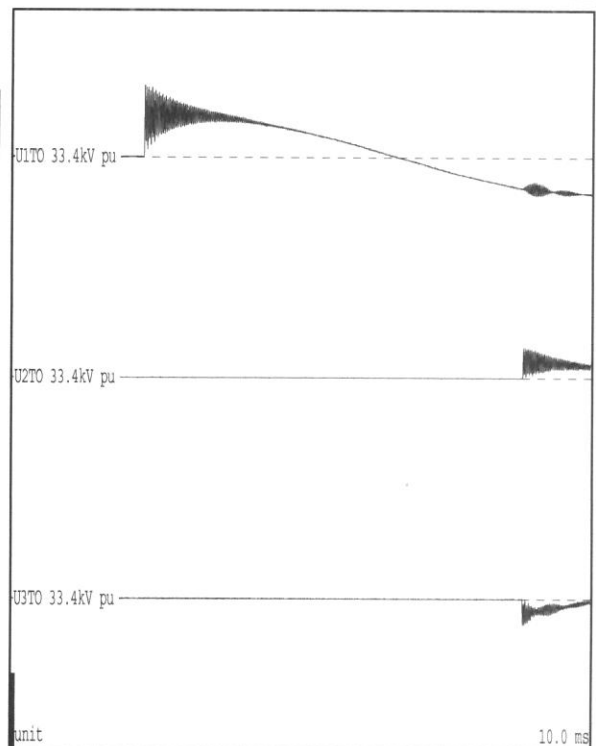
Voltage opening coil - Vd.c. Gas pressure at 20 °C - MPa
Operating pressure

Remarks: Recloser closed.



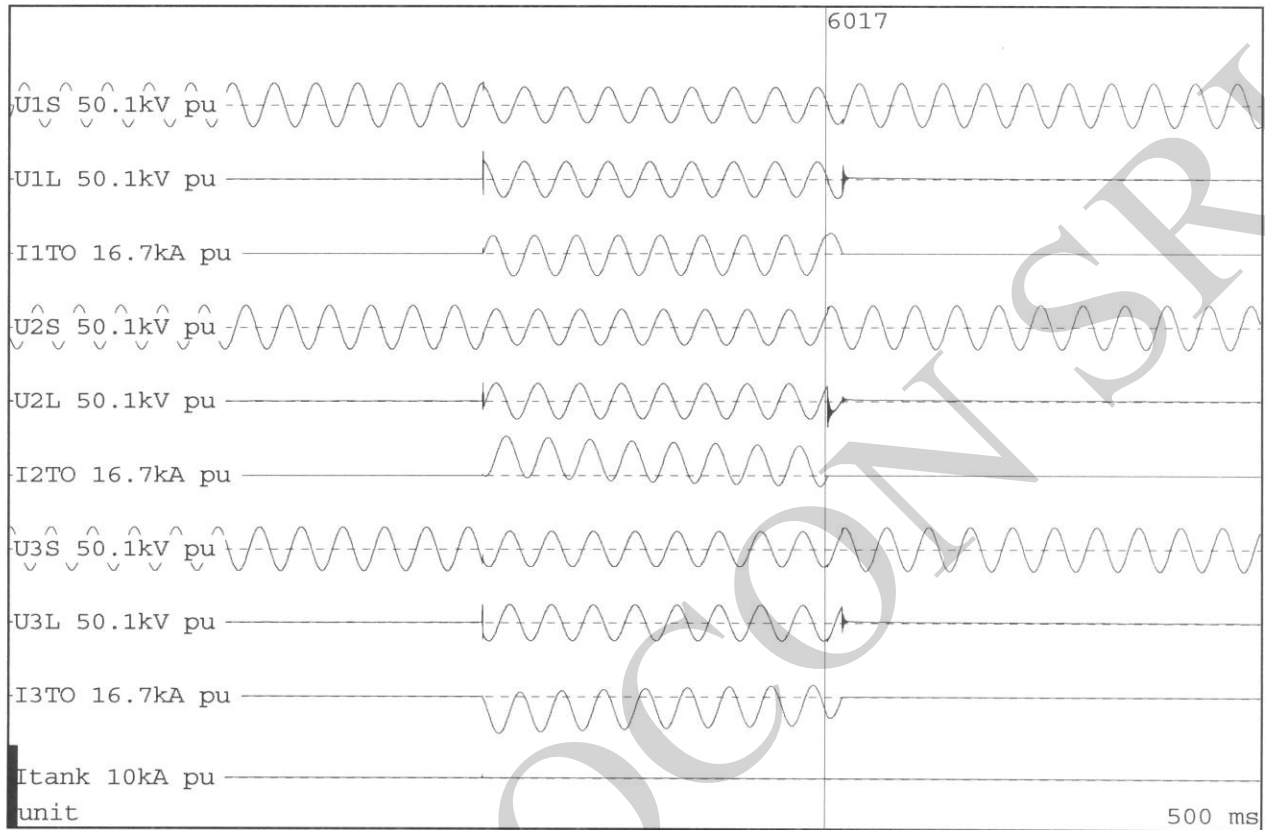
TEST NUMBER: 100527-6016

Time interval since previous test	min	-		
Time interval between operations	s	0,528		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,42	9,40	9,43
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	4,59	-7,90	7,79
Breaking current, phase value	kA	2,91	2,89	2,90
Average current, three phase	kA	2,9		
Breaking current, DC-component	%	3	74	69
Recovery voltage, phase value	kV	9,35	9,35	9,38
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	32,8	13,7	-11,8
Make time	ms	-	-	-
Arc duration	ms	4,5	11,0	11,1
Opening time	ms	-		
Break time	ms	-	-	-



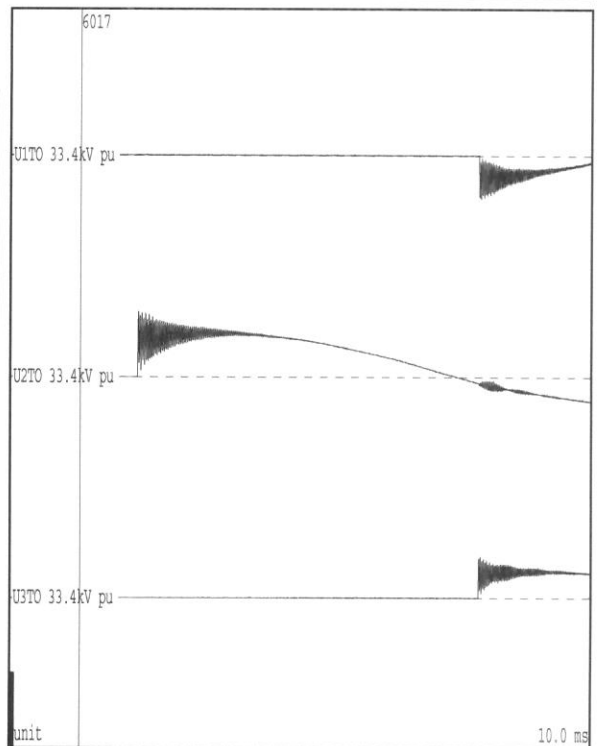
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



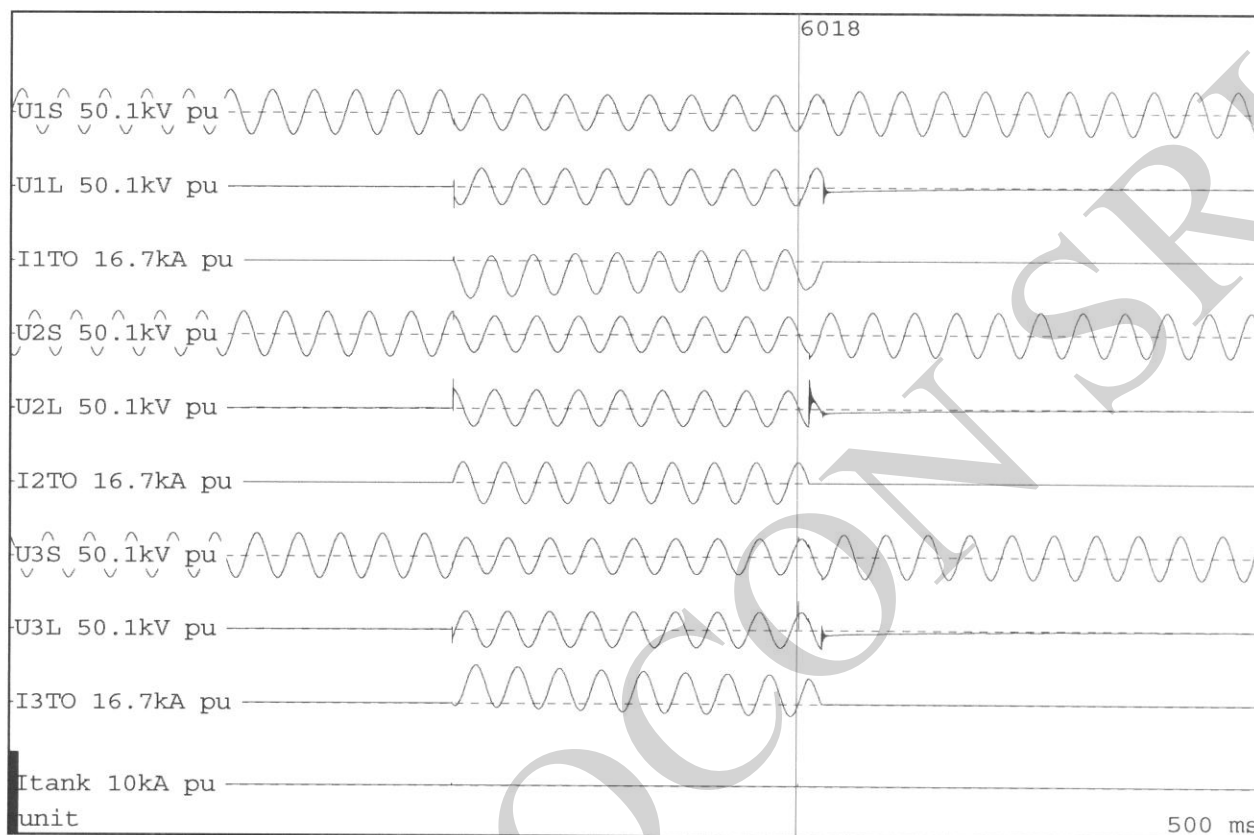
TEST NUMBER: 100527-6017

Time interval since previous test	min	-	-	-
Time interval between operations	s	1,01	-	-
Operation		CO	-	-
Phase		C	B	A
Applied voltage, phase value	kV	9,51	9,48	9,51
Applied voltage, between phases	kV	16,5	-	-
Making current, peak	kA	-4,90	8,20	-7,83
Breaking current, phase value	kA	2,91	2,90	2,90
Average current, three phase	kA	2,9	-	-
Breaking current, DC-component	%	6	45	39
Recovery voltage, phase value	kV	9,45	9,36	9,25
Recovery voltage, between phases	kV	16,2	-	-
TRV, peak	kV	-19,7	0,158	18,6
Make time	ms	-	-	-
Arc duration	ms	6,9	2,1	6,9
Opening time	ms	-	-	-
Break time	ms	-	-	-



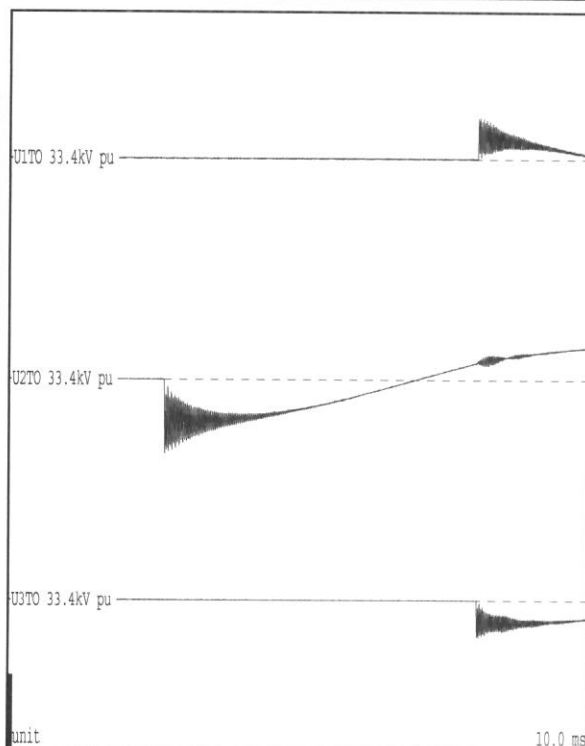
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



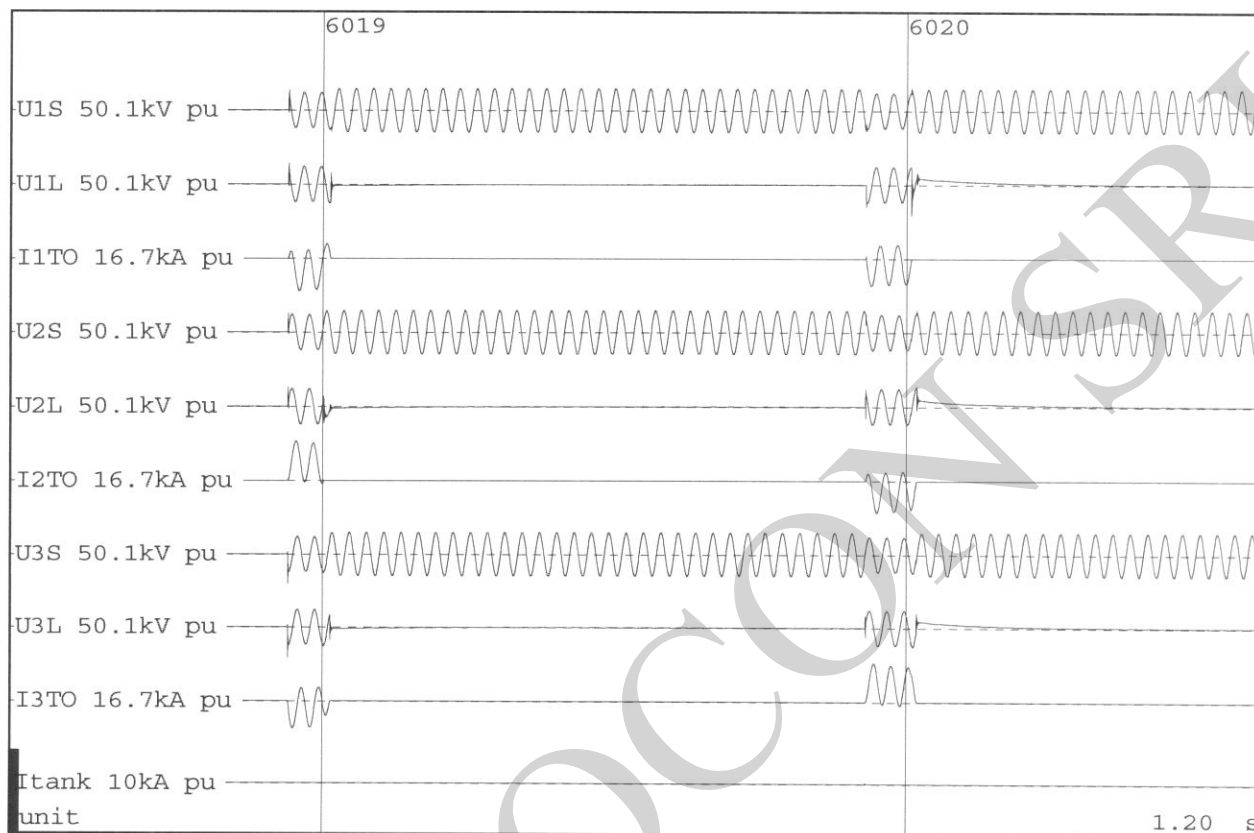
TEST NUMBER: 100527-6018

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,62	9,61	9,62
Applied voltage, between phases	kV	16,7		
Making current, peak	kA	-7,94	-4,66	8,04
Breaking current, phase value	kA	2,95	2,93	2,94
Average current, three phase	kA	2,94		
Breaking current, DC-component	%	39	2	42
Recovery voltage, phase value	kV	9,54	9,49	9,54
Recovery voltage, between phases	kV	16,5		
TRV, peak	kV	18,6	-34,2	-17,4
Make time	ms	-	-	-
Arc duration	ms	10,0	4,6	10,0
Opening time	ms	-	-	-
Break time	ms	-	-	-



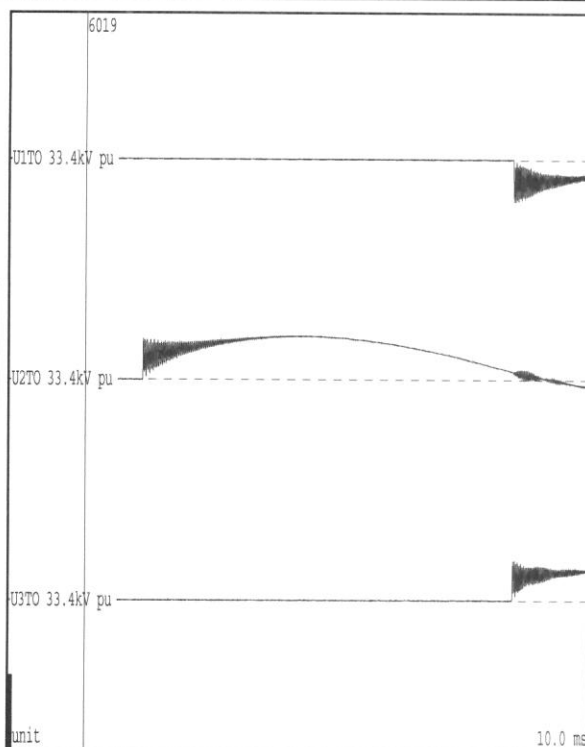
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



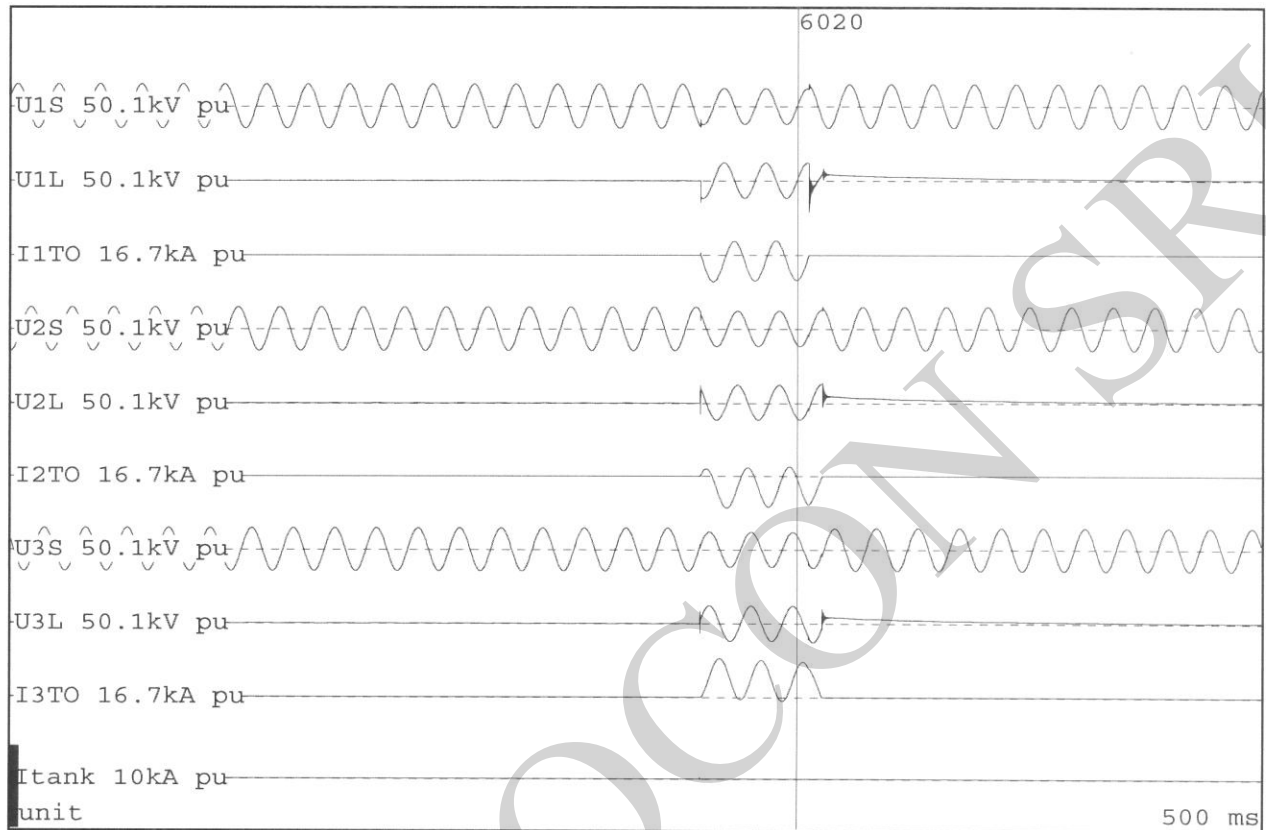
TEST NUMBER: 100527-6019

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	2,88	2,83	2,87
Average current, three phase	kA	2,86		
Breaking current, DC-component	%	53	100	30
Recovery voltage, phase value	kV	9,33	9,25	9,30
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	-19,6	26,7	18,3
Arc duration	ms	7,4	0,6	7,4
Opening time	ms	-		
Break time	ms	-	-	-



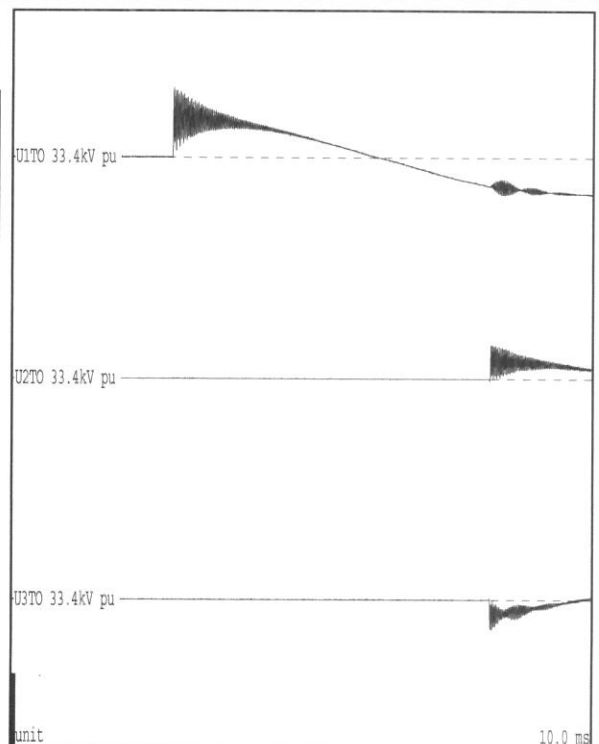
Voltage opening coil - Vd.c. Gas pressure at 20 °C - MPa
Operating pressure

Remarks: Recloser closed.



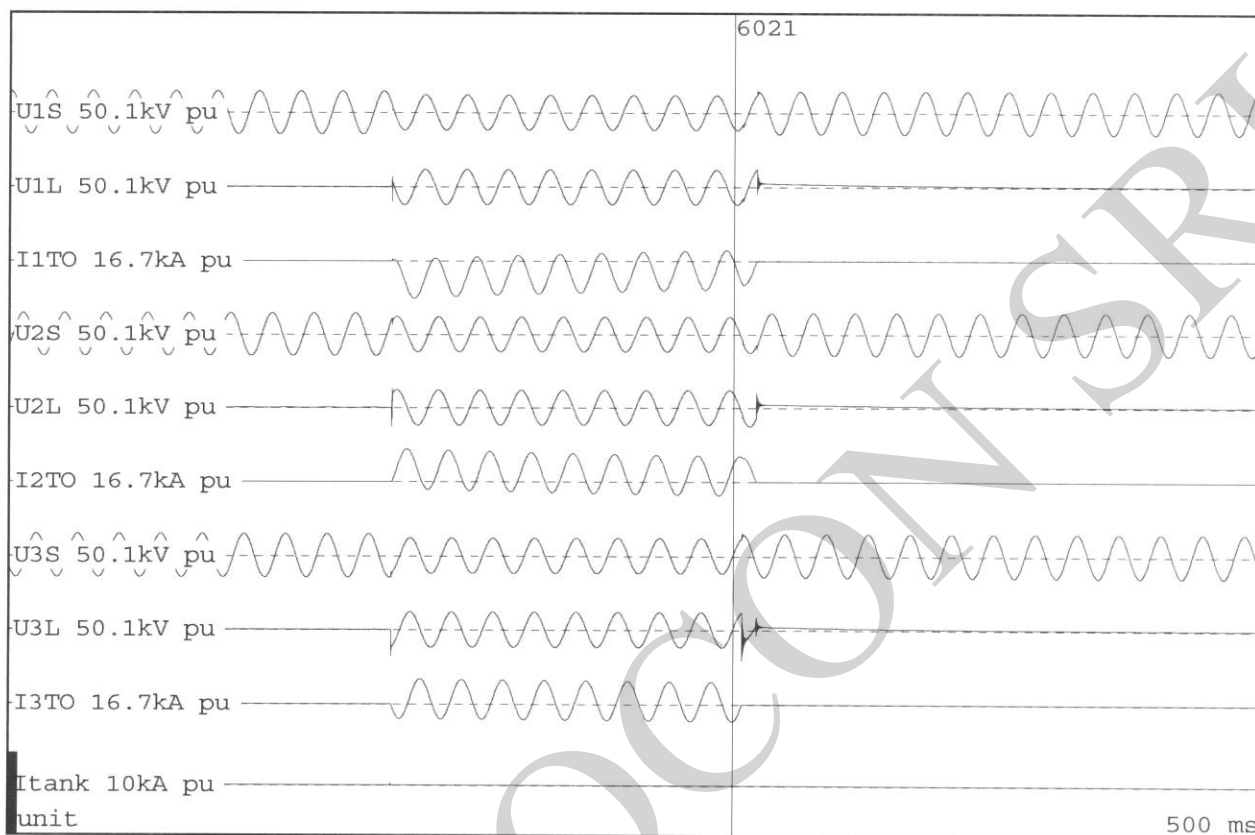
TEST NUMBER: 100527-6020

Time interval since previous test	min	-	-	-
Time interval between operations	s	0,514	-	-
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,36	9,34	9,37
Applied voltage, between phases	kV	16,2		
Making current, peak	kA	-5,64	-6,80	8,17
Breaking current, phase value	kA	2,88	2,86	2,83
Average current, three phase	kA	2,86		
Breaking current, DC-component	%	28	52	3
Recovery voltage, phase value	kV	9,29	9,29	9,31
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	31,5	15,6	-13,5
Make time	ms	-	-	-
Arc duration	ms	4,6	10,0	10,0
Opening time	ms	-		
Break time	ms	-	-	-



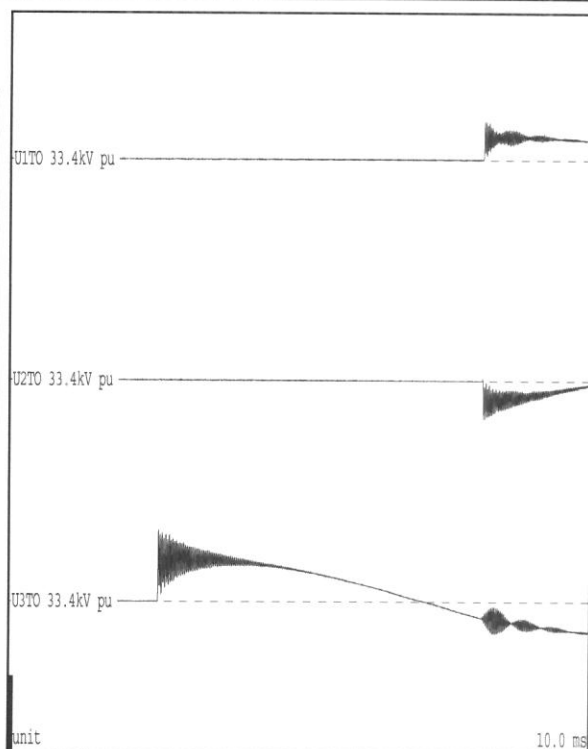
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



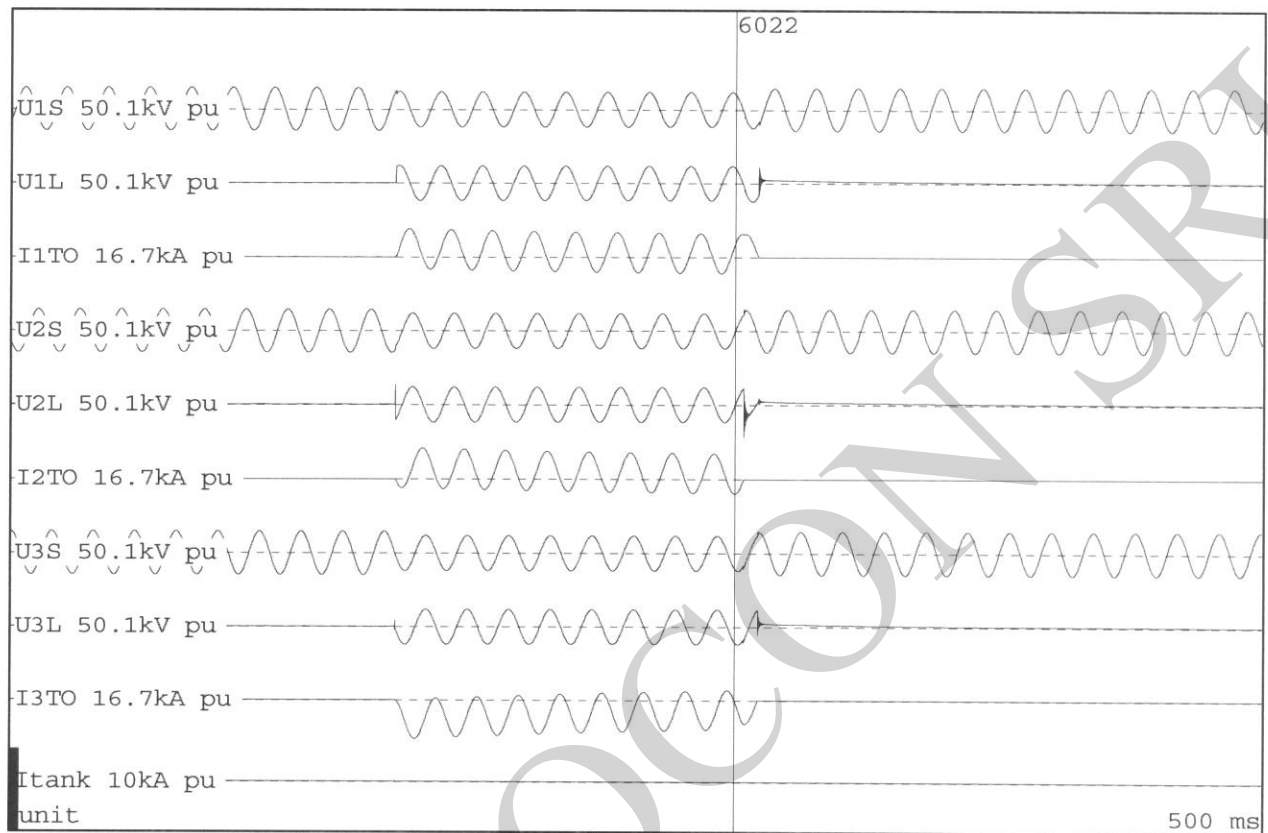
TEST NUMBER: 100527-6021

Time interval since previous test	min	-		
Time interval between operations	s	1,01		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,32	9,30	9,34
Applied voltage, between phases	kV	16,1		
Making current, peak	kA	-7,98	6,90	5,43
Breaking current, phase value	kA	2,84	2,83	2,84
Average current, three phase	kA	2,84		
Breaking current, DC-component	%	44	30	14
Recovery voltage, phase value	kV	9,28	9,25	9,26
Recovery voltage, between phases	kV	16,0		
TRV, peak	kV	17,5	-17,8	31,9
Make time	ms	-	-	-
Arc duration	ms	9,1	9,1	3,5
Opening time	ms	-		
Break time	ms	-	-	-



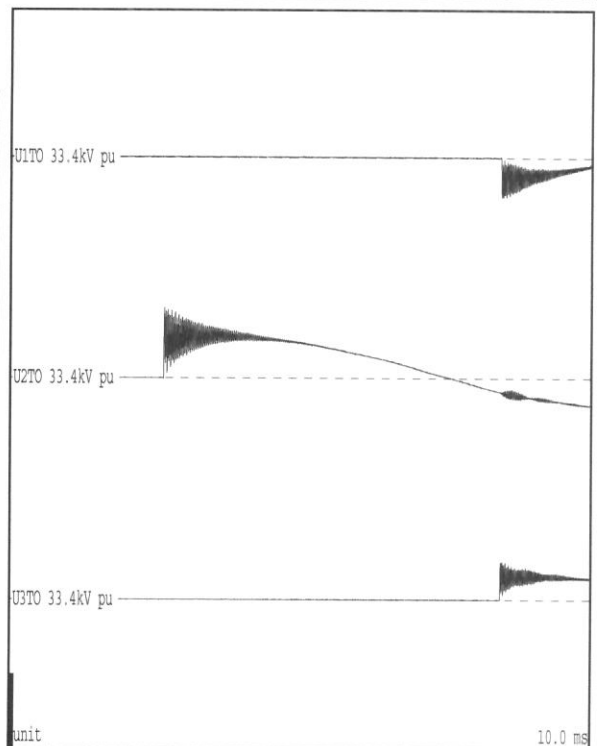
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



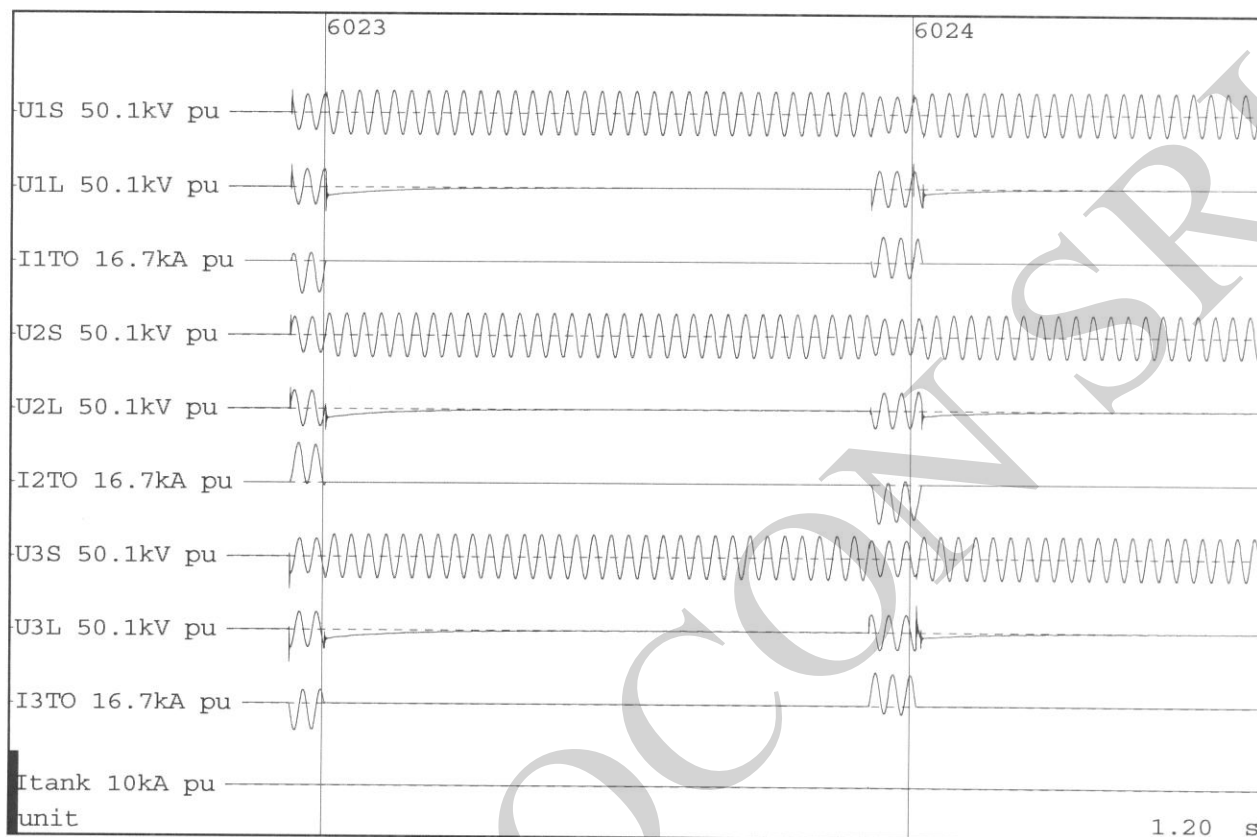
TEST NUMBER: 100527-6022

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,33	9,31	9,32
Applied voltage, between phases	kV	16,1		
Making current, peak	kA	5,98	6,44	-8,21
Breaking current, phase value	kA	2,84	2,83	2,84
Average current, three phase	kA	2,84		
Breaking current, DC-component	%	20	26	47
Recovery voltage, phase value	kV	9,27	9,22	9,27
Recovery voltage, between phases	kV	16,0		
TRV, peak	kV	-18,4	31,9	17,3
Make time	ms	-	-	-
Arc duration	ms	9,3	3,5	9,3
Opening time	ms	-		
Break time	ms	-	-	-



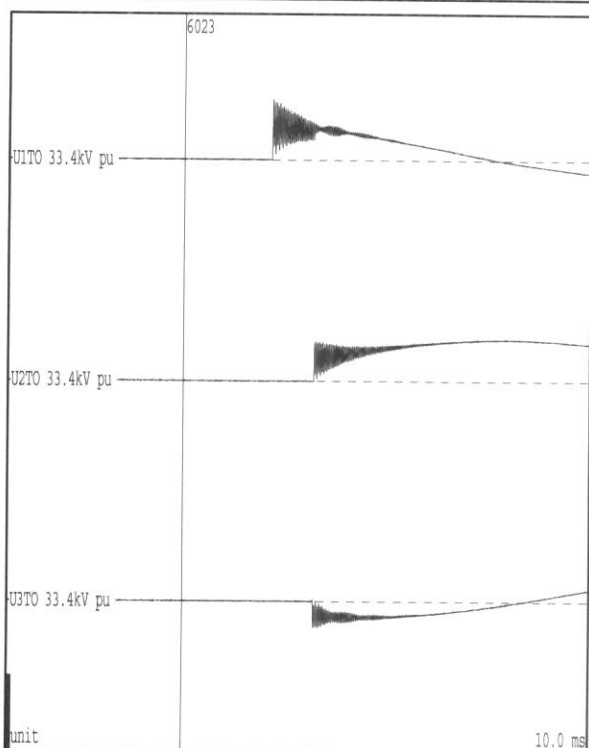
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



TEST NUMBER: 100527-6023

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	2,89	2,84	2,88
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	54	100	30
Recovery voltage, phase value	kV	9,35	9,31	9,36
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	27,6	18,9	-11,8
Arc duration	ms	1,6	2,3	2,3
Opening time	ms	-		
Break time	ms	-	-	-



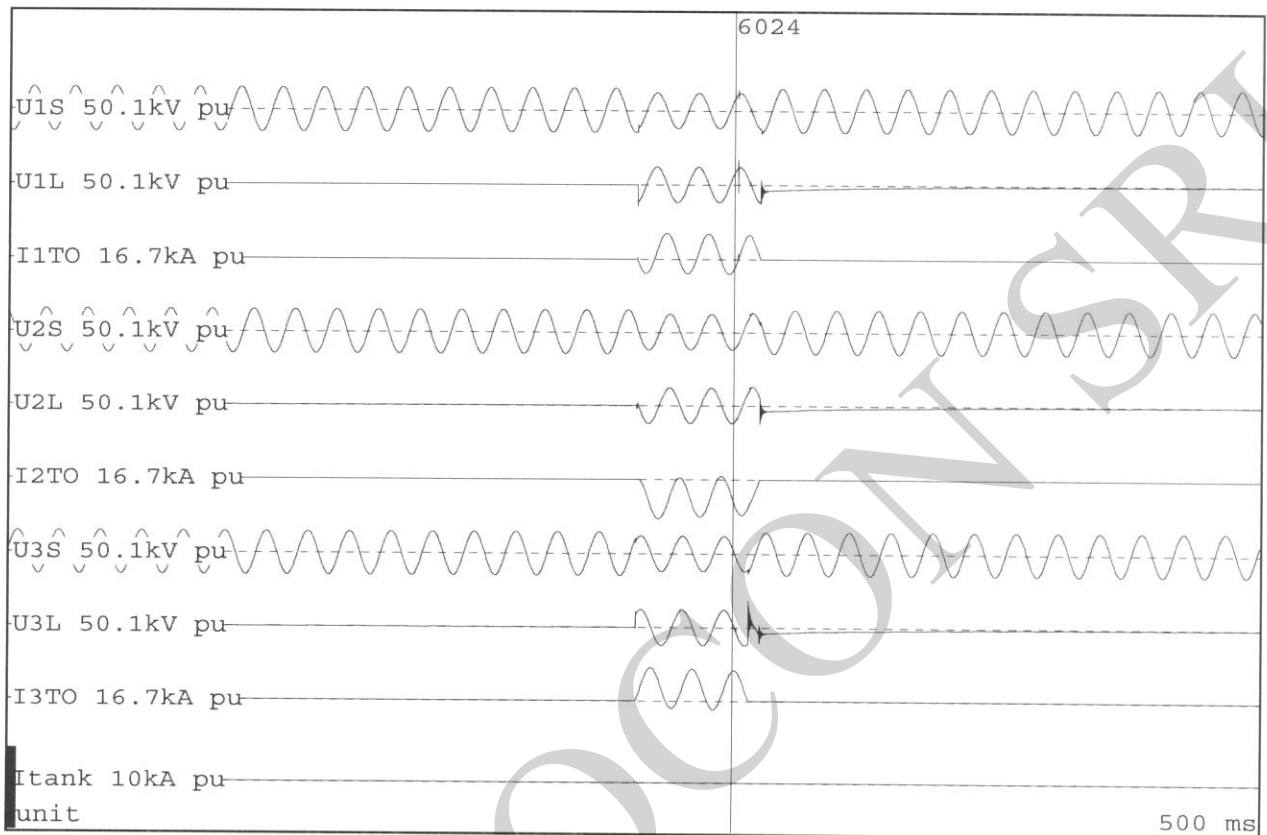
Voltage opening coil - Vd.c.

Gas pressure at 20 °C

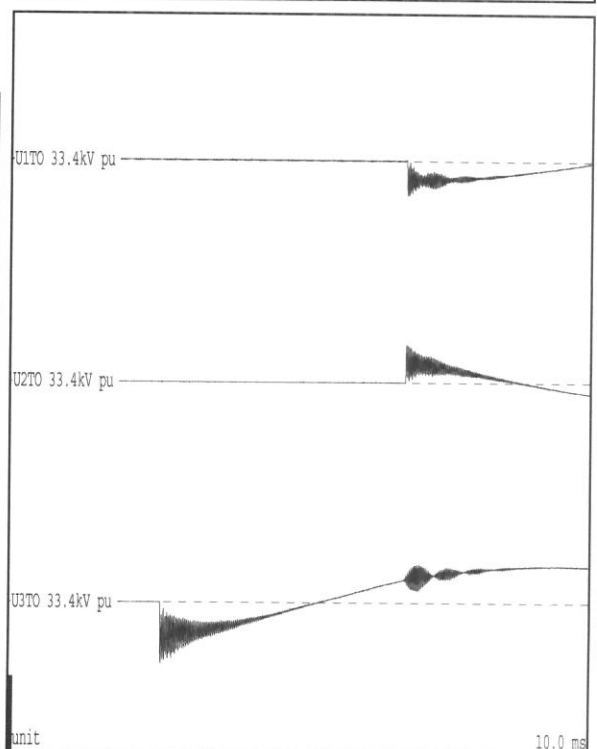
- MPa

Operating pressure

Remarks: Recloser closed.

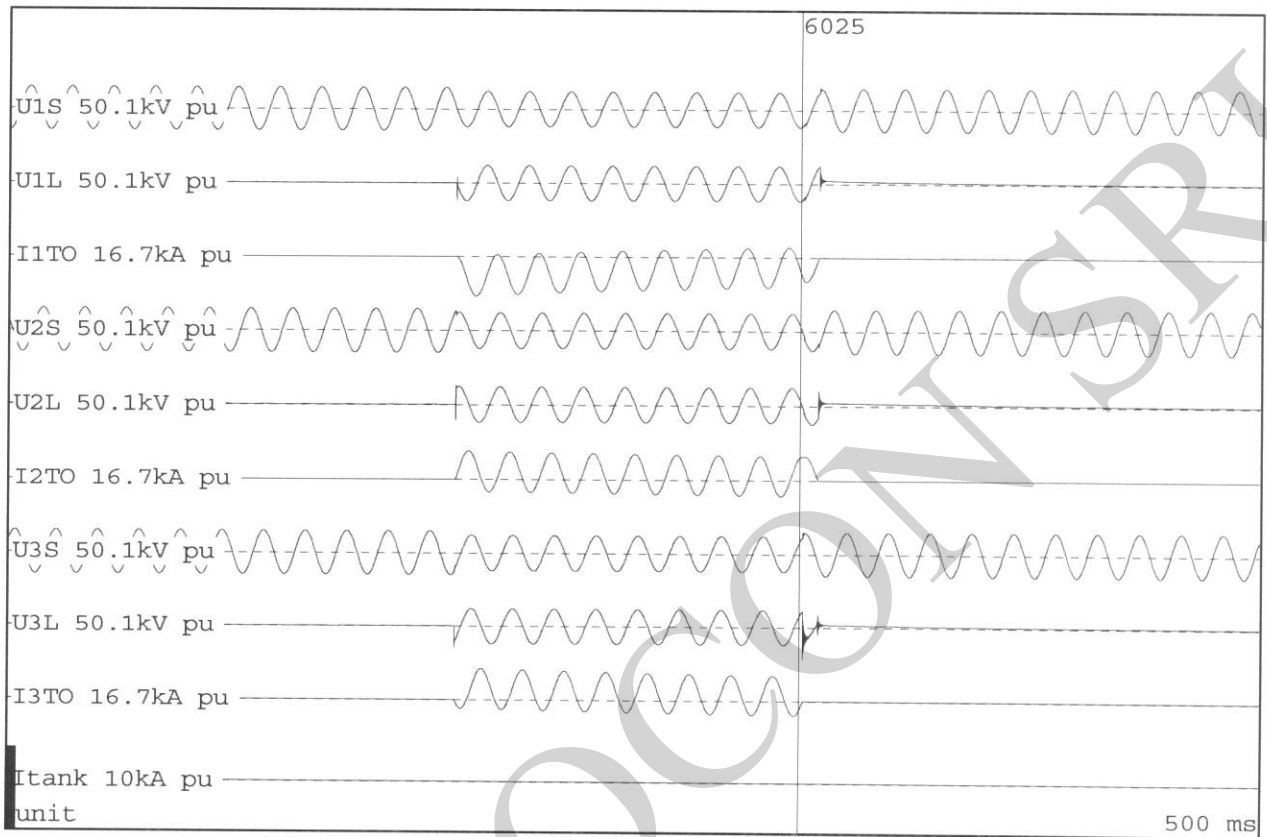

TEST NUMBER: 100527-6024

Time interval since previous test	min	-		
Time interval between operations	s	0,523		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,41	9,39	9,43
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	-2,92	-7,99	6,87
Breaking current, phase value	kA	2,89	2,85	2,87
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	24	100	56
Recovery voltage, phase value	kV	9,35	9,33	9,34
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-16,1	17,0	-27,5
Make time	ms	-	-	-
Arc duration	ms	10,6	10,7	6,4
Opening time	ms	-		
Break time	ms	-	-	-

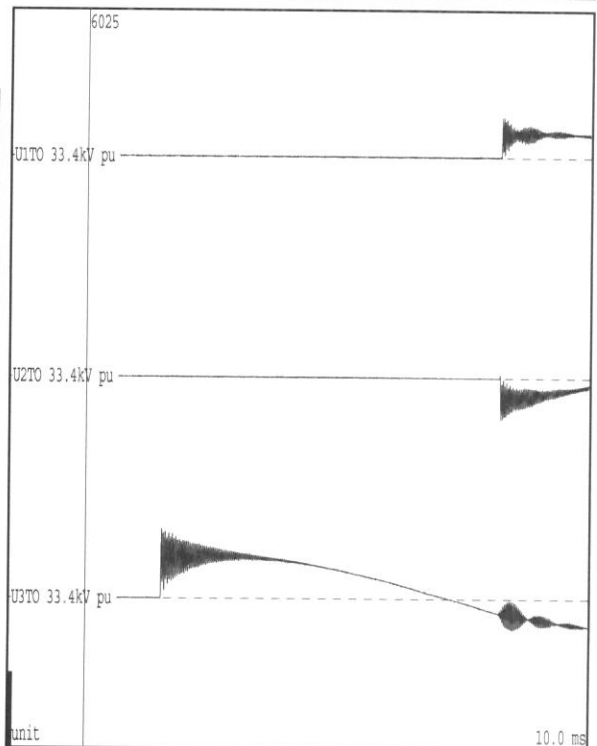


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

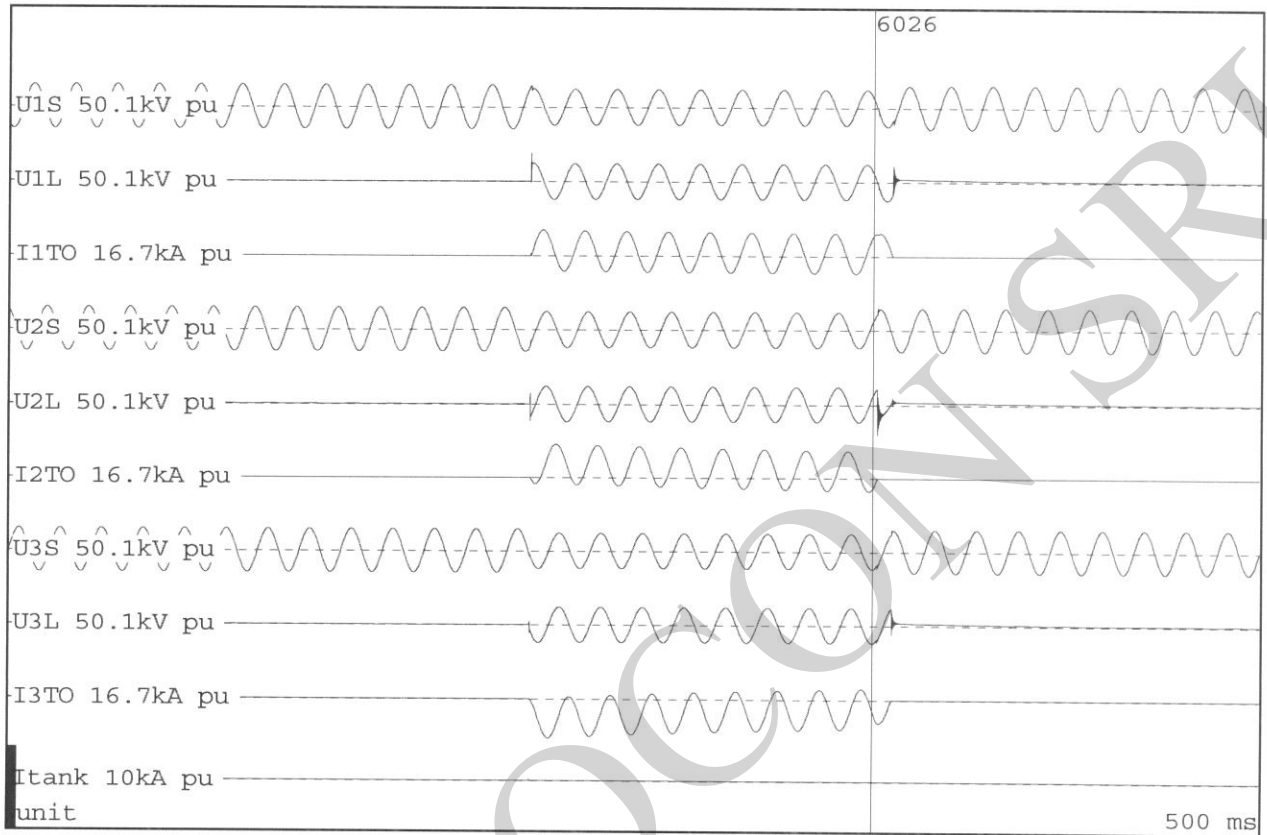

TEST NUMBER: 100527-6025

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,41	9,39	9,41
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	-8,02	5,73	-1,75
Breaking current, phase value	kA	2,86	2,85	2,86
Average current, three phase	kA	2,86		
Breaking current, DC-component	%	46	19	27
Recovery voltage, phase value	kV	9,36	9,33	9,33
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	18,2	-18,7	31,0
Make time	ms	-	-	-
Arc duration	ms	7,3	7,2	1,3
Opening time	ms	-		
Break time	ms	-	-	-

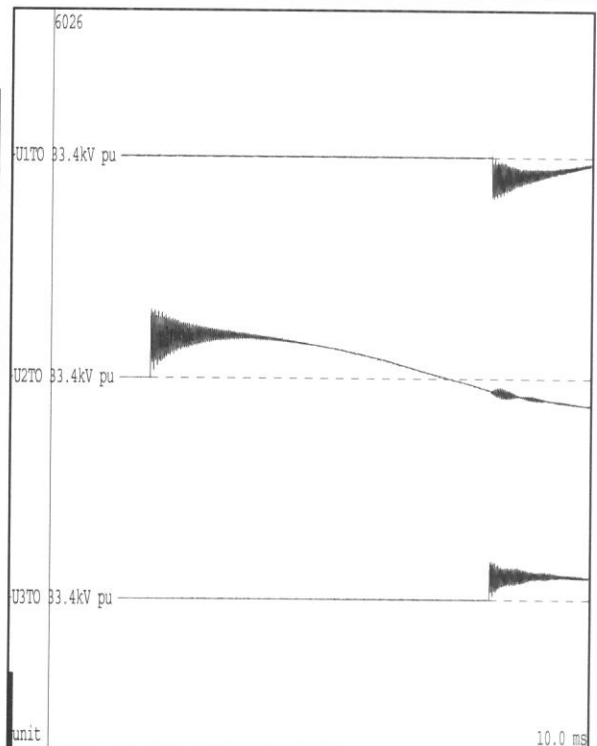


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

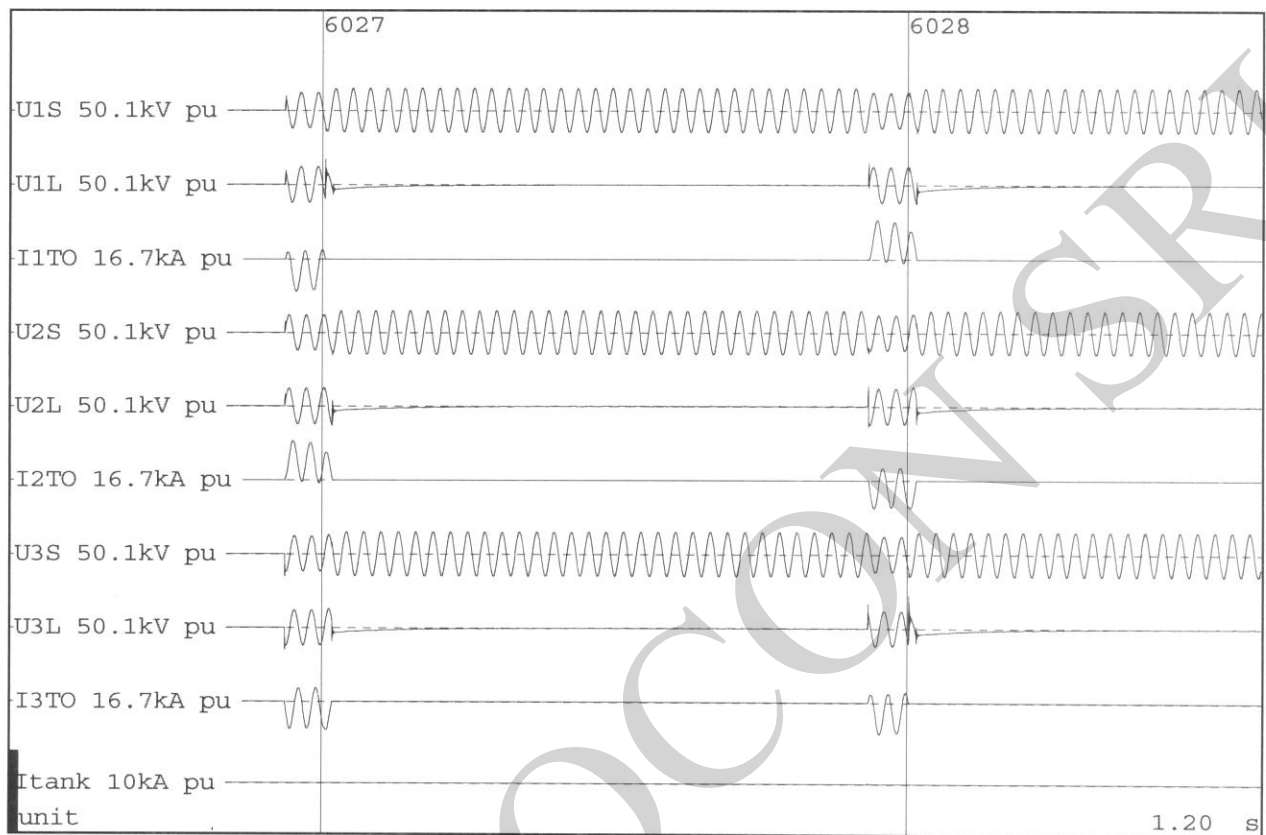

TEST NUMBER: 100527-6026

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,43	9,40	9,43
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	5,21	-1,28	-7,95
Breaking current, phase value	kA	2,88	2,86	2,86
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	12	33	45
Recovery voltage, phase value	kV	9,36	9,32	9,37
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-19,0	30,9	17,8
Make time	ms	-	-	-
Arc duration	ms	7,6	1,8	7,6
Opening time	ms	-		
Break time	ms	-	-	-



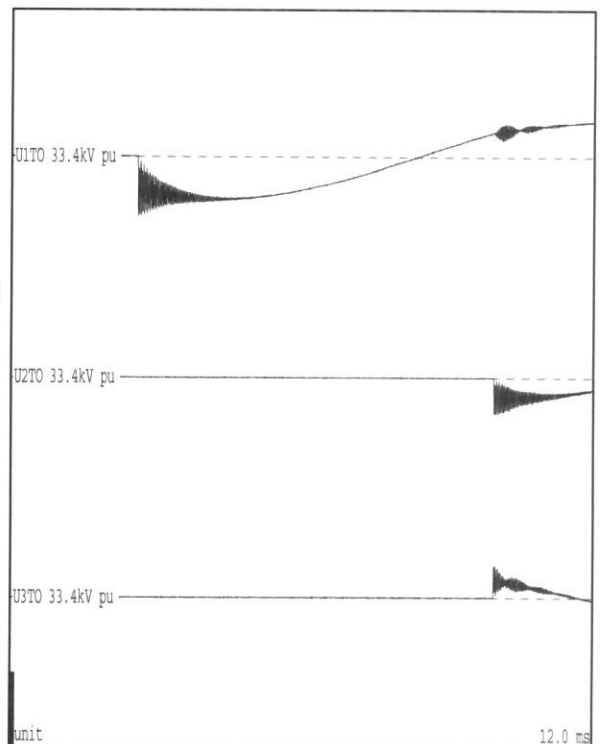
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



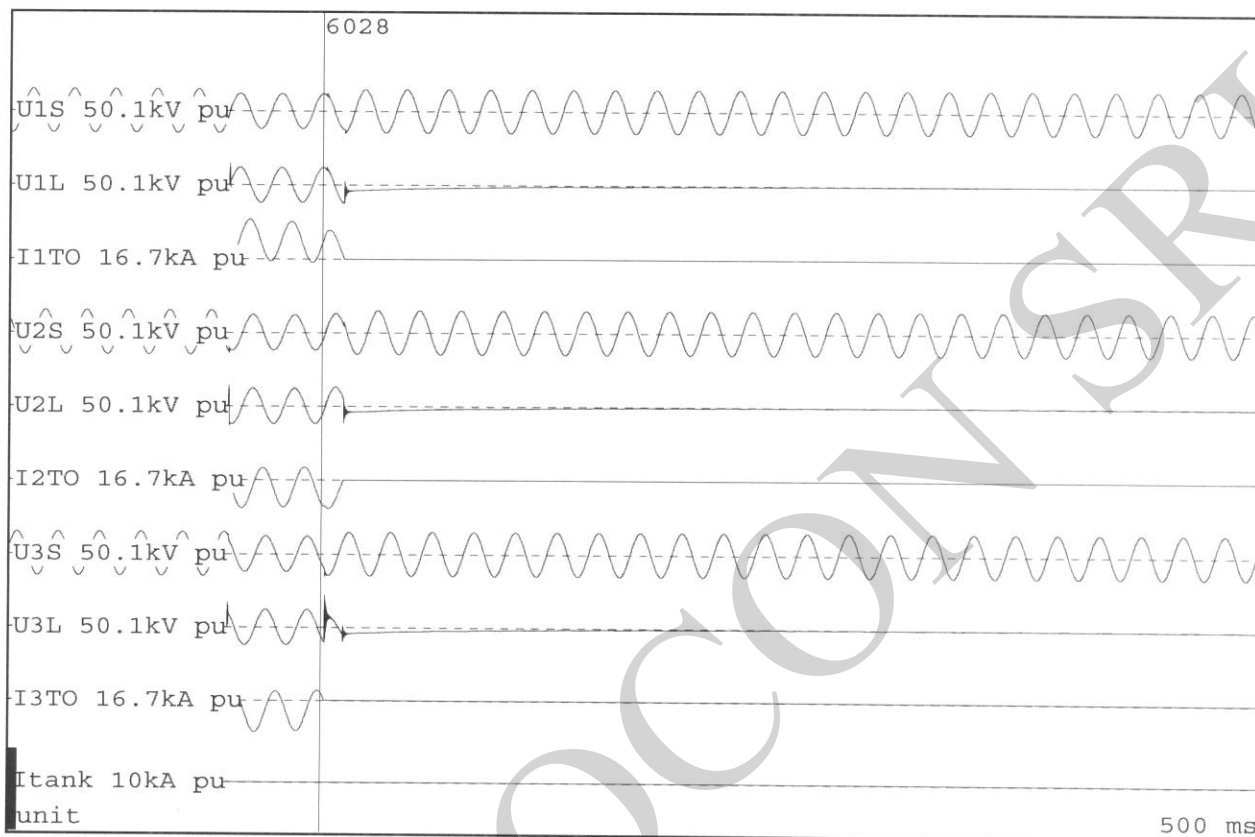
TEST NUMBER: 100527-6027

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	2,89	2,85	2,88
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	54	100	28
Recovery voltage, phase value	kV	9,30	9,32	9,34
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	-27,5	-16,7	14,5
Arc duration	ms	0,1	10,0	10,0
Opening time	ms	-		
Break time	ms	-	-	-

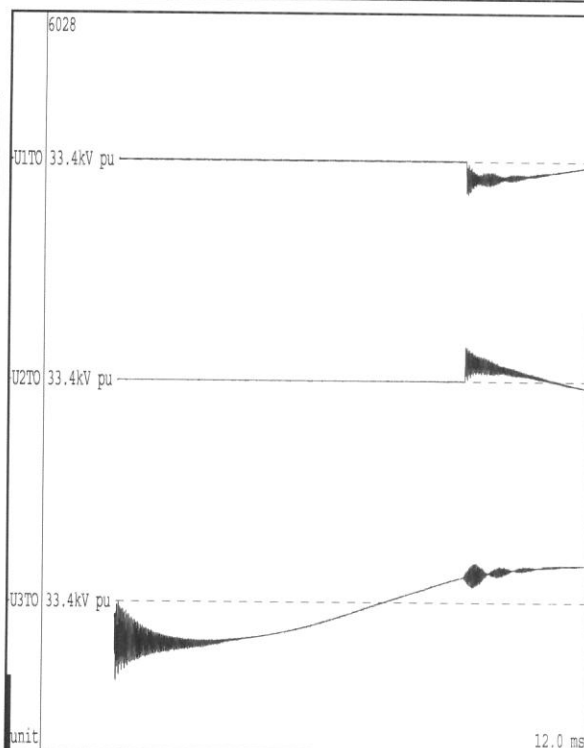


Voltage opening coil - Vd.c. Gas pressure at 20 °C - MPa
Operating pressure

Remarks: Recloser closed.

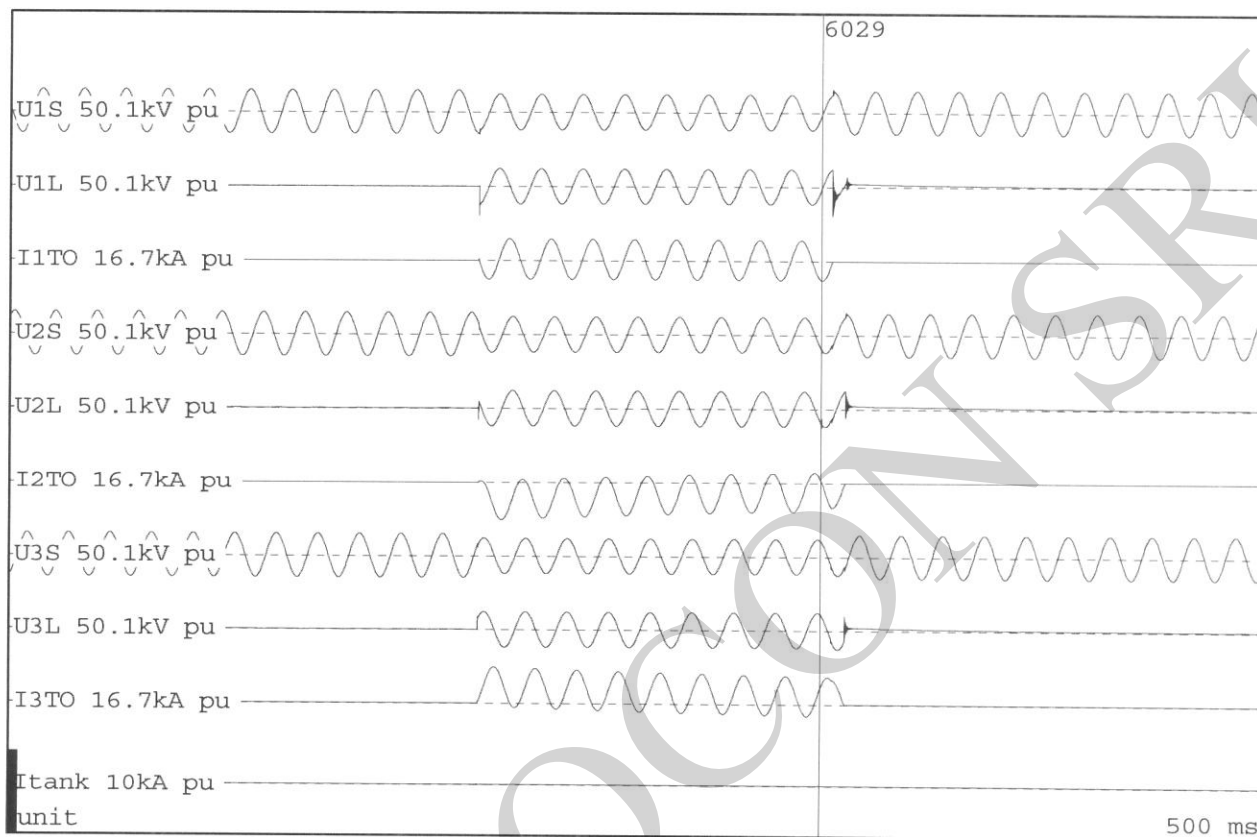

TEST NUMBER: 100527-6028

Time interval since previous test	min	-	-	-
Time interval between operations	s	0,515	-	-
Operation		CO	-	-
Phase		C	B	A
Applied voltage, phase value	kV	9,40	9,37	9,40
Applied voltage, between phases	kV	16,3	-	-
Making current, peak	kA	8,25	-5,73	1,74
Breaking current, phase value	kA	2,91	2,86	2,89
Average current, three phase	kA	2,89	-	-
Breaking current, DC-component	%	21	34	48
Recovery voltage, phase value	kV	9,34	9,33	9,31
Recovery voltage, between phases	kV	16,2	-	-
TRV, peak	kV	-14,8	15,7	-39,6
Make time	ms	-	-	-
Arc duration	ms	8,8	8,8	1,4
Opening time	ms	-	-	-
Break time	ms	-	-	-

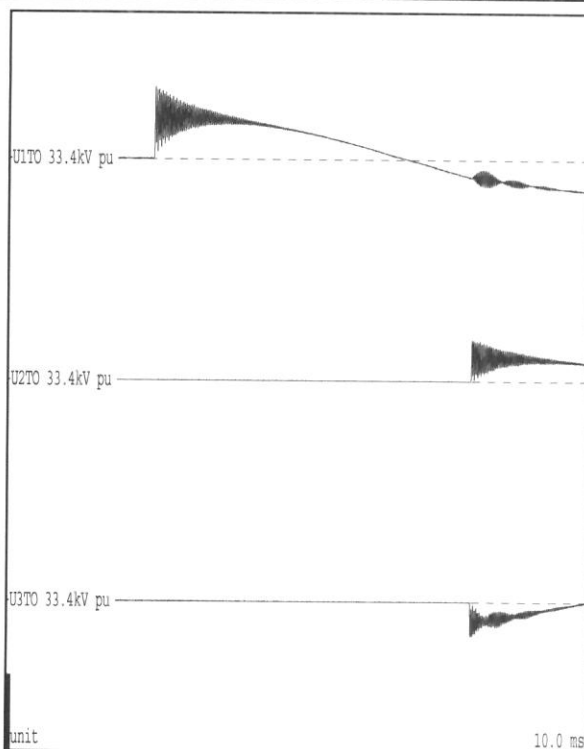


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

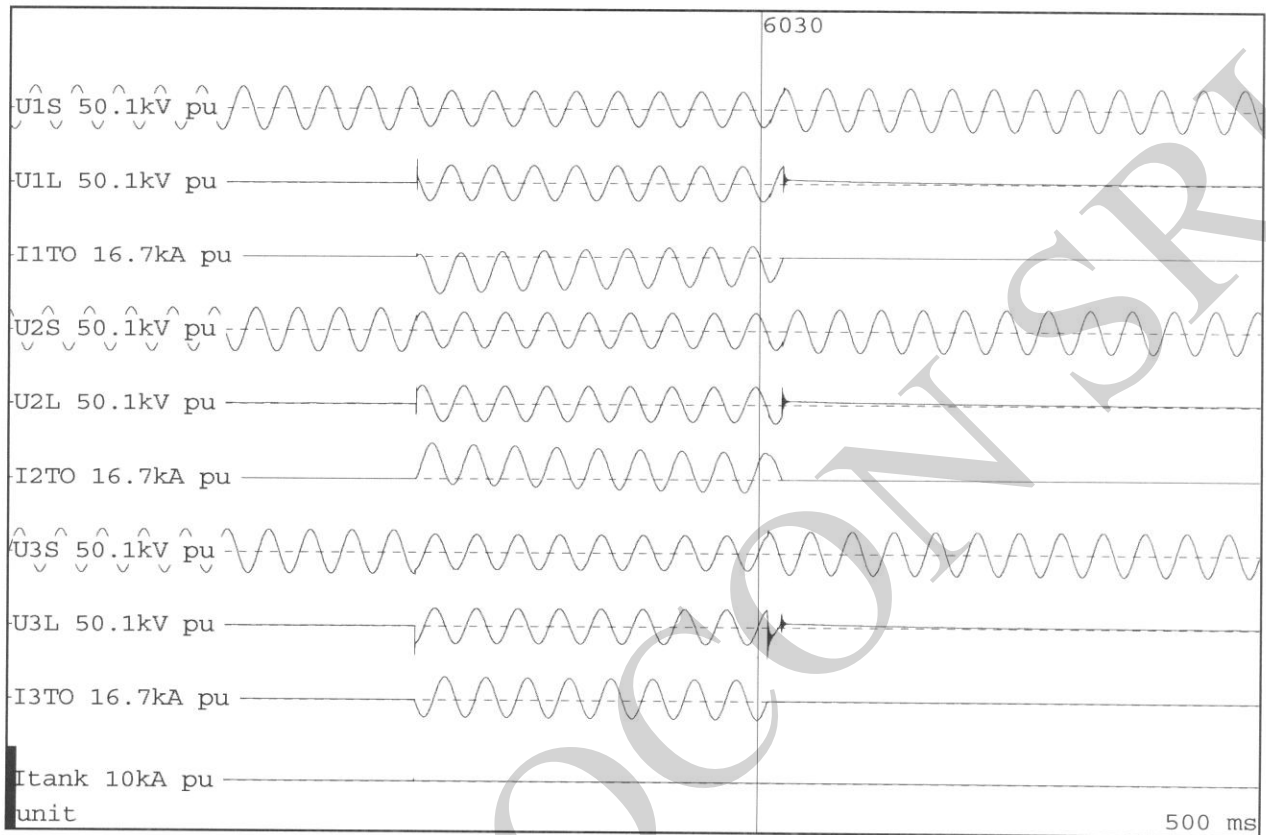

TEST NUMBER: 100527-6029

Time interval since previous test	min	-		
Time interval between operations	s	1,03		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,39	9,36	9,40
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	-3,78	-7,71	7,45
Breaking current, phase value	kA	2,87	2,84	2,85
Average current, three phase	kA	2,85		
Breaking current, DC-component	%	4	44	40
Recovery voltage, phase value	kV	9,30	9,31	9,33
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	32,7	18,5	-16,2
Make time	ms	-	-	-
Arc duration	ms	4,4	9,9	9,9
Opening time	ms	-		
Break time	ms	-	-	-

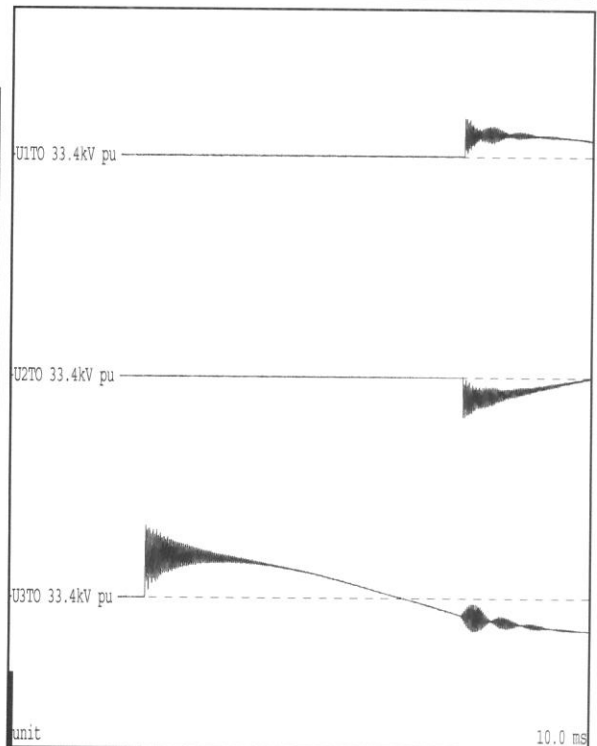


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

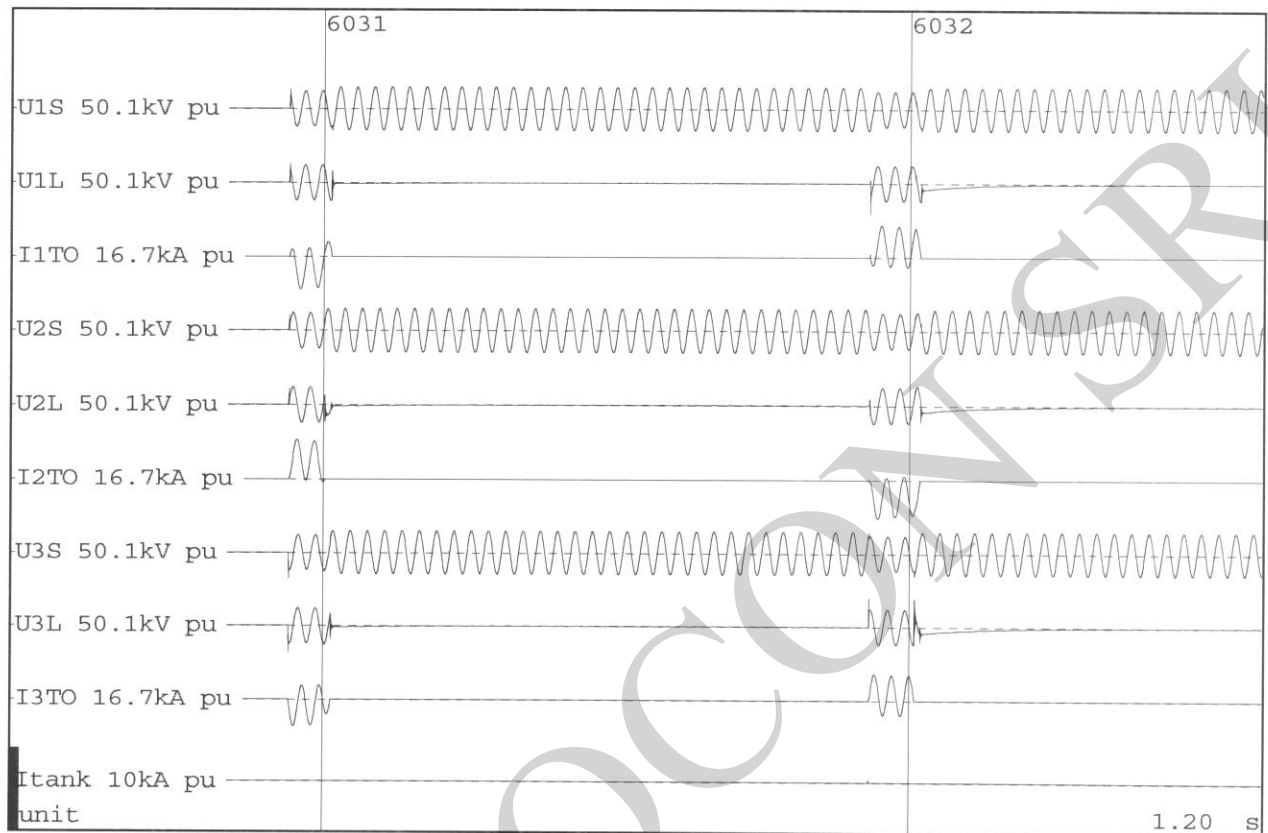

TEST NUMBER: 100527-6030

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,40	9,37	9,40
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	-7,58	7,04	-3,54
Breaking current, phase value	kA	2,86	2,85	2,86
Average current, three phase	kA	2,86		
Breaking current, DC-component	%	42	35	7
Recovery voltage, phase value	kV	9,34	9,31	9,31
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	17,3	-18,2	32,6
Make time	ms	-	-	-
Arc duration	ms	9,3	9,2	3,7
Opening time	ms	-		
Break time	ms	-	-	-



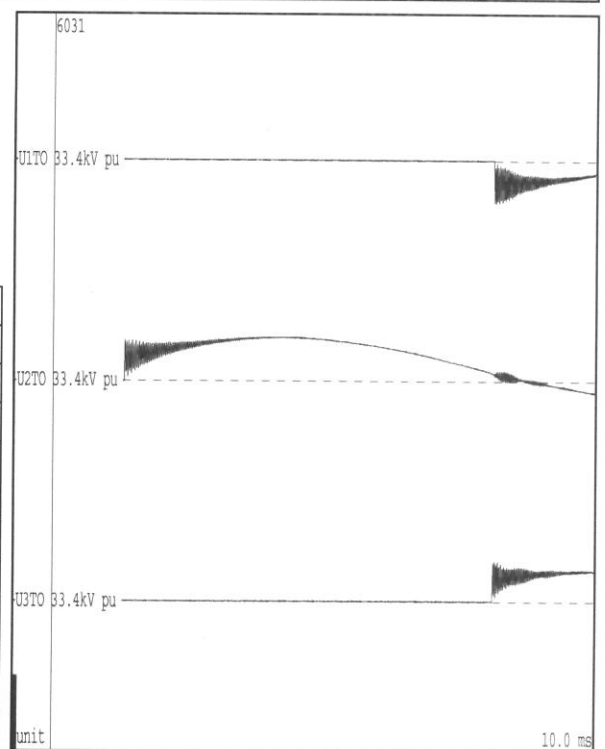
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



TEST NUMBER: 100527-6031

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	2,89	2,85	2,88
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	53	100	30
Recovery voltage, phase value	kV	9,36	9,29	9,34
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-19,7	19,9	18,4
Arc duration	ms	7,6	0,8	7,6
Opening time	ms	-		
Break time	ms	-	-	-

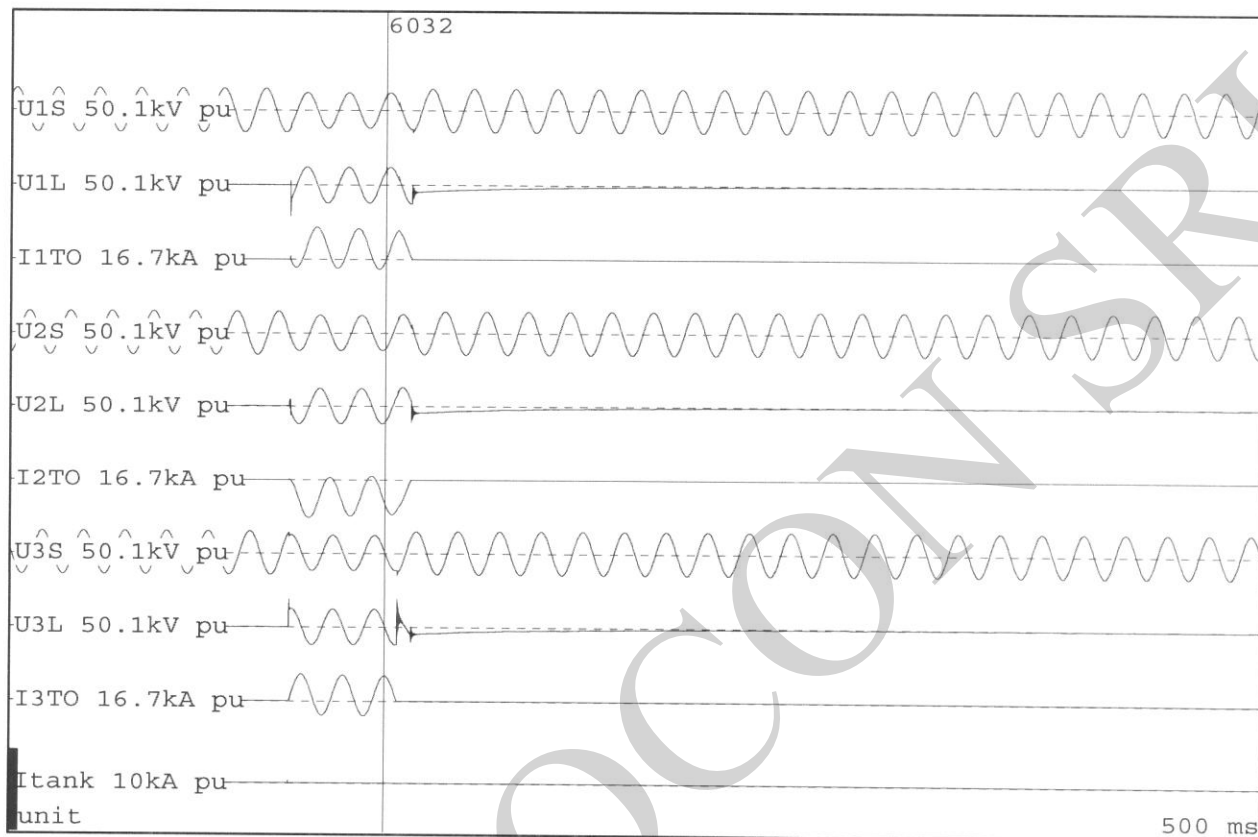


Voltage opening coil - Vd.c.

Gas pressure at 20 °C
Operating pressure

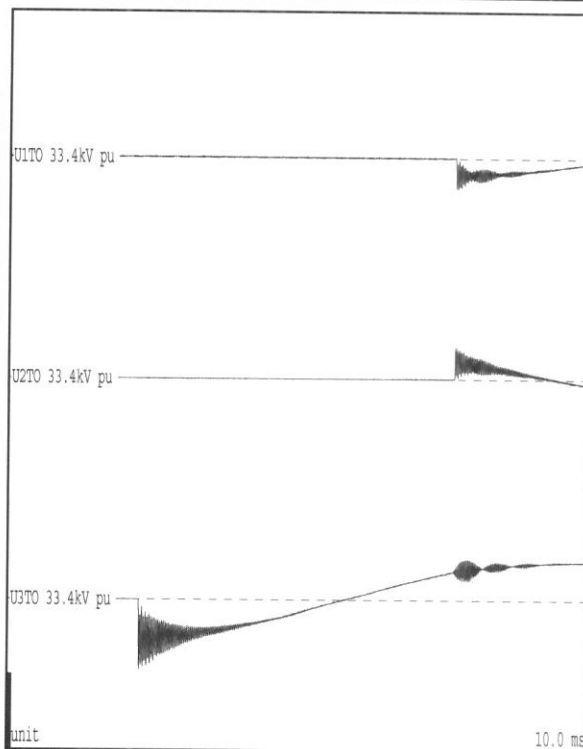
- MPa

Remarks: Recloser closed.



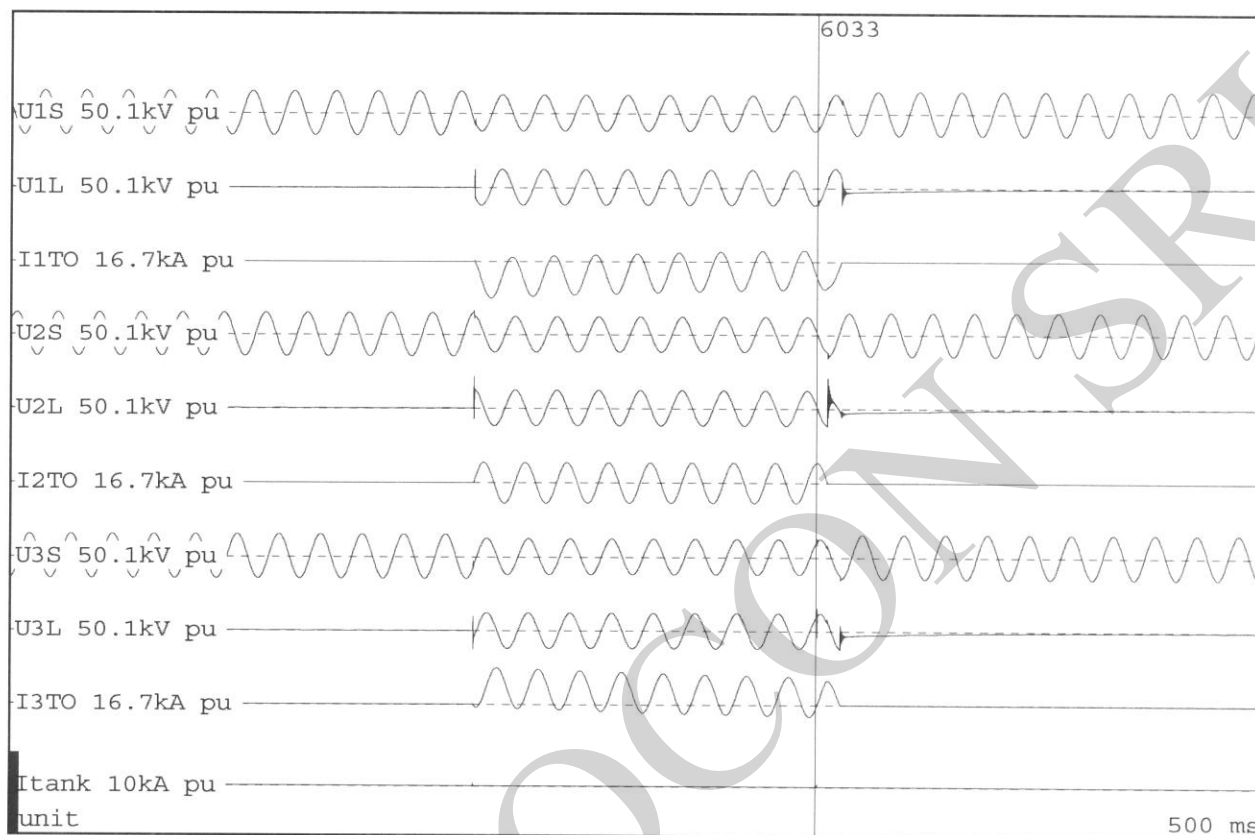
TEST NUMBER: 100527-6032

Time interval since previous test	min	-	-	-
Time interval between operations	s	0,519	-	-
Operation		CO	-	-
Phase		C	B	A
Applied voltage, phase value	kV	9,42	9,39	9,43
Applied voltage, between phases	kV	16,3	-	-
Making current, peak	kA	6,76	-8,12	5,65
Breaking current, phase value	kA	2,89	2,90	2,89
Average current, three phase	kA	2,89	-	-
Breaking current, DC-component	%	50	0	28
Recovery voltage, phase value	kV	9,36	9,34	9,35
Recovery voltage, between phases	kV	16,2	-	-
TRV, peak	kV	-14,0	14,7	-31,4
Make time	ms	-	-	-
Arc duration	ms	10,4	10,5	5,0
Opening time	ms	-	-	-
Break time	ms	-	-	-



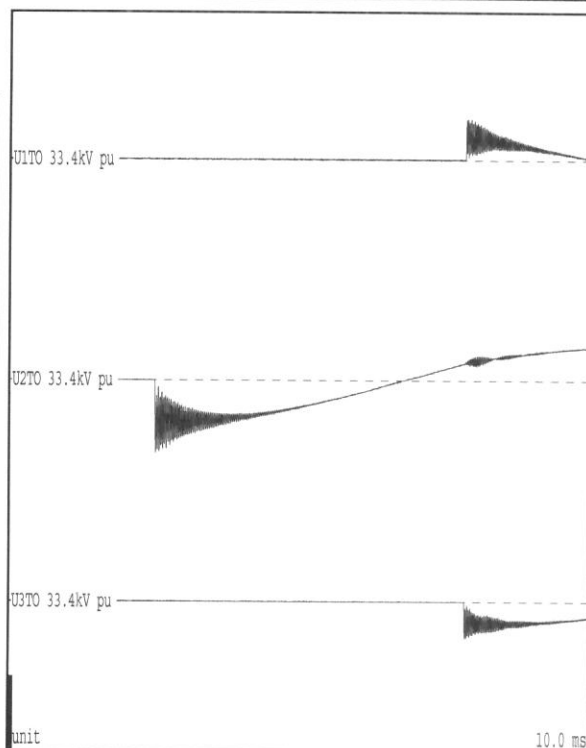
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



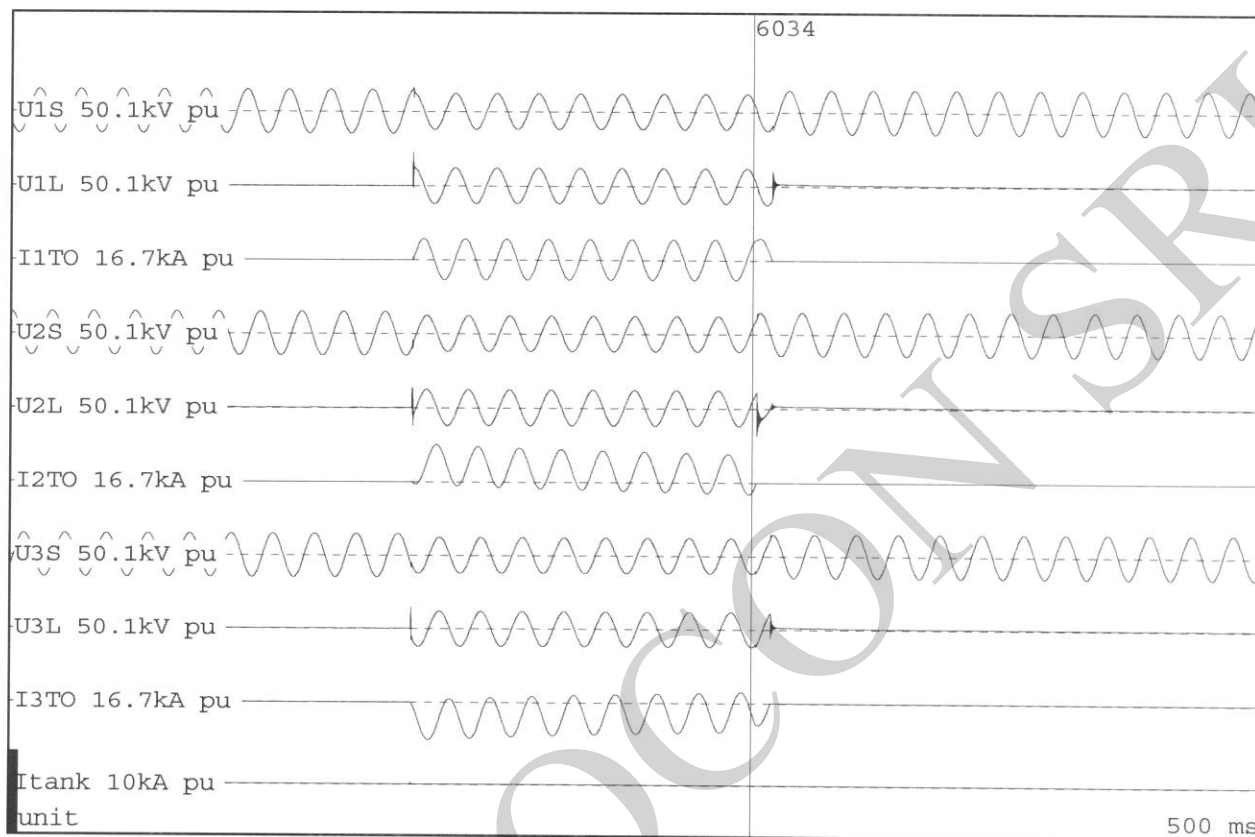
TEST NUMBER: 100527-6033

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,44	9,40	9,43
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	-7,77	-4,45	7,77
Breaking current, phase value	kA	2,88	2,86	2,87
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	40	1	41
Recovery voltage, phase value	kV	9,37	9,33	9,37
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	18,3	-33,1	-16,9
Make time	ms	-	-	-
Arc duration	ms	9,9	4,5	9,8
Opening time	ms	-		
Break time	ms	-	-	-



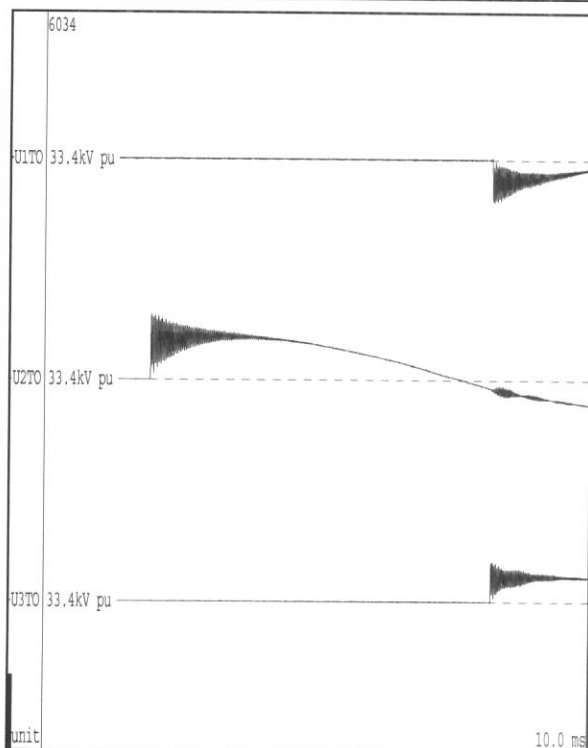
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



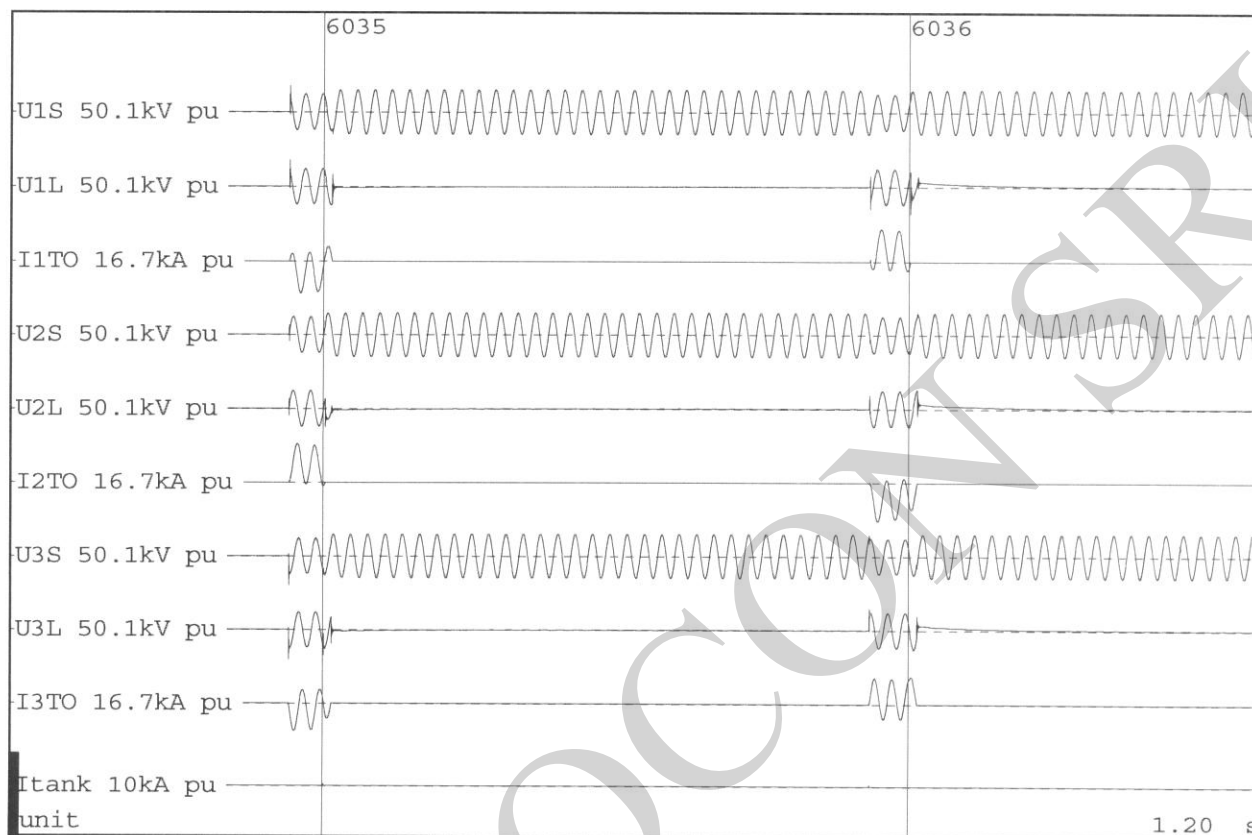
TEST NUMBER: 100527-6034

Time interval since previous test	min	-	-	-
Time interval between operations	s	1,01	-	-
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,47	9,44	9,47
Applied voltage, between phases	kV	16,4		
Making current, peak	kA	4,40	7,82	-7,98
Breaking current, phase value	kA	2,89	2,87	2,88
Average current, three phase	kA	2,88		
Breaking current, DC-component	%	0	41	42
Recovery voltage, phase value	kV	9,40	9,31	9,42
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-19,5	29,7	18,2
Make time	ms	-	-	-
Arc duration	ms	7,8	-1,5	7,8
Opening time	ms	-		
Break time	ms	-	-	-



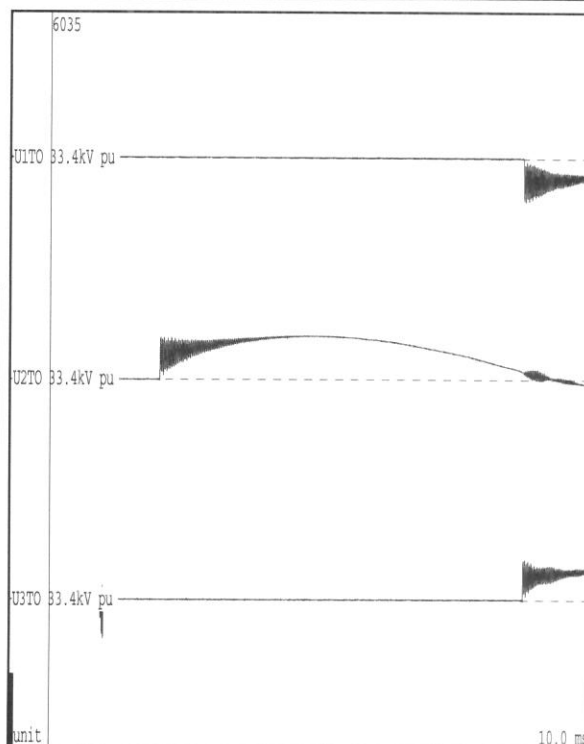
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



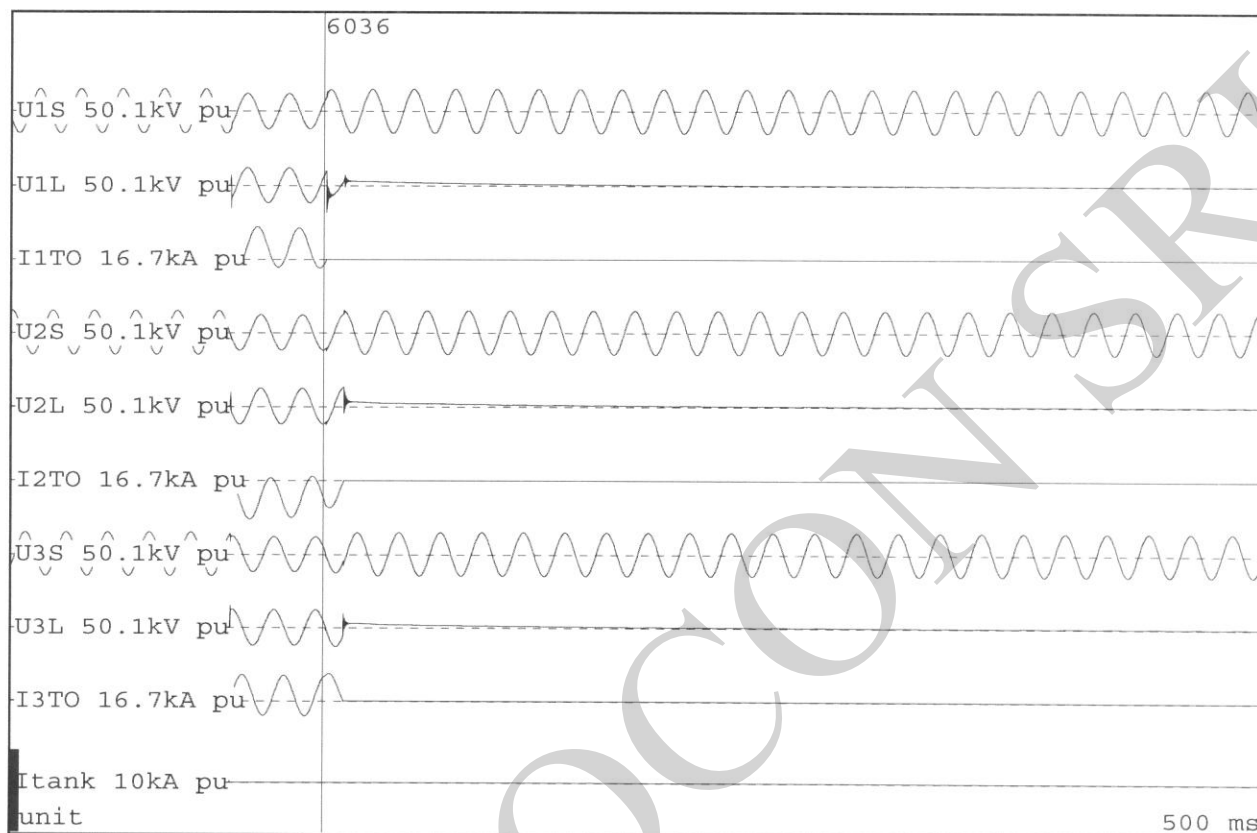
TEST NUMBER: 100527-6035

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	2,89	2,47	2,88
Average current, three phase	kA	2,75		
Breaking current, DC-component	%	53	100	29
Recovery voltage, phase value	kV	9,37	9,29	9,35
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-19,9	19,9	18,4
Arc duration	ms	8,2	1,3	8,2
Opening time	ms	-		
Break time	ms	-	-	-



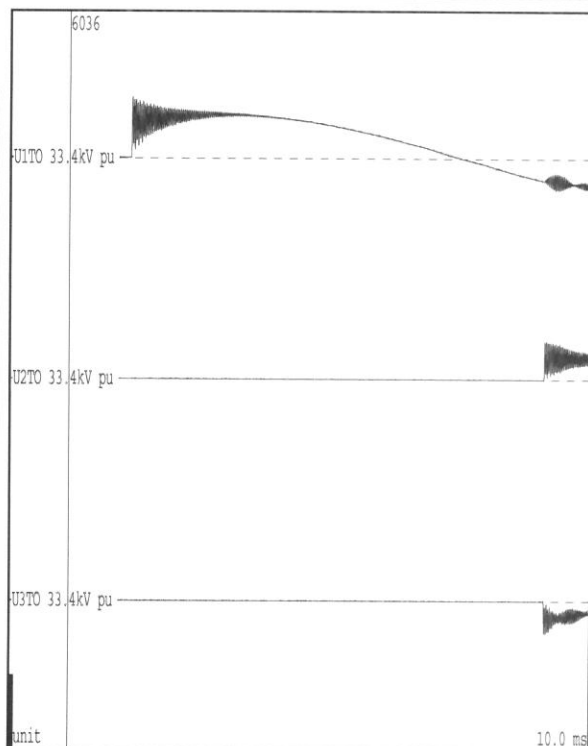
Voltage opening coil - Vd.c. Gas pressure at 20 °C - MPa
Operating pressure

Remarks: Recloser closed.



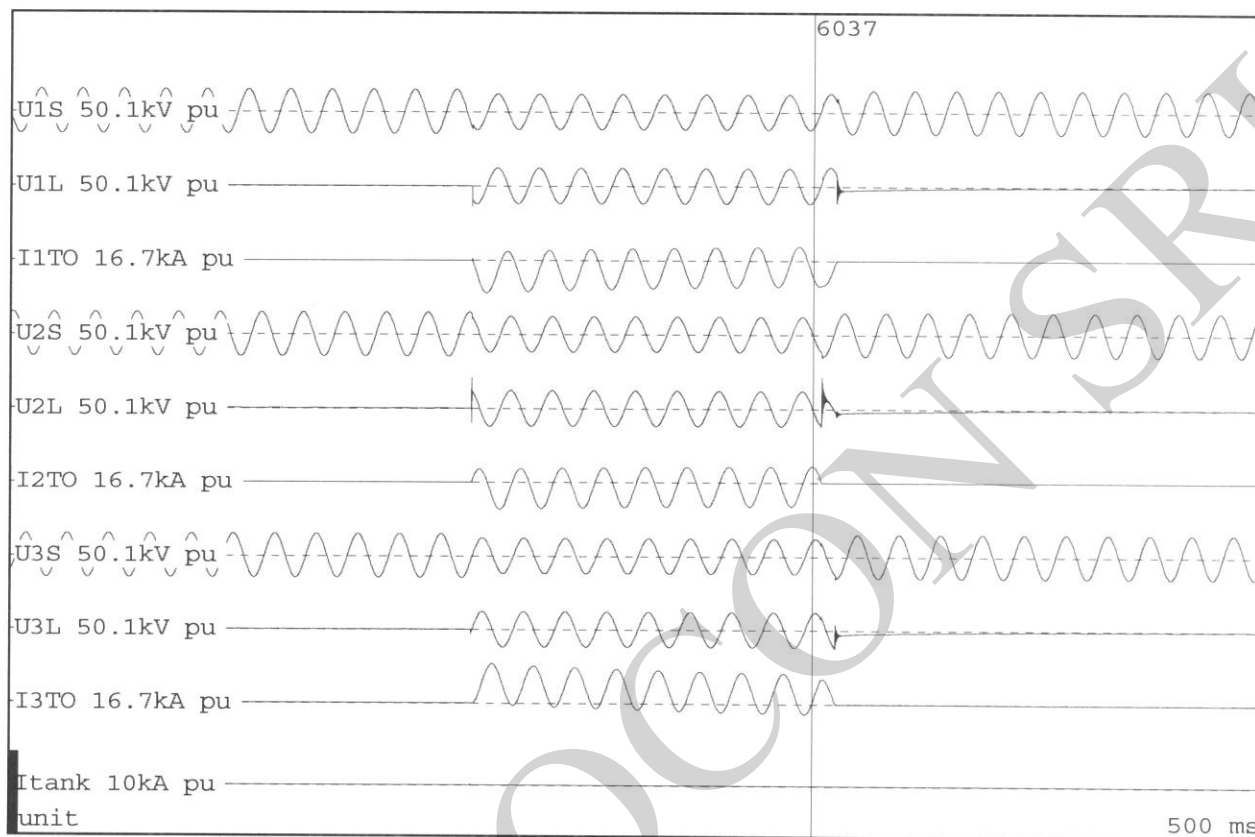
TEST NUMBER: 100527-6036

Time interval since previous test	min	-	-	-
Time interval between operations	s	0,519	-	-
Operation		CO	-	-
Phase		C	B	A
Applied voltage, phase value	kV	9,42	9,40	9,42
Applied voltage, between phases	kV	16,3	-	-
Making current, peak	kA	6,86	-8,11	5,36
Breaking current, phase value	kA	2,89	2,90	2,89
Average current, three phase	kA	2,89	-	-
Breaking current, DC-component	%	52	14	26
Recovery voltage, phase value	kV	9,32	6,39	9,38
Recovery voltage, between phases	kV	14,5	-	-
TRV, peak	kV	27,6	17,4	-14,9
Make time	ms	-	-	-
Arc duration	ms	1,6	8,3	8,3
Opening time	ms	-	-	-
Break time	ms	-	-	-

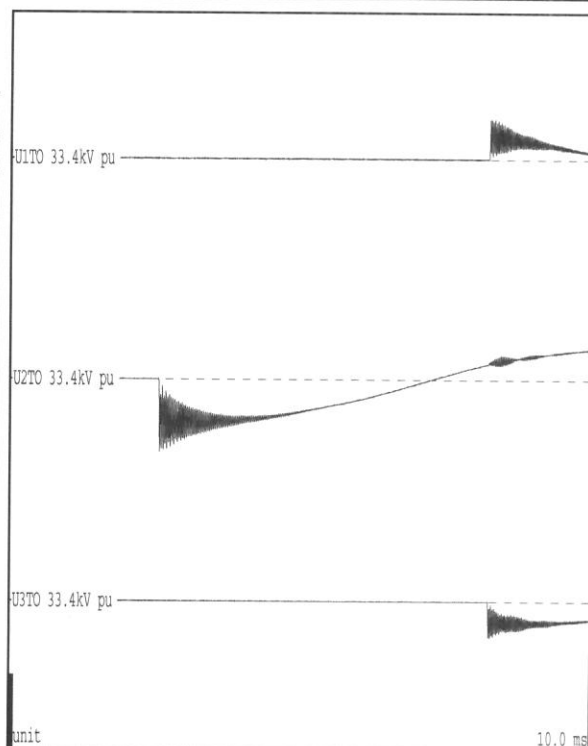


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

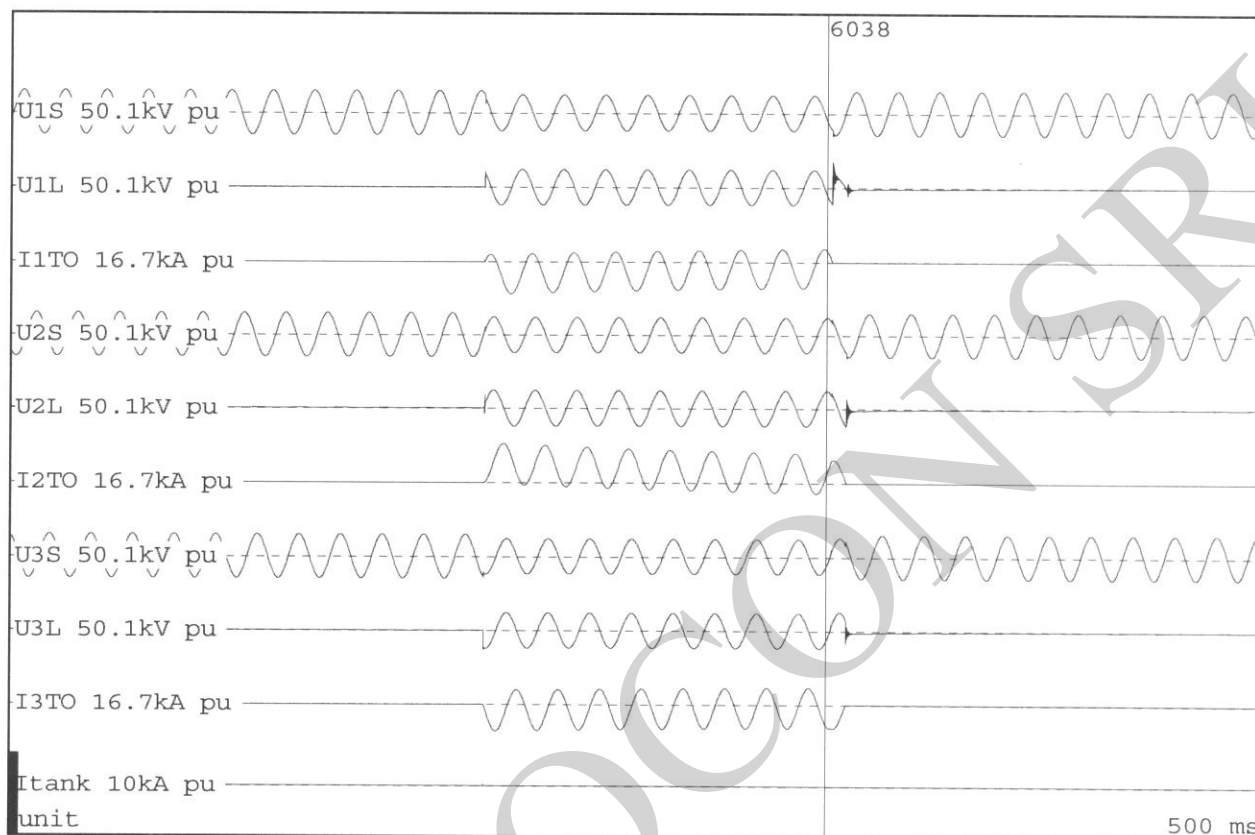

TEST NUMBER: 100527-6037

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,43	9,41	9,43
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	-6,66	2,67	7,99
Breaking current, phase value	kA	2,87	2,87	2,86
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	29	17	46
Recovery voltage, phase value	kV	9,37	9,32	9,38
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	18,4	-32,7	-17,1
Make time	ms	-	-	-
Arc duration	ms	9,2	3,5	9,2
Opening time	ms	-	-	-
Break time	ms	-	-	-

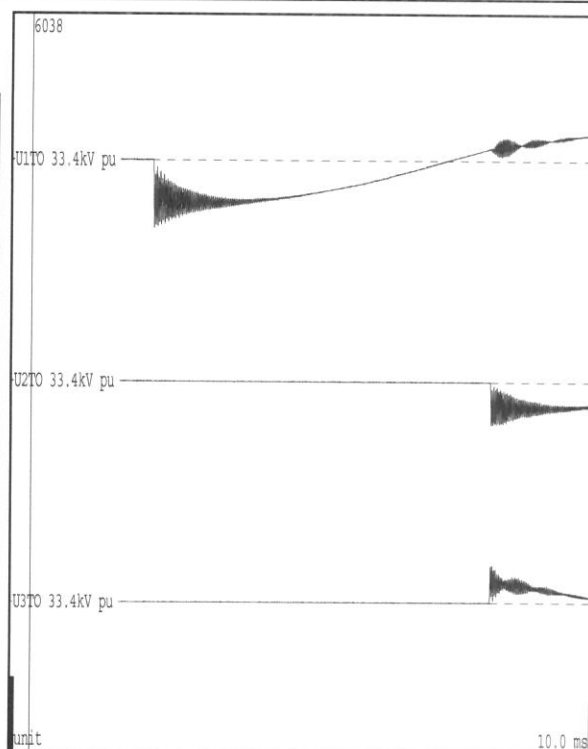


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

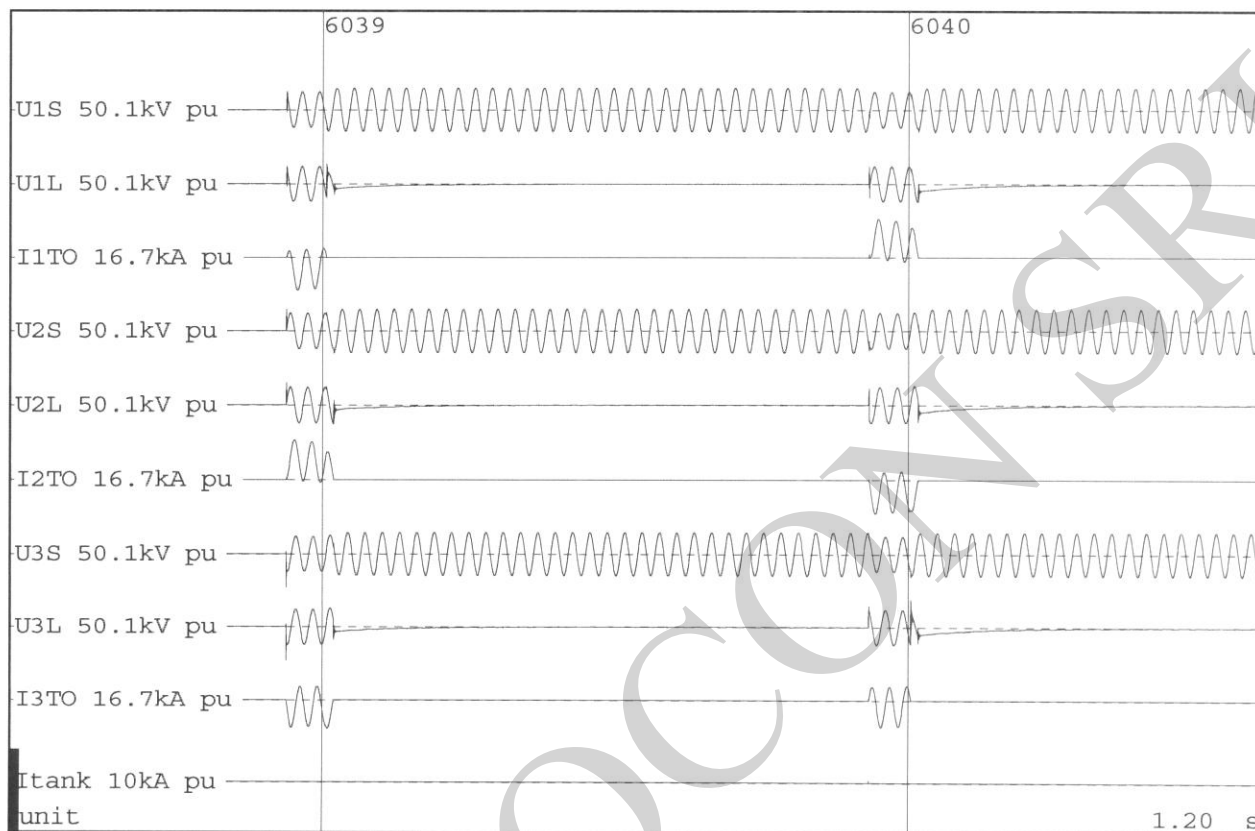

TEST NUMBER: 100527-6038

Time interval since previous test	min	-	-	-
Time interval between operations	s	1,02	-	-
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,47	9,44	9,46
Applied voltage, between phases	kV	16,4		
Making current, peak	kA	1,48	7,89	-5,34
Breaking current, phase value	kA	2,88	2,87	2,88
Average current, three phase	kA	2,88		
Breaking current, DC-component	%	31	45	14
Recovery voltage, phase value	kV	9,39	9,38	9,40
Recovery voltage, between phases	kV	16,3		
TRV, peak	kV	-30,8	-19,5	16,9
Make time	ms	-	-	-
Arc duration	ms	2,1	8,0	8,0
Opening time	ms	-		
Break time	ms	-	-	-



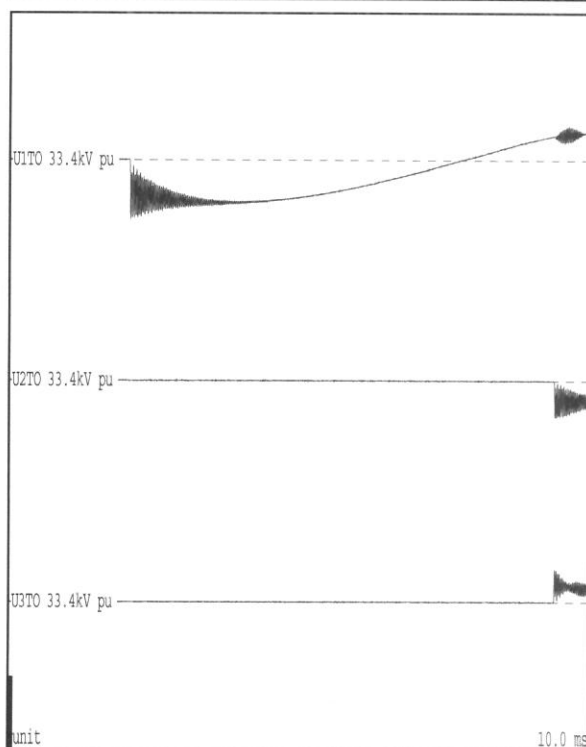
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



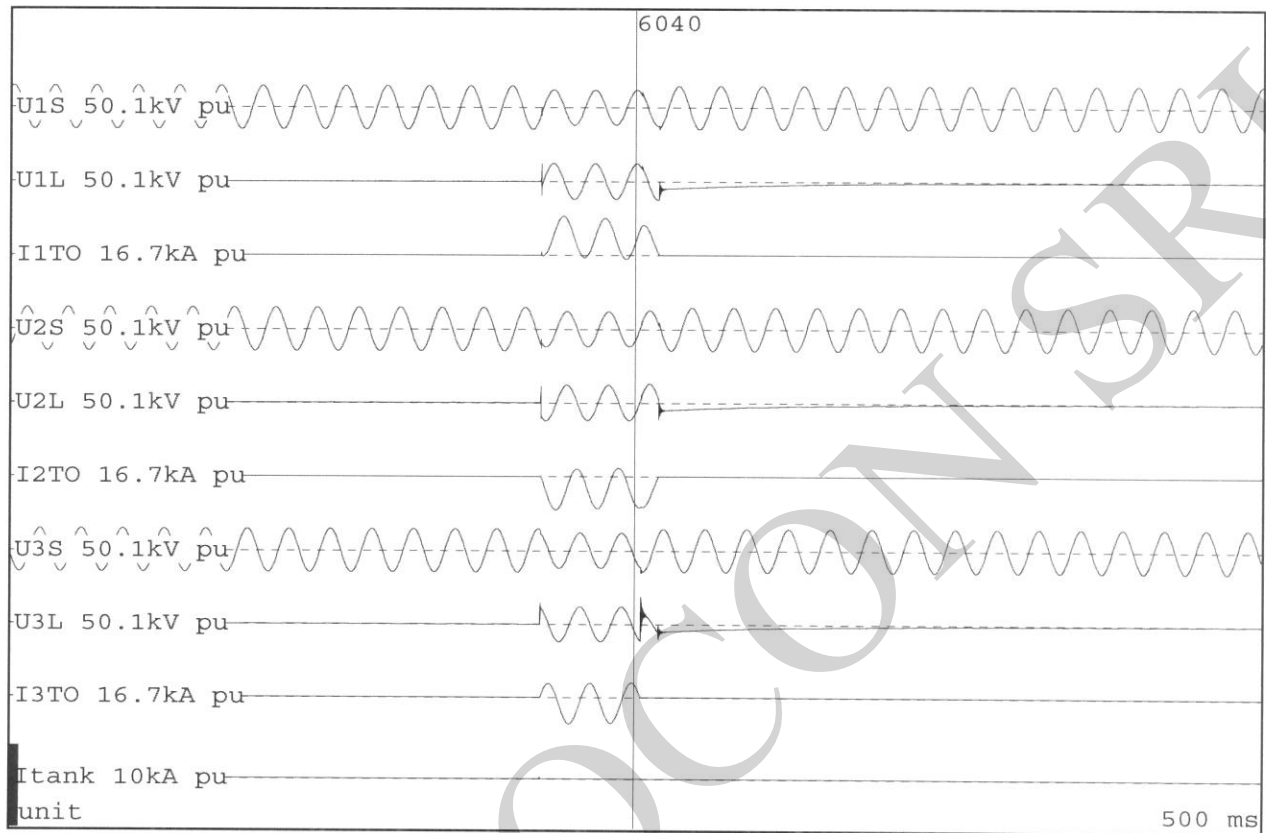
TEST NUMBER: 100527-6039

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	2,89	2,83	2,88
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	53	100	30
Recovery voltage, phase value	kV	9,30	9,32	9,36
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-27,4	-16,6	14,4
Arc duration	ms	0,9	10,9	10,9
Opening time	ms	-		
Break time	ms	-	-	-

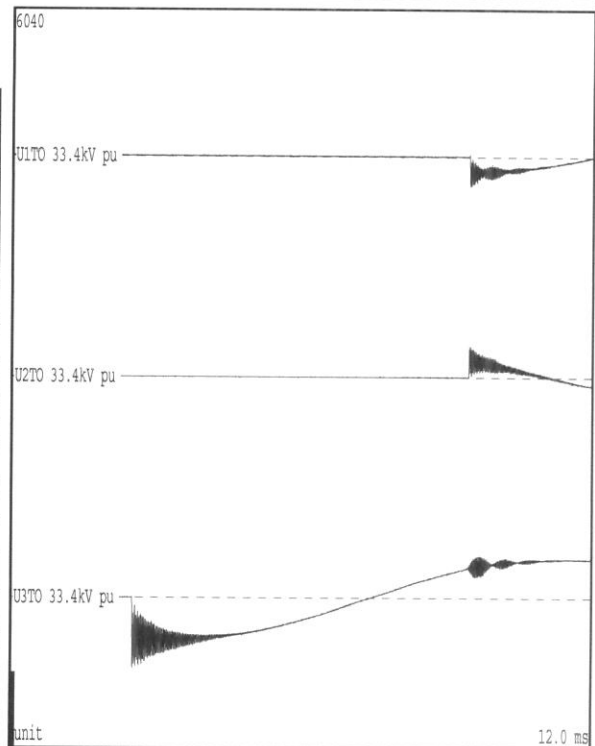


Voltage opening coil - Vd.c. Gas pressure at 20 °C - MPa
Operating pressure

Remarks: Recloser closed.

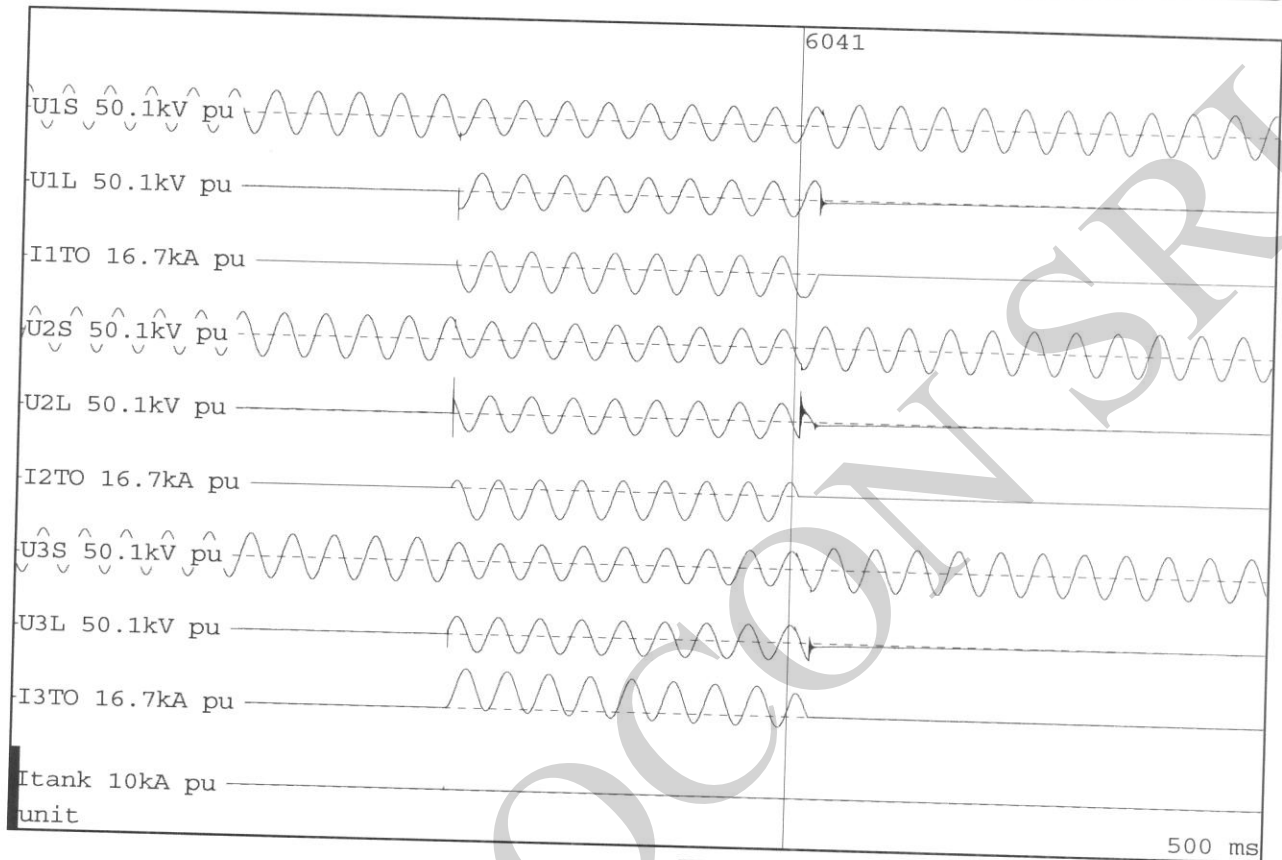

TEST NUMBER: 100527-6040

Time interval since previous test	min	-		
Time interval between operations	s	0,515		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,42	9,39	9,42
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	8,18	-7,03	-5,55
Breaking current, phase value	kA	1,91	2,88	2,89
Average current, three phase	kA	2,56		
Breaking current, DC-component	%	23	55	24
Recovery voltage, phase value	kV	9,37	9,35	9,35
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-13,4	14,3	-31,6
Make time	ms	-	-	-
Arc duration	ms	9,5	9,5	2,6
Opening time	ms	-		
Break time	ms	-	-	-



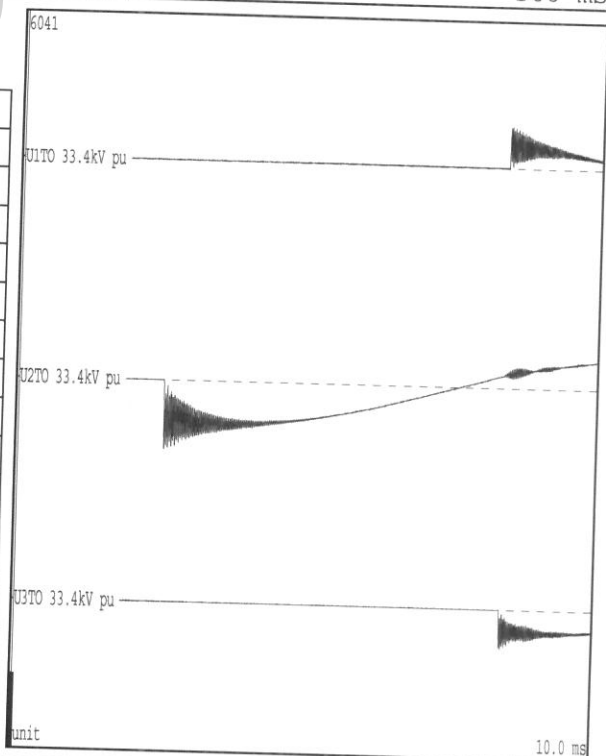
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



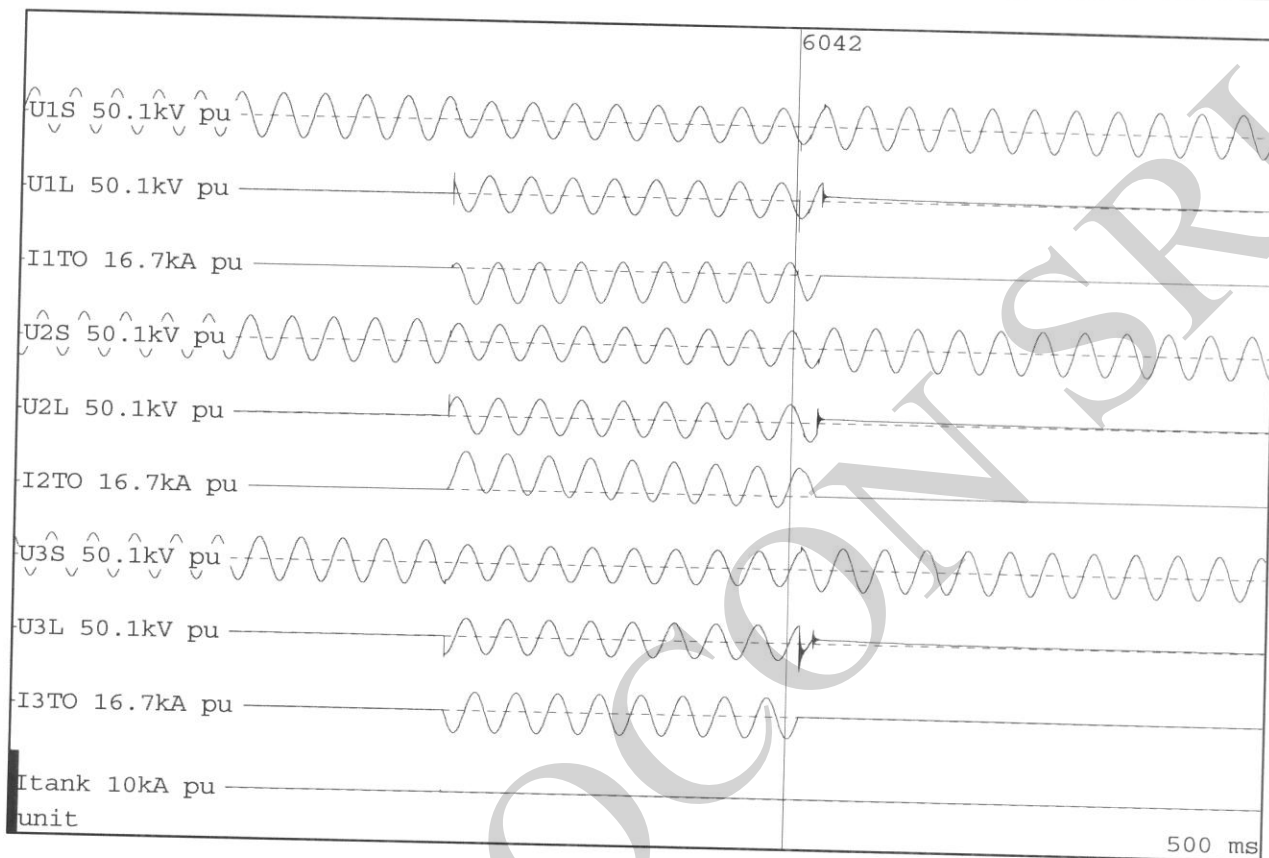
TEST NUMBER: 100527-6041

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation	CO			
Phase		C	B	A
Applied voltage, phase value	kV	9,45	9,42	9,45
Applied voltage, between phases	kV	16,4		
Making current, peak	kA	-5,62	-6,94	8,25
Breaking current, phase value	kA	2,88	2,87	2,87
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	15	31	46
Recovery voltage, phase value	kV	9,39	9,34	9,40
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	19,0	-31,3	-17,8
Make time	ms	-	-	-
Arc duration	ms	8,4	2,5	8,4
Opening time	ms	-		
Break time	ms	-	-	-

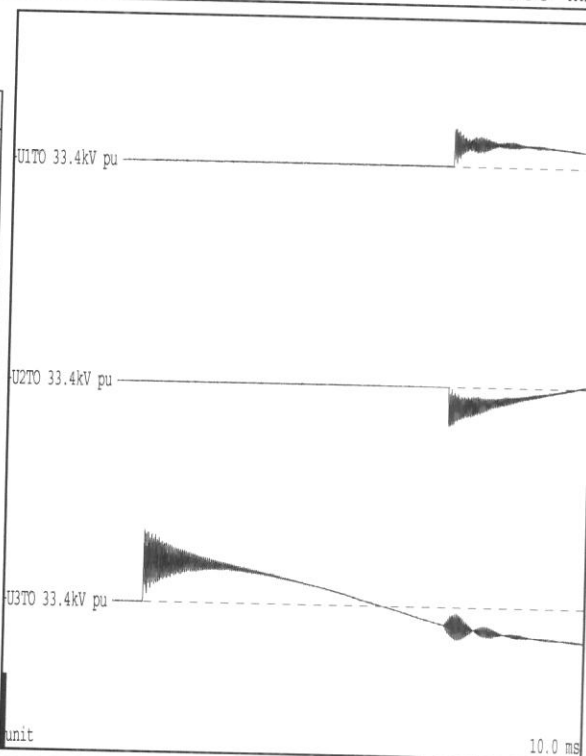


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.


TEST NUMBER: 100527-6042

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,49	9,47	9,51
Applied voltage, between phases	kV	16,4		
Making current, peak	kA	-7,56	8,03	-4,79
Breaking current, phase value	kA	2,89	2,88	2,89
Average current, three phase	kA	2,89		
Breaking current, DC-component	%	38	43	5
Recovery voltage, phase value	kV	9,42	9,39	9,40
Recovery voltage, between phases	kV	16,3		
TRV, peak	kV	17,3	-18,0	32,7
Make time	ms	-	-	-
Arc duration	ms	10,2	10,2	5,0
Opening time	ms	-		
Break time	ms	-	-	-



Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

TEST NUMBERS

100527-6043

100527-6044

100527-6045

100527-6046

100527-6047

100527-6048

100527-6049

100527-6050

100527-6051

100527-6052

100527-6053

100527-6054

CONDITION BEFORE TESTS

Recloser in same condition.

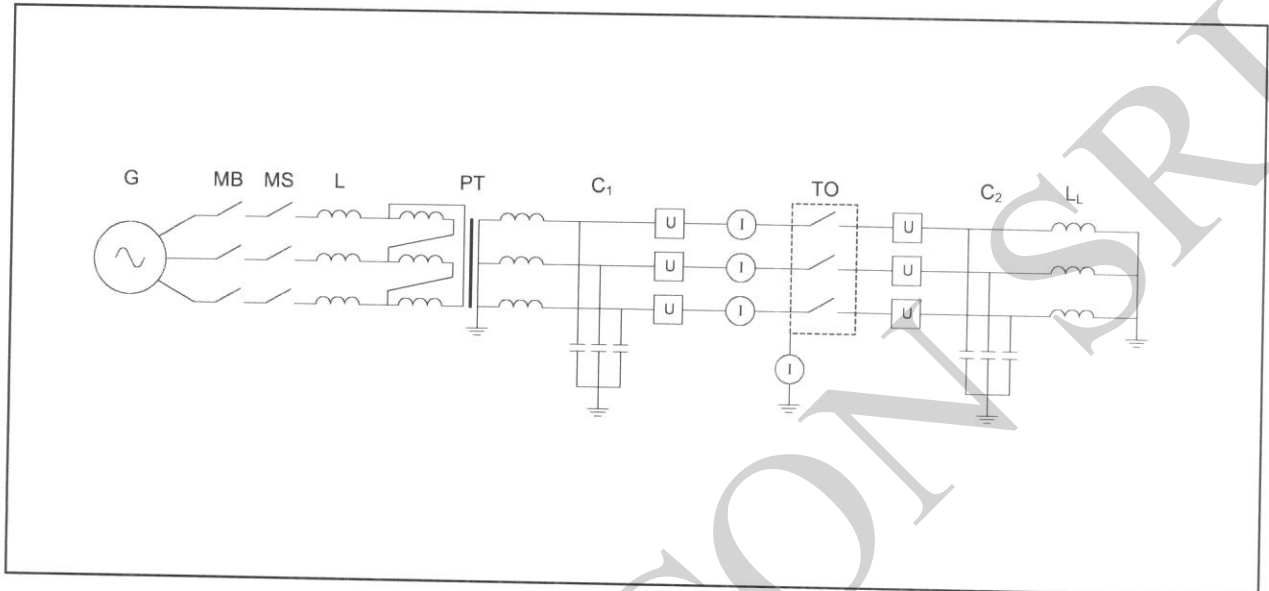
Supply to moving contacts.

Load on fixed contacts.

Frame earthed via an earth fault current indicating CT.

Recovery voltage maintained for 1 sec after the final interruption.

TEST-CIRCUIT S06



G	= Generator	TO	= Test Object	U	= Voltage Measurement to earth
MB	= Master Breaker	L	= Reactor	I	= Current Measurement
MS	= Make Switch	R	= Resistor		
PT	= Power Transformer	C	= Capacitor		

Supply		
Power	MVA	430
Frequency	Hz	60
Phase(s)		3
Voltage	kV	15,5
Current	kA	16
Impedance	Ω	0,559
Power factor		< 0,1
Neutral		earthed

TRV control elements added (supply)		
C ₁	μF	0,008
R ₁ (in parallel)	Ω	-
R ₁ (in series)	Ω	-
L ₁	mH	-
C _d	nF	-
Neutral		earthed

Load		
Impedance	Ω	2,637
Power factor		< 0,1
Neutral		earthed

TRV control elements added (load)		
C ₂	nF	0,8
R ₂ (in parallel)	Ω	-
Neutral		earthed

Prospective TRV across TO		
E ₂	kV	22,7
T ₂	μs	16
t _d	μs	< 2
Rate of rise	kV/ μs	2,58

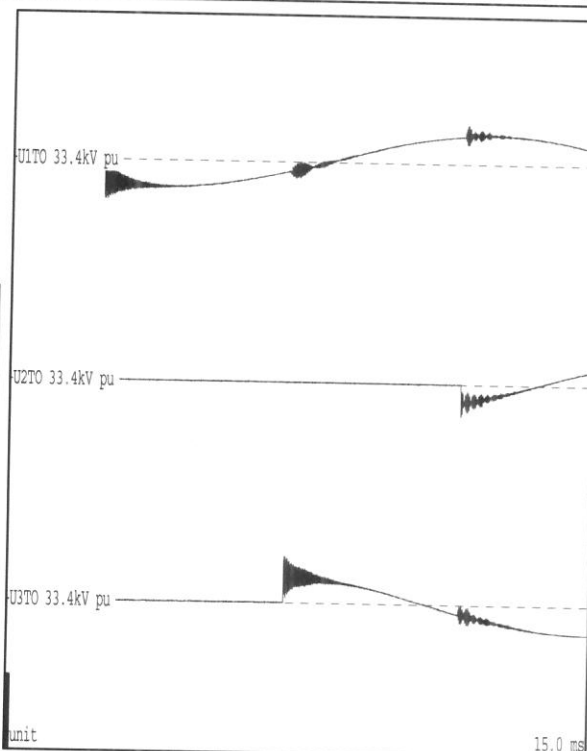
Inductive load element		
X _L (L _L)	Ω	2,58

Remarks: Due to limitations of the testplant, the required X/R ratio > 4



TEST NUMBER: 100527-6043

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	2,89	2,83	2,88
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	53	100	28
Recovery voltage, phase value	kV	9,22	9,33	9,35
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	-18,1	-14,9	21,2
Arc duration	ms	0,5	12,3	7,8
Opening time	ms	-		
Break time	ms	-	-	-

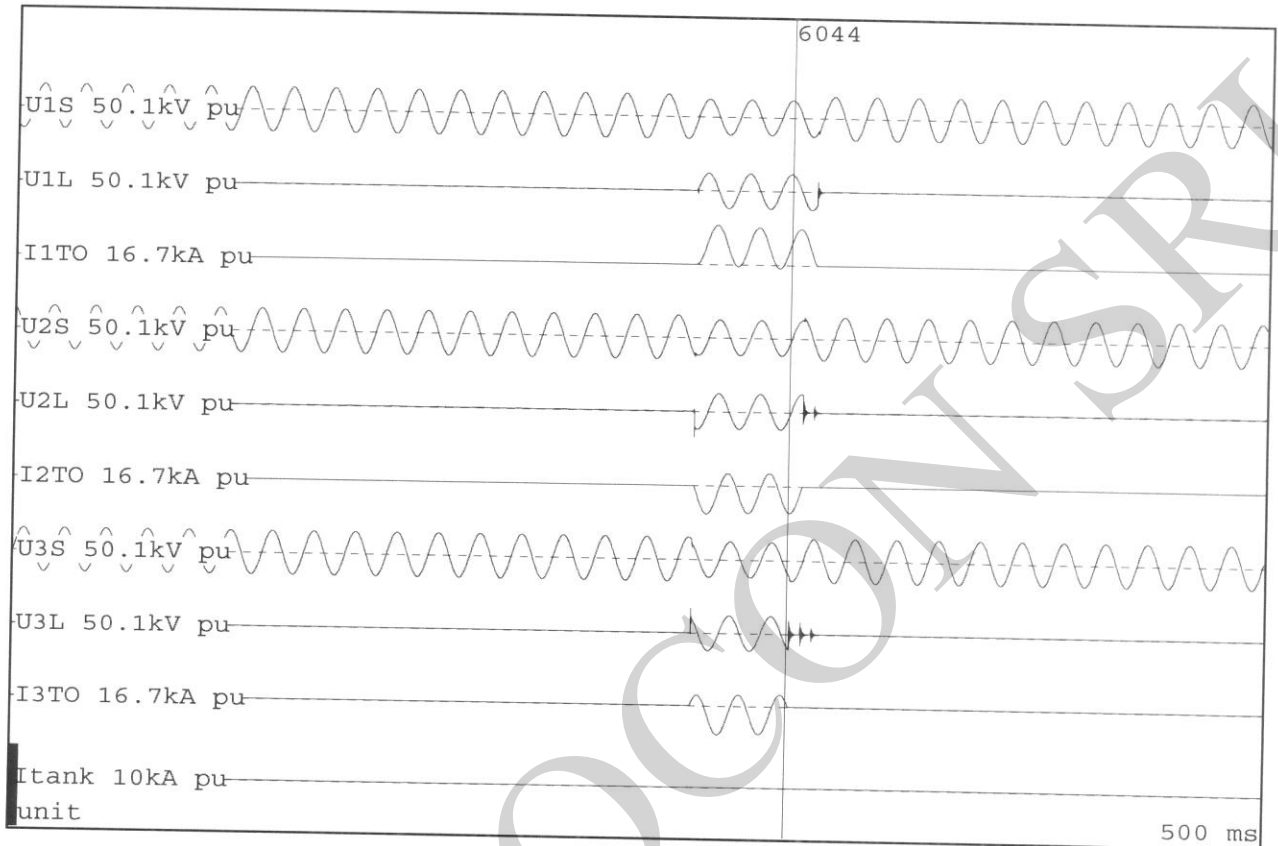


Voltage opening coil - Vd.c.

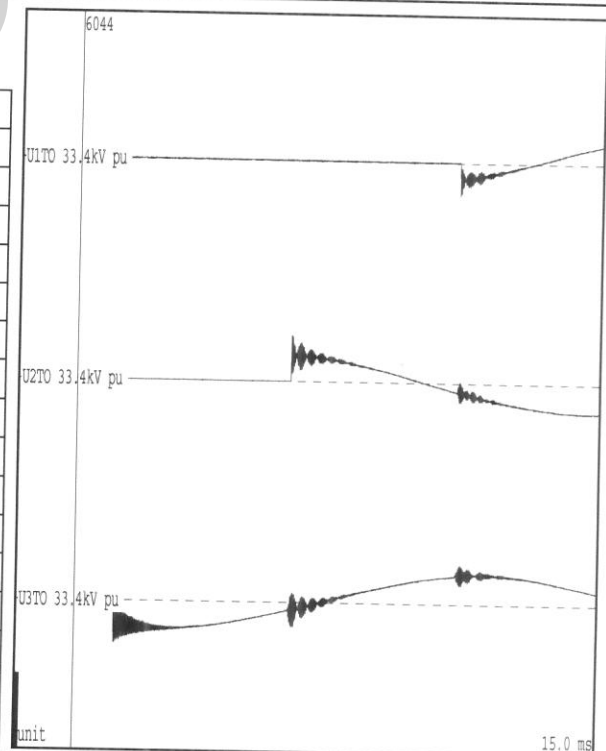
Gas pressure at 20 °C
Operating pressure

- MPa

Remarks: Recloser cleared.

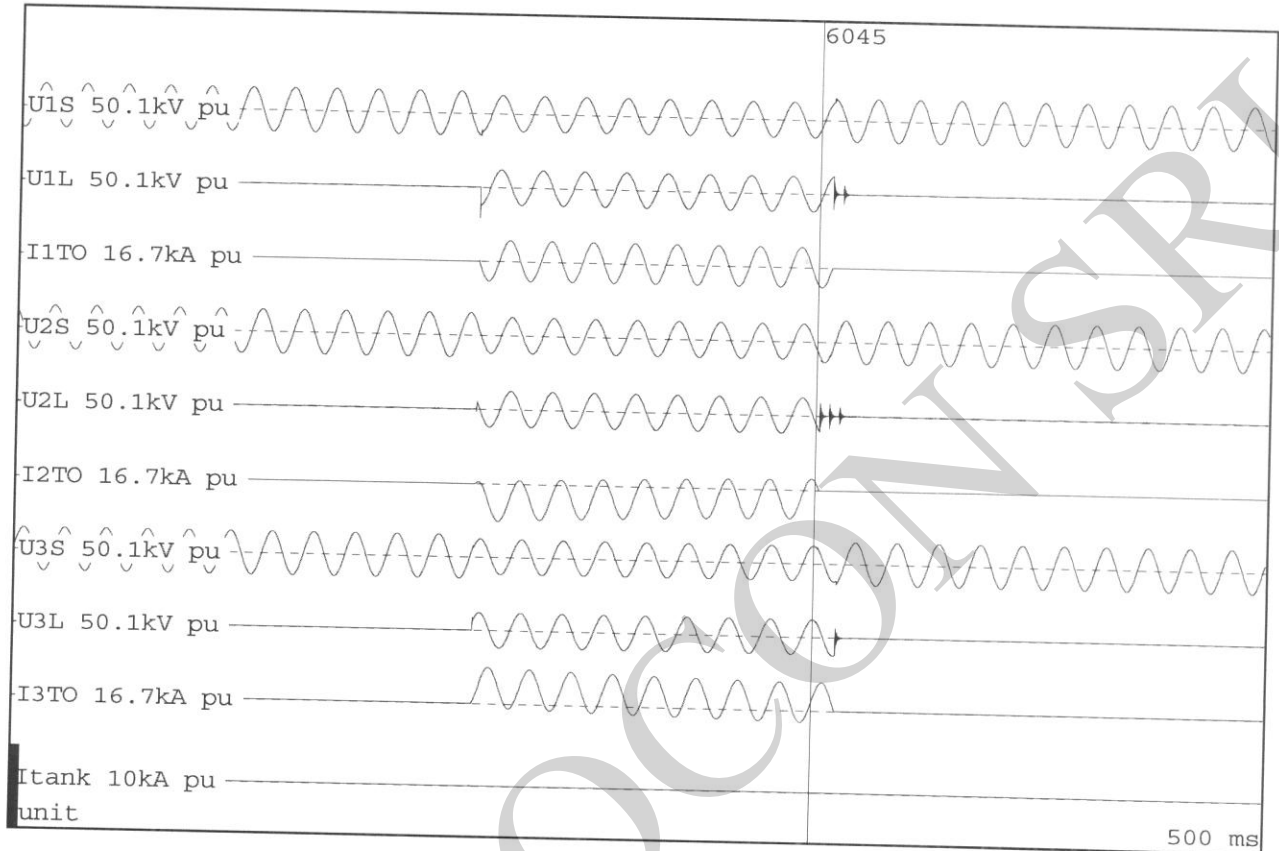

TEST NUMBER: 100527-6044

Time interval since previous test	min	-		
Time interval between operations	s	0,517		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,41	9,38	9,42
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	8,29	-5,98	-6,15
Breaking current, phase value	kA	1,91	2,88	2,88
Average current, three phase	kA	2,56		
Breaking current, DC-component	%	12	35	38
Recovery voltage, phase value	kV	9,36	9,33	9,23
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	-14,8	20,9	0,164
Make time	ms	-	-	-
Arc duration	ms	9,9	5,6	2,5
Opening time	ms	-		
Break time	ms	-	-	-

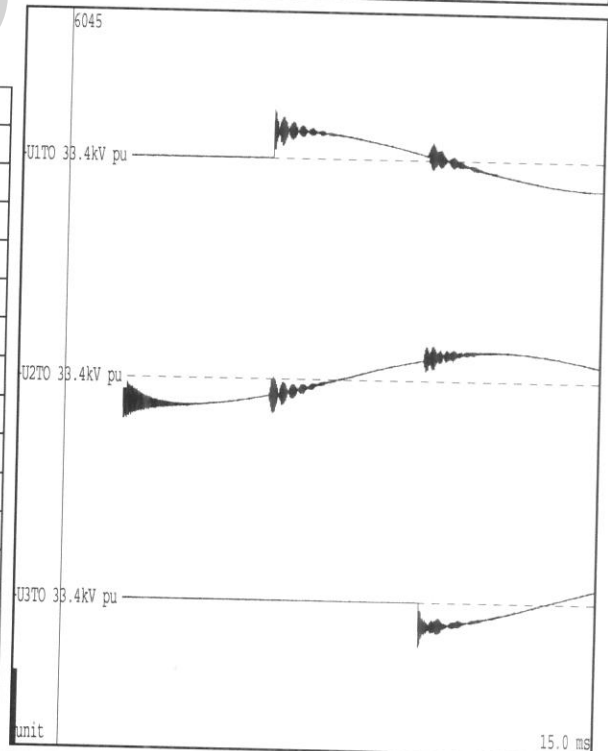


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

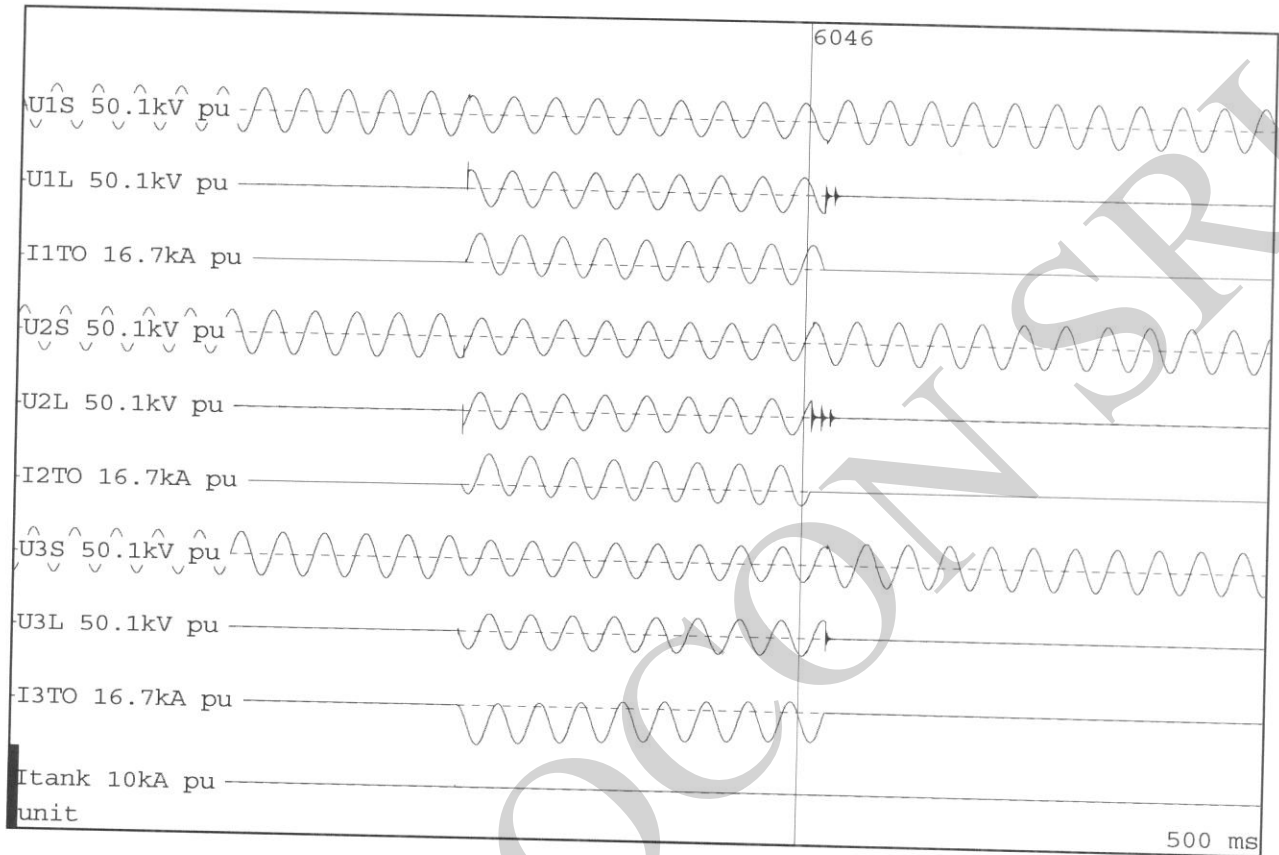

TEST NUMBER: 100527-6045

Time interval since previous test	min	-		
Time interval between operations	s	1,03		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,43	9,24	9,43
Applied voltage, between phases	kV	16,2		
Making current, peak	kA	4,52	-7,95	7,73
Breaking current, phase value	kA	2,88	2,86	2,86
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	2	44	40
Recovery voltage, phase value	kV	9,36	9,25	9,37
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	21,7	-19,2	-20,5
Make time	ms	-	-	-
Arc duration	ms	5,4	1,6	9,3
Opening time	ms	-		
Break time	ms	-	-	-

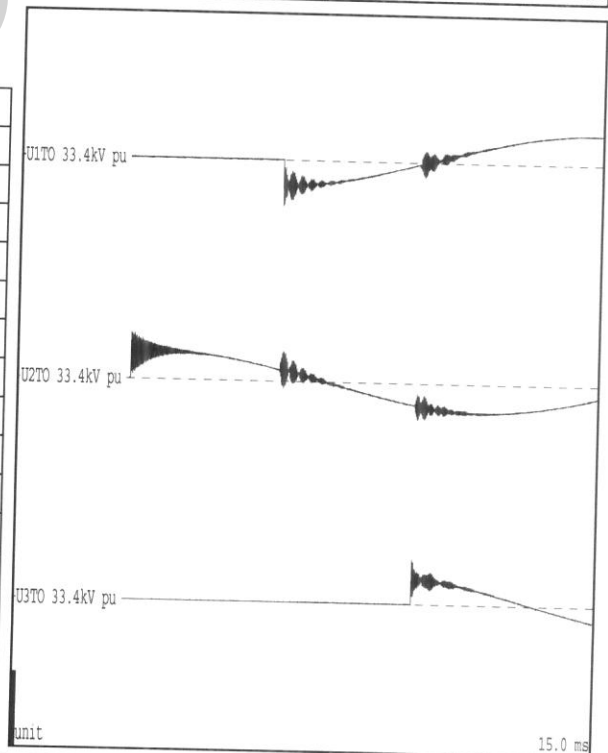


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

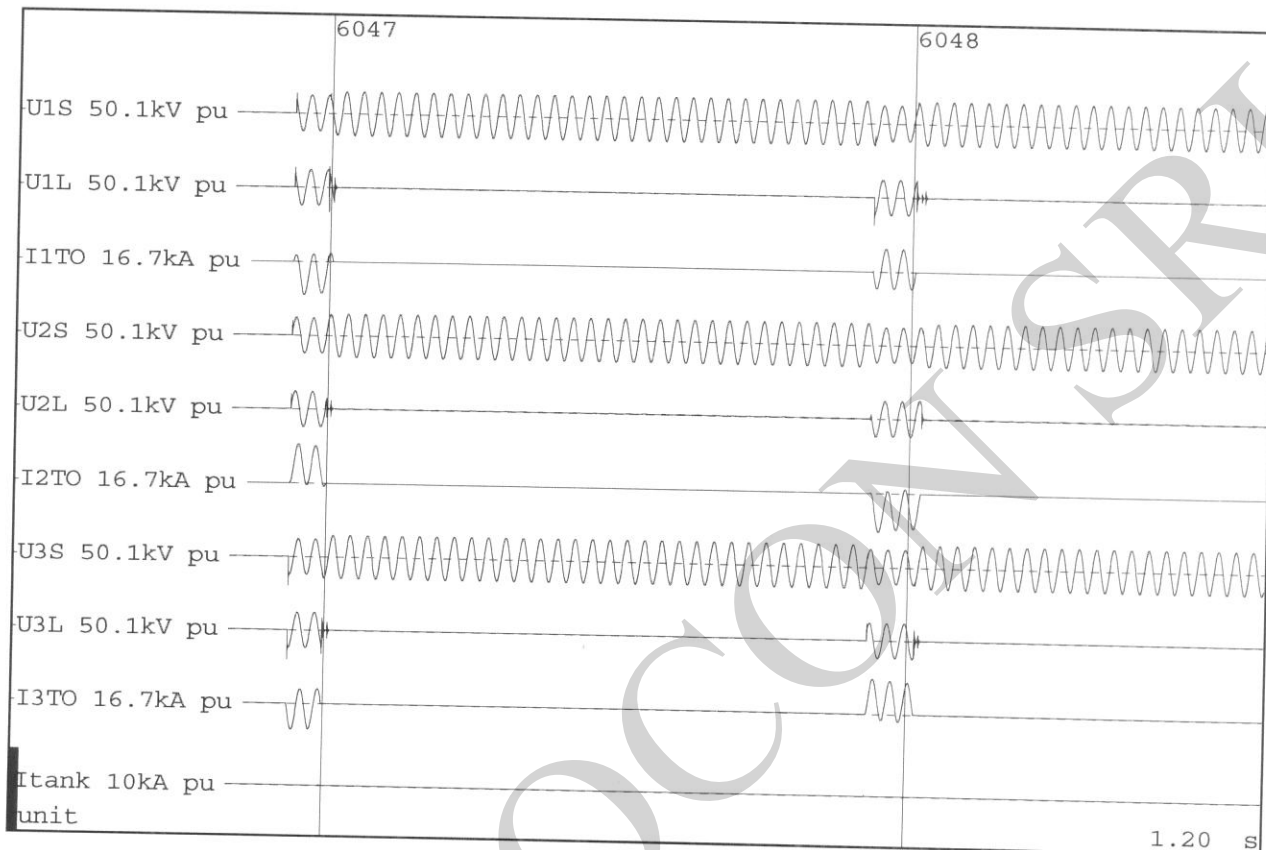

TEST NUMBER: 100527-6046

Time interval since previous test	min	-		
Time interval between operations	s	1,01		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,46	9,43	9,46
Applied voltage, between phases	kV	16,4		
Making current, peak	kA	6,13	6,53	-8,29
Breaking current, phase value	kA	2,88	2,88	2,87
Average current, three phase	kA	2,88		
Breaking current, DC-component	%	21	26	46
Recovery voltage, phase value	kV	9,38	9,35	9,40
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-21,5	20,8	20,0
Make time	ms	-	-	-
Arc duration	ms	7,0	3,2	10,5
Opening time	ms	-		
Break time	ms	-	-	-



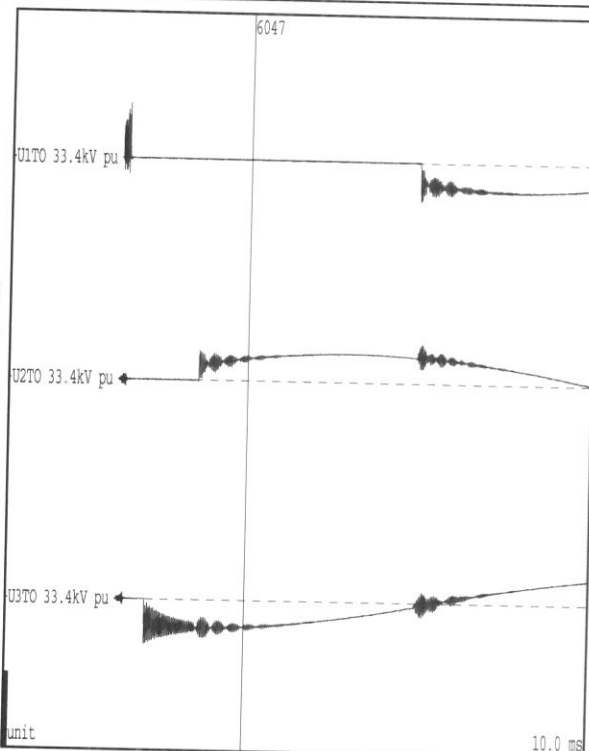
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



TEST NUMBER: 100527-6047

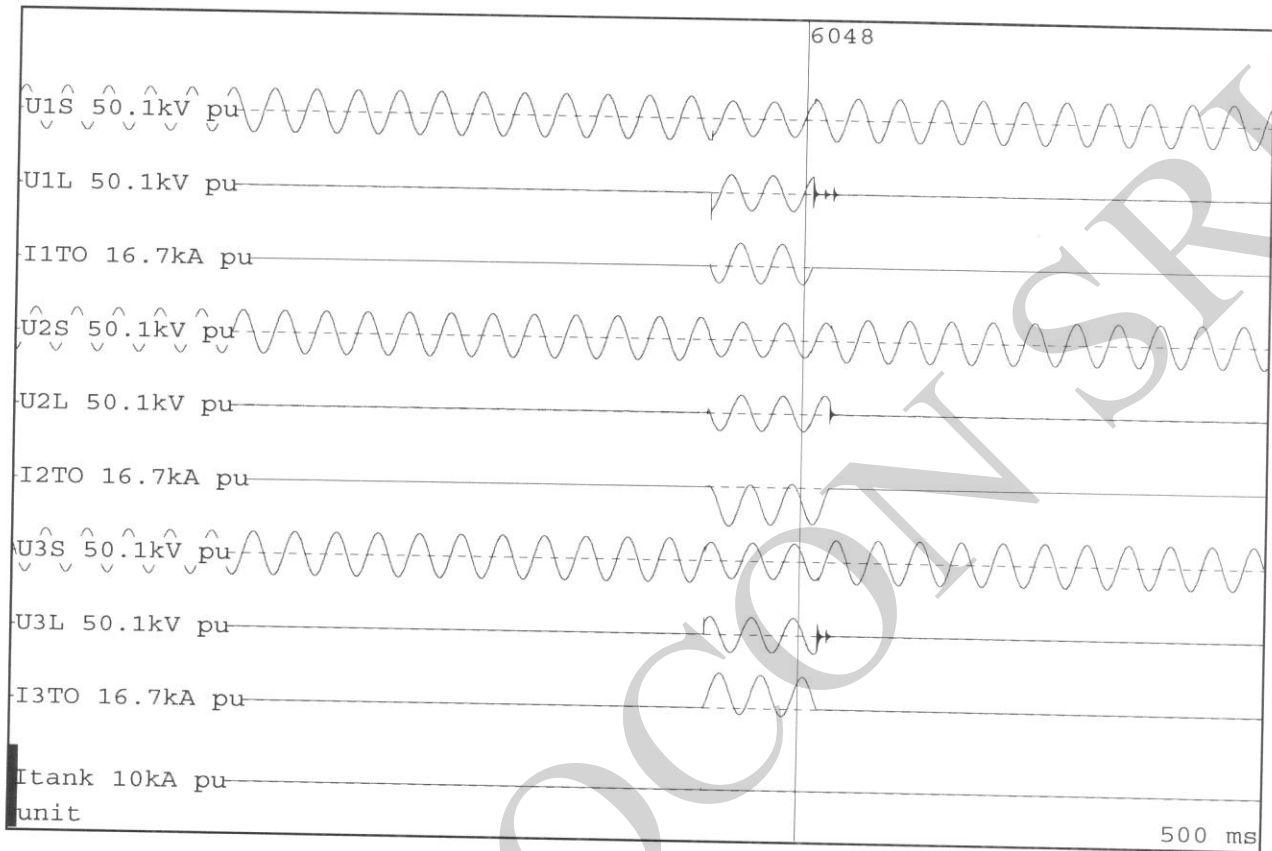
Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	2,89	2,82	2,88
Average current, three phase	kA	2,86		
Breaking current, DC-component	%	54	100	26
Recovery voltage, phase value	kV	9,34	9,31	9,36
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-18,1	13,4	-20,4
Arc duration	ms	0,5	1,4	1,6
Opening time	ms	-		
Break time	ms	-	-	-



Voltage opening coil - Vd.c.

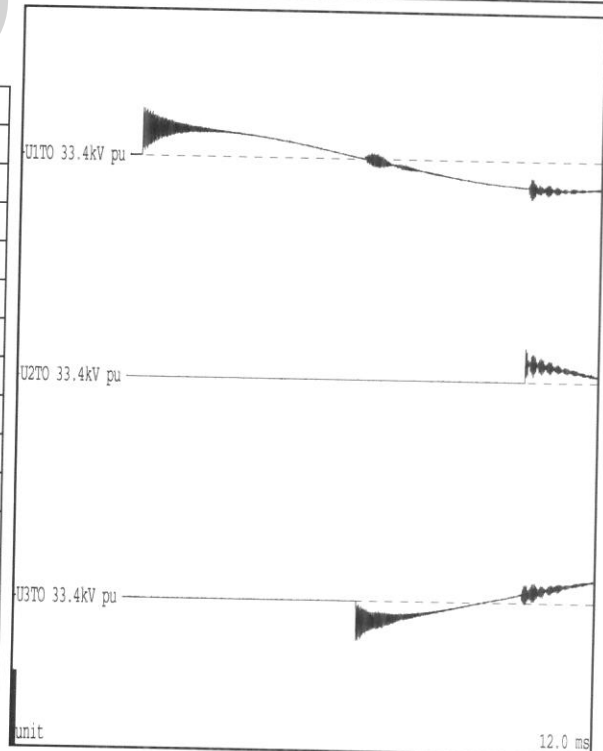
Gas pressure at 20 °C
Operating pressure - MPa

Remarks: Recloser cleared.



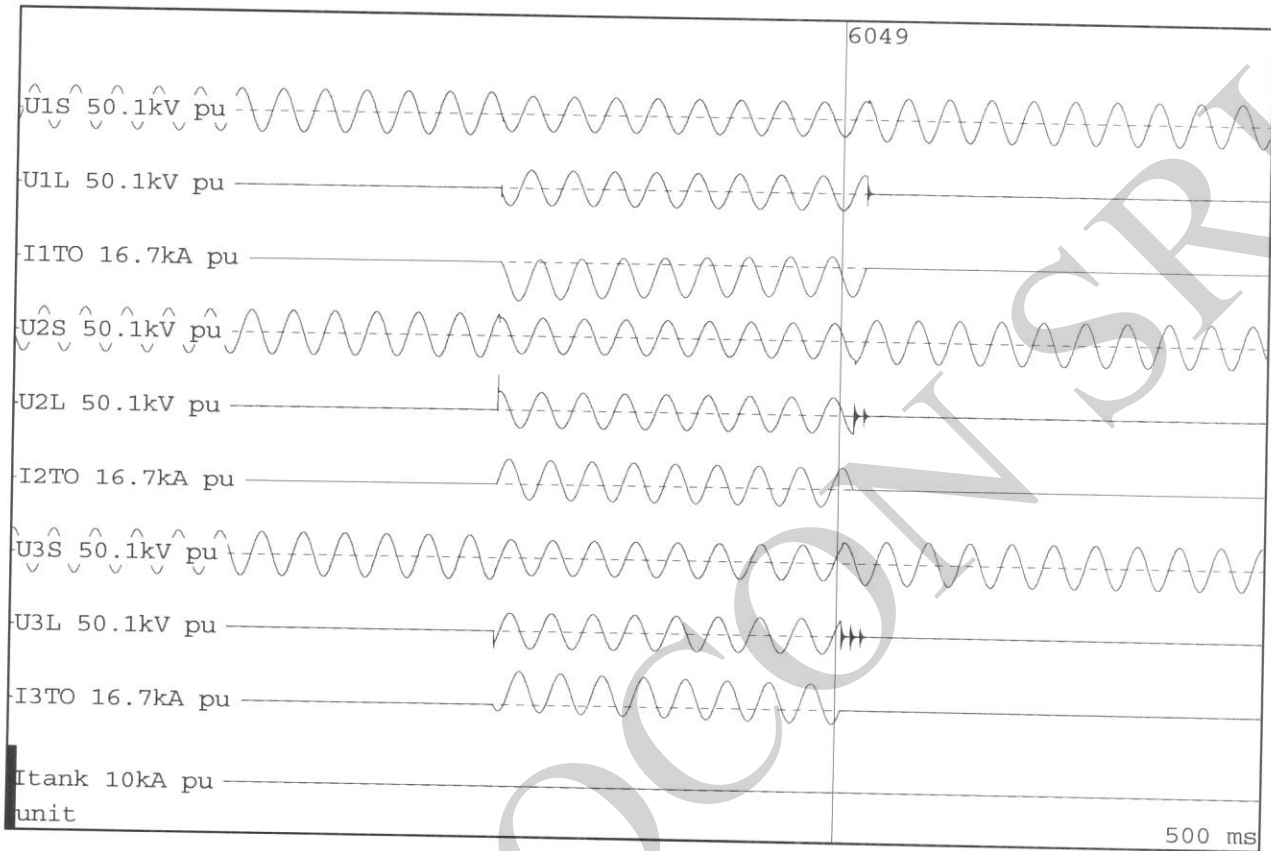
TEST NUMBER: 100527-6048

Time interval since previous test	min	-		
Time interval between operations	s	0,523		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,42	9,40	9,42
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	4,96	-8,17	7,43
Breaking current, phase value	kA	2,90	1,91	2,88
Average current, three phase	kA	2,56		
Breaking current, DC-component	%	11	26	63
Recovery voltage, phase value	kV	9,35	9,34	9,36
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	21,5	15,4	-17,9
Make time	ms	-	-	-
Arc duration	ms	3,1	11,2	7,8
Opening time	ms	-		
Break time	ms	-	-	-



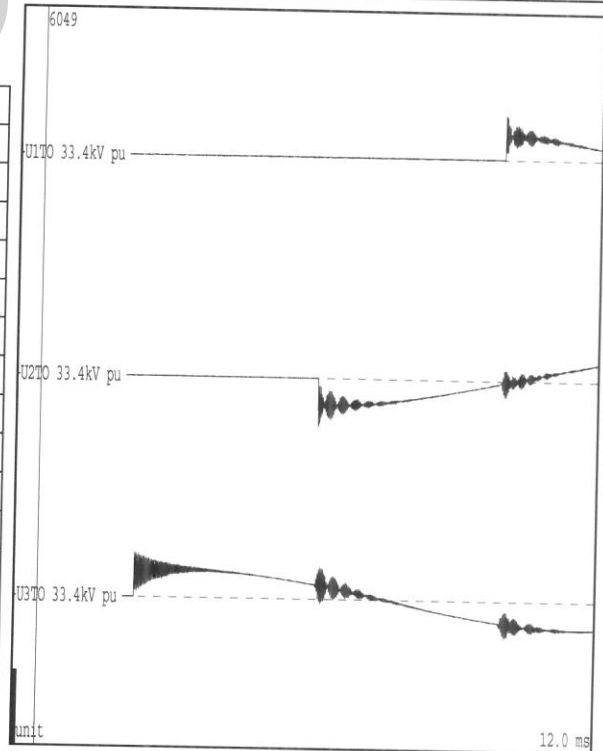
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



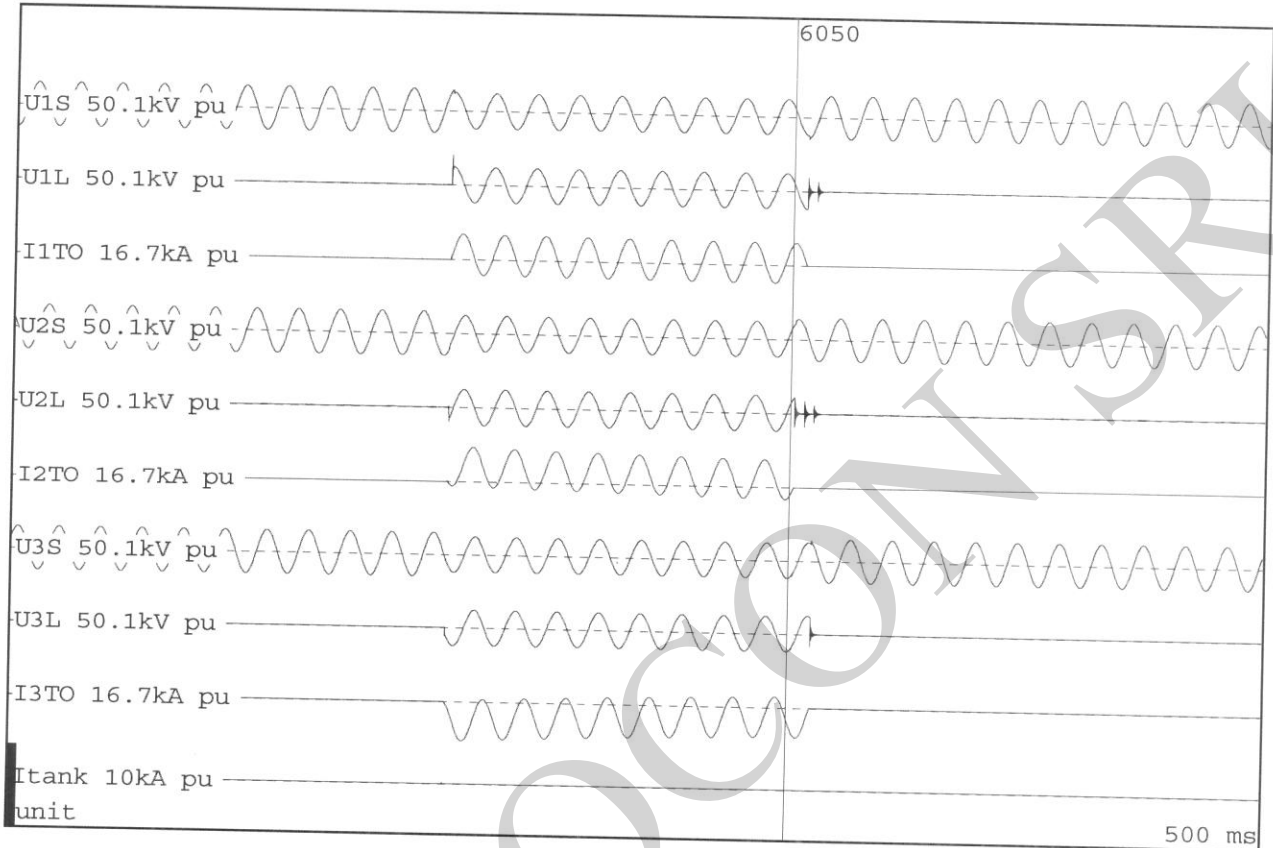
TEST NUMBER: 100527-6049

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,43	9,40	9,42
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	-8,19	5,24	-1,33
Breaking current, phase value	kA	2,87	2,86	2,86
Average current, three phase	kA	2,86		
Breaking current, DC-component	%	46	11	32
Recovery voltage, phase value	kV	9,37	9,35	9,33
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	20,3	-21,9	19,9
Make time	ms	-	-	-
Arc duration	ms	9,6	5,8	2,0
Opening time	ms	-		
Break time	ms	-	-	-

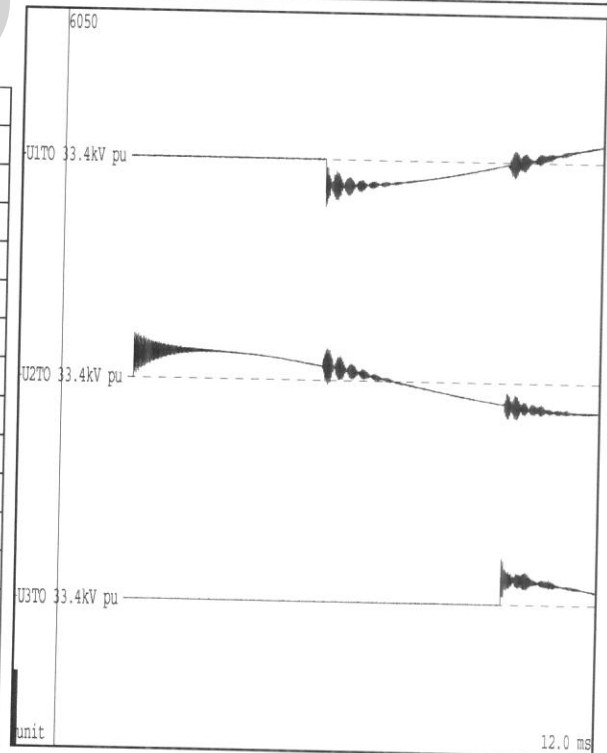


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.


TEST NUMBER: 100527-6050

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,46	9,43	9,46
Applied voltage, between phases	kV	16,4		
Making current, peak	kA	5,13	7,17	-7,90
Breaking current, phase value	kA	2,88	2,87	2,87
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	11	37	44
Recovery voltage, phase value	kV	9,30	9,26	9,39
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	-21,8	19,8	20,0
Make time	ms	-	-	-
Arc duration	ms	5,4	2,1	9,2
Opening time	ms	-		
Break time	ms	-	-	-



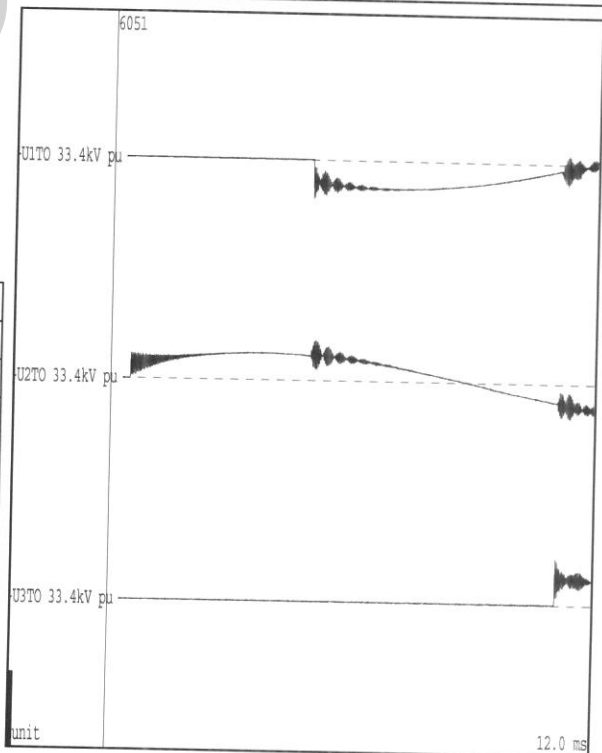
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



TEST NUMBER: 100527-6051

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	2,89	2,84	2,88
Average current, three phase	kA	2,87		
Breaking current, DC-component	%	54	100	29
Recovery voltage, phase value	kV	9,31	9,26	9,37
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	-17,8	11,7	21,4
Arc duration	ms	1,8	0,4	9,3
Opening time	ms	-		
Break time	ms	-	-	-

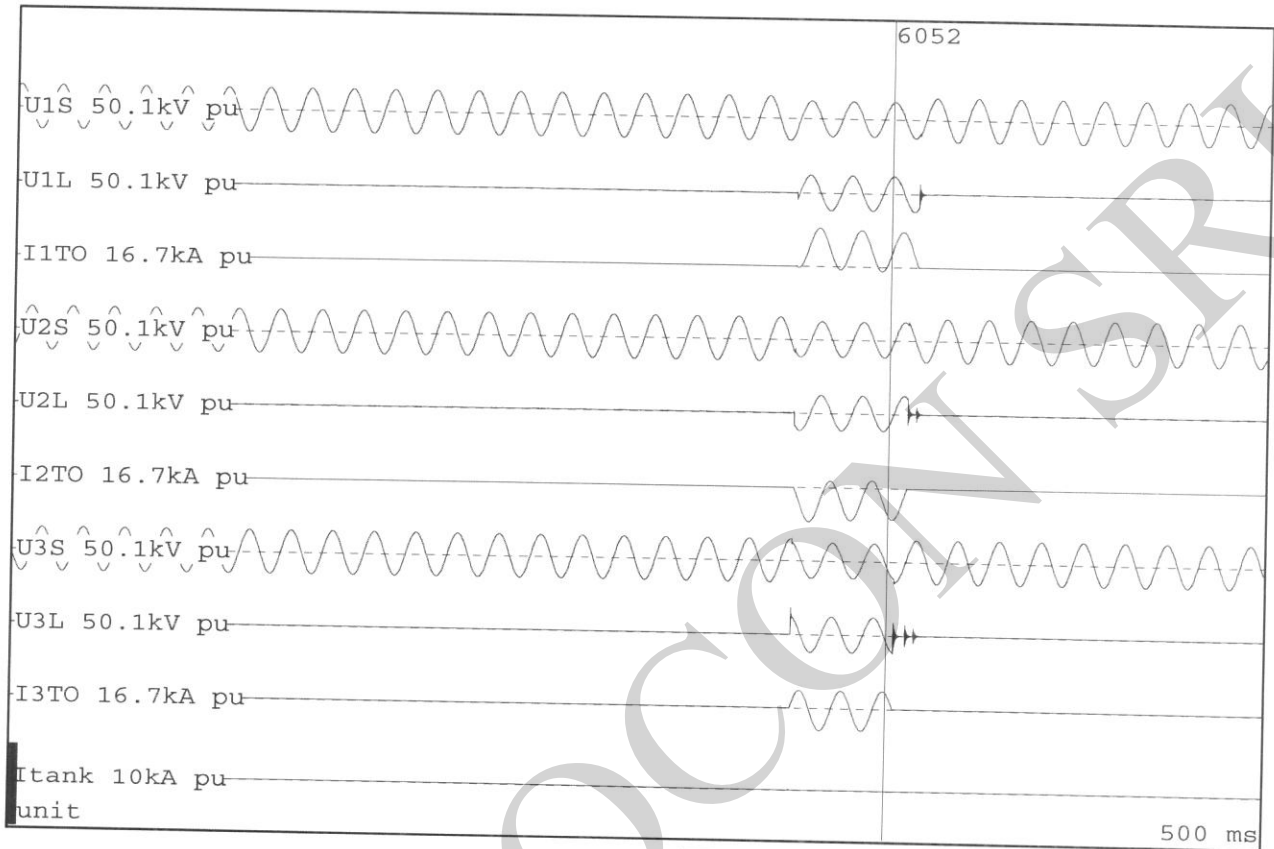


Voltage opening coil - Vd.c.

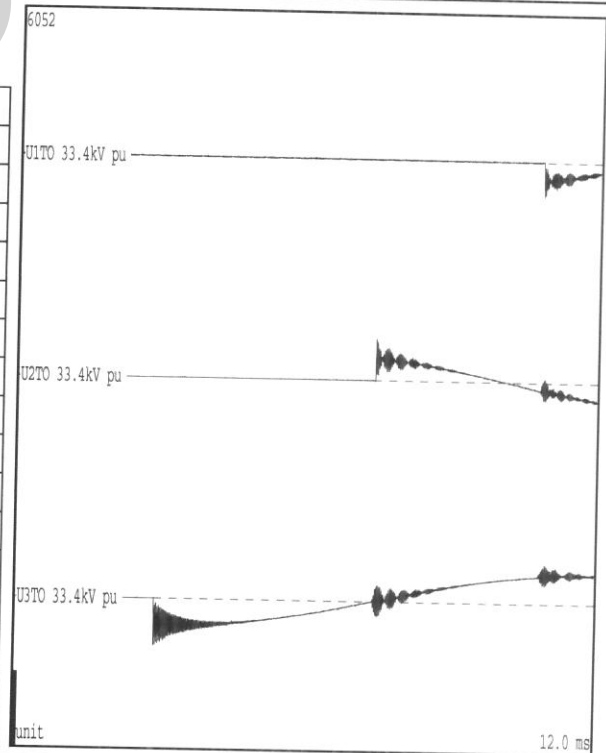
Gas pressure at 20 °C
Operating pressure

- MPa

Remarks: Recloser cleared.

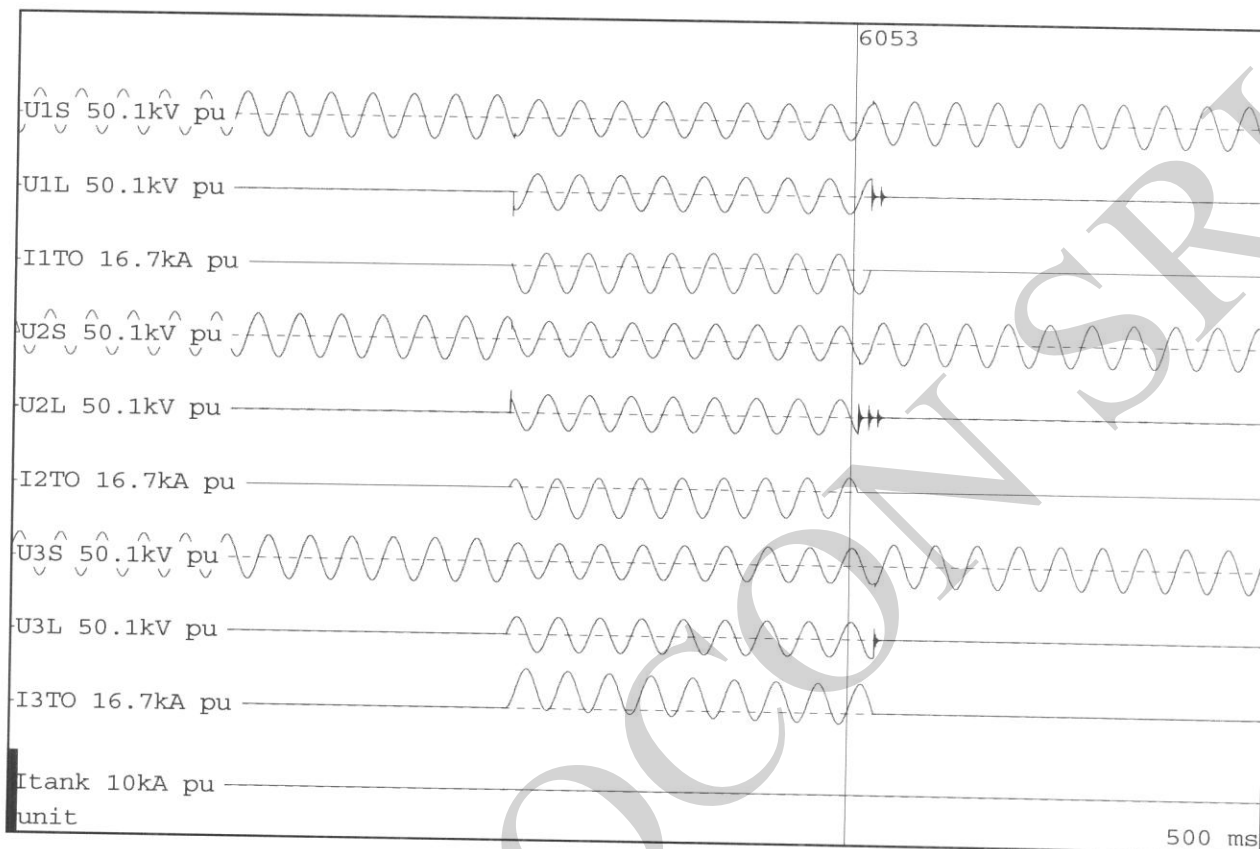

TEST NUMBER: 100527-6052

Time interval since previous test	min	-		
Time interval between operations	s	0,518		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,42	9,39	9,42
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	8,08	-7,32	-4,84
Breaking current, phase value	kA	2,90	2,88	2,89
Average current, three phase	kA	2,89		
Breaking current, DC-component	%	20	61	9
Recovery voltage, phase value	kV	9,37	9,33	9,34
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-15,7	18,7	-21,2
Make time	ms	-	-	-
Arc duration	ms	10,8	7,5	2,9
Opening time	ms	-		
Break time	ms	-	-	-

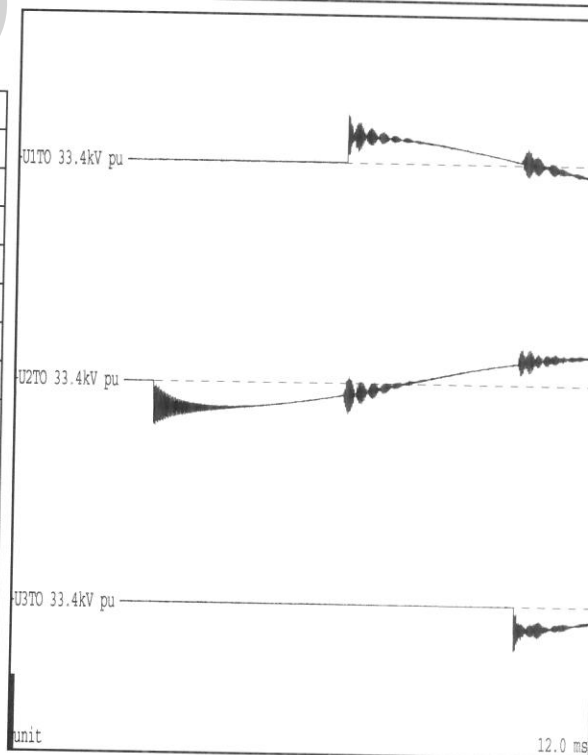


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

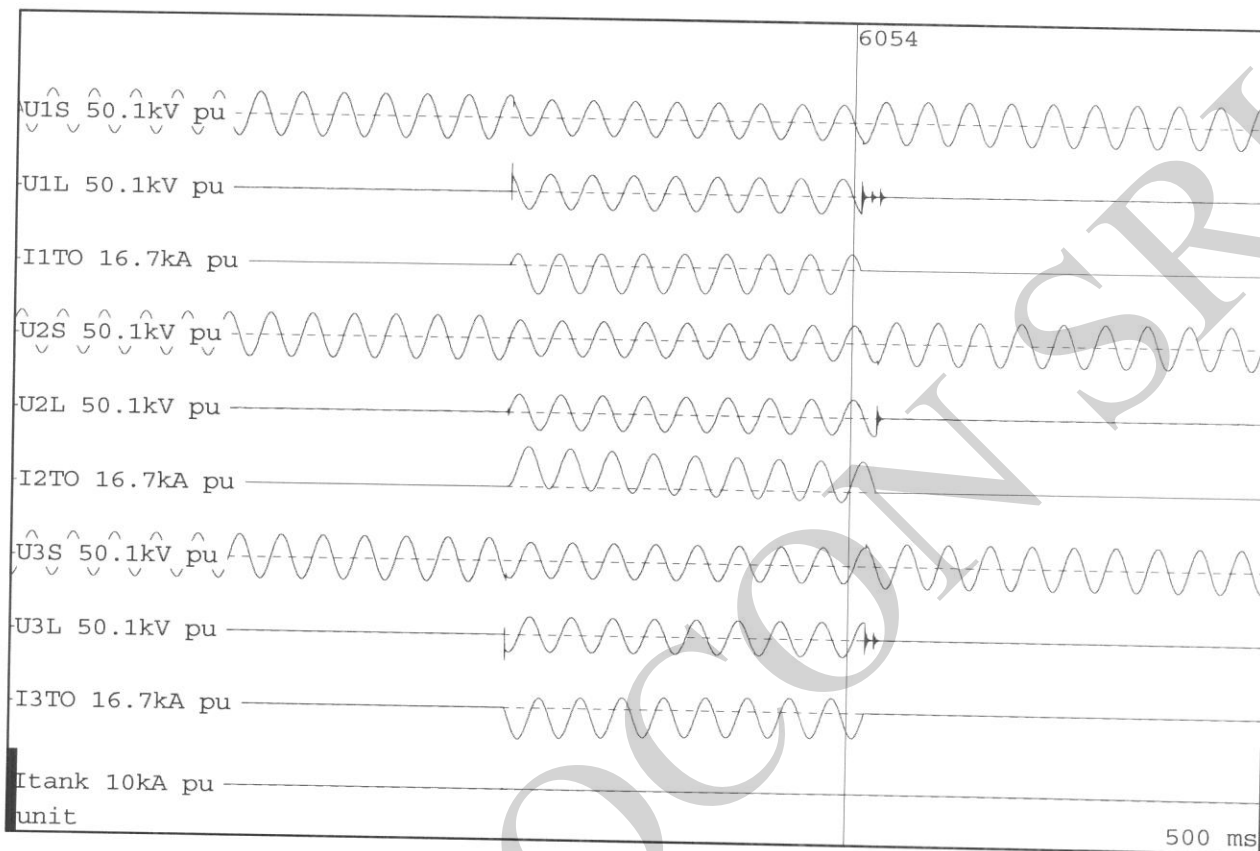

TEST NUMBER: 100527-6053

Time interval since previous test	min	-	-	-
Time interval between operations	s	1,02	-	-
Operation		CO	-	-
Phase		C	B	A
Applied voltage, phase value	kV	9,43	9,40	9,43
Applied voltage, between phases	kV	16,3	-	-
Making current, peak	kA	-5,95	1,49	8,00
Breaking current, phase value	kA	2,87	2,87	2,86
Average current, three phase	kA	2,87	-	-
Breaking current, DC-component	%	19	31	46
Recovery voltage, phase value	kV	9,35	9,31	9,37
Recovery voltage, between phases	kV	16,2	-	-
TRV, peak	kV	21,5	-20,2	-19,9
Make time	ms	-	-	-
Arc duration	ms	6,9	2,9	10,5
Opening time	ms	-	-	-
Break time	ms	-	-	-



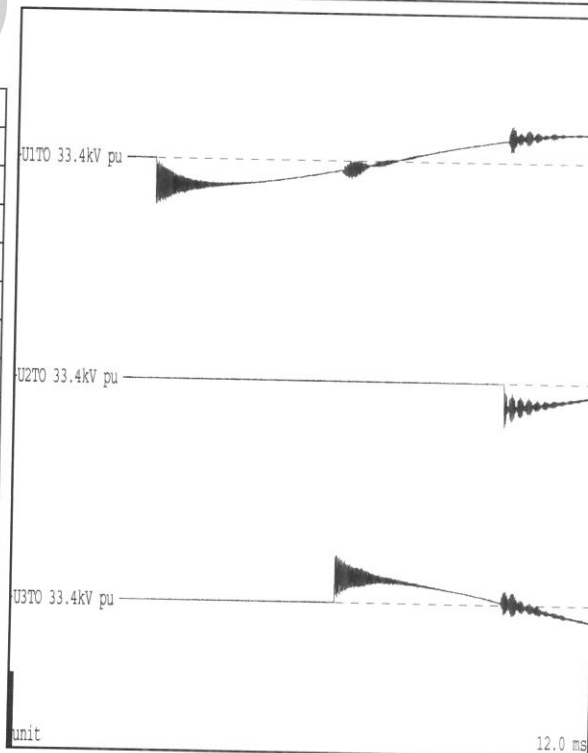
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



TEST NUMBER: 100527-6054

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,44	9,42	9,45
Applied voltage, between phases	kV	16,3		
Making current, peak	kA	2,32	8,04	-6,36
Breaking current, phase value	kA	2,89	2,87	2,87
Average current, three phase	kA	2,88		
Breaking current, DC-component	%	22	47	26
Recovery voltage, phase value	kV	9,36	9,36	9,38
Recovery voltage, between phases	kV	16,2		
TRV, peak	kV	-21,0	-19,9	21,2
Make time	ms	-	-	-
Arc duration	ms	3,1	10,4	7,0
Opening time	ms	-		
Break time	ms	-	-	-



Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

TEST NUMBERS

100527-6062	100527-6074
100527-6063	100527-6075
100527-6064	100527-6076
100527-6065	100527-6077
100527-6066	
100527-6067	
100527-6068	
100527-6069	
100527-6070	
100527-6071	
100527-6072	
100527-6073	

CONDITION BEFORE TESTS

Recloser in same condition.

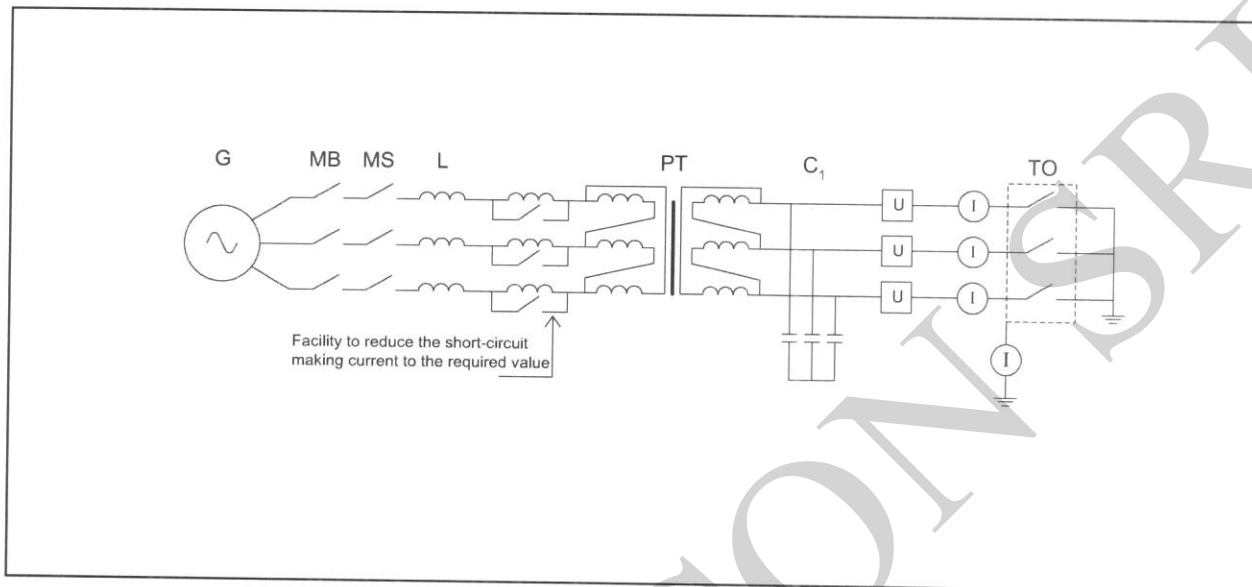
Supply to moving contacts.

Short-circuit on fixed contacts.

Frame earthed via an earth fault current indicating CT.

Recovery voltage maintained for 1 sec after the final interruption.

TEST-CIRCUIT S07



G	= Generator	TO	= Test Object	U	= Voltage Measurement to earth
MB	= Master Breaker	L	= Reactor	I	= Current Measurement
MS	= Make Switch	R	= Resistor		
PT	= Power Transformer	C	= Capacitor		

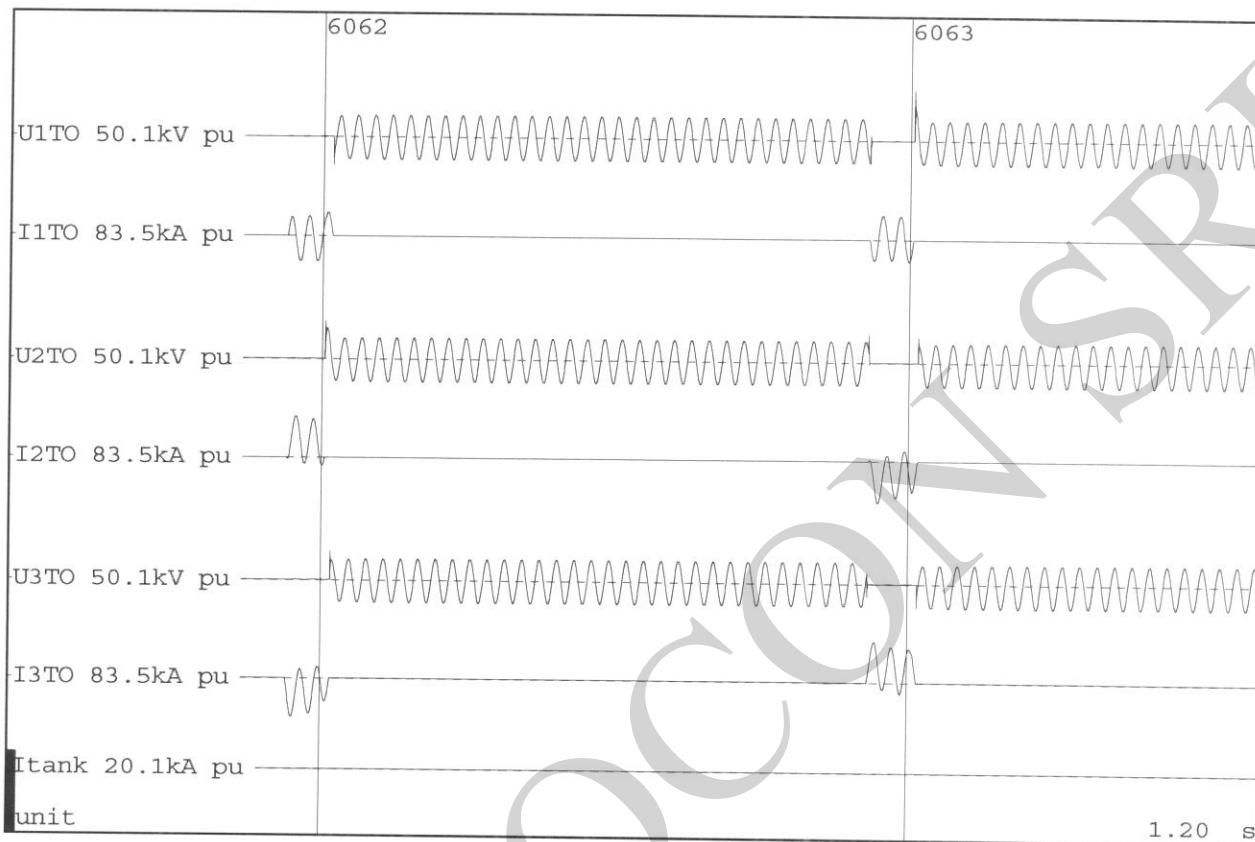
Supply		
Power	MVA	430
Frequency	Hz	60
Phase(s)		3
Voltage	kV	15,5
Current	kA	16
Impedance	Ω	0,559
Power factor		< 0,1
Neutral		not earthed

TRV control elements added (supply)		
C_1	μF	0,05
R_1 (in parallel)	Ω	-
C_s	μF	-
L_1	mH	-
C_d	nF	-
Neutral		not earthed

Prospective TRV of supply		
E_2	kV	30,1
T_2	μs	40
t_d	μs	< 5
Rate of rise	kV/ μs	912

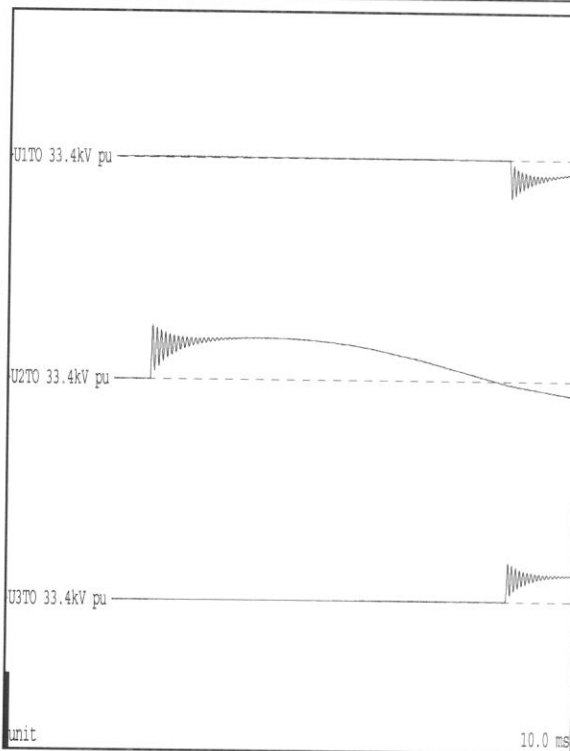
Load	
Short-circuit point	earthed

Remarks: -



TEST NUMBER: 100527-6062

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	16,3	16,7	16,4
Average current, three phase	kA	16,5		
Breaking current, DC-component	%	15	61	50
Recovery voltage, phase value	kV	9,23	9,19	9,20
Recovery voltage, between phases	kV	15,9		
TRV, peak	kV	-17,6	23,9	17,4
Arc duration	ms	9,2	0,8	9,2
Opening time	ms	-		
Break time	ms	-	-	-



Voltage opening coil - Vd.c.

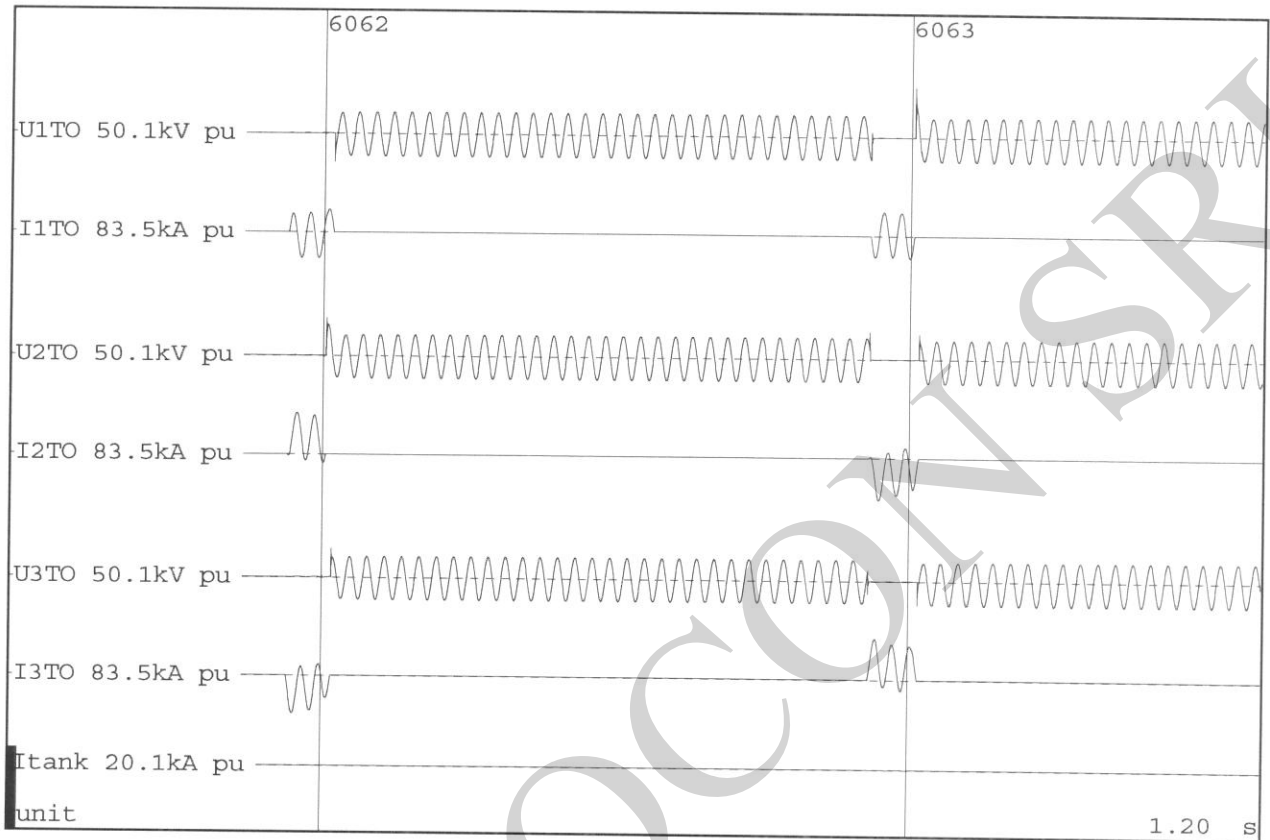
Gas pressure at 20 °C

- MPa

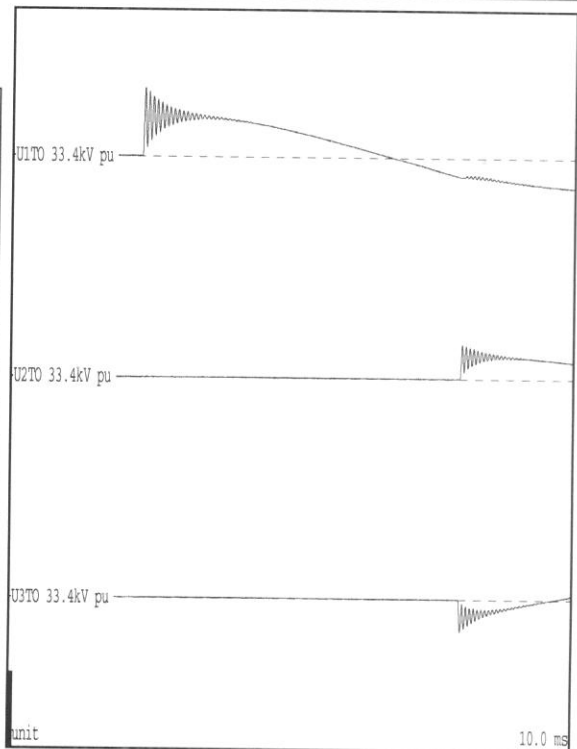
Operating pressure

MPa

Remarks: Recloser cleared.

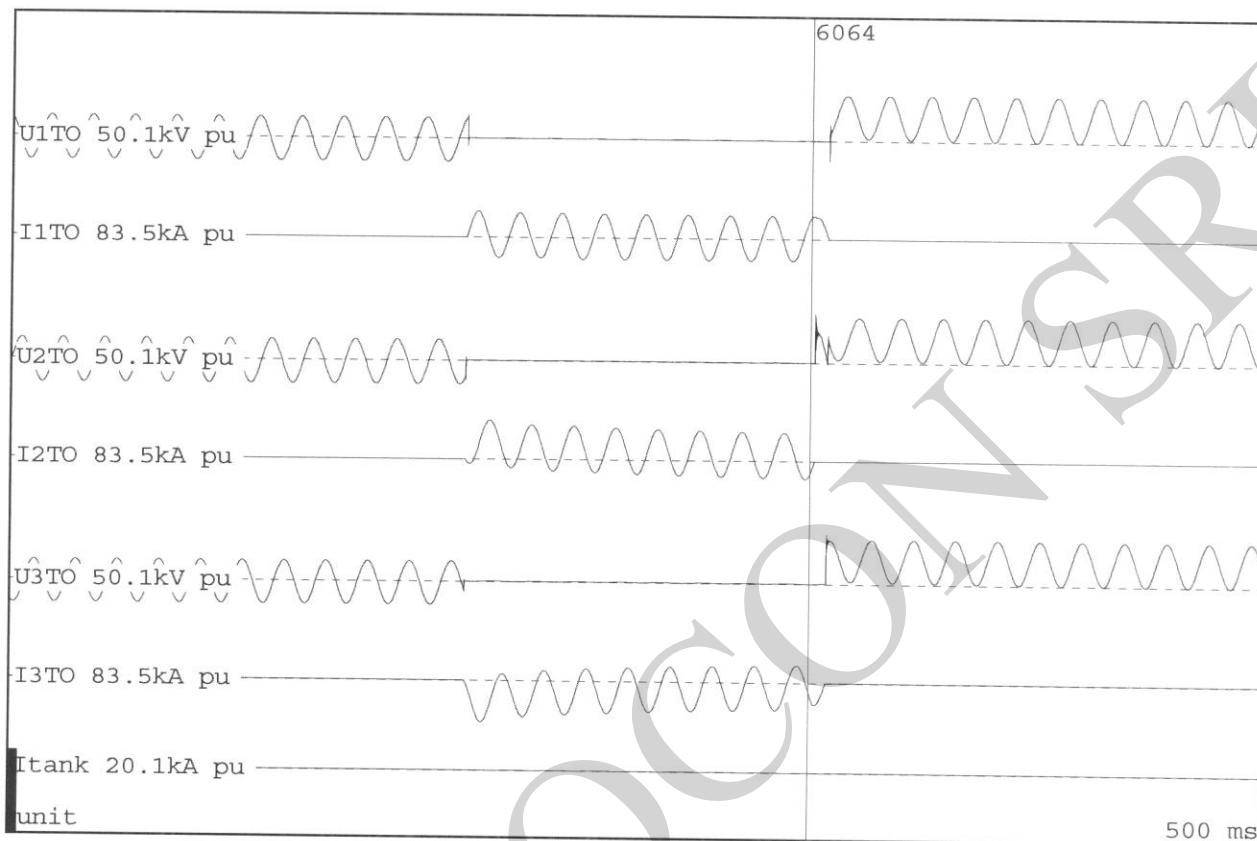

TEST NUMBER: 100527-6063

Time interval since previous test	min	-		
Time interval between operations	s	0,516		
Operation	CO			
Phase		C	B	A
Applied voltage, phase value	kV	9,51	9,53	9,44
Applied voltage, between phases	kV	16,4		
Making current, peak	kA	26,0	-43,9	43,1
Breaking current, phase value	kA	16,1	16,2	16,1
Average current, three phase	kA	16,1		
Breaking current, DC-component	%	5	49	44
Recovery voltage, phase value	kV	9,20	9,28	9,19
Recovery voltage, between phases	kV	16,0		
TRV, peak	kV	31,0	15,5	-14,7
Make time	ms	-	-	-
Arc duration	ms	3,2	8,9	8,9
Opening time	ms	-		
Break time	ms	-	-	-

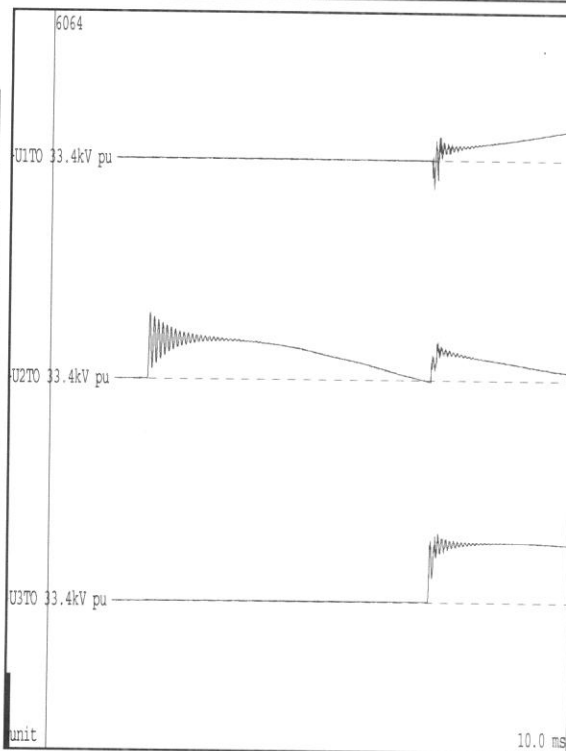


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.

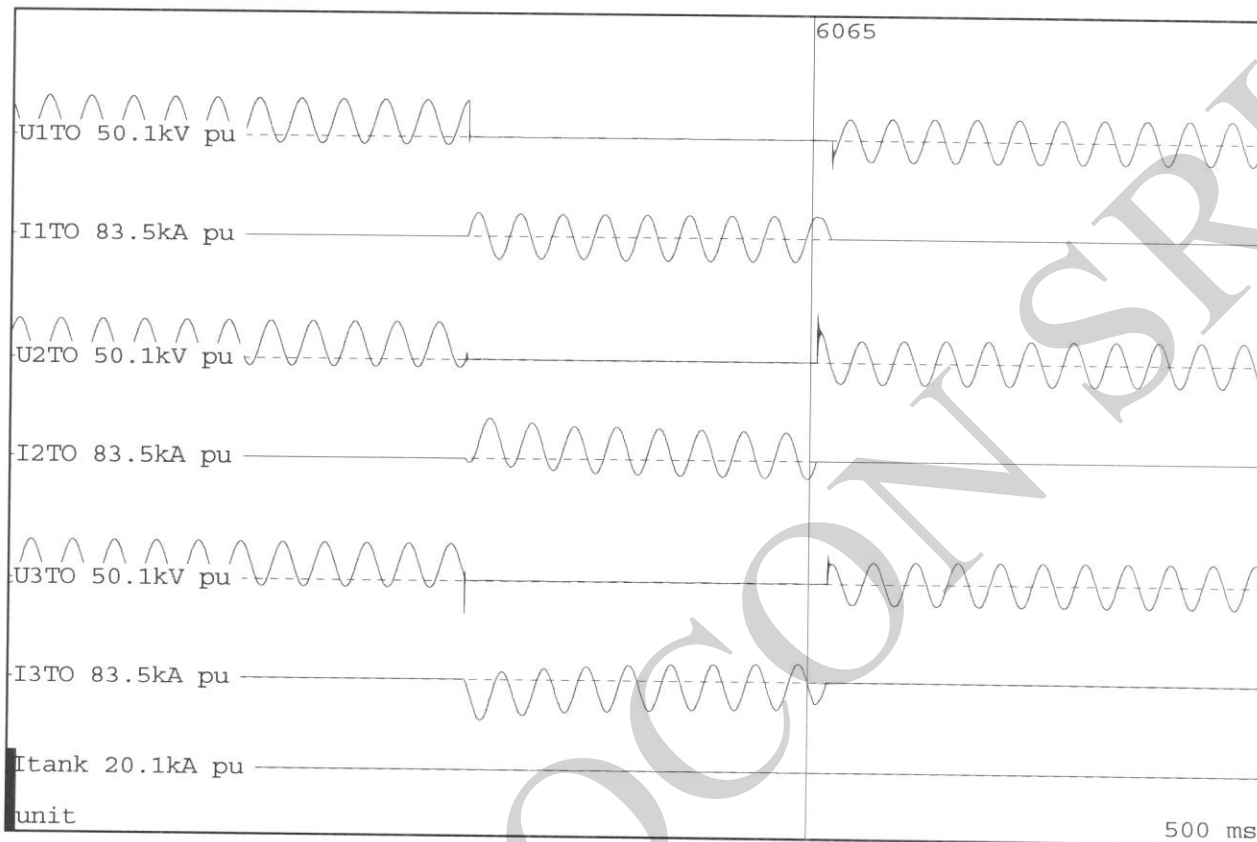

TEST NUMBER: 100527-6064

Time interval since previous test	min	-		
Time interval between operations	s	1,01		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,49	9,50	9,43
Applied voltage, between phases	kV	16,4		
Making current, peak	kA	26,7	40,9	-44,0
Breaking current, phase value	kA	16,2	16,3	16,3
Average current, three phase	kA	16,3		
Breaking current, DC-component	%	1	21	22
Recovery voltage, phase value	kV	9,27	9,25	9,24
Recovery voltage, between phases	kV	16,0		
TRV, peak	kV	-13,5	29,6	30,6
Make time	ms	-	-	-
Arc duration	ms	6,8	1,8	6,8
Opening time	ms	-		
Break time	ms	-	-	-



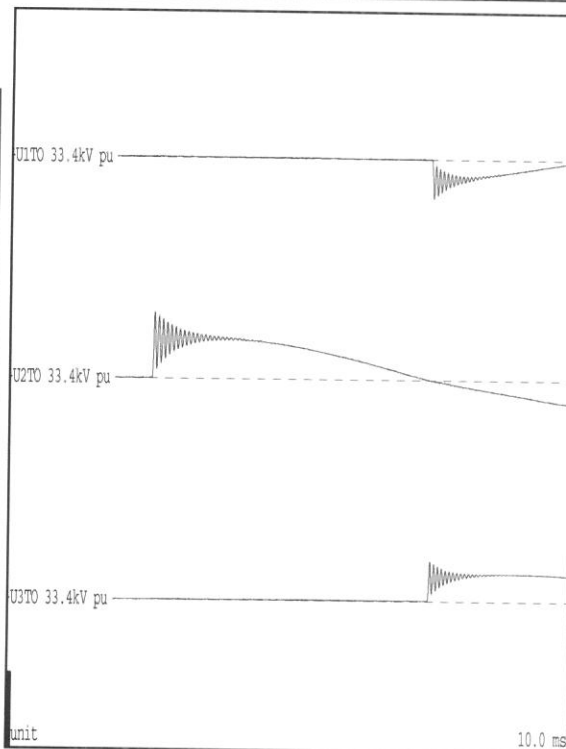
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



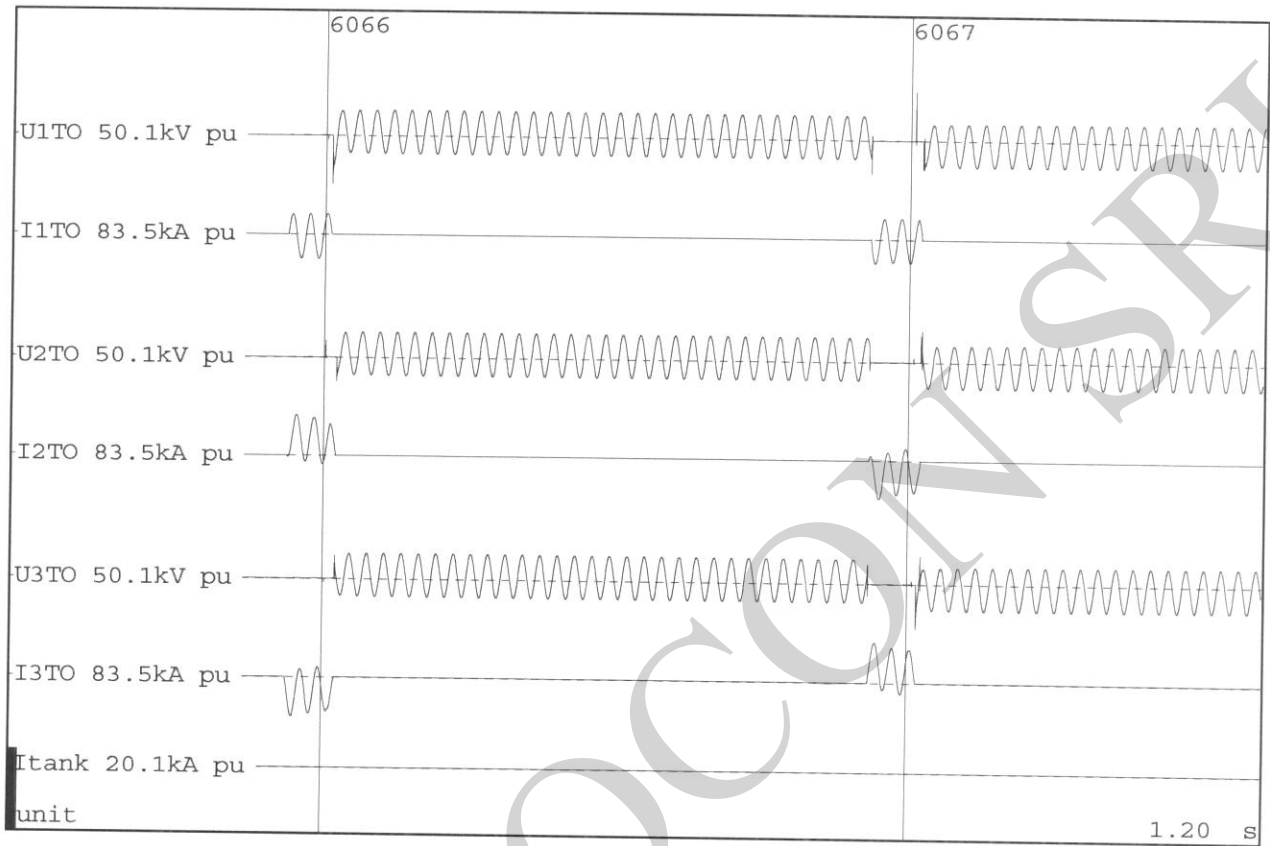
TEST NUMBER: 100527-6065

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,61	9,62	9,55
Applied voltage, between phases	kV	16,6		
Making current, peak	kA	24,7	42,0	-43,0
Breaking current, phase value	kA	16,4	16,5	16,4
Average current, three phase	kA	16,4		
Breaking current, DC-component	%	1	20	19
Recovery voltage, phase value	kV	9,23	9,20	9,21
Recovery voltage, between phases	kV	16,0		
TRV, peak	kV	-17,8	29,6	17,7
Make time	ms	-	-	-
Arc duration	ms	7,7	2,8	7,7
Opening time	ms	-		
Break time	ms	-	-	-



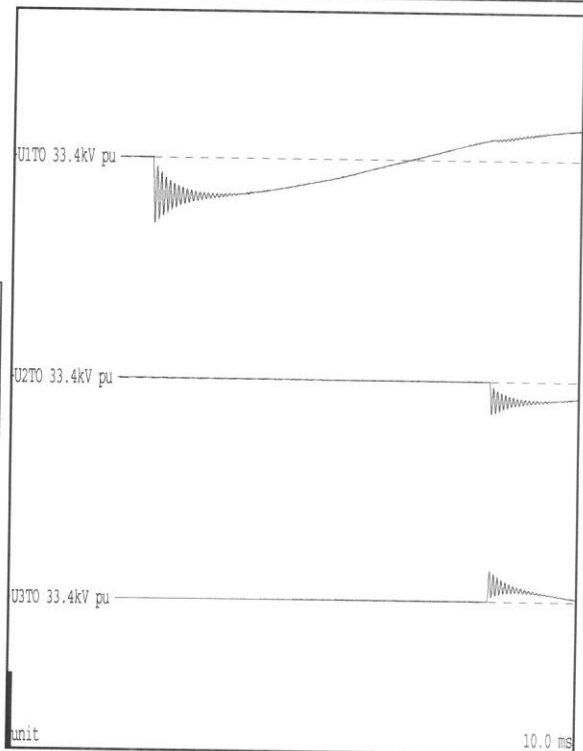
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



TEST NUMBER: 100527-6066

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	16,1	16,4	16,2
Average current, three phase	kA	16,2		
Breaking current, DC-component	%	9	60	54
Recovery voltage, phase value	kV	9,01	9,12	9,01
Recovery voltage, between phases	kV	15,7		
TRV, peak	kV	-30,0	-14,7	14,2
Arc duration	ms	6,0	11,9	11,9
Opening time	ms	-		
Break time	ms	-	-	-



Voltage opening coil - Vd.c.

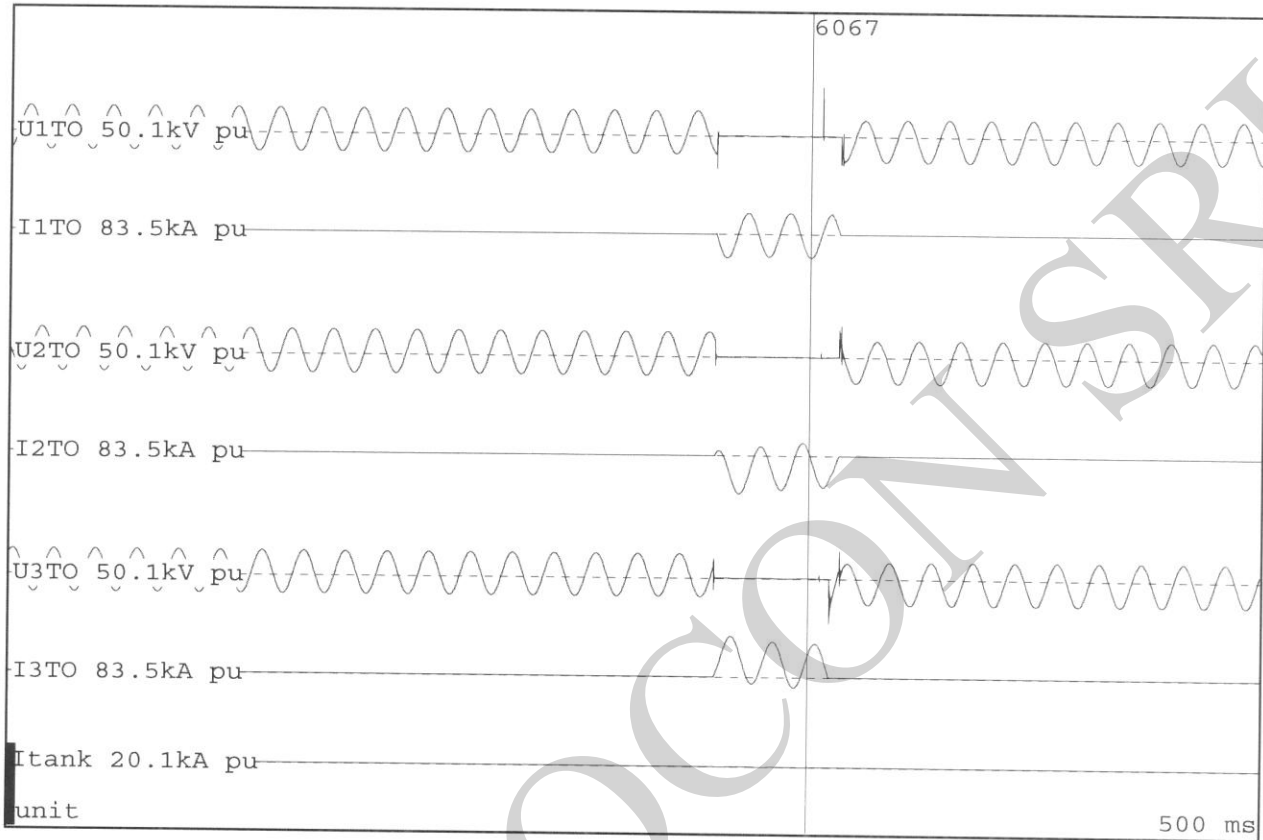
Gas pressure at 20 °C

- MPa

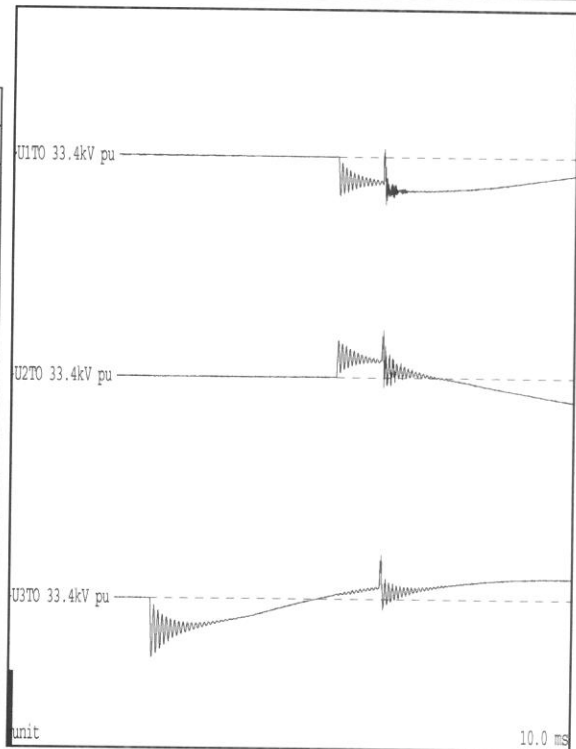
Operating pressure

MPa

Remarks: Recloser cleared.

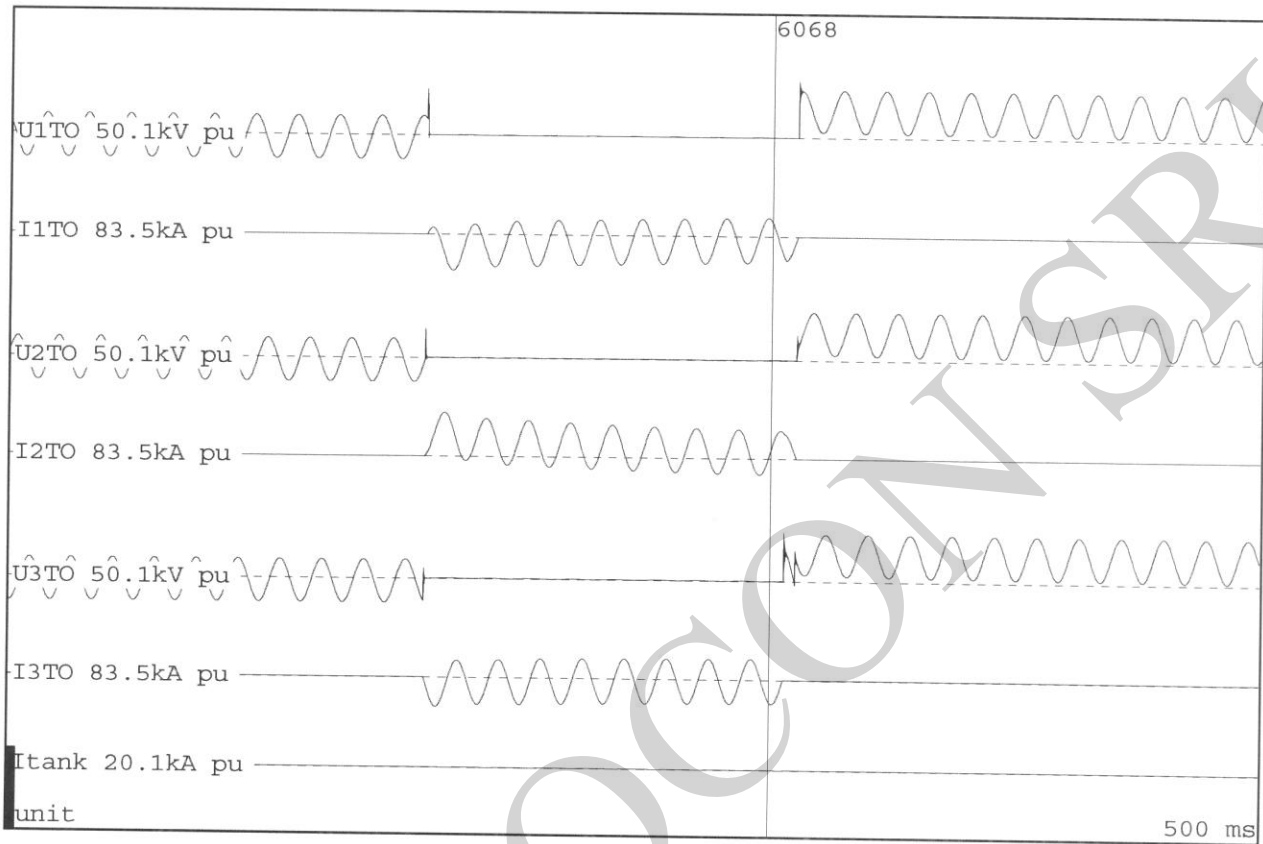

TEST NUMBER: 100527-6067

Time interval since previous test	min	-		
Time interval between operations	s	0,512		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,37	9,39	9,30
Applied voltage, between phases	kV	16,2		
Making current, peak	kA	-25,5	-40,1	42,4
Breaking current, phase value	kA	15,8	16,0	15,8
Average current, three phase	kA	15,9		
Breaking current, DC-component	%	3	42	46
Recovery voltage, phase value	kV	9,17	9,13	8,98
Recovery voltage, between phases	kV	15,8		
TRV, peak	kV	-9,35	18,7	-27,0
Make time	ms	-	-	-
Arc duration	ms	11,7	11,8	8,5
Opening time	ms	-		
Break time	ms	-	-	-

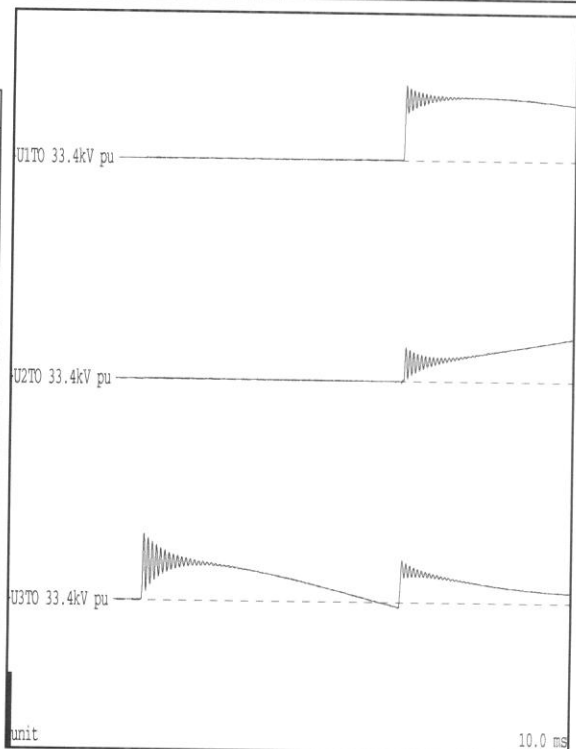


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared. NSDD in C phase after 0,8ms.

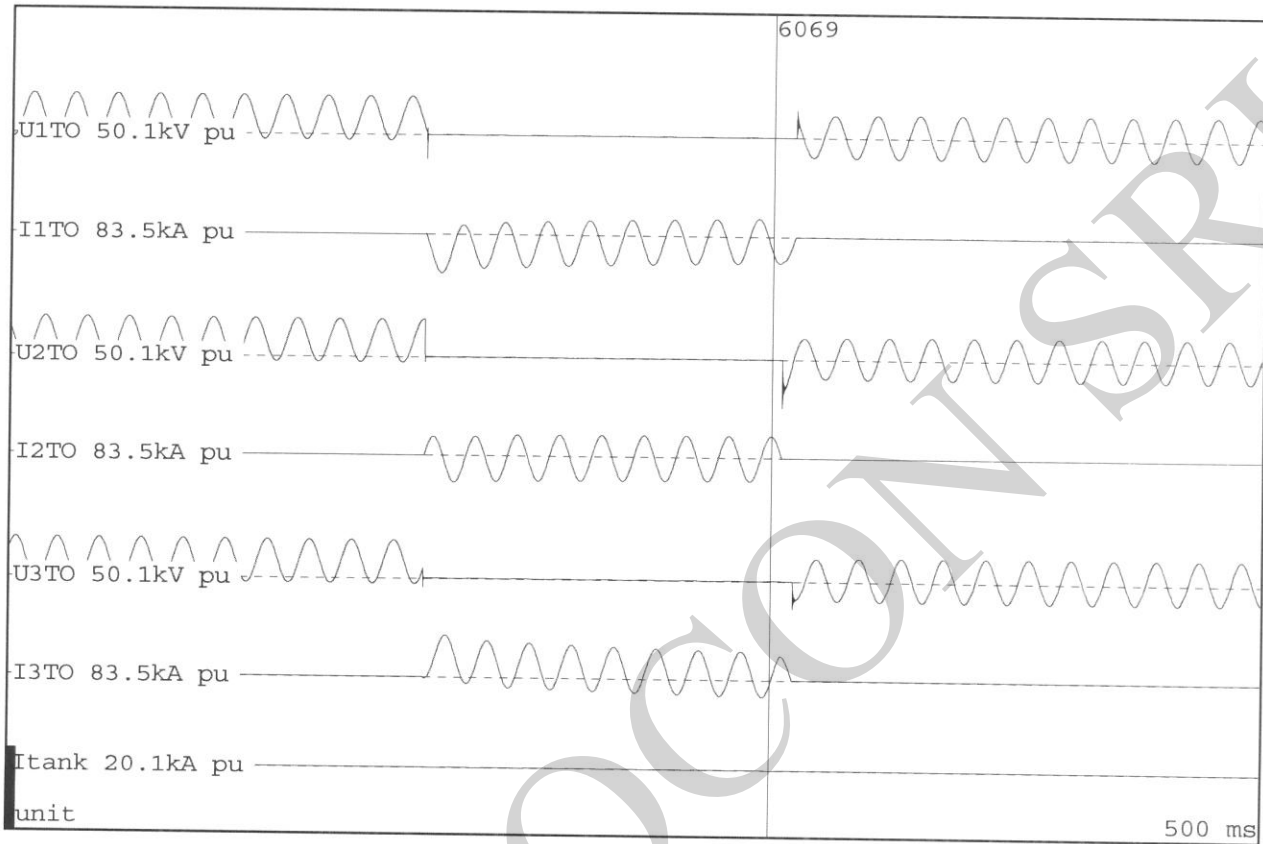

TEST NUMBER: 100527-6068

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,38	9,39	9,31
Applied voltage, between phases	kV	16,2		
Making current, peak	kA	-38,3	45,7	-31,0
Breaking current, phase value	kA	16,1	16,1	16,1
Average current, three phase	kA	16,1		
Breaking current, DC-component	%	19	25	7
Recovery voltage, phase value	kV	9,30	9,28	9,23
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	34,4	15,2	29,8
Make time	ms	-	-	-
Arc duration	ms	10,1	10,1	5,5
Opening time	ms	-		
Break time	ms	-	-	-



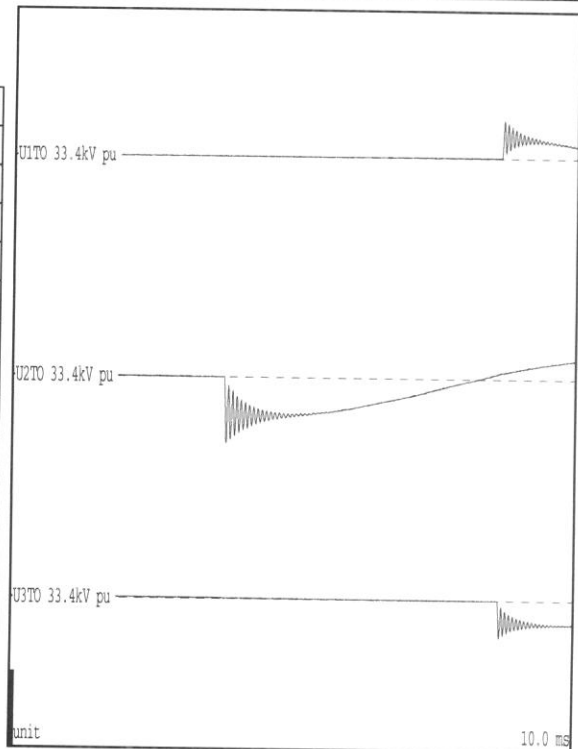
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



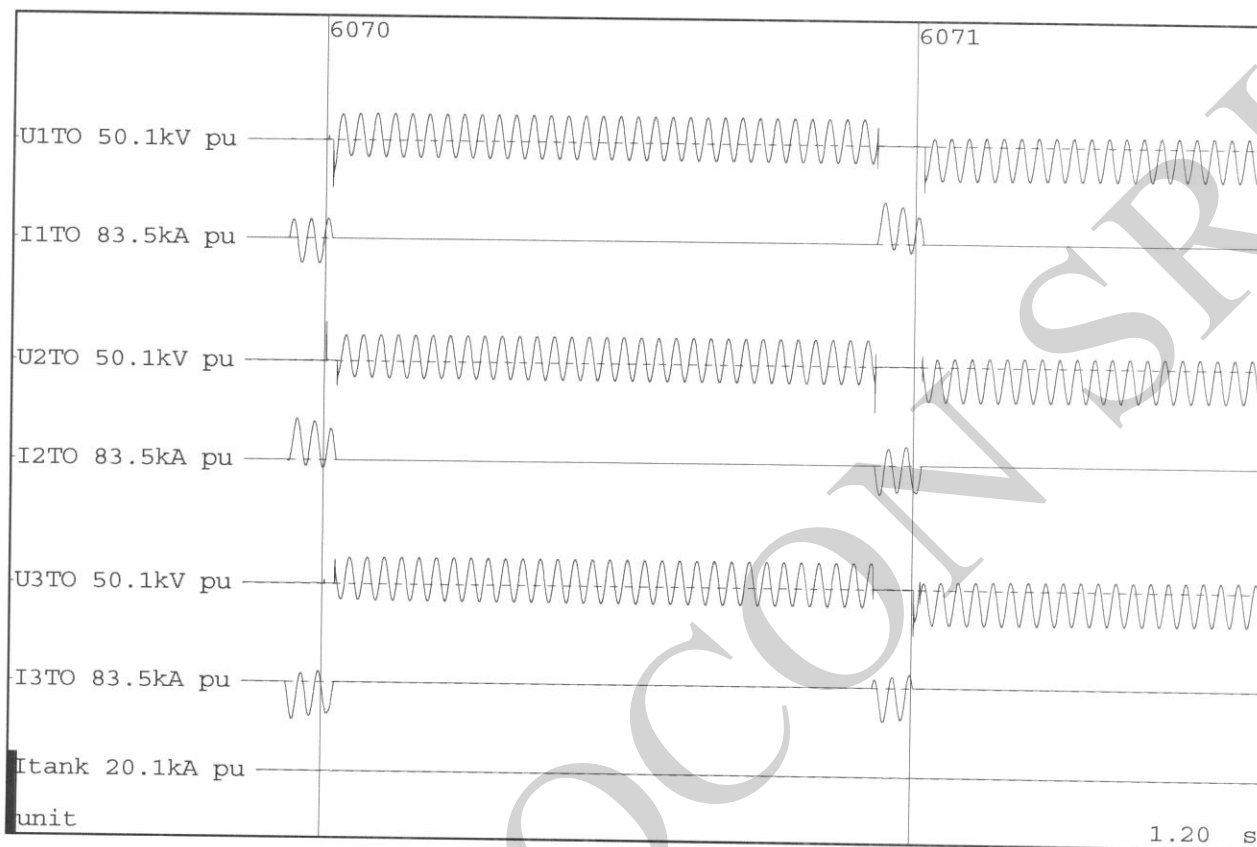
TEST NUMBER: 100527-6069

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation	CO			
Phase		C	B	A
Applied voltage, phase value	kV	9,45	9,48	9,39
Applied voltage, between phases	kV	16,4		
Making current, peak	kA	-40,6	18,8	43,9
Breaking current, phase value	kA	16,2	16,2	16,2
Average current, three phase	kA	16,2		
Breaking current, DC-component	%	19	5	24
Recovery voltage, phase value	kV	9,09	9,07	9,06
Recovery voltage, between phases	kV	15,7		
TRV, peak	kV	17,0	-29,9	-17,1
Make time	ms	-	-	-
Arc duration	ms	8,9	3,9	8,9
Opening time	ms	-		
Break time	ms	-	-	-



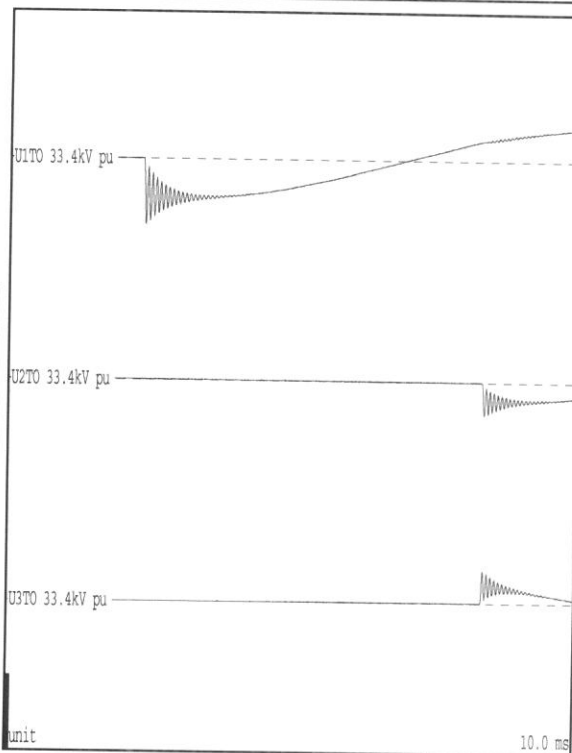
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



TEST NUMBER: 100527-6070

Time interval since previous test	min	-		
Operation		O		
Phase		C	B	A
Breaking current, phase value	kA	16,1	16,4	16,2
Average current, three phase	kA	16,2		
Breaking current, DC-component	%	14	61	51
Recovery voltage, phase value	kV	9,01	9,13	9,02
Recovery voltage, between phases	kV	15,7		
TRV, peak	kV	-30,1	-15,0	14,4
Arc duration	ms	6,5	12,5	12,5
Opening time	ms	-		
Break time	ms	-	-	-

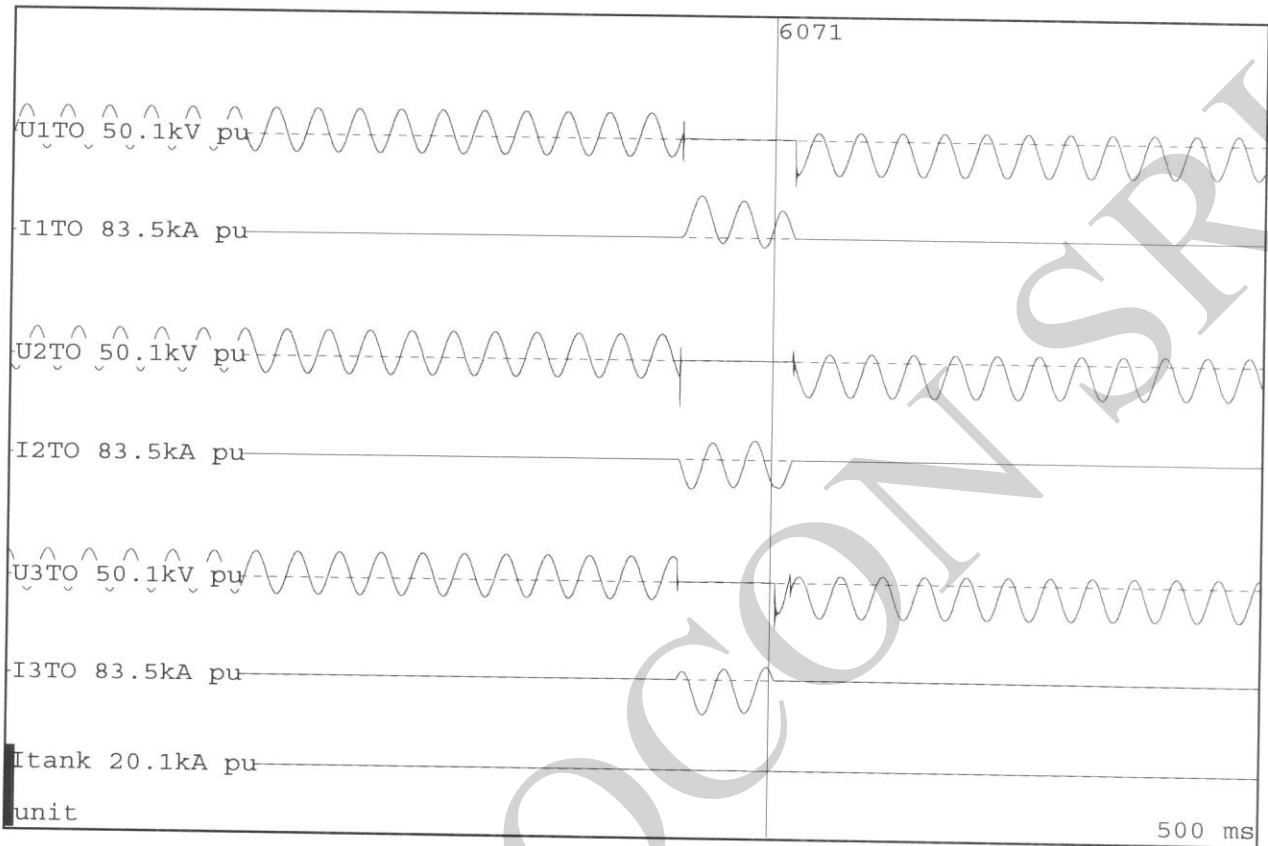


Voltage opening coil - Vd.c.

Gas pressure at 20 °C
Operating pressure

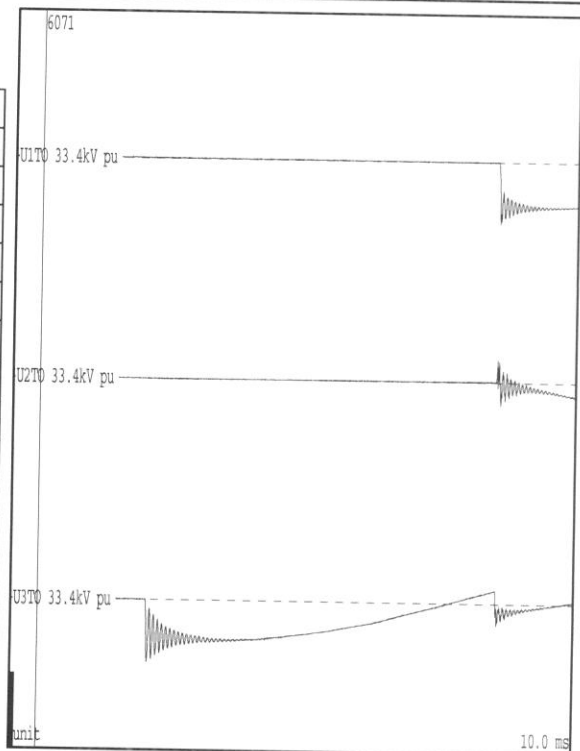
- MPa
MPa

Remarks: Recloser cleared.



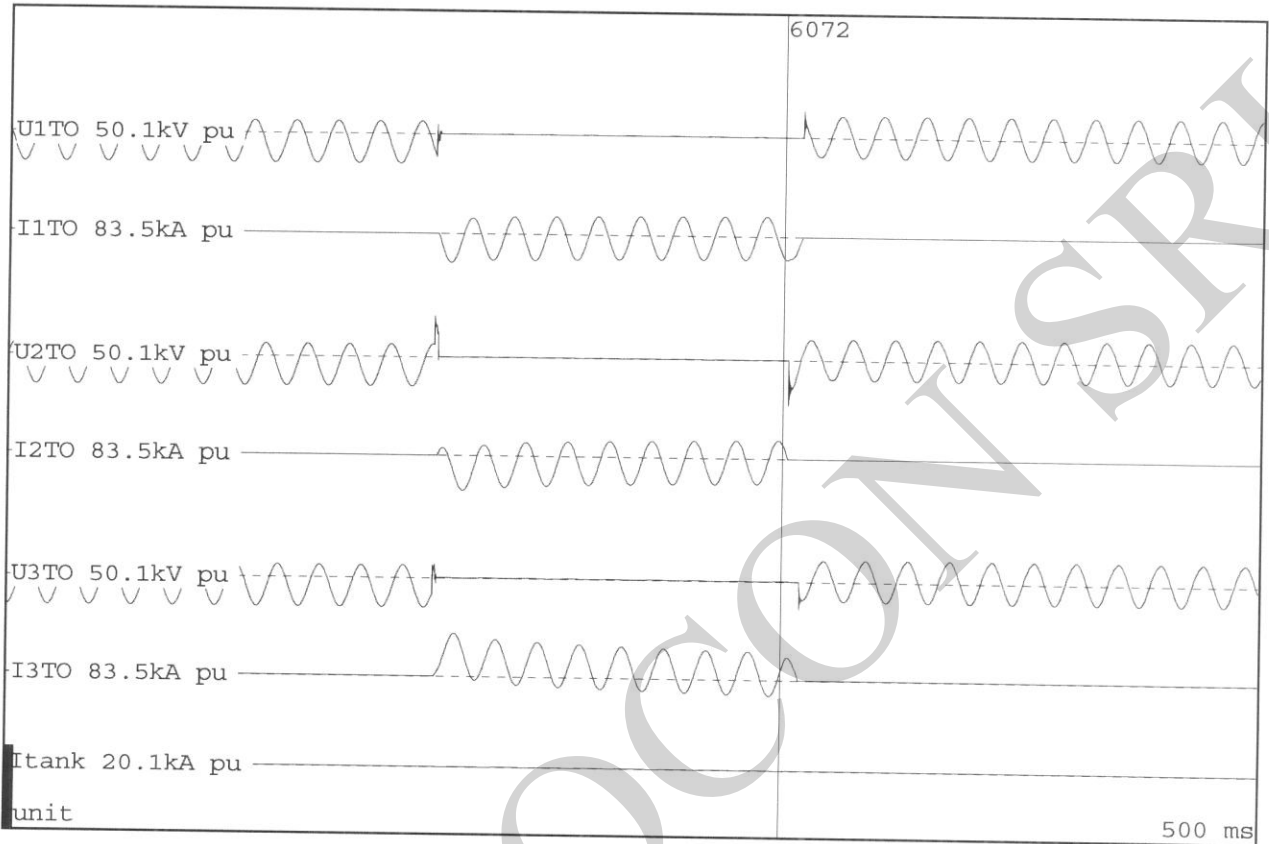
TEST NUMBER: 100527-6071

Time interval since previous test	min	-		
Time interval between operations	s	0,517		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,38	9,39	9,34
Applied voltage, between phases	kV	16,2		
Making current, peak	kA	44,0	-30,9	-36,9
Breaking current, phase value	kA	16,1	16,2	16,3
Average current, three phase	kA	16,2		
Breaking current, DC-component	%	53	12	40
Recovery voltage, phase value	kV	9,20	9,19	9,07
Recovery voltage, between phases	kV	15,9		
TRV, peak	kV	-27,0	-14,0	-27,9
Make time	ms	-	-	-
Arc duration	ms	8,2	8,3	-1,4
Opening time	ms	-		
Break time	ms	-	-	-



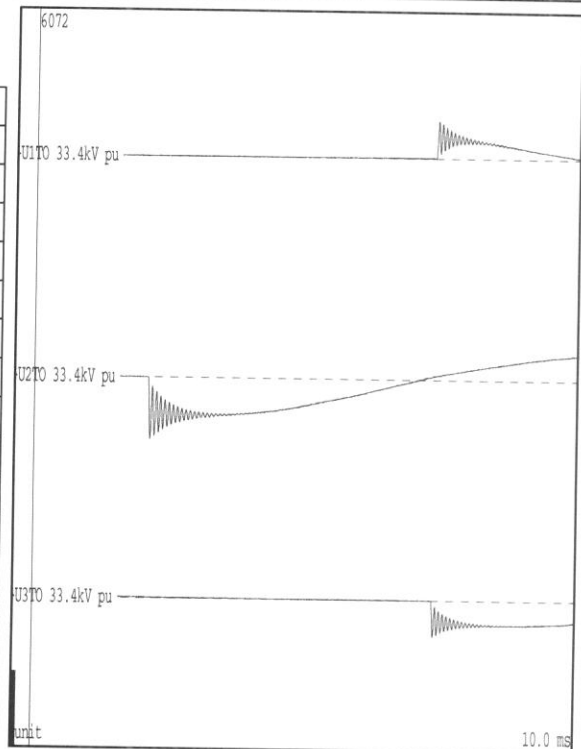
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



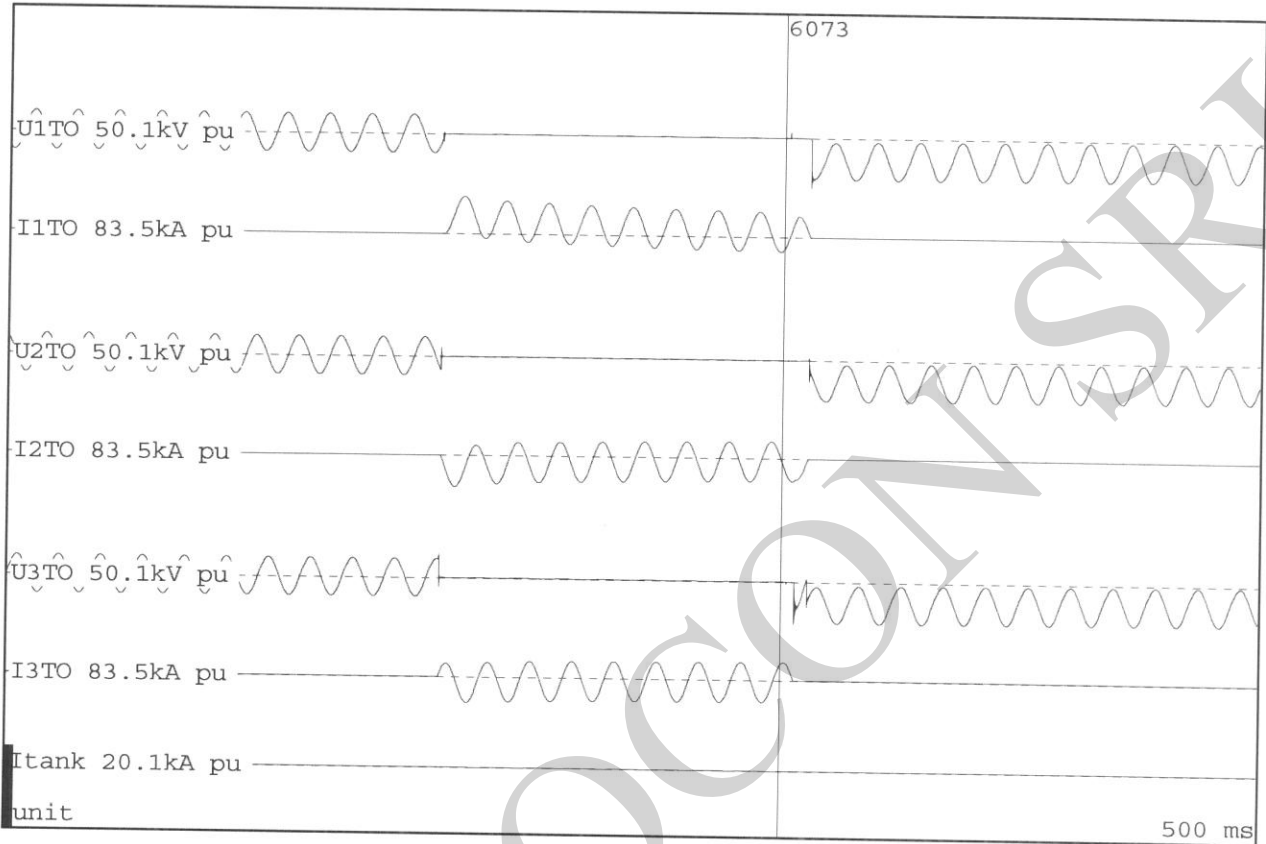
TEST NUMBER: 100527-6072

Time interval since previous test	min	-		
Time interval between operations	s	1,03		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,04	9,07	8,99
Applied voltage, between phases	kV	15,6		
Making current, peak	kA	-30,6	-36,8	44,6
Breaking current, phase value	kA	15,5	15,6	15,6
Average current, three phase	kA	15,6		
Breaking current, DC-component	%	9	17	26
Recovery voltage, phase value	kV	8,81	8,74	8,77
Recovery voltage, between phases	kV	15,2		
TRV, peak	kV	16,8	-28,3	-16,7
Make time	ms	-	-	-
Arc duration	ms	7,2	2,1	7,2
Opening time	ms	-		
Break time	ms	-	-	-

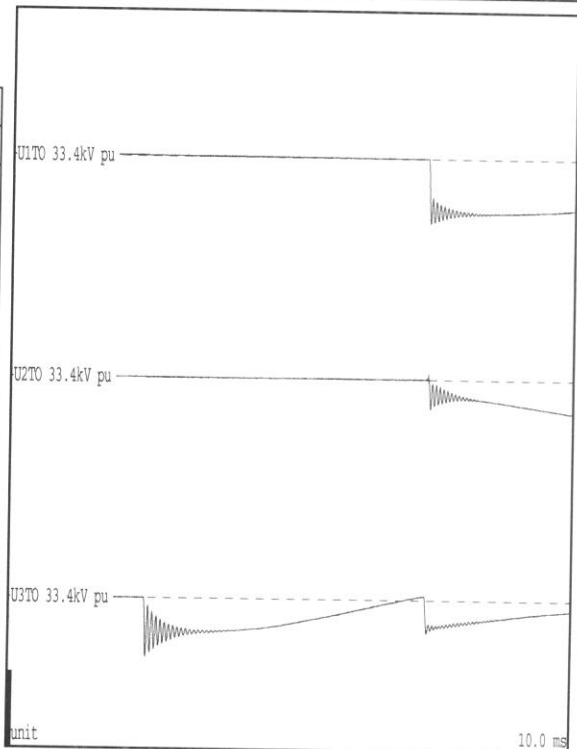


Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.


TEST NUMBER: 100527-6073

Time interval since previous test	min	-		
Time interval between operations	s	1,02		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	8,70	8,68	8,65
Applied voltage, between phases	kV	15,0		
Making current, peak	kA	38,8	-32,8	-27,4
Breaking current, phase value	kA	14,5	14,5	14,5
Average current, three phase	kA	14,5		
Breaking current, DC-component	%	24	15	9
Recovery voltage, phase value	kV	8,96	8,94	9,95
Recovery voltage, between phases	kV	16,1		
TRV, peak	kV	-29,1	-15,8	-26,2
Make time	ms	-	-	-
Arc duration	ms	10,3	10,3	5,4
Opening time	ms	-		
Break time	ms	-	-	-



Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.