

TYPE TEST CERTIFICATE OF INTERRUPTING PERFORMANCE

APPARATUS A three-phase solid insulated automatic circuit recloser equipped with vacuum interrupters

DESIGNATION EPR-1 **SERIAL No.** 10020001

Rated maximum voltage	15,5 kV, rms	Rated continuous current	630 A, rms
Rated symmetrical interrupting current	16 kA, rms	Rated frequency	60 Hz

MANUFACTURER ENTEC Electric & Electronic Co., Ltd.,
Gyungki-Do, Korea-South

TESTED FOR ENTEC Electric & Electronic Co., Ltd.,
Gyungki-Do, Korea-South

TESTED BY KEMA HIGH-POWER LABORATORY
Utrechtseweg 310 - 6812 AR Arnhem - The Netherlands

DATE(S) OF TESTS 26 to 31 May 2010

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this Certificate, has been subjected to the series of proving tests in accordance with

IEC 62271-111 / IEEE C37.60

subclauses 6.3 (Switching tests), 6.5.4 (Standard operating duty)

Additional short-time withstand current and peak withstand current test to IEC 62271-1, subclause 6.6.

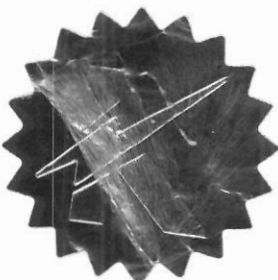
The results are shown in the record of Proving Tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above Standard and to justify the ratings assigned by the manufacturer as listed on page 4.

This Certificate applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations with that tested rests with the Manufacturer.

This Certificate consists of 252 sheets in total.

This Certificate falls under the scope of the accreditation certificate L 020 of the Dutch Council for Accreditation. See information sheet (page 2).

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KEMA Nederland B.V.


P. G. A. Bus
KEMA T&D Testing Services
Managing Director

Arnhem, 16 August 2010

1 Certificate

A Certificate contains a record of a series of type tests carried out strictly in accordance with a recognized standard. The equipment tested has fulfilled the requirements of this standard and the relevant ratings assigned by the manufacturer are endorsed by KEMA. The Certificate is applicable only to the equipment tested. KEMA is responsible for the validity and the contents of the Certificate.

The responsibility for conformity of any apparatus having the same designation as the one tested rests with the manufacturer. The Certificate contains the essential drawings and a description of the equipment tested.

Detailed rules are given in KEMA's Certification procedure.

2 Report of Performance

A Report of Performance contains a record of one or more tests which have been carried out according to the client's instructions. These tests are not necessarily in accordance with a recognized standard. The test results do not verify ratings of the test object.

KEMA issues three types of Reports of Performance:

2.1 *The tests have been carried out strictly in accordance with The apparatus has complied with the relevant requirements.*

This sentence will appear on the front page of a Report of Performance if the tests have been performed in accordance with a recognized standard, but the series of tests does not completely fulfil the requirements for a Certificate of Compliance (for example, if the number of test duties is not a complete series of type tests). The Report contains verified drawings and a description of the equipment tested. Detailed rules are given in KEMA's Certification procedure. The condition of the test object after the tests is assessed and recorded in the Report.

2.2 *The tests have been carried out in accordance with the client's instructions. Test procedure and test parameters were based on*

This sentence will appear on the front page of a Report of Performance if the number of tests, the test procedure and the test parameters are based on a recognized standard and related to the ratings assigned by the manufacturer. If the apparatus does not pass the tests such behaviour will be mentioned on the front sheet. Verification of the drawings (if submitted) and assessment of the condition after the tests is only done on the client's request.

2.3 *The tests have been carried out according to the client's instructions.*

This sentence will appear on the front page of a Report of Performance if the tests, test procedure and/or test parameters are not in accordance with a recognized standard.

3 Standards

When reference is made to a standard, and the date of issue is not stated, this applies to the latest issue, including amendments which have been officially published prior to the date of the tests.

4 Official and uncontrolled test documents

The official test documents of KEMA High-Power Laboratory are issued in bound form. Uncontrolled copies may be provided as loose sheets or as a digital file for convenience of reproduction by the client. The copyright has to be respected at all times.

5 Accuracy of measurement

In the table of test results the measured quantities are given in three digits. This method of presentation does not indicate an accuracy. The guaranteed uncertainty in the figures mentioned, taking into account the total measuring system, is less than 5%, unless mentioned otherwise.

6 Qualified by RvA (Dutch Council for Accreditation)

KEMA High-Power Laboratory and High-Voltage Laboratory have been entered in the RvA-register for laboratories under resp. Nrs. L 020 and L 218 for the testing services as defined in the Field of Accreditation.

The accreditation is carried out in accordance with ISO/IEC 17025.

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ANNEX II

ELECTROCON SPL

RATINGS ASSIGNED BY THE MANUFACTURER

Maximum voltage	15,5 kV, rms	
Continuous current	630 A, rms	X
Number of poles	3	
Frequency	60 Hz	X
Symmetrical interrupting current	16 kA, rms	X
Symmetrical making current	41,6 kA, rms	X
Line charging interrupting current	2 A	X
Cable charging interrupting current	10 A, rms	X
Control voltage	220 V a.c.	

X = This rating has been proved by the tests of this Certificate.

DESCRIPTION OF APPARATUS TESTED

A three-phase solid insulated automatic circuit recloser equipped with vacuum interrupters

Mechanism:

Dependent power closing (magnetic actuator).

Dependet power opening (magnetic actuator).

Control of automatic circuit recloser by means of control box, therefore no opening and closing times given in this Certificate.

Control box Type: EVRC2A

Serial number: 0906 0001

TRAVEL RECORDER

No travel recorder fitted.

LIST OF DRAWINGS

The manufacturer has guaranteed that the equipment submitted for tests has been manufactured in accordance with the drawings mentioned below.

KEMA has verified that these drawings adequately represent the equipment tested.

The following drawings have been included in this Certificate:

Drawing No.	Rev. No.
EPR1-KE001	0

The following drawings are only listed for reference and are kept in KEMA's files:

Drawing No.	Rev. No.
EPR1-KE002	0
EPR1-21000D	0
EPR1-22000D	0
EPR1-31000D	0
EPR1-31010E-1	0
EPR1-31200D-1	2
EPR1-31205E-1	0
EPR1-33000D	0
PEB-31102D	0
EPR1-31012E	0

THE TESTS WERE WITNESSED BY

Name

Kim, Y.
Choi, M.
Yang, W.

Company

ENTEC Electric & Electronic Co., Ltd.,
Gyungki-Do, Korea-South

THE TESTS WERE OBSERVED BY

Name

Dobbe, N.
Hofstee, A.B.
Wiggers, R.

Company

KEMA,
Arnhem, The Netherlands

ELECTROCON SRL

PHASE INDICATIONS

If more than one phase is recorded on oscillogram, the phases are indicated by the digits 1, 2 and 3. These phases 1, 2 and 3 correspond to the phase values in the columns of the accompanying table, respectively from left to right.

EXPLANATION OF THE LETTER SYMBOLS AND ABBREVIATIONS ON THE OSCILLOGRAMS

pu	Per unit (the reference length of one unit is represented by the black bar on the oscillogram)
CS1	Timing signal contact separation
CS2	Timing signal contact separation
CS3	Timing signal contact separation
I1TO	Current through test object
I2TO	Current through test object
I3TO	Current through test object
Itank	Tank current test object
ITOcl	Current closing coil test object
ITOop	Current opening coil test object
ITrip	Current closing coil auxiliary breaker
U1arc	Arc voltage
U1L	Load voltage
U1S	Supply voltage
U1TO	Voltage across test object
U2arc	Arc voltage
U2L	Load voltage
U2S	Supply voltage
U2TO	Voltage across test object
U3arc	Arc voltage
U3L	Load voltage
U3S	Supply voltage
U3TO	Voltage across test object

Test no.			100526 6001					
Operation			CO					
Current closing coil		A	-					
	C	ms	-					
Closing time	B	ms	-					
	A	ms	-					
Current opening coil		A	-					
	C	ms	-					
Opening time	B	ms	-					
	A	ms	-					
Voltage closing coil		Vd.c.	-					
Voltage opening coil		Vd.c.	-					
Gas pressure at 20 °C		MPa	-					

REMARKS

100526-6001 -

Test no.			100526 6004					
	C	kA	-28,3					
Peak value of current	B	kA	-37,4					
	A	kA	42,3					
	C	kA	16,3					
Symmetrical current, beginning	B	kA	16,6					
	A	kA	16,3					
	C	kA	15,8					
Symmetrical current, middle	B	kA	16,0					
	A	kA	15,8					
	C	kA	15,6					
Symmetrical current, end	B	kA	15,8					
	A	kA	15,5					
	C	kA	16,0					
Symmetrical current, average	B	kA	16,2					
	A	kA	15,9					
		kA	16,0					
Average current, three phase		kA	16,0					
Current duration		s	3,04					
Thermal equivalent			16,0kA during 3,05 s					
Gas pressure at 20 °C		MPa	-					

REMARKS

100526-6004 No visible disturbance.

Test no.			100526 6005					
Operation			O					
Current opening coil		A	-					
	C	ms	-					
Opening time	B	ms	-					
	A	ms	-					
Voltage opening coil		Vd.c.	-					
Gas pressure at 20 °C		MPa	-					

REMARKS

100526-6005 -

Test no.		100526 6008	100526 6009	100526 6010	100526 6011	100526 6012	100526 6013	
Time interval since previous test	min	-	-	-	-	-	-	
Operation		CO	CO	CO	CO	CO	CO	
Applied voltage, phase value	C	kV	8,98	9,04	9,06	9,06	9,07	9,06
	B	kV	8,95	9,01	9,03	9,03	9,03	9,02
	A	kV	8,98	9,03	9,05	9,06	9,06	9,06
Applied voltage, between phases		kV	15,5	15,6	15,7	15,7	15,7	15,7
	C	kA	1,34	1,24	1,31	1,27	1,28	1,53
	B	kA	-1,44	-1,52	-1,49	-1,51	-1,50	-1,27
Making current, peak	A	kA	0,995	1,18	1,08	1,15	1,12	-1,18
	C	kA	0,633	0,636	0,637	0,638	0,637	0,638
	B	kA	0,634	0,638	0,639	0,639	0,639	0,639
Breaking current, phase value	A	kA	0,634	0,638	0,639	0,640	0,639	0,639
		kA	0,634	0,637	0,638	0,639	0,638	0,639
	C	%	8	6	7	6	6	11
Breaking current, DC-component	B	%	10	11	10	11	10	6
	A	%	2	5	3	4	4	5
	C	kV	8,92	8,97	8,99	8,98	8,99	8,99
Recovery voltage, phase value	B	kV	8,89	8,93	8,95	8,96	8,95	8,96
	A	kV	8,92	8,97	8,98	8,99	8,98	8,99
		kV	15,4	15,5	15,5	15,5	15,5	15,6
Recovery voltage, between phases	C	kV	-	-	-	-	-	-
	B	kV	-	-	-	-	-	-
	A	kV	-	-	-	-	-	-
TRV, peak	C	ms	43,1	43,0	43,1	43,2	43,2	42,7
	B	ms	43,1	43,0	43,1	43,2	43,2	42,7
	A	ms	43,1	43,0	43,1	43,2	43,2	42,7
Make time	C	ms	6,6	6,7	2,0	2,0	7,4	6,3
	B	ms	2,6	2,8	5,8	5,8	3,0	6,2
	A	ms	6,6	6,7	5,8	5,8	7,4	2,5
Arc duration		ms	15,6	15,3	15,3	15,3	15,2	15,0
	C	ms	22,2	22,0	17,3	17,3	22,6	21,3
	B	ms	18,2	18,1	21,1	21,1	18,2	21,2
Opening time	A	ms	22,2	22,0	21,1	21,1	22,6	17,5
		Vd.c.	-	-	-	-	-	-
		Vd.c.	-	-	-	-	-	-
Voltage closing coil		MPa	-	-	-	-	-	
Voltage opening coil								
Gas pressure at 20 °C								

REMARKS

100526-6008	Recloser closed and cleared.
100526-6009	Recloser closed and cleared.
100526-6010	Recloser closed and cleared.
100526-6011	Recloser closed and cleared.
100526-6012	Recloser closed and cleared.
100526-6013	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100526 6014	100526 6015	100526 6016	100526 6017		
Time interval since previous test	min	-	-	-	-		
Operation		CO	CO	CO	CO		
Applied voltage, phase value	C	kV	9,07	9,07	9,06	9,06	
	B	kV	9,02	9,03	9,03	9,03	
	A	kV	9,06	9,05	9,05	9,05	
Applied voltage, between phases		kV	15,7	15,7	15,7	15,7	
Making current, peak	C	kA	1,51	1,53	1,51	1,39	
	B	kA	-1,36	-1,27	-1,10	1,02	
	A	kA	-1,07	-1,17	-1,32	-1,50	
Breaking current, phase value	C	kA	0,638	0,638	0,637	0,638	
	B	kA	0,639	0,639	0,639	0,639	
	A	kA	0,639	0,639	0,639	0,639	
Average current, three phase		kA	0,639	0,639	0,638	0,639	
Breaking current, DC-component	C	%	10	10	10	8	
	B	%	8	6	3	2	
	A	%	3	4	7	10	
Recovery voltage, phase value	C	kV	8,99	9,00	8,99	8,98	
	B	kV	8,96	8,95	8,95	8,95	
	A	kV	8,99	8,98	8,97	8,98	
Recovery voltage, between phases		kV	15,6	15,5	15,5	15,5	
TRV, peak	C	kV	-	-	-	-	
	B	kV	-	-	-	-	
	A	kV	-	-	-	-	
Make time	C	ms	43,0	43,2	43,1	43,7	
	B	ms	43,0	43,2	43,1	43,7	
	A	ms	43,0	43,2	43,1	43,7	
Arc duration	C	ms	5,5	4,4	5,9	7,6	
	B	ms	1,4	0,2	6,0	3,1	
	A	ms	5,5	4,3	1,4	7,6	
Opening time		ms	14,9	15,6	15,4	15,5	
Break time	C	ms	20,4	20,0	21,3	23,1	
	B	ms	16,3	15,8	21,4	18,6	
	A	ms	20,4	19,9	16,8	23,1	
Voltage closing coil	Vd.c.	-	-	-	-		
Voltage opening coil	Vd.c.	-	-	-	-		
Gas pressure at 20 °C	MPa	-	-	-	-		

REMARKS

100526-6014	Recloser closed and cleared.
100526-6015	Recloser closed and cleared.
100526-6016	Recloser closed and cleared.
100526-6017	Recloser closed and cleared.

Test no.			100526 6020	100526 6021	100526 6022	100526 6023	100526 6024	100526 6025
Operation			CO	CO	CO	CO	CO	CO
	C	kV	9,06	9,05	9,06	9,06	9,06	9,07
Applied voltage, phase value	B	kV	9,03	9,03	9,03	9,03	9,03	9,03
	A	kV	9,06	9,05	9,06	9,05	9,05	9,05
Applied voltage, between phases		kV	15,7	15,7	15,7	15,7	15,7	15,7
	C	ms	44,7	44,3	125	44,3	43,6	43,0
Make time	B	ms	44,7	44,3	124	44,3	43,6	43,0
	A	ms	44,7	44,3	124	44,3	43,6	43,0
Closing time		ms	-	-	-	-	-	-
	C	A	10,6	10,6	10,6	10,6	10,6	10,6
Breaking current, phase value	B	A	10,6	10,6	10,6	10,6	10,6	10,6
	A	A	10,6	10,6	10,6	10,6	10,6	10,6
Average current, three phase		A	10,6	10,6	10,6	10,6	10,6	10,6
	C	kV	9,09	9,10	9,10	9,10	9,09	9,09
Test voltage, phase value	B	kV	9,06	9,06	9,07	9,06	9,06	9,06
	A	kV	9,09	9,09	9,10	9,10	9,10	9,10
Test voltage, between phases		kV	15,7	15,7	15,7	15,7	15,7	15,7
Opening time		ms	15,3	15,4	15,8	15,6	16,4	16,0
	C	ms	0,3	4,0	4,8	3,6	4,4	4,3
Arc duration	B	ms	3,7	4,0	1,1	0,1	0,4	0,7
	A	ms	3,7	0,2	4,8	3,6	4,4	4,3
	C	ms	15,6	19,4	20,6	19,2	20,8	20,3
Break time	B	ms	19,0	19,4	16,9	15,7	16,8	16,7
	A	ms	19,0	15,6	20,6	19,2	20,8	20,3
	C	kV	30,4	-21,7	-25,0	-25,0	-25,1	-25,3
Recovery voltage, peak value	B	kV	21,5	24,7	29,7	29,8	29,6	29,3
	A	kV	-24,8	-30,0	21,4	21,4	21,6	20,9
	C	kV	-13,1	13,1	13,1	13,2	13,1	13,2
Supply voltage, peak value	B	kV	-13,0	-13,0	-13,2	-13,2	-13,2	-13,2
	A	kV	13,2	13,3	-13,0	-12,9	-13,0	-12,9
	C	kV	-17,6	8,98	12,4	12,4	12,3	12,6
Load voltage, peak value	B	kV	-8,76	-12,0	-17,1	-17,1	-16,9	-16,6
	A	kV	12,1	17,4	-8,61	-8,52	-8,70	-8,05
Voltage closing coil		Vd.c.	-	-	-	-	-	-
Voltage opening coil		Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C		MPa	-	-	-	-	-	-

REMARKS

100526-6020	Recloser closed and cleared.
100526-6021	Recloser closed and cleared.
100526-6022	Recloser closed and cleared.
100526-6023	Recloser closed and cleared.
100526-6024	Recloser closed and cleared.
100526-6025	Recloser closed and cleared.

SUMMARY (continued)

Test no.			100526 6026	100526 6027	100526 6028	100526 6029	100526 6030	100526 6031
Operation			CO	CO	CO	CO	CO	CO
	C	kV	9,07	9,06	9,06	9,06	9,06	9,06
Applied voltage, phase value	B	kV	9,03	9,03	9,03	9,03	9,03	9,03
	A	kV	9,05	9,05	9,05	9,06	9,06	9,04
Applied voltage, between phases		kV	15,7	15,7	15,7	15,7	15,7	15,7
	C	ms	43,7	43,1	43,0	42,6	42,9	42,7
Make time	B	ms	43,7	43,1	43,0	42,6	42,9	42,7
	A	ms	43,7	43,1	43,0	42,6	42,9	42,7
Closing time		ms	-	-	-	-	-	-
	C	A	10,6	10,6	10,6	10,6	10,6	10,6
Breaking current, phase value	B	A	10,6	10,6	10,6	10,6	10,6	10,6
	A	A	10,6	10,6	10,6	10,6	10,6	10,6
Average current, three phase		A	10,6	10,6	10,6	10,6	10,6	10,6
	C	kV	9,09	9,09	9,09	9,10	9,10	9,08
Test voltage, phase value	B	kV	9,07	9,06	9,06	9,07	9,06	9,06
	A	kV	9,10	9,10	9,10	9,10	9,10	9,10
Test voltage, between phases		kV	15,7	15,7	15,7	15,7	15,7	15,7
Opening time		ms	14,7	14,5	16,0	15,1	16,3	15,2
	C	ms	4,0	4,0	0,3	5,1	0,4	5,0
Arc duration	B	ms	0,6	0,5	3,7	5,1	3,3	1,3
	A	ms	4,0	4,0	3,7	1,4	3,3	5,0
	C	ms	18,7	18,5	16,3	20,2	16,7	20,2
Break time	B	ms	15,3	15,0	19,7	20,2	19,6	16,5
	A	ms	18,7	18,5	19,7	16,5	19,6	20,2
	C	kV	-25,0	-24,6	-29,4	21,5	-29,4	25,2
Recovery voltage, peak value	B	kV	30,0	30,5	-20,7	-25,0	-20,7	-29,8
	A	kV	21,5	22,1	25,1	30,0	25,5	-21,2
	C	kV	13,2	13,2	13,3	-13,0	13,3	-13,0
Supply voltage, peak value	B	kV	-13,2	-13,1	12,9	13,1	12,9	13,2
	A	kV	-13,0	-13,0	-13,0	-13,1	-13,0	13,1
	C	kV	12,3	11,9	16,7	-8,70	16,7	-12,5
Load voltage, peak value	B	kV	-17,3	-17,8	7,95	12,2	8,00	17,1
	A	kV	-8,71	-9,20	-12,3	-17,2	-12,7	8,49
Voltage closing coil		Vd.c.	-	-	-	-	-	-
Voltage opening coil		Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C		MPa	-	-	-	-	-	-

REMARKS

100526-6026	Recloser closed and cleared.
100526-6027	Recloser closed and cleared.
100526-6028	Recloser closed and cleared.
100526-6029	Recloser closed and cleared.
100526-6030	Recloser closed and cleared.
100526-6031	Recloser closed and cleared.

SUMMARY (continued)

Test no.			100526 6032	100526 6033	100526 6034	100526 6035	100526 6036	100526 6037
Operation			CO	CO	CO	CO	CO	CO
	C	kV	9,07	9,06	9,06	9,06	9,06	9,07
Applied voltage, phase value	B	kV	9,03	9,03	9,03	9,03	9,03	9,04
	A	kV	9,06	9,05	9,05	9,06	9,06	9,06
Applied voltage, between phases		kV	15,7	15,7	15,7	15,7	15,7	15,7
	C	ms	43,2	43,5	43,5	43,7	43,7	43,5
Make time	B	ms	43,2	43,5	43,5	43,7	43,7	43,5
	A	ms	43,2	43,5	43,5	43,7	43,7	43,5
Closing time		ms	-	-	-	-	-	-
	C	A	10,6	10,6	10,6	10,6	10,6	10,6
Breaking current, phase value	B	A	10,6	10,6	10,6	10,6	10,6	10,6
	A	A	10,6	10,6	10,6	10,6	10,6	10,6
Average current, three phase		A	10,6	10,6	10,6	10,6	10,6	10,6
	C	kV	9,09	9,10	9,09	9,08	9,10	9,09
Test voltage, phase value	B	kV	9,06	9,07	9,06	9,06	9,07	9,07
	A	kV	9,10	9,11	9,10	9,10	9,11	9,10
Test voltage, between phases		kV	15,7	15,8	15,7	15,7	15,8	15,7
Opening time		ms	15,8	15,0	15,0	15,3	15,5	15,6
	C	ms	4,2	4,1	4,4	4,4	4,4	0,6
Arc duration	B	ms	0,6	0,7	0,6	0,5	0,6	4,1
	A	ms	4,2	4,1	4,4	4,4	4,4	4,2
	C	ms	20,0	19,1	19,4	19,7	19,9	16,2
Break time	B	ms	16,4	15,7	15,6	15,8	16,1	19,7
	A	ms	20,0	19,1	19,4	19,7	19,9	19,8
	C	kV	25,2	25,5	24,8	25,2	25,2	29,5
Recovery voltage, peak value	B	kV	-30,1	-29,3	-30,6	-29,6	-29,7	20,7
	A	kV	-21,5	-20,5	-22,0	-21,3	-21,3	-25,3
	C	kV	-13,0	-13,1	-13,1	-13,0	-13,0	-13,1
Supply voltage, peak value	B	kV	13,2	13,2	13,2	13,2	13,2	-12,9
	A	kV	13,1	13,1	13,1	13,1	13,1	13,2
	C	kV	-12,3	-12,7	-11,9	-12,4	-12,4	-16,7
Load voltage, peak value	B	kV	17,4	16,7	17,9	17,0	17,1	-7,89
	A	kV	8,80	7,83	9,30	8,60	8,62	12,7
Voltage closing coil		Vd.c.	-	-	-	-	-	-
Voltage opening coil		Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C		MPa	-	-	-	-	-	-

REMARKS	
100526-6032	Recloser closed and cleared.
100526-6033	Recloser closed and cleared.
100526-6034	Recloser closed and cleared.
100526-6035	Recloser closed and cleared.
100526-6036	Recloser closed and cleared.
100526-6037	Recloser closed and cleared.

SUMMARY (continued)

Test no.			100526 6038	100526 6039				
Operation			CO	CO				
	C	kV	9,07	9,07				
Applied voltage, phase value	B	kV	9,03	9,03				
	A	kV	9,06	9,05				
Applied voltage, between phases		kV	15,7	15,7				
	C	ms	43,2	43,8				
Make time	B	ms	43,2	43,8				
	A	ms	43,2	43,8				
Closing time		ms	-	-				
	C	A	10,6	10,6				
Breaking current, phase value	B	A	10,6	10,6				
	A	A	10,6	10,6				
Average current, three phase		A	10,6	10,6				
	C	kV	9,10	9,10				
Test voltage, phase value	B	kV	9,06	9,07				
	A	kV	9,11	9,10				
Test voltage, between phases		kV	15,7	15,7				
Opening time		ms	15,1	15,3				
	C	ms	6,0	4,5				
Arc duration	B	ms	6,0	4,5				
	A	ms	2,2	0,7				
	C	ms	21,1	19,8				
Break time	B	ms	21,1	19,8				
	A	ms	17,3	16,0				
	C	kV	-21,7	-21,5				
Recovery voltage, peak value	B	kV	24,7	24,9				
	A	kV	-29,9	-29,9				
	C	kV	13,1	13,1				
Supply voltage, peak value	B	kV	-13,0	-13,0				
	A	kV	13,3	13,3				
	C	kV	8,90	8,80				
Load voltage, peak value	B	kV	-12,0	-12,1				
	A	kV	17,3	17,3				
Voltage closing coil		Vd.c.	-	-				
Voltage opening coil		Vd.c.	-	-				
Gas pressure at 20 °C		MPa	-	-				

REMARKS	
100526-6038	Recloser closed and cleared.
100526-6039	Recloser closed and cleared.

Test no.			100526 6042	100526 6043	100526 6044	100526 6045	100526 6046	100526 6047
Operation			CO	CO	CO	CO	CO	CO
	C	kV	8,99	9,10	9,11	9,11	9,11	9,11
Applied voltage, phase value	B	kV	8,97	9,08	9,09	9,09	9,08	9,09
	A	kV	8,90	9,01	9,01	9,02	9,01	9,02
Applied voltage, between phases		kV	15,5	15,7	15,7	15,7	15,7	15,7
	C	ms	43,4	43,6	43,2	43,5	43,1	43,3
Make time	B	ms	43,4	43,6	43,2	43,5	43,1	43,3
	A	ms	43,4	43,6	43,2	43,5	43,1	43,3
Closing time		ms	-	-	-	-	-	-
	C	A	2,05	2,07	2,07	2,07	2,07	2,07
Breaking current, phase value	B	A	2,05	2,07	2,07	2,07	2,07	2,07
	A	A	2,05	2,07	2,07	2,07	2,07	2,07
Average current, three phase		A	2,05	2,07	2,07	2,07	2,07	2,07
	C	kV	8,99	9,11	9,10	9,11	9,11	9,10
Test voltage, phase value	B	kV	8,99	9,10	9,09	9,09	9,09	9,09
	A	kV	8,93	9,04	9,04	9,04	9,05	9,04
Test voltage, between phases		kV	15,5	15,7	15,7	15,7	15,7	15,7
Opening time		ms	14,8	14,3	15,0	15,5	14,0	14,7
	C	ms	1,7	0,9	2,0	0,9	0,9	0,7
Arc duration	B	ms	0,5	2,2	0,3	0,6	0,5	0,3
	A	ms	0,5	0,9	0,4	0,7	0,9	0,8
	C	ms	16,5	15,2	17,0	16,4	14,9	15,4
Break time	B	ms	15,3	16,5	15,3	16,1	14,5	15,0
	A	ms	15,3	15,2	15,4	16,2	14,9	15,5
	C	kV	-21,3	-25,5	-21,7	8,49	18,7	10,9
Recovery voltage, peak value	B	kV	-13,3	21,6	-13,6	-18,7	-24,8	-21,4
	A	kV	25,1	18,3	25,2	25,8	20,7	24,1
	C	kV	13,3	13,4	13,4	13,3	13,2	13,1
Supply voltage, peak value	B	kV	13,0	-12,9	13,2	13,2	13,3	13,1
	A	kV	12,9	12,9	13,0	13,0	12,9	12,9
	C	kV	8,97	13,0	9,13	4,83	-5,51	2,16
Load voltage, peak value	B	kV	0,865	-8,67	0,880	6,10	12,1	8,70
	A	kV	-12,3	-5,39	-12,2	-12,8	-7,82	-11,3
Voltage closing coil		Vd.c.	-	-	-	-	-	-
Voltage opening coil		Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C		MPa	-	-	-	-	-	-

REMARKS	
100526-6042	Recloser closed and cleared.
100526-6043	Recloser closed and cleared.
100526-6044	Recloser closed and cleared.
100526-6045	Recloser closed and cleared.
100526-6046	Recloser closed and cleared.
100526-6047	Recloser closed and cleared.

SUMMARY (continued)

Test no.			100526 6048	100526 6049	100526 6050	100526 6051	100526 6052	100526 6053
Operation			CO	CO	CO	CO	CO	CO
	C	kV	9,10	9,11	9,11	9,11	9,11	9,11
Applied voltage, phase value	B	kV	9,09	9,09	9,08	9,09	9,09	9,08
	A	kV	9,01	9,01	9,01	9,02	9,02	9,01
Applied voltage, between phases		kV	15,7	15,7	15,7	15,7	15,7	15,7
	C	ms	43,2	43,2	43,3	43,6	43,4	43,6
Make time	B	ms	43,2	43,2	43,3	43,6	43,4	43,6
	A	ms	43,2	43,2	43,3	43,6	43,4	43,6
Closing time		ms	-	-	-	-	-	-
	C	A	2,07	2,07	2,07	2,07	2,07	2,07
Breaking current, phase value	B	A	2,07	2,07	2,07	2,07	2,07	2,07
	A	A	2,07	2,07	2,07	2,07	2,07	2,07
Average current, three phase		A	2,07	2,07	2,07	2,07	2,07	2,07
	C	kV	9,10	9,10	9,12	9,10	9,10	9,11
Test voltage, phase value	B	kV	9,09	9,09	9,10	9,09	9,08	9,08
	A	kV	9,04	9,04	9,05	9,04	9,05	9,04
Test voltage, between phases		kV	15,7	15,7	15,7	15,7	15,7	15,7
Opening time		ms	14,1	13,6	14,6	14,3	14,5	14,7
	C	ms	1,1	1,5	0,8	1,7	1,1	1,0
Arc duration	B	ms	0,8	1,2	1,2	1,2	0,8	0,7
	A	ms	0,9	1,5	0,8	1,7	1,1	1,0
	C	ms	15,2	15,1	15,4	16,0	15,6	15,7
Break time	B	ms	14,9	14,8	15,8	15,5	15,3	15,4
	A	ms	15,0	15,1	15,4	16,0	15,6	15,7
	C	kV	13,9	18,7	24,5	25,8	-7,25	-7,24
Recovery voltage, peak value	B	kV	-22,8	-25,0	-24,5	-22,2	17,3	17,5
	A	kV	23,8	20,3	-13,1	-17,2	-25,8	-25,7
	C	kV	13,2	13,1	-13,1	-13,2	-13,3	-13,2
Supply voltage, peak value	B	kV	13,3	13,2	13,1	13,0	-13,2	-13,2
	A	kV	12,9	12,9	-12,8	12,9	-12,9	12,9
	C	kV	-0,698	-5,63	-11,5	-13,0	-5,98	-5,94
Load voltage, peak value	B	kV	10,1	12,3	11,7	9,37	-4,69	-4,87
	A	kV	-10,9	-7,51	0,346	4,44	13,0	12,9
Voltage closing coil		Vd.c.	-	-	-	-	-	-
Voltage opening coil		Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C		MPa	-	-	-	-	-	-

REMARKS

100526-6048	Recloser closed and cleared.
100526-6049	Recloser closed and cleared.
100526-6050	Recloser closed and cleared.
100526-6051	Recloser closed and cleared.
100526-6052	Recloser closed and cleared.
100526-6053	Recloser closed and cleared.

SUMMARY (continued)

Test no.			100526 6054	100526 6055	100526 6056	100526 6057	100526 6058	100526 6059
Operation			CO	CO	CO	CO	CO	CO
	C	kV	9,11	9,11	9,11	9,12	9,10	9,11
Applied voltage, phase value	B	kV	9,09	9,09	9,08	9,09	9,08	9,09
	A	kV	9,02	9,02	9,02	9,02	9,01	9,01
Applied voltage, between phases		kV	15,7	15,7	15,7	15,7	15,7	15,7
	C	ms	43,5	43,7	43,6	44,0	43,0	43,3
Make time	B	ms	43,5	43,7	43,6	44,0	43,0	43,3
	A	ms	43,5	43,7	43,6	44,0	43,0	43,3
Closing time		ms	-	-	-	-	-	-
	C	A	2,07	2,07	2,07	2,07	2,07	2,07
Breaking current, phase value	B	A	2,07	2,07	2,07	2,07	2,07	2,07
	A	A	2,07	2,07	2,07	2,07	2,07	2,07
Average current, three phase		A	2,07	2,07	2,07	2,07	2,07	2,07
	C	kV	9,11	9,10	9,11	9,11	9,11	9,11
Test voltage, phase value	B	kV	9,09	9,09	9,09	9,10	9,10	9,10
	A	kV	9,04	9,04	9,05	9,05	9,04	9,05
Test voltage, between phases		kV	15,7	15,7	15,7	15,7	15,7	15,7
Opening time		ms	14,3	14,4	13,9	14,1	13,6	14,5
	C	ms	1,4	0,7	1,4	1,7	1,3	1,0
Arc duration	B	ms	1,0	0,3	1,0	1,4	0,2	0,6
	A	ms	0,9	0,7	1,5	1,7	1,3	1,0
	C	ms	15,7	15,1	15,3	15,8	14,9	15,5
Break time	B	ms	15,3	14,7	14,9	15,5	13,8	15,1
	A	ms	15,2	15,1	15,4	15,8	14,9	15,5
	C	kV	22,5	-19,4	-17,8	-18,7	-23,1	-18,8
Recovery voltage, peak value	B	kV	15,0	24,7	24,3	24,2	25,0	24,7
	A	kV	-24,7	-20,2	-21,3	-21,0	10,8	-20,2
	C	kV	-13,1	-13,0	-13,0	-13,1	13,2	-13,0
Supply voltage, peak value	B	kV	-12,9	-13,4	-13,3	-13,4	-13,2	-13,3
	A	kV	13,1	12,9	12,8	-12,9	12,9	12,8
	C	kV	-9,63	6,31	4,78	5,64	10,3	5,81
Load voltage, peak value	B	kV	-2,11	-12,1	-11,7	-11,6	-12,3	-12,0
	A	kV	12,1	7,39	8,49	8,15	2,04	7,45
Voltage closing coil	Vd.c.		-	-	-	-	-	-
Voltage opening coil	Vd.c.		-	-	-	-	-	-
Gas pressure at 20 °C	MPa		-	-	-	-	-	-

REMARKS

100526-6054	Recloser closed and cleared.
100526-6055	Recloser closed and cleared.
100526-6056	Recloser closed and cleared.
100526-6057	Recloser closed and cleared.
100526-6058	Recloser closed and cleared.
100526-6059	Recloser closed and cleared.

SUMMARY (continued)

Test no.			100526 6060	100526 6061				
Operation			CO	CO				
	C	kV	9,11	9,11				
Applied voltage, phase value	B	kV	9,08	9,09				
	A	kV	9,01	9,02				
Applied voltage, between phases		kV	15,7	15,7				
	C	ms	43,6	43,5				
Make time	B	ms	43,6	43,5				
	A	ms	43,6	43,5				
Closing time		ms	-	-				
	C	A	2,07	2,07				
Breaking current, phase value	B	A	2,07	2,07				
	A	A	2,07	2,07				
Average current, three phase		A	2,07	2,07				
	C	kV	9,11	9,11				
Test voltage, phase value	B	kV	9,09	9,09				
	A	kV	9,05	9,05				
Test voltage, between phases		kV	15,7	15,7				
Opening time		ms	13,9	14,4				
	C	ms	1,4	1,3				
Arc duration	B	ms	1,6	0,8				
	A	ms	1,4	0,8				
	C	ms	15,3	15,7				
Break time	B	ms	15,5	15,2				
	A	ms	15,3	15,2				
	C	kV	-25,6	-22,3				
Recovery voltage, peak value	B	kV	22,2	-13,1				
	A	kV	17,7	24,9				
	C	kV	13,4	13,4				
Supply voltage, peak value	B	kV	-13,0	13,1				
	A	kV	13,0	13,0				
	C	kV	12,9	9,83				
Load voltage, peak value	B	kV	-9,31	0,378				
	A	kV	-4,73	-11,9				
Voltage closing coil		Vd.c.	-	-				
Voltage opening coil		Vd.c.	-	-				
Gas pressure at 20 °C		MPa	-	-				

REMARKS	
100526-6060	Recloser closed and cleared.
100526-6061	Recloser closed and cleared.

Test no.		100526 6070	100526 6071	100526 6072	100526 6073	100527 6015	100527 6016	
Time interval since previous test	min	-	-	-	-	-	-	
Time interval between operations	s	-	0,515	1,04	0,989	-	0,528	
Operation		O	CO	CO	CO	O	CO	
Applied voltage, phase value	C	kV	-	9,42	9,43	9,50	-	9,42
	B	kV	-	9,39	9,40	9,47	-	9,40
	A	kV	-	9,42	9,42	9,50	-	9,43
Applied voltage, between phases		kV	-	16,3	16,3	16,4	-	16,3
	C	kA	-	-5,04	-7,54	7,42	-	4,59
	B	kA	-	-6,94	7,02	-3,83	-	-7,90
Making current, peak	A	kA	-	7,90	4,65	-7,66	-	7,79
	C	kA	2,89	2,90	2,88	2,89	2,89	2,91
	B	kA	2,88	2,88	2,86	2,88	2,83	2,89
Breaking current, phase value	A	kA	2,88	2,89	2,87	2,88	2,88	2,90
		kA	2,88	2,89	2,87	2,88	2,87	2,9
	C	%	55	19	41	37	51	3
Breaking current, DC-component	B	%	53	60	34	7	100	74
	A	%	25	78	7	42	34	69
	C	kV	9,37	9,33	9,37	9,39	9,33	9,35
Recovery voltage, phase value	B	kV	9,29	9,33	9,34	9,35	9,30	9,35
	A	kV	9,35	9,36	9,34	9,40	9,30	9,38
		kV	16,2	16,2	16,2	16,2	16,1	16,2
Recovery voltage, between phases	C	kV	-20,1	32,5	17,4	-18,5	-11,0	32,8
	B	kV	19,7	14,4	-18,1	33,6	12,2	13,7
	A	kV	18,2	-12,3	32,5	17,0	-30,0	-11,8
TRV, peak	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Make time	C	ms	6,3	4,7	10,1	9,1	3,7	4,5
	B	ms	0,1	10,6	10,1	3,7	2,1	11,0
	A	ms	6,3	10,6	4,7	9,1	-2,4	11,1
Arc duration		ms	-	-	-	-	-	-
	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
Opening time	A	ms	-	-	-	-	-	-
	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
Break time	A	ms	-	-	-	-	-	-
		Vd.c.	-	-	-	-	-	-
	C	Vd.c.	-	-	-	-	-	-
Voltage closing coil		Vd.c.	-	-	-	-	-	
		Vd.c.	-	-	-	-	-	
Voltage opening coil		MPa	-	-	-	-	-	
		MPa	-	-	-	-	-	

REMARKS	
100526-6070	Recloser closed.
100526-6071	Recloser closed and cleared.
100526-6072	Recloser closed and cleared.
100526-6073	Recloser closed and cleared.
100527-6015	Recloser closed.
100527-6016	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6017	100527 6018	100527 6019	100527 6020	100527 6021	100527 6022	
Time interval since previous test	min	-	-	-	-	-	-	
Time interval between operations	s	1,01	1,02	-	0,514	1,01	1,02	
Operation		CO	CO	O	CO	CO	CO	
Applied voltage, phase value	C	kV	9,51	9,62	-	9,36	9,32	9,33
	B	kV	9,48	9,61	-	9,34	9,30	9,31
	A	kV	9,51	9,62	-	9,37	9,34	9,32
Applied voltage, between phases		kV	16,5	16,7	-	16,2	16,1	16,1
	C	kA	-4,90	-7,94	-	-5,64	-7,98	5,98
	B	kA	8,20	-4,66	-	-6,80	6,90	6,44
Making current, peak	A	kA	-7,83	8,04	-	8,17	5,43	-8,21
	C	kA	2,91	2,95	2,88	2,88	2,84	2,84
	B	kA	2,90	2,93	2,83	2,86	2,83	2,83
Breaking current, phase value	A	kA	2,90	2,94	2,87	2,83	2,84	2,84
		kA	2,9	2,94	2,86	2,86	2,84	2,84
	C	%	6	39	53	28	44	20
Breaking current, DC-component	B	%	45	2	100	52	30	26
	A	%	39	42	30	3	14	47
	C	kV	9,45	9,54	9,33	9,29	9,28	9,27
Recovery voltage, phase value	B	kV	9,36	9,49	9,25	9,29	9,25	9,22
	A	kV	9,25	9,54	9,30	9,31	9,26	9,27
		kV	16,2	16,5	16,1	16,1	16,0	16,0
Recovery voltage, between phases	C	kV	-19,7	18,6	-19,6	31,5	17,5	-18,4
	B	kV	-0,158	-34,2	26,7	15,6	-17,8	31,9
	A	kV	18,6	-17,4	18,3	-13,5	31,9	17,3
TRV, peak	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Make time	C	ms	6,9	10,0	7,4	4,6	9,1	9,3
	B	ms	2,1	4,6	0,6	10,0	9,1	3,5
	A	ms	6,9	10,0	7,4	10,0	3,5	9,3
Arc duration		ms	-	-	-	-	-	-
	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
Opening time	A	ms	-	-	-	-	-	-
	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
Break time	A	ms	-	-	-	-	-	-
	Vd.c.		-	-	-	-	-	-
	Vd.c.		-	-	-	-	-	-
Voltage closing coil		-	-	-	-	-	-	
Voltage opening coil		-	-	-	-	-	-	
Gas pressure at 20 °C	MPa	-	-	-	-	-	-	

REMARKS

100527-6017 Recloser closed and cleared.

100527-6018 Recloser closed and cleared.

100527-6019 Recloser closed.

100527-6020 Recloser closed and cleared.

100527-6021 Recloser closed and cleared.

100527-6022 Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6023	100527 6024	100527 6025	100527 6026	100527 6027	100527 6028	
Time interval since previous test	min	-	-	-	-	-	-	
Time interval between operations	s	-	0,523	1,02	1,02	-	0,515	
Operation		O	CO	CO	CO	O	CO	
Applied voltage, phase value	C	kV	-	9,41	9,41	9,43	-	9,40
	B	kV	-	9,39	9,39	9,40	-	9,37
	A	kV	-	9,43	9,41	9,43	-	9,40
Applied voltage, between phases		kV	-	16,3	16,3	16,3	-	16,3
	C	kA	-	-2,92	-8,02	5,21	-	8,25
	B	kA	-	-7,99	5,73	-1,28	-	-5,73
Making current, peak	A	kA	-	6,87	-1,75	-7,95	-	1,74
	C	kA	2,89	2,89	2,86	2,88	2,89	2,91
	B	kA	2,84	2,85	2,85	2,86	2,85	2,86
Breaking current, phase value	A	kA	2,88	2,87	2,86	2,86	2,88	2,89
		kA	2,87	2,87	2,86	2,87	2,87	2,89
	C	%	54	24	46	12	54	21
Breaking current, DC-component	B	%	100	100	19	33	100	34
	A	%	30	56	27	45	28	48
	C	kV	9,35	9,35	9,36	9,36	9,30	9,34
Recovery voltage, phase value	B	kV	9,31	9,33	9,33	9,32	9,32	9,33
	A	kV	9,36	9,34	9,33	9,37	9,34	9,31
		kV	16,2	16,2	16,2	16,2	16,1	16,2
Recovery voltage, between phases	C	kV	27,6	-16,1	18,2	-19,0	-27,5	-14,8
	B	kV	18,9	17,0	-18,7	30,9	-16,7	15,7
	A	kV	-11,8	-27,5	31,0	17,8	14,5	-39,6
TRV, peak	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Make time	C	ms	1,6	10,6	7,3	7,6	0,1	8,8
	B	ms	2,3	10,7	7,2	1,8	10,0	8,8
	A	ms	2,3	6,4	1,3	7,6	10,0	1,4
Arc duration		ms	-	-	-	-	-	-
	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
Opening time	A	ms	-	-	-	-	-	-
		ms	-	-	-	-	-	-
	C	ms	-	-	-	-	-	-
Break time	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
		ms	-	-	-	-	-	-
Voltage closing coil	Vd.c.	-	-	-	-	-	-	
Voltage opening coil	Vd.c.	-	-	-	-	-	-	
Gas pressure at 20 °C	MPa	-	-	-	-	-	-	

REMARKS

100527-6023	Recloser closed.
100527-6024	Recloser closed and cleared.
100527-6025	Recloser closed and cleared.
100527-6026	Recloser closed and cleared.
100527-6027	Recloser closed.
100527-6028	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6029	100527 6030	100527 6031	100527 6032	100527 6033	100527 6034	
Time interval since previous test	min	-	-	-	-	-	-	
Time interval between operations	s	1,03	1,02	-	0,519	1,02	1,01	
Operation		CO	CO	O	CO	CO	CO	
Applied voltage, phase value	C	kV	9,39	9,40	-	9,42	9,44	9,47
	B	kV	9,36	9,37	-	9,39	9,40	9,44
	A	kV	9,40	9,40	-	9,43	9,43	9,47
Applied voltage, between phases		kV	16,3	16,3	-	16,3	16,3	16,4
	C	kA	-3,78	-7,58	-	6,76	-7,77	4,40
	B	kA	-7,71	7,04	-	-8,12	-4,45	7,82
Making current, peak	A	kA	7,45	-3,54	-	5,65	7,77	-7,98
	C	kA	2,87	2,86	2,89	2,89	2,88	2,89
	B	kA	2,84	2,85	2,85	2,90	2,86	2,87
Breaking current, phase value	A	kA	2,85	2,86	2,88	2,89	2,87	2,88
		kA	2,85	2,86	2,87	2,89	2,87	2,88
	C	%	4	42	53	50	40	0
Breaking current, DC-component	B	%	44	35	100	0	1	41
	A	%	40	7	30	28	41	42
	C	kV	9,30	9,34	9,36	9,36	9,37	9,40
Recovery voltage, phase value	B	kV	9,31	9,31	9,29	9,34	9,33	9,31
	A	kV	9,33	9,31	9,34	9,35	9,37	9,42
		kV	16,1	16,1	16,2	16,2	16,2	16,2
Recovery voltage, between phases	C	kV	32,7	17,3	-19,7	-14,0	18,3	-19,5
	B	kV	18,5	-18,2	19,9	14,7	-33,1	29,7
	A	kV	-16,2	32,6	18,4	-31,4	-16,9	18,2
TRV, peak	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Make time	C	ms	4,4	9,3	7,6	10,4	9,9	7,8
	B	ms	9,9	9,2	0,8	10,5	4,5	-1,5
	A	ms	9,9	3,7	7,6	5,0	9,8	7,8
Arc duration		ms	-	-	-	-	-	-
	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
Break time	A	ms	-	-	-	-	-	-
		Vd.c.	-	-	-	-	-	-
	C	Vd.c.	-	-	-	-	-	-
Voltage closing coil		Vd.c.	-	-	-	-	-	-
	B	Vd.c.	-	-	-	-	-	-
	A	Vd.c.	-	-	-	-	-	-
Voltage opening coil		MPa	-	-	-	-	-	-
	B	MPa	-	-	-	-	-	-
	A	MPa	-	-	-	-	-	-
Gas pressure at 20 °C								

REMARKS

100527-6029 Recloser closed and cleared.

100527-6030 Recloser closed and cleared.

100527-6031 Recloser closed.

100527-6032 Recloser closed and cleared.

100527-6033 Recloser closed and cleared.

100527-6034 Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6035	100527 6036	100527 6037	100527 6038	100527 6039	100527 6040	
Time interval since previous test	min	-	-	-	-	-	-	
Time interval between operations	s	-	0,519	1,02	1,02	-	0,515	
Operation		O	CO	CO	CO	O	CO	
	C	kV	-	9,42	9,43	9,47	-	9,42
Applied voltage, phase value	B	kV	-	9,40	9,41	9,44	-	9,39
	A	kV	-	9,42	9,43	9,46	-	9,42
Applied voltage, between phases		kV	-	16,3	16,3	16,4	-	16,3
	C	kA	-	6,86	-6,66	1,48	-	8,18
Making current, peak	B	kA	-	-8,11	2,67	7,89	-	-7,03
	A	kA	-	5,36	7,99	-5,34	-	-5,55
	C	kA	2,89	2,89	2,87	2,88	2,89	1,91
Breaking current, phase value	B	kA	2,47	2,90	2,87	2,87	2,83	2,88
	A	kA	2,88	2,89	2,86	2,88	2,88	2,89
Average current, three phase		kA	2,75	2,89	2,87	2,88	2,87	2,56
	C	%	53	52	29	31	53	23
Breaking current, DC-component	B	%	100	14	17	45	100	55
	A	%	29	26	46	14	30	24
	C	kV	9,37	9,32	9,37	9,39	9,30	9,37
Recovery voltage, phase value	B	kV	9,29	6,39	9,32	9,38	9,32	9,35
	A	kV	9,35	9,38	9,38	9,40	9,36	9,35
Recovery voltage, between phases		kV	16,2	14,5	16,2	16,3	16,2	16,2
	C	kV	-19,9	27,6	18,4	-30,8	-27,4	-13,4
TRV, peak	B	kV	19,9	17,4	-32,7	-19,5	-16,6	14,3
	A	kV	18,4	-14,9	-17,1	16,9	14,4	-31,6
	C	ms	-	-	-	-	-	-
Make time	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
	C	ms	8,2	1,6	9,2	2,1	0,9	9,5
Arc duration	B	ms	1,3	8,3	3,5	8,0	10,9	9,5
	A	ms	8,2	8,3	9,2	8,0	10,9	2,6
Opening time		ms	-	-	-	-	-	-
	C	ms	-	-	-	-	-	-
Break time	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Voltage closing coil	Vd.c.	-	-	-	-	-	-	-
Voltage opening coil	Vd.c.	-	-	-	-	-	-	-
Gas pressure at 20 °C	MPa	-	-	-	-	-	-	-

REMARKS

100527-6035	Recloser closed.
100527-6036	Recloser closed and cleared.
100527-6037	Recloser closed and cleared.
100527-6038	Recloser closed and cleared.
100527-6039	Recloser closed.
100527-6040	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6041	100527 6042				
Time interval since previous test	min	-	-				
Time interval between operations	s	1,02	1,02				
Operation		CO	CO				
Applied voltage, phase value	C	kV	9,45	9,49			
	B	kV	9,42	9,47			
	A	kV	9,45	9,51			
Applied voltage, between phases		kV	16,4	16,4			
Making current, peak	C	kA	-5,62	-7,56			
	B	kA	-6,94	8,03			
	A	kA	8,25	-4,79			
Breaking current, phase value	C	kA	2,88	2,89			
	B	kA	2,87	2,88			
	A	kA	2,87	2,89			
Average current, three phase		kA	2,87	2,89			
Breaking current, DC-component	C	%	15	38			
	B	%	31	43			
	A	%	46	5			
Recovery voltage, phase value	C	kV	9,39	9,42			
	B	kV	9,34	9,39			
	A	kV	9,40	9,40			
Recovery voltage, between phases		kV	16,2	16,3			
TRV, peak	C	kV	19,0	17,3			
	B	kV	-31,3	-18,0			
	A	kV	-17,8	32,7			
Make time	C	ms	-	-			
	B	ms	-	-			
	A	ms	-	-			
Arc duration	C	ms	8,4	10,2			
	B	ms	2,5	10,2			
	A	ms	8,4	5,0			
Opening time		ms	-	-			
Break time	C	ms	-	-			
	B	ms	-	-			
	A	ms	-	-			
Voltage closing coil		Vd.c.	-	-			
Voltage opening coil		Vd.c.	-	-			
Gas pressure at 20 °C		MPa	-	-			

REMARKS

100527-6041 Recloser closed and cleared.

100527-6042 Recloser closed and cleared.

Test no.		100527 6043	100527 6044	100527 6045	100527 6046	100527 6047	100527 6048
Time interval since previous test	min	-	-	-	-	-	-
Time interval between operations	s	-	0,517	1,03	1,01	-	0,523
Operation		O	CO	CO	CO	O	CO
Applied voltage, phase value	C kV	-	9,41	9,43	9,46	-	9,42
	B kV	-	9,38	9,24	9,43	-	9,40
	A kV	-	9,42	9,43	9,46	-	9,42
Applied voltage, between phases	kV	-	16,3	16,2	16,4	-	16,3
Making current, peak	C kA	-	8,29	4,52	6,13	-	4,96
	B kA	-	-5,98	-7,95	6,53	-	-8,17
	A kA	-	-6,15	7,73	-8,29	-	7,43
Breaking current, phase value	C kA	2,89	1,91	2,88	2,88	2,89	2,90
	B kA	2,83	2,88	2,86	2,88	2,82	1,91
	A kA	2,88	2,88	2,86	2,87	2,88	2,88
Average current, three phase	kA	2,87	2,56	2,87	2,88	2,86	2,56
Breaking current, DC-component	C %	53	12	2	21	54	11
	B %	100	35	44	26	100	26
	A %	28	38	40	46	26	63
Recovery voltage, phase value	C kV	9,22	9,36	9,36	9,38	9,34	9,35
	B kV	9,33	9,33	9,25	9,35	9,31	9,34
	A kV	9,35	9,23	9,37	9,40	9,36	9,36
Recovery voltage, between phases	kV	16,1	16,1	16,2	16,2	16,2	16,2
TRV, peak	C kV	-18,1	-14,8	21,7	-21,5	-18,1	21,5
	B kV	-14,9	20,9	-19,2	20,8	13,4	15,4
	A kV	21,2	0,164	-20,5	20,0	-20,4	-17,9
Make time	C ms	-	-	-	-	-	-
	B ms	-	-	-	-	-	-
	A ms	-	-	-	-	-	-
Arc duration	C ms	0,5	9,9	5,4	7,0	0,5	3,1
	B ms	12,3	5,6	1,6	3,2	1,4	11,2
	A ms	7,8	2,5	9,3	10,5	1,6	7,8
Opening time	ms	-	-	-	-	-	-
Break time	C ms	-	-	-	-	-	-
	B ms	-	-	-	-	-	-
	A ms	-	-	-	-	-	-
Voltage closing coil	Vd.c.	-	-	-	-	-	-
Voltage opening coil	Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C	MPa	-	-	-	-	-	-

REMARKS

100527-6043	Recloser cleared.
100527-6044	Recloser closed and cleared.
100527-6045	Recloser closed and cleared.
100527-6046	Recloser closed and cleared.
100527-6047	Recloser cleared.
100527-6048	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6049	100527 6050	100527 6051	100527 6052	100527 6053	100527 6054
Time interval since previous test	min	-	-	-	-	-	-
Time interval between operations	s	1,02	1,02	-	0,518	1,02	1,02
Operation		CO	CO	O	CO	CO	CO
Applied voltage, phase value	C kV	9,43	9,46	-	9,42	9,43	9,44
	B kV	9,40	9,43	-	9,39	9,40	9,42
	A kV	9,42	9,46	-	9,42	9,43	9,45
Applied voltage, between phases	kV	16,3	16,4	-	16,3	16,3	16,3
Making current, peak	C kA	-8,19	5,13	-	8,08	-5,95	2,32
	B kA	5,24	7,17	-	-7,32	1,49	8,04
	A kA	-1,33	-7,90	-	-4,84	8,00	-6,36
Breaking current, phase value	C kA	2,87	2,88	2,89	2,90	2,87	2,89
	B kA	2,86	2,87	2,84	2,88	2,87	2,87
	A kA	2,86	2,87	2,88	2,89	2,86	2,87
Average current, three phase	kA	2,86	2,87	2,87	2,89	2,87	2,88
Breaking current, DC-component	C %	46	11	54	20	19	22
	B %	11	37	100	61	31	47
	A %	32	44	29	9	46	26
Recovery voltage, phase value	C kV	9,37	9,30	9,31	9,37	9,35	9,36
	B kV	9,35	9,26	9,26	9,33	9,31	9,36
	A kV	9,33	9,39	9,37	9,34	9,37	9,38
Recovery voltage, between phases	kV	16,2	16,1	16,1	16,2	16,2	16,2
TRV, peak	C kV	20,3	-21,8	-17,8	-15,7	21,5	-21,0
	B kV	-21,9	19,8	11,7	18,7	-20,2	-19,9
	A kV	19,9	20,0	21,4	-21,2	-19,9	21,2
Make time	C ms	-	-	-	-	-	-
	B ms	-	-	-	-	-	-
	A ms	-	-	-	-	-	-
Arc duration	C ms	9,6	5,4	1,8	10,8	6,9	3,1
	B ms	5,8	2,1	0,4	7,5	2,9	10,4
	A ms	2,0	9,2	9,3	2,9	10,5	7,0
Opening time	ms	-	-	-	-	-	-
Break time	C ms	-	-	-	-	-	-
	B ms	-	-	-	-	-	-
	A ms	-	-	-	-	-	-
Voltage closing coil	Vd.c.	-	-	-	-	-	-
Voltage opening coil	Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C	MPa	-	-	-	-	-	-

REMARKS

100527-6049	Recloser closed and cleared.
100527-6050	Recloser closed and cleared.
100527-6051	Recloser cleared.
100527-6052	Recloser closed and cleared.
100527-6053	Recloser closed and cleared.
100527-6054	Recloser closed and cleared.

Test no.		100527 6062	100527 6063	100527 6064	100527 6065	100527 6066	100527 6067
Time interval since previous test	min	-	-	-	-	-	-
Time interval between operations	s	-	0,516	1,01	1,02	-	0,512
Operation		O	CO	CO	CO	O	CO
Applied voltage, phase value	C	kV	-	9,51	9,49	9,61	9,37
	B	kV	-	9,53	9,50	9,62	9,39
	A	kV	-	9,44	9,43	9,55	9,30
Applied voltage, between phases		kV	-	16,4	16,4	16,6	16,2
Making current, peak	C	kA	-	26,0	26,7	24,7	25,5
	B	kA	-	43,9	40,9	42,0	40,1
	A	kA	-	43,1	44,0	43,0	42,4
Breaking current, phase value	C	kA	16,3	16,1	16,2	16,4	15,8
	B	kA	16,7	16,2	16,3	16,5	16,0
	A	kA	16,4	16,1	16,3	16,4	15,8
Average current, three phase		kA	16,5	16,1	16,3	16,4	15,9
Breaking current, DC-component	C	%	15	5	1	1	3
	B	%	61	49	21	20	42
	A	%	50	44	22	19	46
Recovery voltage, phase value	C	kV	9,23	9,20	9,27	9,23	9,01
	B	kV	9,19	9,28	9,25	9,20	9,12
	A	kV	9,20	9,19	9,24	9,21	8,98
Recovery voltage, between phases		kV	15,9	16,0	16,0	16,0	15,7
TRV, peak	C	kV	-17,6	31,0	-13,5	-17,8	-30,0
	B	kV	23,9	15,5	29,6	29,6	18,7
	A	kV	17,4	-14,7	30,6	17,7	-27,0
Make time	C	ms	-	-	-	-	-
	B	ms	-	-	-	-	-
	A	ms	-	-	-	-	-
Arc duration	C	ms	9,2	3,2	6,8	7,7	11,7
	B	ms	0,8	8,9	1,8	2,8	11,8
	A	ms	9,2	8,9	6,8	7,7	8,5
Opening time		ms	-	-	-	-	-
Break time	C	ms	-	-	-	-	-
	B	ms	-	-	-	-	-
	A	ms	-	-	-	-	-
Voltage closing coil		Vd.c.	-	-	-	-	-
Voltage opening coil		Vd.c.	-	-	-	-	-
Gas pressure at 20 °C		MPa	-	-	-	-	-

REMARKS

100527-6062	Recloser cleared.
100527-6063	Recloser closed and cleared.
100527-6064	Recloser closed and cleared.
100527-6065	Recloser closed and cleared.
100527-6066	Recloser cleared.
100527-6067	Recloser closed and cleared. NSDD in C phase after 0,8ms.

SUMMARY (continued)

Test no.		100527 6068	100527 6069	100527 6070	100527 6071	100527 6072	100527 6073
Time interval since previous test	min	-	-	-	-	-	-
Time interval between operations	s	1,02	1,02	-	0,517	1,03	1,02
Operation		CO	CO	O	CO	CO	CO
Applied voltage, phase value	C	kV 9,38	9,45	-	9,38	9,04	8,70
	B	kV 9,39	9,48	-	9,39	9,07	8,68
	A	kV 9,31	9,39	-	9,34	8,99	8,65
Applied voltage, between phases		kV 16,2	16,4	-	16,2	15,6	15,0
Making current, peak	C	kA -38,3	-40,6	-	44,0	-30,6	38,8
	B	kA 45,7	18,8	-	-30,9	-36,8	-32,8
	A	kA -31,0	43,9	-	-36,9	44,6	-27,4
Breaking current, phase value	C	kA 16,1	16,2	16,1	16,1	15,5	14,5
	B	kA 16,1	16,2	16,4	16,2	15,6	14,5
	A	kA 16,1	16,2	16,2	16,3	15,6	14,5
Average current, three phase		kA 16,1	16,2	16,2	16,2	15,6	14,5
Breaking current, DC-component	C	% 19	19	14	53	9	24
	B	% 25	5	61	12	17	15
	A	% 7	24	51	40	26	9
Recovery voltage, phase value	C	kV 9,30	9,09	9,01	9,20	8,81	8,96
	B	kV 9,28	9,07	9,13	9,19	8,74	8,94
	A	kV 9,23	9,06	9,02	9,07	8,77	9,95
Recovery voltage, between phases		kV 16,1	15,7	15,7	15,9	15,2	16,1
TRV, peak	C	kV 34,4	17,0	-30,1	-27,0	16,8	-29,1
	B	kV 15,2	-29,9	-15,0	-14,0	-28,3	-15,8
	A	kV 29,8	-17,1	14,4	-27,9	-16,7	-26,2
Make time	C	ms -	-	-	-	-	-
	B	ms -	-	-	-	-	-
	A	ms -	-	-	-	-	-
Arc duration	C	ms 10,1	8,9	6,5	8,2	7,2	10,3
	B	ms 10,1	3,9	12,5	8,3	2,1	10,3
	A	ms 5,5	8,9	12,5	-1,4	7,2	5,4
Opening time		ms -	-	-	-	-	-
Break time	C	ms -	-	-	-	-	-
	B	ms -	-	-	-	-	-
	A	ms -	-	-	-	-	-
Voltage closing coil	Vd.c.	-	-	-	-	-	-
Voltage opening coil	Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C	MPa	-	-	-	-	-	-

REMARKS

100527-6068	Recloser closed and cleared.
100527-6069	Recloser closed and cleared.
100527-6070	Recloser cleared.
100527-6071	Recloser closed and cleared.
100527-6072	Recloser closed and cleared.
100527-6073	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6074	100527 6075	100527 6076	100527 6077		
Time interval since previous test	min	-	-	-	-		
Time interval between operations	s	-	0,519	1,03	1,02		
Operation		O	CO	CO	CO		
Applied voltage, phase value	C kV	-	9,46	9,49	9,48		
	B kV	-	9,46	9,53	9,45		
	A kV	-	9,39	9,45	9,40		
Applied voltage, between phases	kV	-	16,3	16,4	16,4		
Making current, peak	C kA	-	45,7	-26,7	44,8		
	B kA	-	-34,8	-40,7	-29,6		
	A kA	-	-34,9	43,8	-39,2		
Breaking current, phase value	C kA	16,2	16,1	16,3	16,3		
	B kA	16,5	16,3	16,3	16,3		
	A kA	16,2	16,3	16,3	16,3		
Average current, three phase	kA	16,3	16,2	16,3	16,3		
Breaking current, DC-component	C %	15	56	3	24		
	B %	61	21	20	5		
	A %	50	34	23	19		
Recovery voltage, phase value	C kV	9,18	9,05	5,19	9,48		
	B kV	9,13	9,07	5,21	9,35		
	A kV	9,15	9,04	5,19	9,34		
Recovery voltage, between phases	kV	15,9	15,7	9,00	16,3		
TRV, peak	C kV	-17,4	-32,1	30,5	-30,9		
	B kV	23,8	-18,3	-11,2	-15,6		
	A kV	17,2	-28,9	-31,1	-46,2		
Make time	C ms	-	-	-	-		
	B ms	-	-	-	-		
	A ms	-	-	-	-		
Arc duration	C ms	9,0	9,4	6,4	9,4		
	B ms	0,7	9,4	10,9	9,5		
	A ms	9,0	3,2	10,9	4,4		
Opening time	ms	-	-	-	-		
Break time	C ms	-	-	-	-		
	B ms	-	-	-	-		
	A ms	-	-	-	-		
Voltage closing coil	Vd.c.	-	-	-	-		
Voltage opening coil	Vd.c.	-	-	-	-		
Gas pressure at 20 °C	MPa	-	-	-	-		

REMARKS

100527-6074	Recloser cleared.
100527-6075	Recloser closed and cleared.
100527-6076	Recloser closed and cleared.
100527-6077	Recloser closed and cleared.

Test no.		100527 6084	100527 6085	100527 6086	100527 6087	100527 6088	100527 6089	
Time interval since previous test	min	-	-	-	-	-	-	
Time interval between operations	s	-	0,525	1,02	1,03	-	0,520	
Operation		O	CO	CO	CO	O	CO	
Applied voltage, phase value	C	kV	-	9,44	9,42	9,43	-	9,42
	B	kV	-	9,41	9,39	9,41	-	9,39
	A	kV	-	9,33	9,30	9,32	-	9,31
Applied voltage, between phases		kV	-	16,3	16,2	16,3	-	16,2
Making current, peak	C	kA	-	-16,4	-23,0	21,3	-	23,2
	B	kA	-	-19,6	17,8	13,8	-	-19,1
	A	kA	-	23,8	17,3	-22,5	-	-16,3
Breaking current, phase value	C	kA	8,14	8,15	8,04	8,06	8,14	5,37
	B	kA	8,12	8,16	8,04	8,06	8,17	8,14
	A	kA	8,17	8,13	8,03	8,05	8,11	8,15
Average current, three phase		kA	8,14	8,15	8,04	8,06	8,14	7,22
Breaking current, DC-component	C	%	14	30	39	32	10	27
	B	%	100	51	20	5	73	49
	A	%	61	40	19	38	65	27
Recovery voltage, phase value	C	kV	9,34	9,36	9,34	9,33	9,35	9,35
	B	kV	9,30	9,24	9,29	9,28	9,23	9,31
	A	kV	9,20	9,24	9,18	9,23	9,23	9,21
Recovery voltage, between phases		kV	16,1	16,1	16,1	16,1	16,1	16,1
TRV, peak	C	kV	18,6	16,4	18,2	-18,4	-19,1	-14,5
	B	kV	-21,1	-28,4	-18,6	33,0	21,7	14,7
	A	kV	-18,0	-15,4	32,0	17,4	17,9	-31,6
Make time	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Arc duration	C	ms	2,1	10,0	9,0	10,7	9,5	9,9
	B	ms	1,0	0,2	9,0	5,4	1,3	9,9
	A	ms	0,5	10,0	3,5	10,7	9,5	3,0
Opening time		ms	-	-	-	-	-	-
Break time	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Voltage closing coil		Vd.c.	-	-	-	-	-	-
Voltage opening coil		Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C		MPa	-	-	-	-	-	-

REMARKS

100527-6084	Recloser cleared.
100527-6085	Recloser closed and cleared.
100527-6086	Recloser closed and cleared.
100527-6087	Recloser closed and cleared.
100527-6088	Recloser cleared.
100527-6089	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6090	100527 6091	100527 6092	100527 6093	100527 6094	100527 6095	
Time interval since previous test	min	-	-	-	-	-	-	
Time interval between operations	s	1,03	1,02	-	0,521	1,02	1,02	
Operation		CO	CO	O	CO	CO	CO	
Applied voltage, phase value	C	kV	9,41	9,39	-	9,26	9,45	9,45
	B	kV	9,37	9,33	-	9,41	9,42	9,41
	A	kV	9,29	9,27	-	9,33	9,34	9,34
Applied voltage, between phases		kV	16,2	16,2	-	16,2	16,3	16,3
Making current, peak	C	kA	12,6	-15,7	-	22,6	17,2	-19,3
	B	kA	-22,6	-	-	-13,5	-23,3	23,0
	A	kA	22,5	-	-	-21,1	18,3	-15,8
Breaking current, phase value	C	kA	8,04	8,04	8,14	8,15	8,07	8,09
	B	kA	8,00	8,02	8,17	8,16	8,05	8,09
	A	kA	8,00	8,02	8,11	8,13	8,05	8,08
Average current, three phase		kA	8,01	8,03	8,14	8,15	8,06	8,09
Breaking current, DC-component	C	%	2	13	11	72	19	26
	B	%	39	41	74	10	41	38
	A	%	37	28	65	64	22	12
Recovery voltage, phase value	C	kV	9,31	9,30	9,34	9,34	9,31	9,33
	B	kV	9,15	9,18	9,24	9,30	9,32	9,35
	A	kV	9,17	9,16	9,25	9,25	9,22	9,25
Recovery voltage, between phases		kV	16,0	16,0	16,1	16,1	16,1	16,1
TRV, peak	C	kV	19,3	-19,5	-19,2	-14,0	32,4	-31,8
	B	kV	-30,3	-29,9	21,3	33,2	19,1	-19,7
	A	kV	-18,3	18,4	18,1	13,6	-17,4	17,5
Make time	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Arc duration	C	ms	7,4	7,1	8,3	12,0	4,4	2,8
	B	ms	1,8	1,7	0,2	6,1	9,9	8,4
	A	ms	7,3	7,1	8,3	12,0	9,9	8,4
Opening time		ms	-	-	-	-	-	-
Break time	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Voltage closing coil		Vd.c.	-	-	-	-	-	-
Voltage opening coil		Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C		MPa	-	-	-	-	-	-

REMARKS

100527-6090 Recloser closed and cleared.

100527-6091 Recloser closed and cleared.

100527-6092 Recloser cleared.

100527-6093 Recloser closed and cleared.

100527-6094 Recloser closed and cleared.

100527-6095 Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6096	100527 6097	100527 6098	100527 6099	100527 6100	100527 6101
Time interval since previous test	min	-	-	-	-	-	-
Time interval between operations	s	-	0,516	1,03	1,02	-	0,519
Operation		O	CO	CO	CO	O	CO
Applied voltage, phase value	C kV	-	9,41	9,40	9,38	-	9,40
	B kV	-	9,37	9,36	9,33	-	9,39
	A kV	-	9,29	9,29	9,25	-	9,31
Applied voltage, between phases	kV	-	16,2	16,2	16,1	-	16,2
Making current, peak	C kA	-	23,1	-13,4	-13,1	-	21,1
	B kA	-	-19,7	-21,6	22,6	-	-21,6
	A kA	-	-15,7	23,0	-22,1	-	12,4
Breaking current, phase value	C kA	8,13	5,35	8,02	8,03	8,11	8,12
	B kA	8,17	8,12	8,00	8,03	8,14	8,11
	A kA	8,10	8,14	7,99	8,02	8,08	8,12
Average current, three phase	kA	8,13	7,2	8,00	8,03	8,11	8,12
Breaking current, DC-component	C %	13	39	4	3	10	64
	B %	75	52	35	38	74	65
	A %	63	24	39	35	66	3
Recovery voltage, phase value	C kV	9,30	9,34	9,29	9,29	9,32	9,33
	B kV	9,29	9,30	9,21	9,17	9,22	9,30
	A kV	9,21	9,19	9,18	8,98	9,21	9,30
Recovery voltage, between phases	kV	16,1	16,1	16,0	15,8	16,0	16,1
TRV, peak	C kV	-32,7	-14,4	19,2	-19,2	-19,1	-14,2
	B kV	-14,6	14,7	-30,8	30,1	21,6	14,8
	A kV	13,1	-31,7	-18,0	18,5	18,1	-32,8
Make time	C ms	-	-	-	-	-	-
	B ms	-	-	-	-	-	-
	A ms	-	-	-	-	-	-
Arc duration	C ms	7,1	10,9	8,3	7,0	10,8	11,0
	B ms	13,7	11,0	2,6	-2,1	2,6	11,0
	A ms	13,7	4,1	8,2	7,0	10,8	4,9
Opening time	ms	-	-	-	-	-	-
Break time	C ms	-	-	-	-	-	-
	B ms	-	-	-	-	-	-
	A ms	-	-	-	-	-	-
Voltage closing coil	Vd.c.	-	-	-	-	-	-
Voltage opening coil	Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C	MPa	-	-	-	-	-	-

REMARKS

100527-6096	Recloser cleared.
100527-6097	Recloser closed and cleared.
100527-6098	Recloser closed and cleared.
100527-6099	Recloser closed and cleared.
100527-6100	Recloser cleared.
100527-6101	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6102	100527 6103	100527 6104	100527 6105	100527 6106	100527 6107	
Time interval since previous test	min	-	-	-	-	-	-	
Time interval between operations	s	1,02	1,02	-	0,519	1,02	1,02	
Operation		CO	CO	O	CO	CO	CO	
Applied voltage, phase value	C	kV	9,41	9,42	-	9,40	9,41	9,44
	B	kV	9,38	9,39	-	9,37	9,38	9,42
	A	kV	9,30	9,31	-	9,29	9,29	9,33
Applied voltage, between phases		kV	16,2	16,2	-	16,2	16,2	16,3
Making current, peak	C	kA	-17,7	11,7	-	22,5	-23,2	22,8
	B	kA	6,67	21,3	-	-21,0	19,6	-13,9
	A	kA	22,3	-21,5	-	-14,0	16,0	-20,9
Breaking current, phase value	C	kA	8,02	8,06	8,12	8,18	8,03	8,07
	B	kA	8,04	8,04	8,15	8,11	8,03	8,06
	A	kA	7,99	8,03	8,08	8,12	8,02	8,06
Average current, three phase		kA	8,02	8,04	8,12	8,14	8,03	8,06
Breaking current, DC-component	C	%	21	1	14	73	40	37
	B	%	18	36	75	63	26	6
	A	%	40	35	63	12	14	31
Recovery voltage, phase value	C	kV	9,30	9,28	9,32	9,26	9,32	9,34
	B	kV	9,24	9,30	9,21	9,32	9,28	9,31
	A	kV	9,19	9,20	9,21	9,24	9,17	9,21
Recovery voltage, between phases		kV	16,0	16,0	16,0	16,1	16,0	16,1
TRV, peak	C	kV	19,0	-32,9	-19,3	22,2	18,1	-18,7
	B	kV	-32,2	-18,6	21,3	19,7	-18,1	18,8
	A	kV	-17,3	17,2	17,9	-17,9	32,1	-31,1
Make time	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Arc duration	C	ms	8,7	5,2	10,3	2,3	9,6	8,2
	B	ms	3,2	10,4	2,2	10,5	9,6	8,3
	A	ms	8,7	10,4	10,3	10,5	4,1	2,6
Opening time		ms	-	-	-	-	-	-
Break time	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Voltage closing coil		Vd.c.	-	-	-	-	-	-
Voltage opening coil		Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C		MPa	-	-	-	-	-	-

REMARKS

100527-6102	Recloser closed and cleared.
100527-6103	Recloser closed and cleared.
100527-6104	Recloser cleared.
100527-6105	Recloser closed and cleared.
100527-6106	Recloser closed and cleared. NSDD in the S-fase after 115 ms.
100527-6107	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6108	100527 6109	100527 6110	100527 6111	100527 6112	100527 6113
Time interval since previous test	min	-	-	-	-	-	-
Time interval between operations	s	-	0,517	1,02	1,02	-	0,518
Operation		O	CO	CO	CO	O	CO
Applied voltage, phase value	C kV	-	9,42	9,45	9,47	-	9,39
	B kV	-	9,40	9,42	9,29	-	9,35
	A kV	-	9,32	9,34	9,37	-	9,27
Applied voltage, between phases	C kV	-	16,2	16,3	16,2	-	16,2
	B kA	-	22,2	18,4	-20,2	-	20,5
	A kA	-	-12,6	-23,3	22,9	-	14,8
Making current, peak	C kA	-	-21,5	17,0	-14,9	-	-22,9
	B kA	8,12	8,13	8,07	8,11	8,11	8,11
	A kA	8,09	8,15	8,06	8,11	8,08	8,12
Breaking current, phase value	C kA	8,09	8,12	8,05	8,10	8,08	8,13
	B kA	8,1	8,13	8,06	8,11	8,09	8,12
	A kA	10	69	23	28	12	58
Average current, three phase	C %	75	4	40	37	76	18
	B %	64	66	17	9	63	34
	A %	9,29	9,33	9,33	9,35	9,26	9,31
Breaking current, DC-component	C kV	9,30	9,28	9,33	9,37	9,26	9,25
	B kV	9,21	9,24	9,23	9,27	9,20	9,20
	A kV	16,1	16,1	16,1	16,2	16,0	16,0
Recovery voltage, phase value	C kV	-32,8	-14,1	32,0	-31,6	-32,7	-14,3
	B kV	-14,5	33,2	19,3	-19,8	-12,4	32,5
	A kV	12,8	13,3	-17,5	17,8	25,8	13,3
Recovery voltage, between phases	C ms	-	-	-	-	-	-
	B ms	-	-	-	-	-	-
	A ms	5,5	11,5	3,7	2,6	5,3	10,7
TRV, peak	C ms	12,1	5,4	9,2	8,2	11,9	4,0
	B ms	12,1	11,5	9,2	8,2	11,9	10,7
	A ms	-	-	-	-	-	-
Opening time	C ms	-	-	-	-	-	-
	B ms	-	-	-	-	-	-
	A ms	-	-	-	-	-	-
Break time	Vd.c.	-	-	-	-	-	-
Voltage closing coil	Vd.c.	-	-	-	-	-	-
Voltage opening coil	MPa	-	-	-	-	-	-
Gas pressure at 20 °C							

REMARKS

100527-6108	Recloser cleared.
100527-6109	Recloser closed and cleared.
100527-6110	Recloser closed and cleared.
100527-6111	Recloser closed and cleared.
100527-6112	Recloser cleared.
100527-6113	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6114	100527 6115	100527 6116	100527 6117	100527 6118	100527 6119	
Time interval since previous test	min	-	-	-	-	-	-	
Time interval between operations	s	1,02	1,02	-	0,521	1,02	1,02	
Operation		CO	CO	O	CO	CO	CO	
	C	kV	9,38	9,36	-	9,42	9,43	9,45
Applied voltage, phase value	B	kV	9,36	9,32	-	9,38	9,41	9,43
	A	kV	9,27	9,25	-	9,30	9,32	9,36
Applied voltage, between phases		kV	16,2	16,1	-	16,2	16,3	16,3
	C	kA	20,2	-22,0	-	20,6	20,6	-23,3
Making current, peak	B	kA	-22,5	20,6	-	14,9	-21,6	15,2
	A	kA	14,2	13,9	-	-23,0	13,0	20,2
	C	kA	8,01	8,01	8,11	8,13	8,06	8,09
Breaking current, phase value	B	kA	8,00	8,01	8,09	8,15	8,04	8,08
	A	kA	7,99	8,00	8,08	8,16	8,04	8,08
Average current, three phase		kA	8,00	8,01	8,09	8,15	8,05	8,08
	C	%	30	36	11	58	31	39
Breaking current, DC-component	B	%	37	30	75	18	34	10
	A	%	8	6	64	39	3	29
	C	kV	9,28	9,27	9,33	9,33	9,32	9,36
Recovery voltage, phase value	B	kV	9,22	9,23	9,21	9,28	9,32	9,32
	A	kV	9,13	9,13	9,21	9,24	9,21	9,21
Recovery voltage, between phases		kV	16,0	16,0	16,0	16,1	16,1	16,1
	C	kV	-17,2	18,1	-19,0	-14,5	31,4	18,6
TRV, peak	B	kV	18,5	-17,9	21,7	32,6	19,9	-18,8
	A	kV	-32,6	32,3	18,0	13,5	-17,9	31,4
	C	ms	-	-	-	-	-	-
Make time	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
	C	ms	10,8	10,8	7,9	11,0	2,9	8,9
Arc duration	B	ms	10,9	10,7	-0,3	4,4	8,4	8,9
	A	ms	5,9	5,5	7,9	11,0	8,4	3,2
Opening time		ms	-	-	-	-	-	-
	C	ms	-	-	-	-	-	-
Break time	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Voltage closing coil	Vd.c.	-	-	-	-	-	-	-
Voltage opening coil	Vd.c.	-	-	-	-	-	-	-
Gas pressure at 20 °C	MPa	-	-	-	-	-	-	-

REMARKS

100527-6114	Recloser closed and cleared.
100527-6115	Recloser closed and cleared.
100527-6116	Recloser cleared.
100527-6117	Recloser closed and cleared.
100527-6118	Recloser closed and cleared.
100527-6119	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6120	100527 6121	100527 6122	100527 6123	100527 6128	100527 6129
Time interval since previous test	min	-	-	-	-	-	-
Time interval between operations	s	-	0,520	1,02	1,02	-	0,521
Operation		O	CO	CO	CO	O	CO
Applied voltage, phase value	C kV	-	9,41	9,42	9,44	-	9,40
	B kV	-	9,37	9,40	9,43	-	9,35
	A kV	-	9,30	9,31	9,35	-	9,26
Applied voltage, between phases	kV	-	16,2	16,2	16,3	-	16,2
Making current, peak	C kA	-	21,4	23,3	22,3	-	22,9
	B kA	-	13,2	-17,2	-20,4	-	-20,2
	A kA	-	-22,2	-18,3	-14,5	-	-15,0
Breaking current, phase value	C kA	8,10	8,12	8,03	8,07	8,12	8,11
	B kA	8,08	8,13	8,03	8,06	8,14	8,10
	A kA	8,07	8,10	8,02	8,06	8,08	8,12
Average current, three phase	kA	8,08	8,12	8,03	8,06	8,11	8,11
Breaking current, DC-component	C %	13	64	39	36	13	46
	B %	100	6	18	28	75	57
	A %	63	71	22	8	64	19
Recovery voltage, phase value	C kV	9,32	9,33	9,32	9,31	9,31	9,33
	B kV	9,21	9,28	9,27	9,26	9,18	9,27
	A kV	9,22	9,23	9,22	9,23	9,19	9,16
Recovery voltage, between phases	kV	16,0	16,1	16,1	16,1	16,0	16,0
TRV, peak	C kV	-19,1	-14,4	-18,9	-18,8	-19,0	-14,6
	B kV	21,9	33,0	32,4	32,0	21,2	13,8
	A kV	18,0	13,3	17,0	18,2	17,9	-32,1
Make time	C ms	-	-	-	-	-	-
	B ms	-	-	-	-	-	-
	A ms	-	-	-	-	-	-
Arc duration	C ms	9,0	11,2	8,3	9,2	10,0	11,6
	B ms	1,0	4,9	3,7	5,2	2,0	11,7
	A ms	9,0	11,2	8,3	9,2	10,0	4,9
Opening time	ms	-	-	-	-	-	-
Break time	C ms	-	-	-	-	-	-
	B ms	-	-	-	-	-	-
	A ms	-	-	-	-	-	-
Voltage closing coil	Vd.c.	-	-	-	-	-	-
Voltage opening coil	Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C	MPa	-	-	-	-	-	-

REMARKS

100527-6120	Recloser cleared.
100527-6121	Recloser closed and cleared.
100527-6122	Recloser closed and cleared.
100527-6123	Recloser closed and cleared.
100527-6128	Recloser cleared.
100527-6129	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6130	100527 6131	100527 6132	100527 6133	100527 6134	100527 6135
Time interval since previous test	min	-	-	-	-	-	-
Time interval between operations	s	1,03	1,02	-	0,521	1,02	1,02
Operation		CO	CO	O	CO	CO	CO
Applied voltage, phase value	C	kV 9,38	9,38	-	9,42	9,37	9,38
	B	kV 9,33	9,31	-	9,37	9,35	9,34
	A	kV 9,26	9,25	-	9,27	9,27	9,26
Applied voltage, between phases		kV 16,1	16,1	-	16,2	16,2	16,2
Making current, peak	C	kA -14,8	-14,5	-	22,4	-5,58	-20,7
	B	kA -19,6	23,1	-	-13,2	-9,46	21,4
	A	kA 22,4	-21,2	-	-20,4	16,7	-12,3
Breaking current, phase value	C	kA 8,01	8,02	8,11	8,12	8,03	8,00
	B	kA 7,97	8,02	8,14	8,12	7,97	8,00
	A	kA 7,97	8,01	8,08	8,13	7,98	8,01
Average current, three phase		kA 7,98	8,02	8,11	8,12	7,99	8,00
Breaking current, DC-component	C	% 9	9	12	72	22	33
	B	% 28	40	73	9	40	35
	A	% 37	31	63	64	18	2
Recovery voltage, phase value	C	kV 9,28	9,28	9,31	9,31	9,28	9,28
	B	kV 9,18	9,16	9,20	9,25	9,15	9,25
	A	kV 9,14	9,14	9,21	9,20	9,12	9,35
Recovery voltage, between phases		kV 15,9	15,9	16,0	16,0	15,9	16,1
TRV, peak	C	kV 19,3	-19,4	-19,1	-13,9	19,6	17,6
	B	kV -31,3	30,0	21,3	33,0	-29,9	-18,0
	A	kV -17,8	18,4	18,0	13,4	-18,4	32,4
Make time	C	ms -	-	-	-	-	-
	B	ms -	-	-	-	-	-
	A	ms -	-	-	-	-	-
Arc duration	C	ms 7,5	7,5	8,0	11,6	6,2	7,5
	B	ms 2,0	1,4	0,8	5,6	2,4	7,4
	A	ms 7,5	7,5	8,0	11,6	6,2	2,3
Opening time		ms -	-	-	-	-	-
Break time	C	ms -	-	-	-	-	-
	B	ms -	-	-	-	-	-
	A	ms -	-	-	-	-	-
Voltage closing coil	Vd.c.	-	-	-	-	-	-
Voltage opening coil	Vd.c.	-	-	-	-	-	-
Gas pressure at 20 °C	MPa	-	-	-	-	-	-

REMARKS

100527-6130	Recloser closed and cleared.
100527-6131	Recloser closed and cleared.
100527-6132	Recloser cleared.
100527-6133	Recloser closed and cleared.
100527-6134	Recloser closed and cleared.
100527-6135	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6136	100527 6137	100527 6138	100527 6139	100527 6140	100527 6141	
Time interval since previous test	min	-	-	-	-	-	-	
Time interval between operations	s	-	0,520	1,03	1,02	-	0,520	
Operation		O	CO	CO	CO	O	CO	
Applied voltage, phase value	C	kV	-	9,39	9,38	9,36	-	9,39
	B	kV	-	9,37	9,36	9,32	-	9,36
	A	kV	-	9,29	9,29	9,24	-	9,28
Applied voltage, between phases	C	kV	-	16,2	16,2	16,1	-	16,2
	B	kV	-	16,2	16,2	16,1	-	16,2
	A	kV	-	16,2	16,2	16,1	-	16,2
Making current, peak	C	kA	-	23,2	-9,07	5,52	-	23,0
	B	kA	-	-15,5	-22,4	22,4	-	-15,2
	A	kA	-	4,21	20,1	-16,6	-	-19,7
Breaking current, phase value	C	kA	8,11	8,01	8,02	8,04	8,11	5,31
	B	kA	8,14	7,97	7,98	7,99	8,14	8,07
	A	kA	8,08	8,00	7,98	8,00	8,07	8,03
Average current, three phase		kA	8,11	7,99	7,99	8,01	8,11	7,14
Breaking current, DC-component	C	%	12	33	10	22	11	14
	B	%	74	28	41	40	73	23
	A	%	65	49	31	18	64	55
Recovery voltage, phase value	C	kV	9,31	9,25	9,28	9,28	9,31	9,18
	B	kV	9,21	9,30	9,14	9,16	9,20	9,15
	A	kV	9,22	9,14	9,14	9,14	9,21	9,02
Recovery voltage, between phases	C	kV	16,0	16,0	15,9	15,9	16,0	15,8
	B	kV	16,0	16,0	15,9	15,9	16,0	15,8
	A	kV	16,0	16,0	15,9	15,9	16,0	15,8
TRV, peak	C	kV	-19,0	-16,0	19,7	-19,5	-19,1	-16,1
	B	kV	21,3	16,8	-30,0	30,0	21,3	16,6
	A	kV	18,0	-28,3	-18,3	18,3	18,0	-27,2
Make time	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Arc duration	C	ms	9,2	9,9	6,7	6,5	9,0	8,4
	B	ms	1,1	10,0	2,2	2,0	0,8	8,5
	A	ms	9,2	0,1	6,7	6,5	9,0	1,2
Opening time		ms	-	-	-	-	-	-
Break time	C	ms	-	-	-	-	-	-
	B	ms	-	-	-	-	-	-
	A	ms	-	-	-	-	-	-
Voltage closing coil	Vd.c.	-	-	-	-	-	-	
Voltage opening coil	Vd.c.	-	-	-	-	-	-	
Gas pressure at 20 °C	MPa	-	-	-	-	-	-	

REMARKS

100527-6136	Recloser cleared.
100527-6137	Recloser closed and cleared.
100527-6138	Recloser closed and cleared.
100527-6139	Recloser closed and cleared.
100527-6140	Recloser cleared.
100527-6141	Recloser closed and cleared.

SUMMARY (continued)

Test no.		100527 6142	100527 6143				
Time interval since previous test	min	-	-				
Time interval between operations	s	1,03	1,02				
Operation		CO	CO				
Applied voltage, phase value	C	kV 9,27	9,30				
	B	kV 9,24	9,25				
	A	kV 9,16	9,17				
Applied voltage, between phases		kV 16,0	16,0				
Making current, peak	C	kA 15,9	-20,4				
	B	kA -23,0	22,0				
	A	kA 19,4	-13,4				
Breaking current, phase value	C	kA 7,92	7,67				
	B	kA 7,90	7,67				
	A	kA 7,90	7,65				
Average current, three phase		kA 7,91	7,66				
Breaking current, DC-component	C	% 14	32				
	B	% 41	36				
	A	% 27	4				
Recovery voltage, phase value	C	kV 9,16	8,78				
	B	kV 9,14	8,75				
	A	kV 9,05	8,74				
Recovery voltage, between phases		kV 15,8	15,2				
TRV, peak	C	kV 31,9	16,7				
	B	kV 18,7	-17,1				
	A	kV -16,8	30,9				
Make time	C	ms -	-				
	B	ms -	-				
	A	ms -	-				
Arc duration	C	ms 5,1	7,4				
	B	ms 10,5	7,3				
	A	ms 10,6	2,3				
Opening time		ms -	-				
Break time	C	ms -	-				
	B	ms -	-				
	A	ms -	-				
Voltage closing coil		Vd.c. -	-				
Voltage opening coil		Vd.c. -	-				
Gas pressure at 20 °C		MPa -	-				

REMARKS	
100527-6142	Recloser closed and cleared.
100527-6143	Recloser closed and cleared.

Test no.			100527 6144					
Operation			CO					
Current closing coil		A	-					
	C	ms	-					
Closing time	B	ms	-					
	A	ms	-					
Current opening coil		A	-					
	C	ms	-					
Opening time	B	ms	-					
	A	ms	-					
Voltage closing coil		Vd.c.	-					
Voltage opening coil		Vd.c.	-					
Gas pressure at 20 °C		MPa	-					

REMARKS								
100527-6144 -								

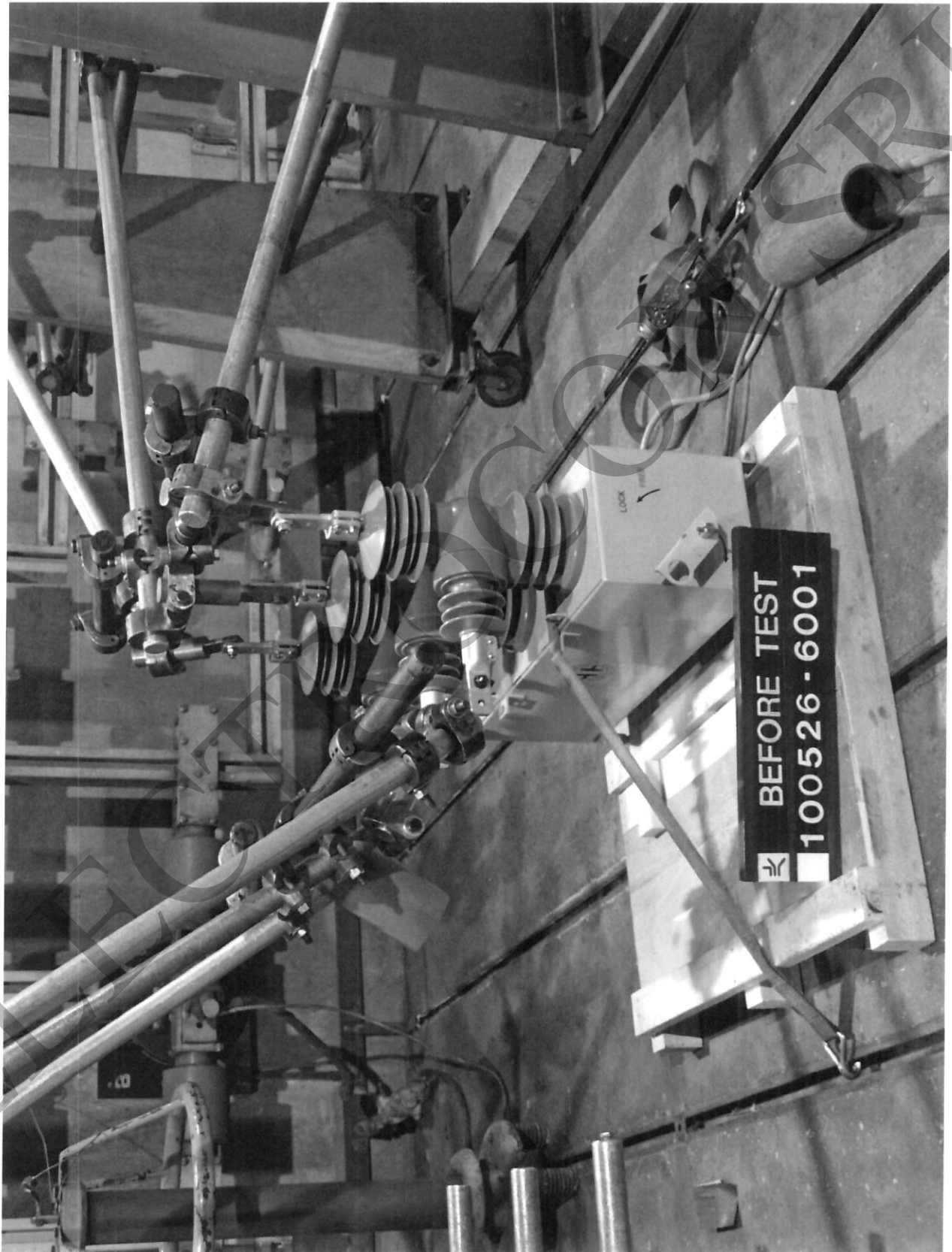
TEST NUMBER

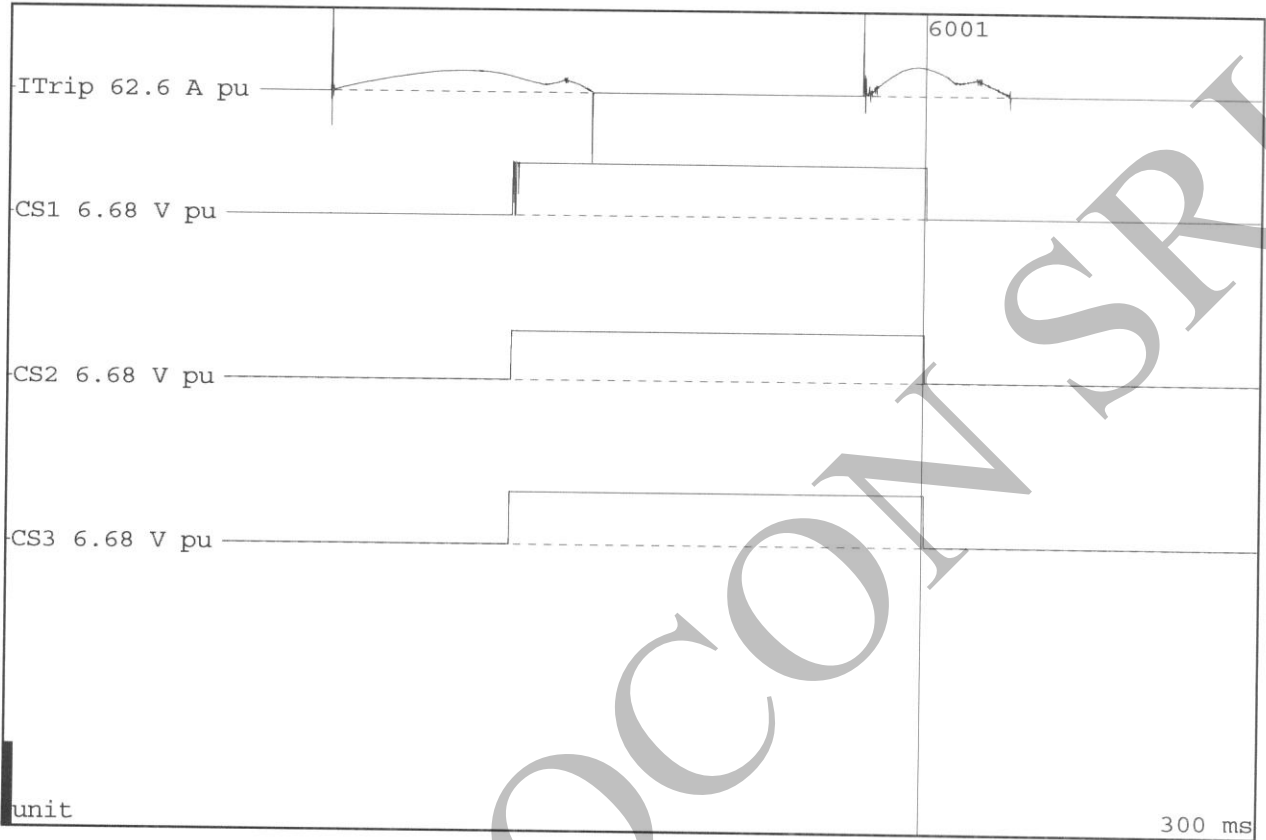
100526-6001

CONDITION BEFORE TEST

Recloser new.

ELECTROCON SRL





TEST NUMBER: 100526-6001

Operation		CO		
		C	B	A
Phase				
Current closing coil	A	-		
Closing time	ms	-	-	-
Current opening coil	A	-		
Opening time	ms	-	-	-

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

Remarks: -

TEST NUMBER

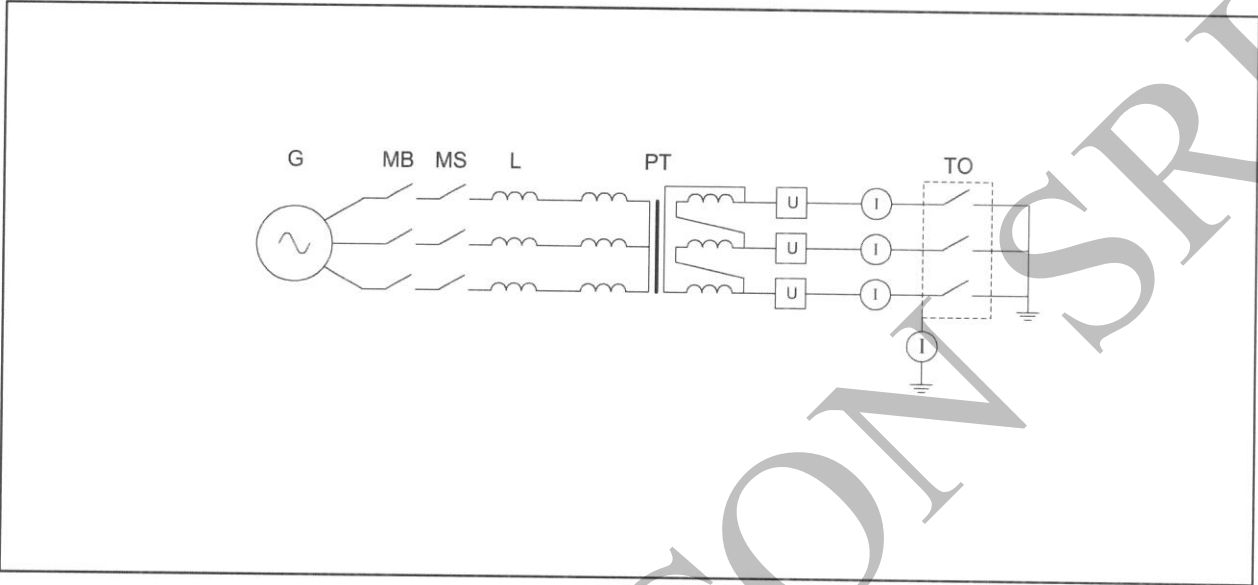
100526-6004

CONDITION BEFORE TEST

Recloser in same condition.

- Supply to moving contacts.
- Short-circuit on fixed contacts.
- Frame earthed via an earth fault current indicating CT.

TEST-CIRCUIT S01

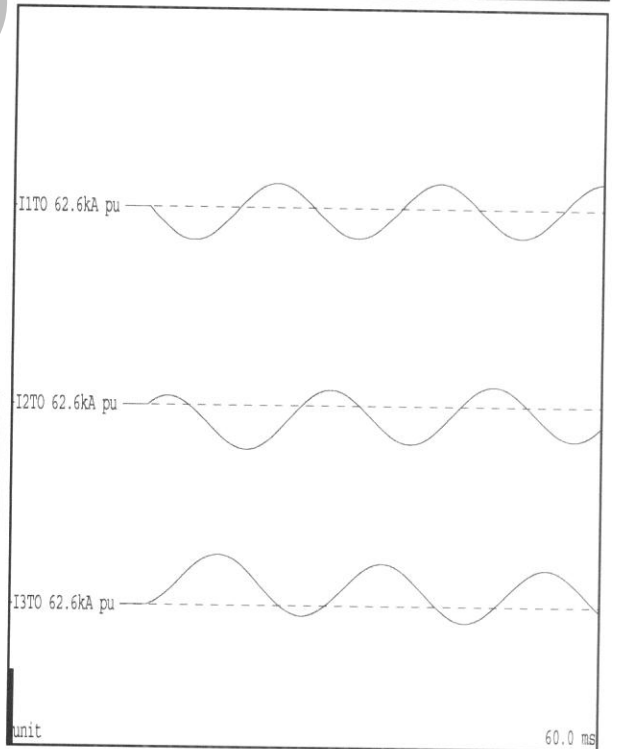


G = Generator TO = Test Object U = Voltage Measurement to earth
 MB = Master Breaker L = Reactor I = Current Measurement
 MS = Make Switch
 PT = Power Transformer

Supply		
Power	MVA	42,7
Frequency	Hz	60
Phase(s)		3
Voltage	kV	1,54
Current	kA	16
Impedance	Ω	0,056
Power factor		< 0,1
Neutral		not earthed

Load	
Short-circuit point	earthed

Remarks: -



TEST NUMBER: 100526-6004

Phase		C	B	A
Peak value of current	kA	-28,3	-37,4	42,3
Symmetrical current, beginning	kA	16,3	16,6	16,3
Symmetrical current, middle	kA	15,8	16,0	15,8
Symmetrical current, end	kA	15,6	15,8	15,5
Symmetrical current, average	kA	16,0	16,2	15,9
Average current, three phase	kA	16,0		
Current duration	s	3,04		
Thermal equivalent		16,0 kA during 3,05 s		

Gas pressure at 20 °C - MPa

Remarks: No visible disturbance.

CONDITION AFTER TEST

Recloser could be opened easily. See no-load test 100526-6005.

ELECTROCON SRL

TEST NUMBER

100526-6005

CONDITION BEFORE TEST

Recloser in same condition.

ELECTROCON SRL



TEST NUMBER: 100526-6005

Operation		O		
Phase		C	B	A
Current opening coil	A	-		
Opening time	ms	-	-	-

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

Remarks: -

TEST NUMBERS

100526-6008
100526-6009
100526-6010
100526-6011
100526-6012
100526-6013
100526-6014
100526-6015
100526-6016
100526-6017

CONDITION BEFORE TESTS

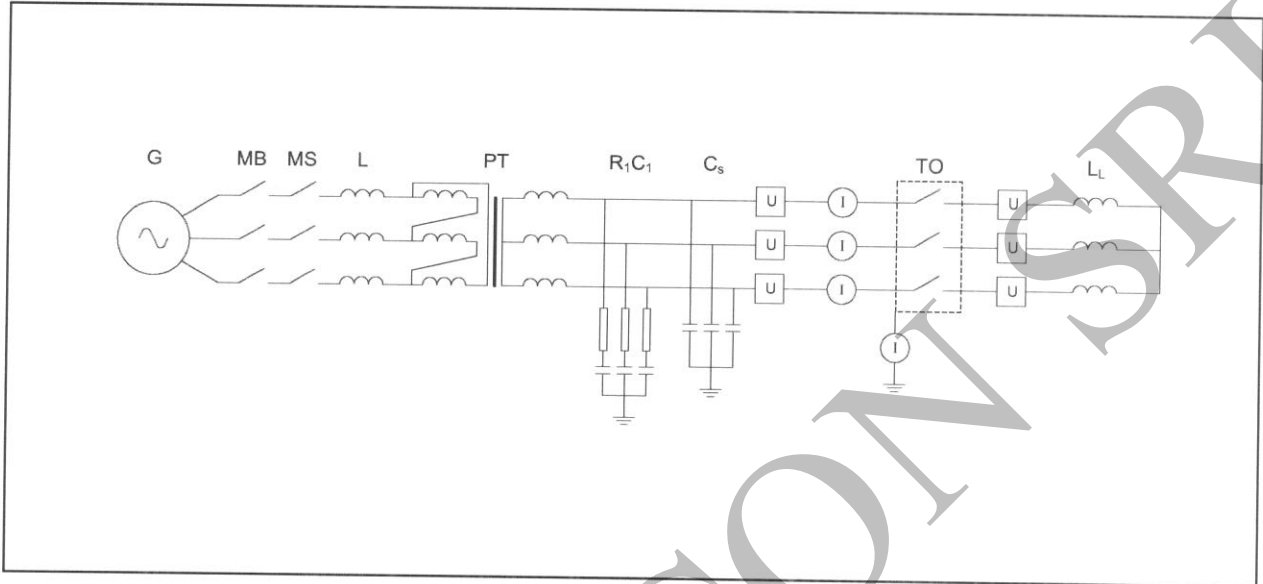
Recloser in same condition.

Supply to moving contacts.

Load on fixed contacts.

Frame earthed via an earth fault current indicating CT.

TEST-CIRCUIT S02



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	0,5
R ₁ (in parallel)	Ω	400
C _s	μF	1,32
L ₁	mH	-
C _d	nF	-
Neutral		earthed

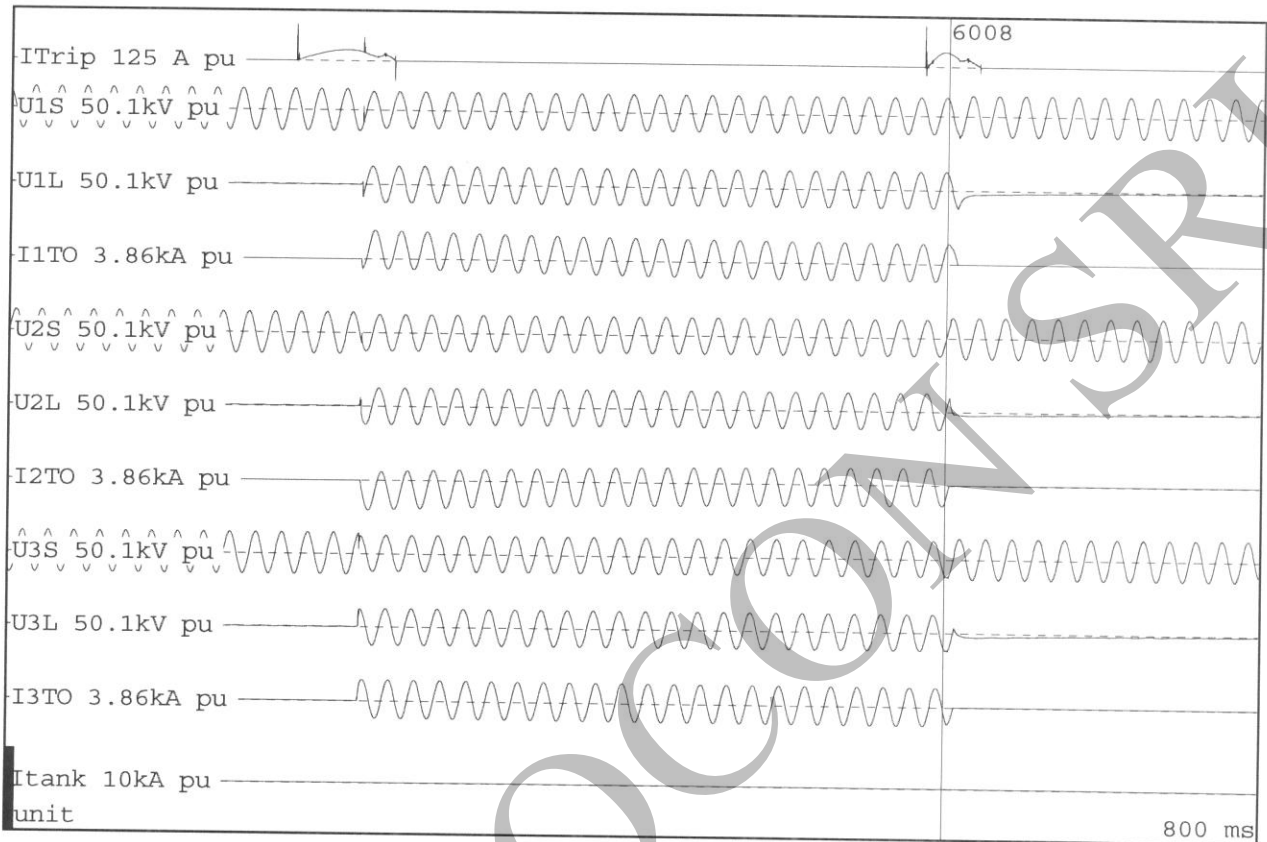
Load		
Impedance	Ω	12,07
Cos phi		0,7
Neutral		not earthed

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

Prospective TRV across TO		
u _c	kV	28,5
t ₃	μs	155
t _d	μs	< 25
RRRV	V/ μs	184

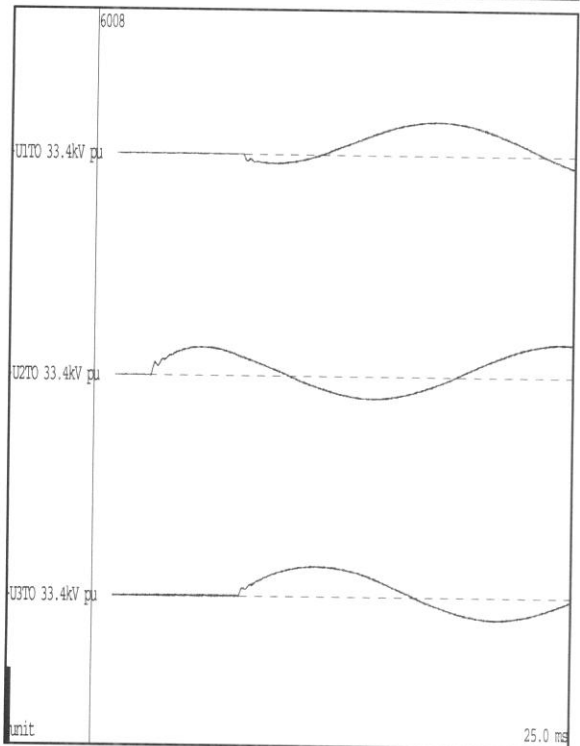
Inductive load element		
X _L (L _L)	Ω	17,38

Remarks: -



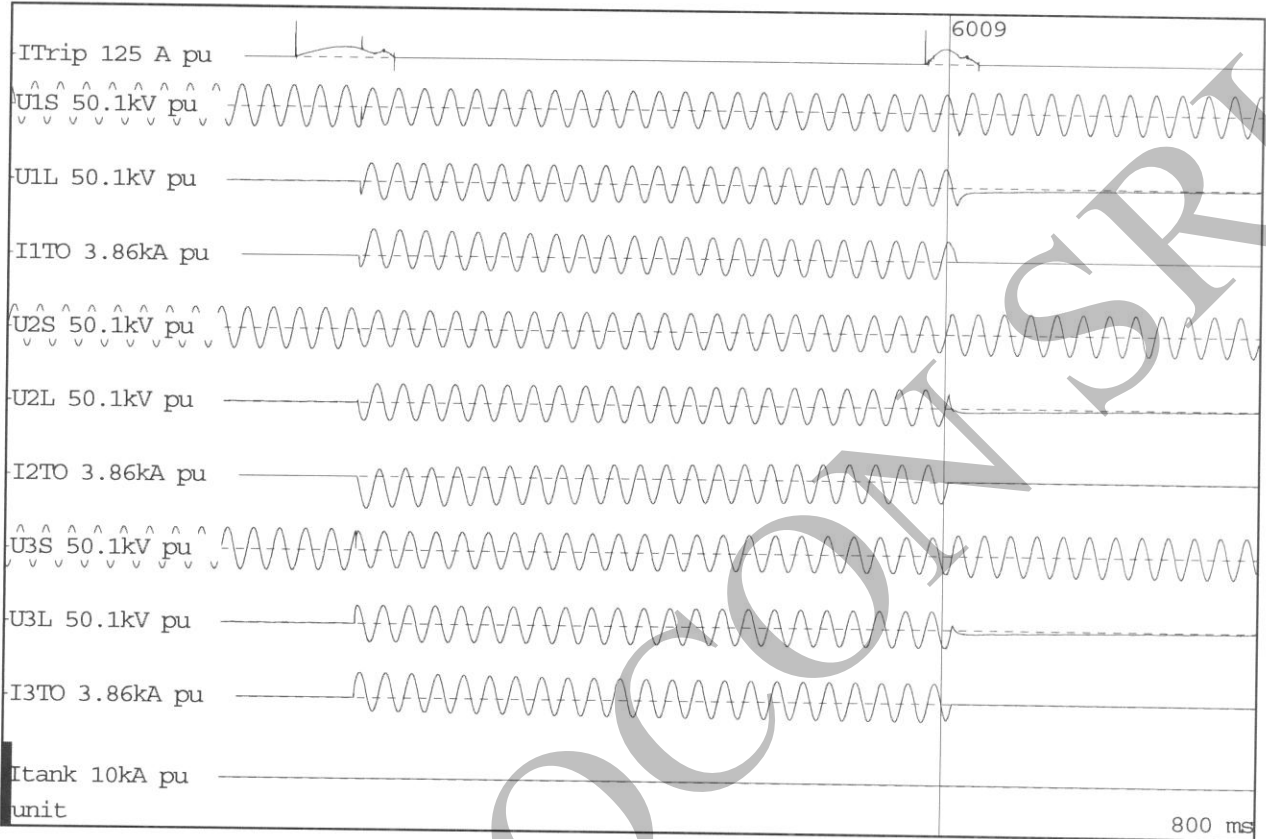
TEST NUMBER: 100526-6008

Time interval since previous test	min	-		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	8,98	8,95	8,98
Applied voltage, between phases	kV	15,5		
Making current, peak	kA	1,34	-1,44	0,995
Breaking current, phase value	kA	0,633	0,634	0,634
Average current, three phase	kA	0,634		
Breaking current, DC-component	%	8	10	2
Recovery voltage, phase value	kV	8,92	8,89	8,92
Recovery voltage, between phases	kV	15,4		
TRV, peak	kV	-	-	-
Make time	ms	43,1	43,1	43,1
Arc duration	ms	6,6	2,6	6,6
Opening time	ms	15,6		
Break time	ms	22,2	18,2	22,2



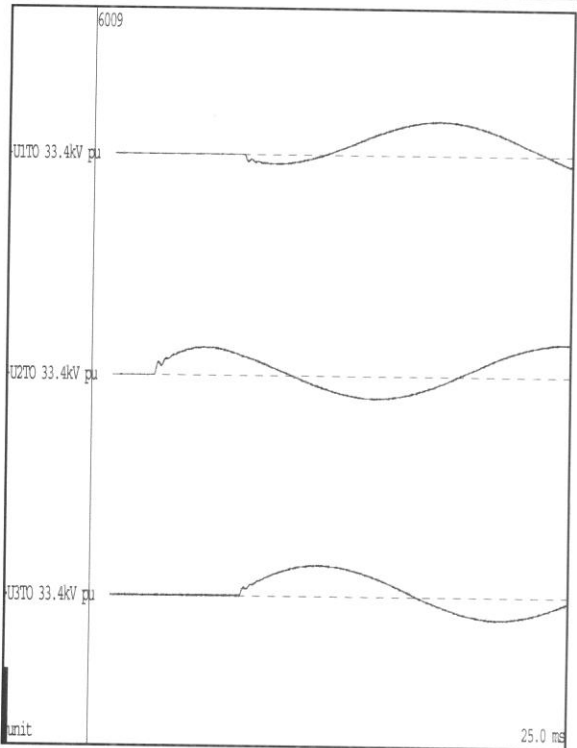
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



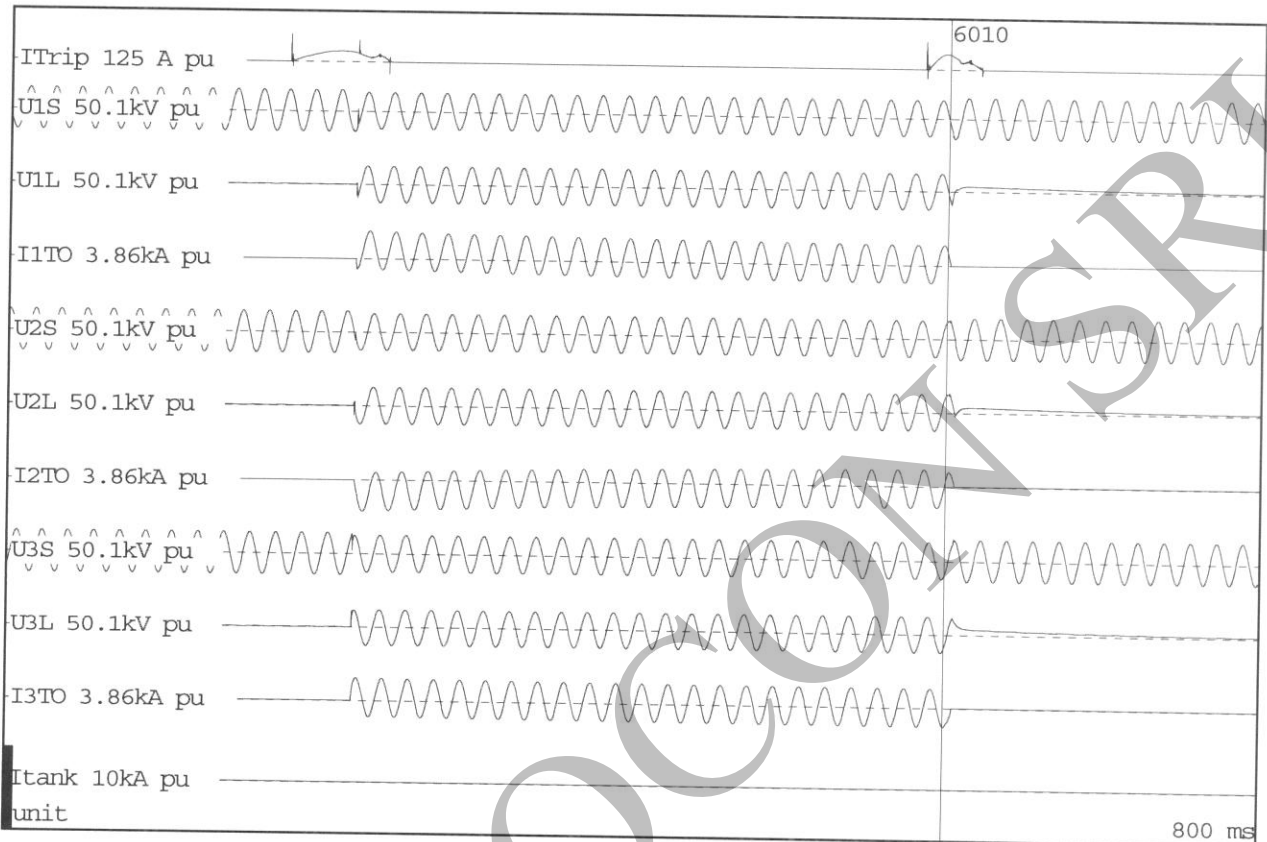
TEST NUMBER: 100526-6009

Time interval since previous test	min	-		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,04	9,01	9,03
Applied voltage, between phases	kV	15,6		
Making current, peak	kA	1,24	-1,52	1,18
Breaking current, phase value	kA	0,636	0,638	0,638
Average current, three phase	kA	0,637		
Breaking current, DC-component	%	6	11	5
Recovery voltage, phase value	kV	8,97	8,93	8,97
Recovery voltage, between phases	kV	15,5		
TRV, peak	kV	-	-	-
Make time	ms	43,0	43,0	43,0
Arc duration	ms	6,7	2,8	6,7
Opening time	ms	15,3		
Break time	ms	22,0	18,1	22,0



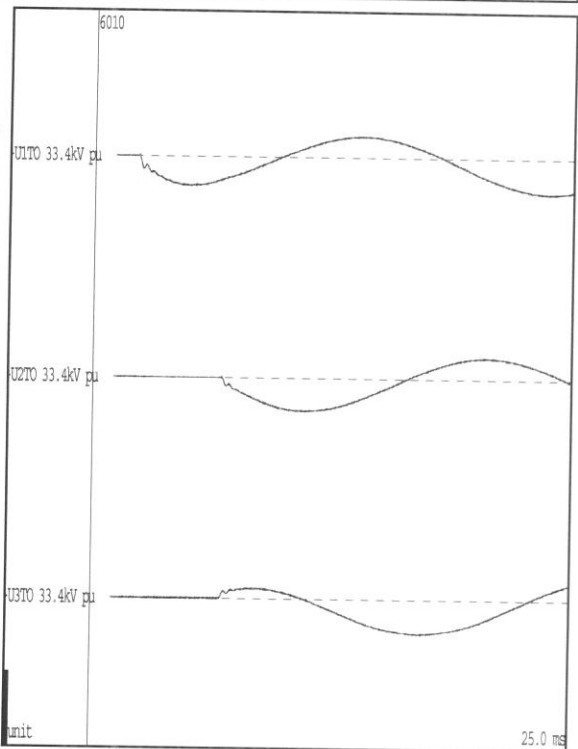
Voltage closing coil - V.d.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - V.d.c. Operating pressure

Remarks: Recloser closed and cleared.



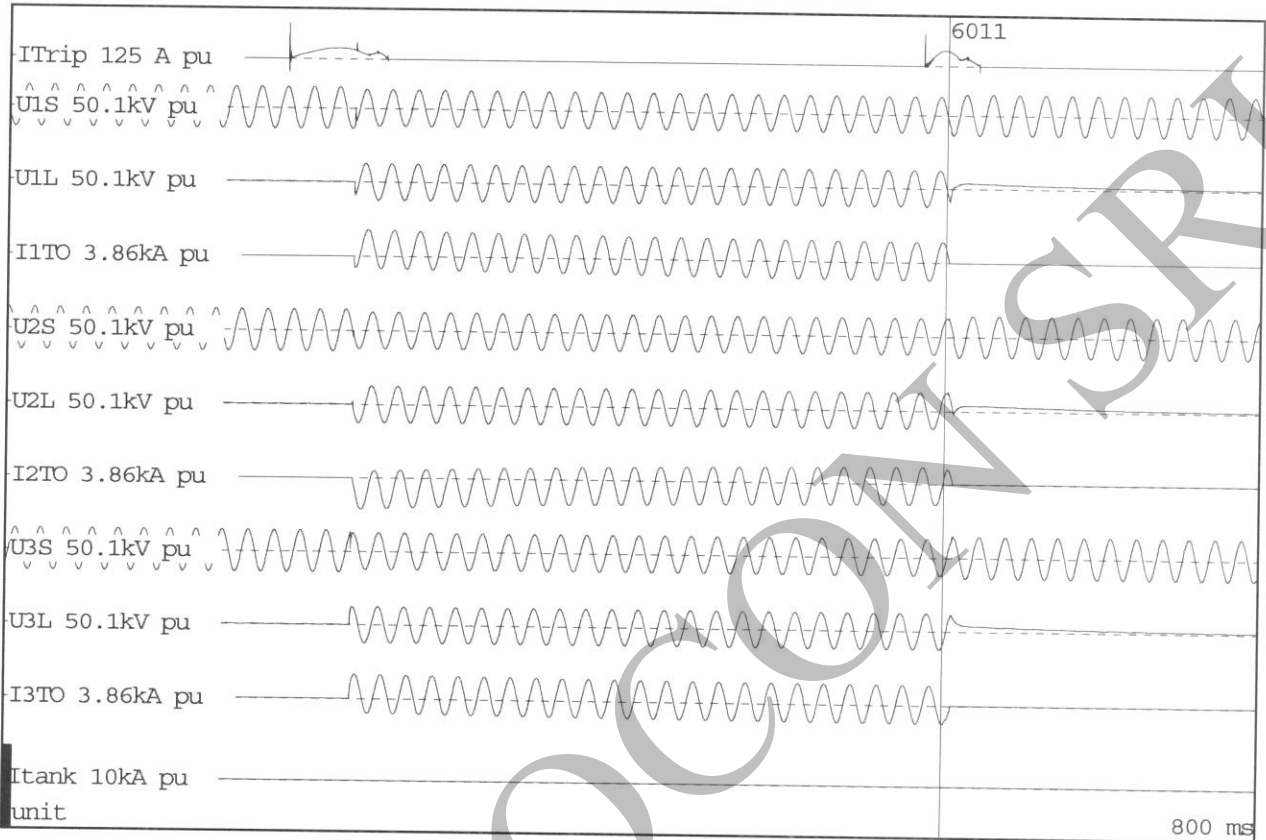
TEST NUMBER: 100526-6010

Time interval since previous test	min	-		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,06	9,03	9,05
Applied voltage, between phases	kV	15,7		
Making current, peak	kA	1,31	-1,49	1,08
Breaking current, phase value	kA	0,637	0,639	0,639
Average current, three phase	kA	0,638		
Breaking current, DC-component	%	7	10	3
Recovery voltage, phase value	kV	8,99	8,95	8,98
Recovery voltage, between phases	kV	15,5		
TRV, peak	kV	-	-	-
Make time	ms	43,1	43,1	43,1
Arc duration	ms	2,0	5,8	5,8
Opening time	ms	15,3		
Break time	ms	17,3	21,1	21,1



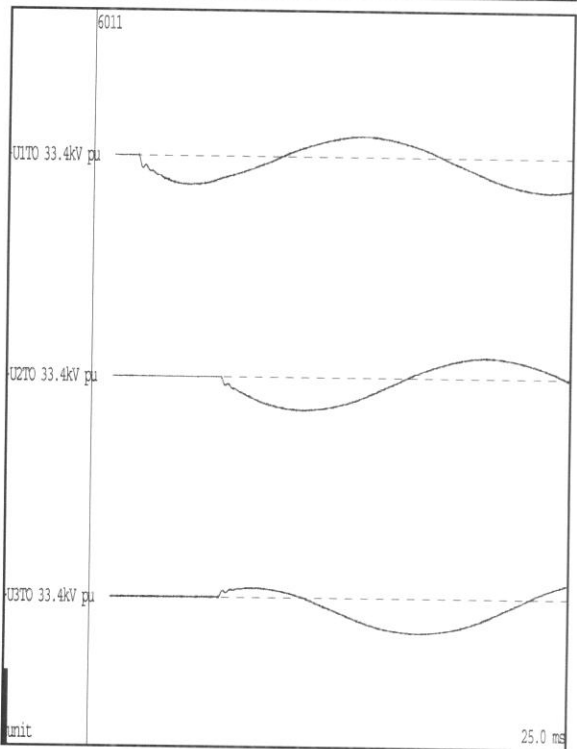
Voltage closing coil - V.d.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - V.d.c. Operating pressure

Remarks: Recloser closed and cleared.



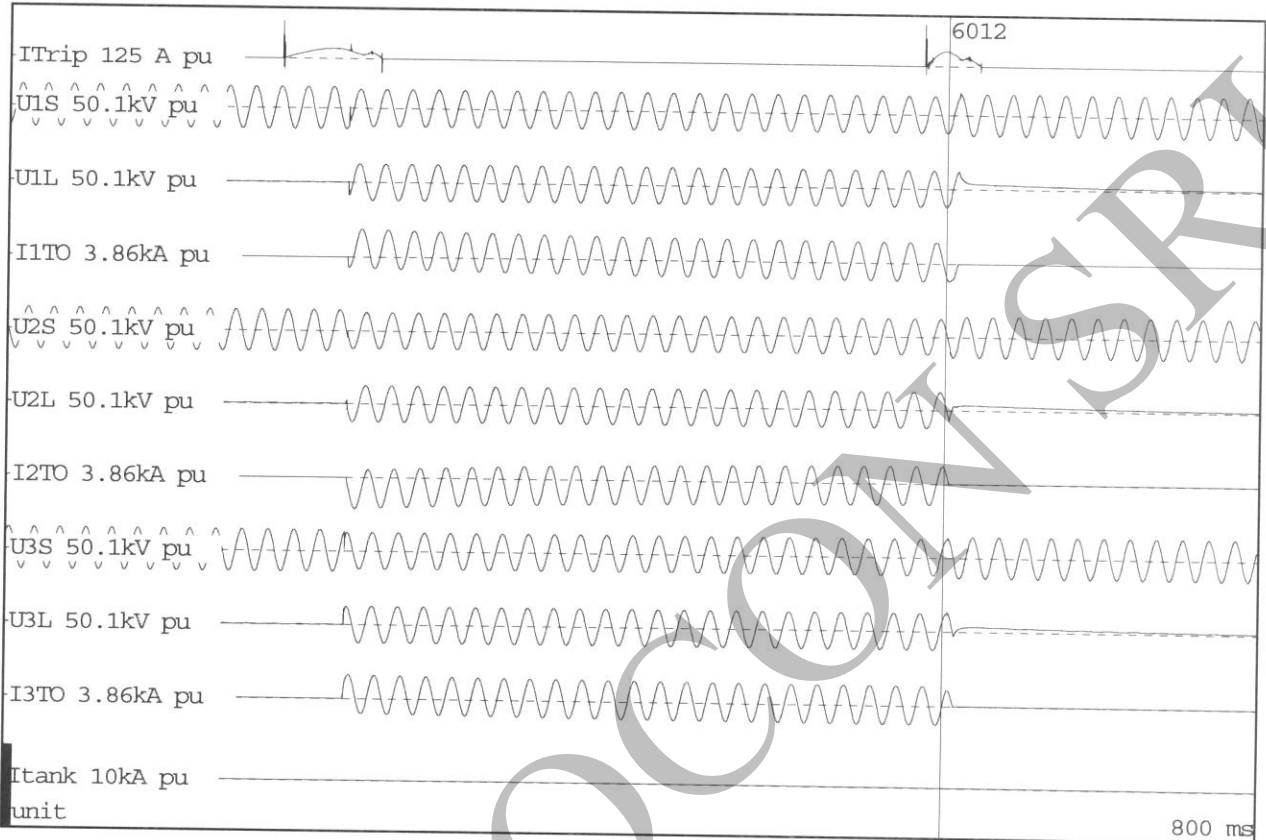
TEST NUMBER: 100526-6011

Time interval since previous test	min	-		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,06	9,03	9,06
Applied voltage, between phases	kV	15,7		
Making current, peak	kA	1,27	-1,51	1,15
Breaking current, phase value	kA	0,638	0,639	0,640
Average current, three phase	kA	0,639		
Breaking current, DC-component	%	6	11	4
Recovery voltage, phase value	kV	8,98	8,96	8,99
Recovery voltage, between phases	kV	15,5		
TRV, peak	kV	-	-	-
Make time	ms	43,2	43,2	43,2
Arc duration	ms	2,0	5,8	5,8
Opening time	ms	15,3		
Break time	ms	17,3	21,1	21,1



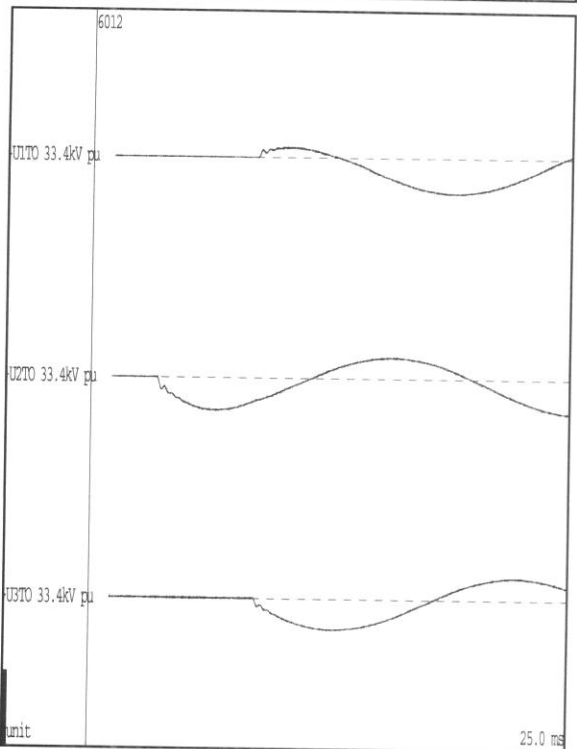
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



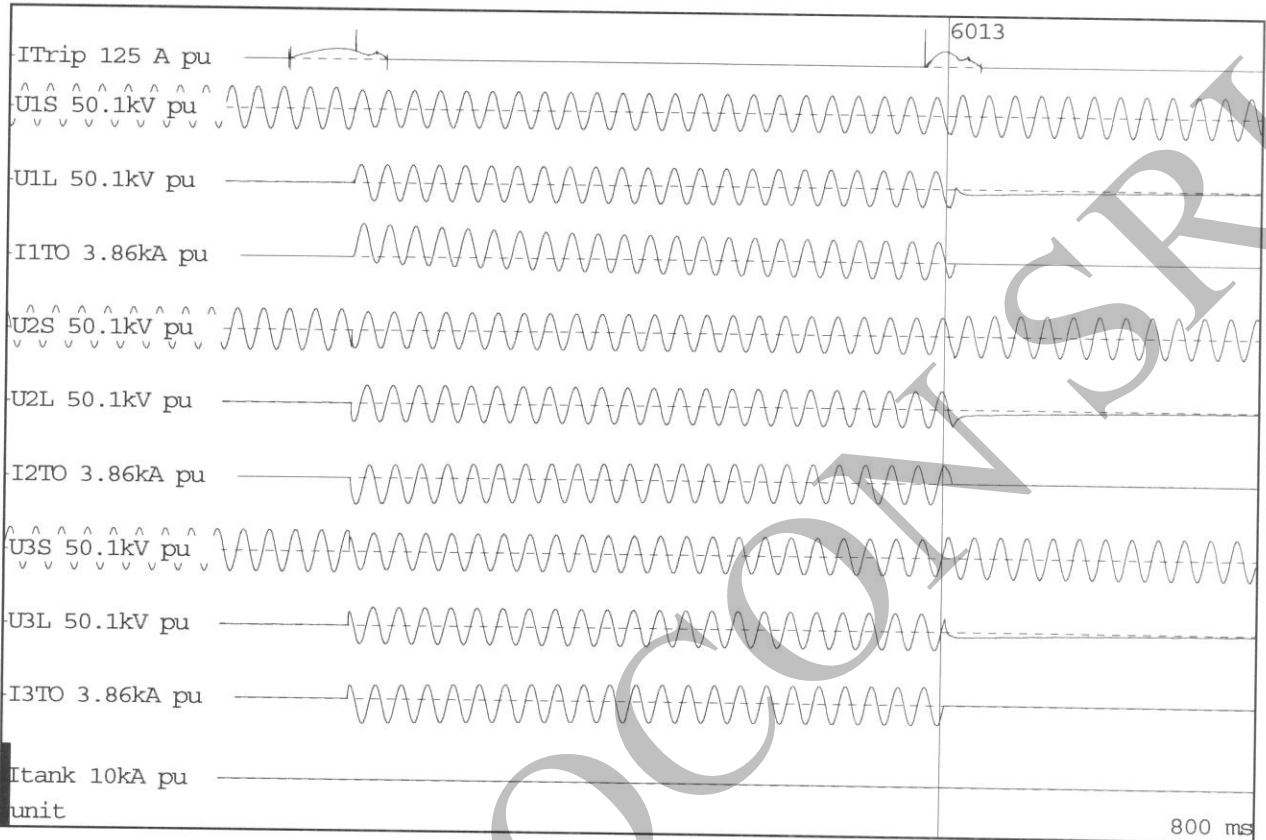
TEST NUMBER: 100526-6012

Time interval since previous test	min	-		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,07	9,03	9,06
Applied voltage, between phases	kV	15,7		
Making current, peak	kA	1,28	-1,50	1,12
Breaking current, phase value	kA	0,637	0,639	0,639
Average current, three phase	kA	0,638		
Breaking current, DC-component	%	6	10	4
Recovery voltage, phase value	kV	8,99	8,95	8,98
Recovery voltage, between phases	kV	15,5		
TRV, peak	kV	-	-	-
Make time	ms	43,2	43,2	43,2
Arc duration	ms	7,4	3,0	7,4
Opening time	ms	15,2		
Break time	ms	22,6	18,2	22,6



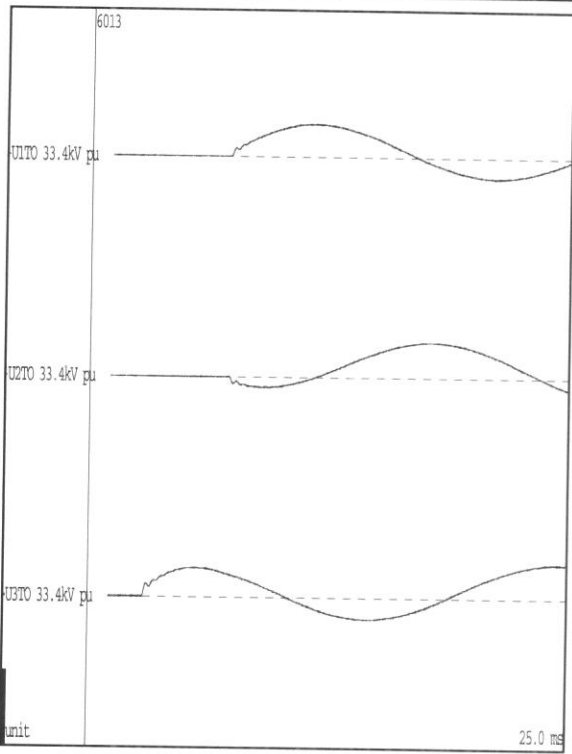
Voltage closing coil - V.d.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - V.d.c. Operating pressure

Remarks: Recloser closed and cleared.



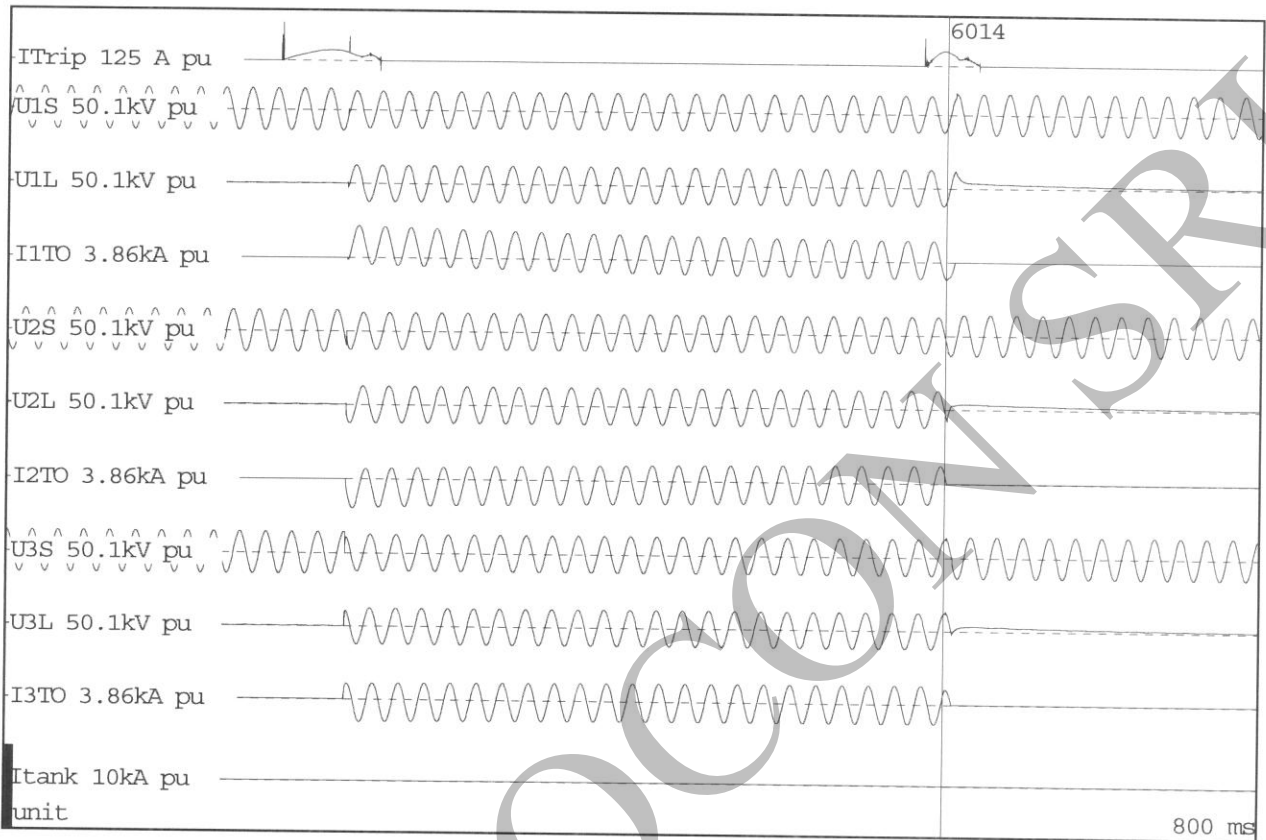
TEST NUMBER: 100526-6013

Time interval since previous test	min	-		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,06	9,02	9,06
Applied voltage, between phases	kV	15,7		
Making current, peak	kA	1,53	-1,27	-1,18
Breaking current, phase value	kA	0,638	0,639	0,639
Average current, three phase	kA	0,639		
Breaking current, DC-component	%	11	6	5
Recovery voltage, phase value	kV	8,99	8,96	8,99
Recovery voltage, between phases	kV	15,6		
TRV, peak	kV	-	-	-
Make time	ms	42,7	42,7	42,7
Arc duration	ms	6,3	6,2	2,5
Opening time	ms	15,0		
Break time	ms	21,3	21,2	17,5



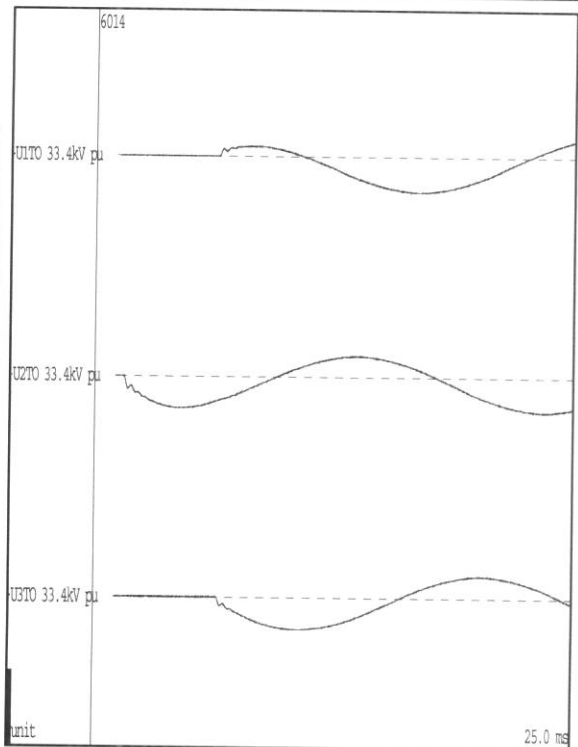
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



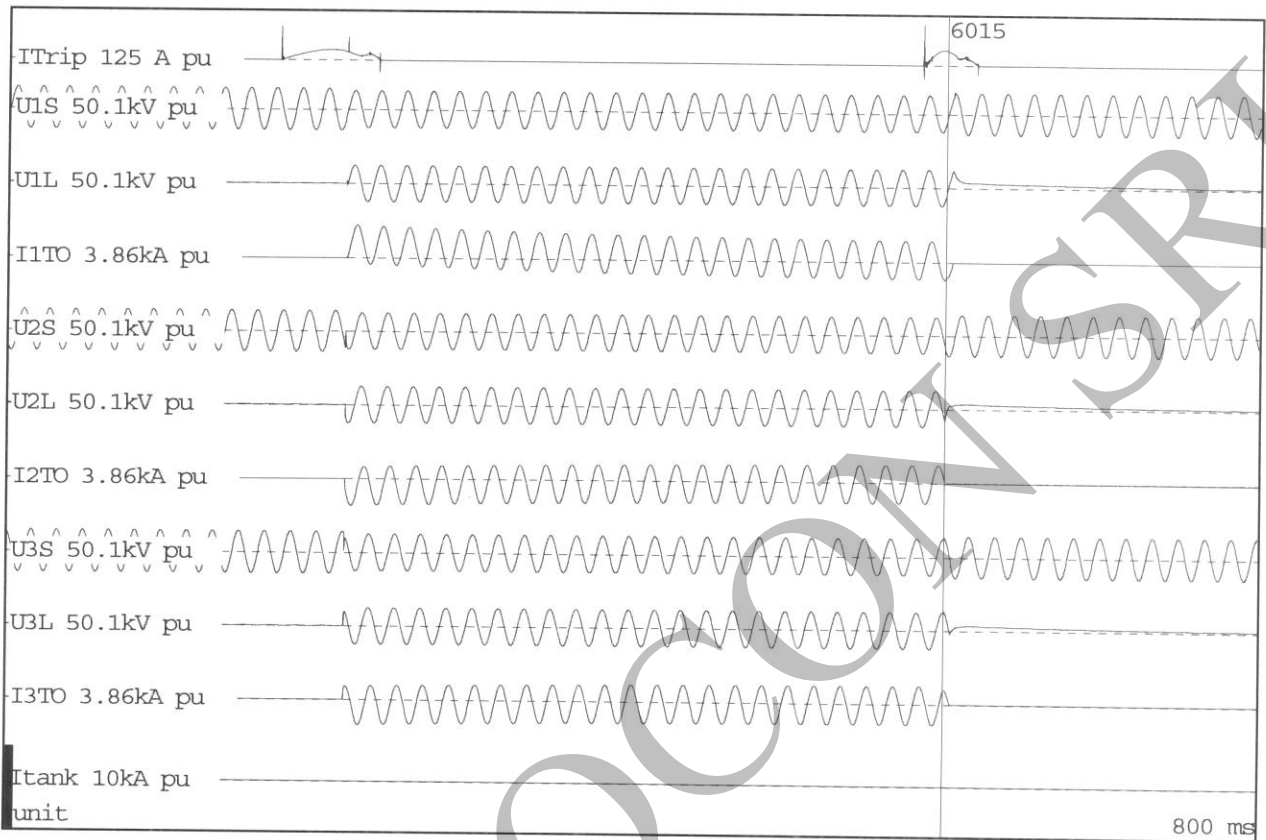
TEST NUMBER: 100526-6014

Time interval since previous test	min	-		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,07	9,02	9,06
Applied voltage, between phases	kV	15,7		
Making current, peak	kA	1,51	-1,36	-1,07
Breaking current, phase value	kA	0,638	0,639	0,639
Average current, three phase	kA	0,639		
Breaking current, DC-component	%	10	8	3
Recovery voltage, phase value	kV	8,99	8,96	8,99
Recovery voltage, between phases	kV	15,6		
TRV, peak	kV	-	-	-
Make time	ms	43,0	43,0	43,0
Arc duration	ms	5,5	1,4	5,5
Opening time	ms	14,9		
Break time	ms	20,4	16,3	20,4



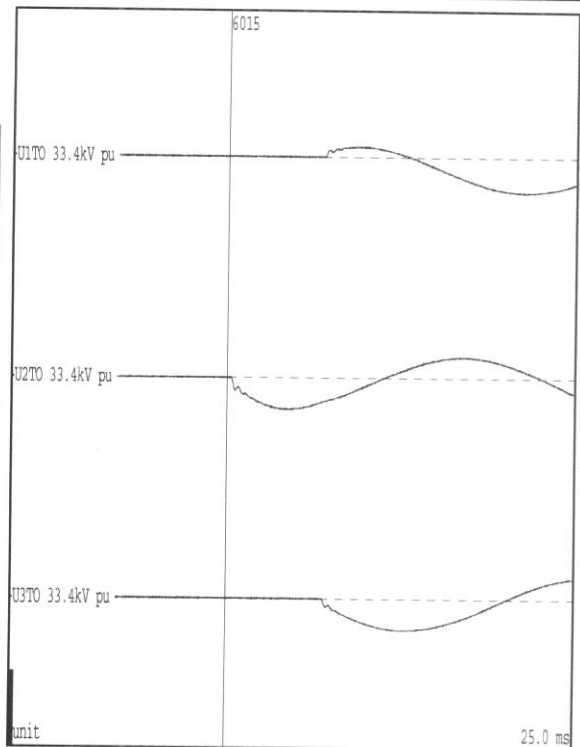
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



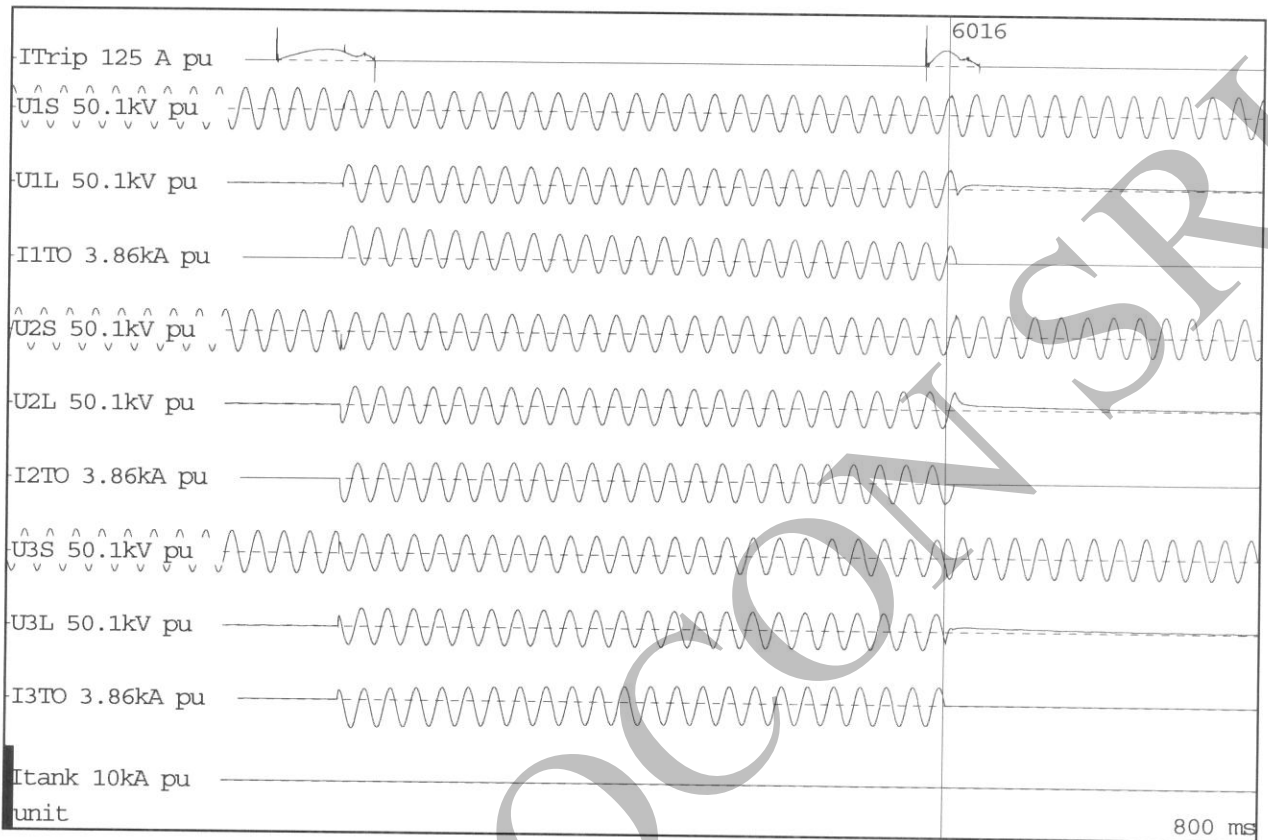
TEST NUMBER: 100526-6015

Time interval since previous test	min	-		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,07	9,03	9,05
Applied voltage, between phases	kV	15,7		
Making current, peak	kA	1,53	-1,27	-1,17
Breaking current, phase value	kA	0,638	0,639	0,639
Average current, three phase	kA	0,639		
Breaking current, DC-component	%	10	6	4
Recovery voltage, phase value	kV	9,00	8,95	8,98
Recovery voltage, between phases	kV	15,5		
TRV, peak	kV	-	-	-
Make time	ms	43,2	43,2	43,2
Arc duration	ms	4,4	0,2	4,3
Opening time	ms	15,6		
Break time	ms	20,0	15,8	19,9



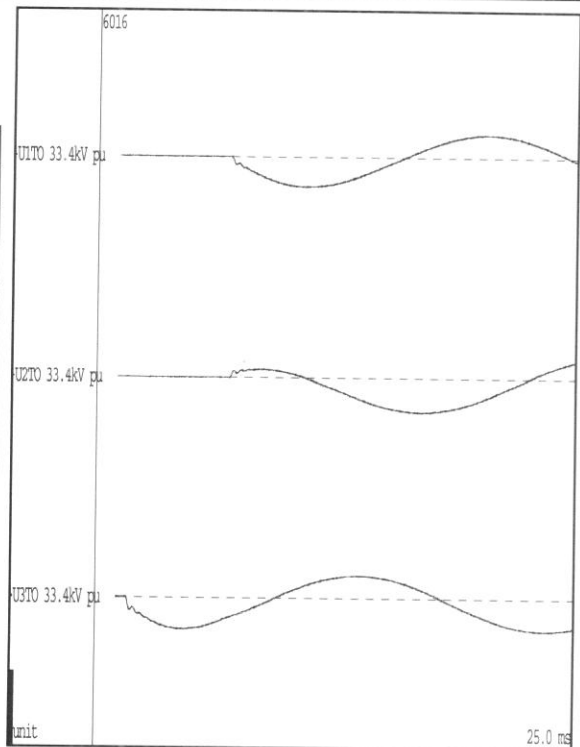
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



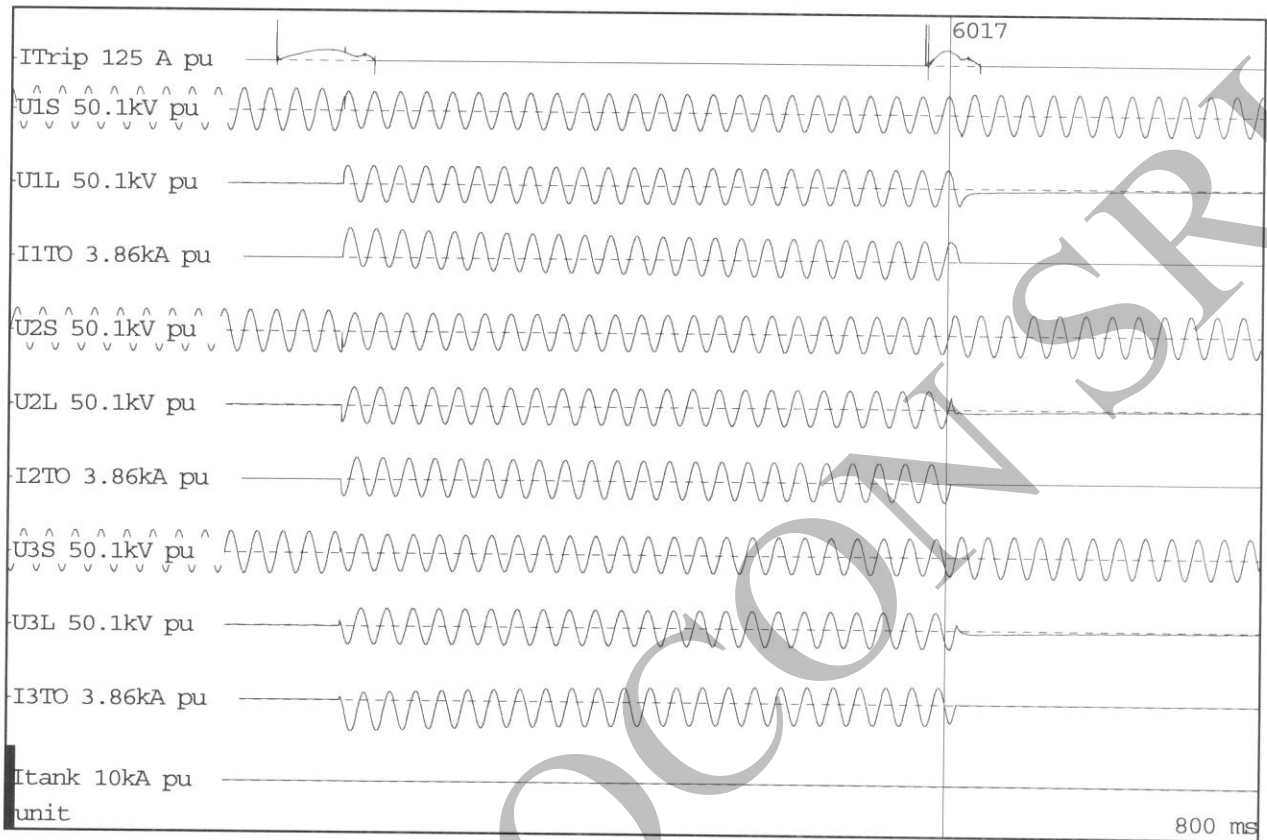
TEST NUMBER: 100526-6016

Time interval since previous test	min	-		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,06	9,03	9,05
Applied voltage, between phases	kV	15,7		
Making current, peak	kA	1,51	-1,10	-1,32
Breaking current, phase value	kA	0,637	0,639	0,639
Average current, three phase	kA	0,638		
Breaking current, DC-component	%	10	3	7
Recovery voltage, phase value	kV	8,99	8,95	8,97
Recovery voltage, between phases	kV	15,5		
TRV, peak	kV	-	-	-
Make time	ms	43,1	43,1	43,1
Arc duration	ms	5,9	6,0	1,4
Opening time	ms	15,4		
Break time	ms	21,3	21,4	16,8



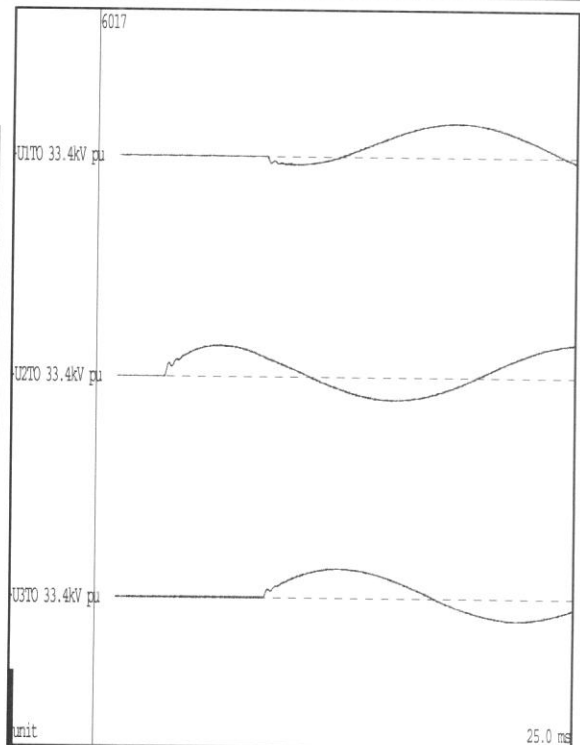
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



TEST NUMBER: 100526-6017

Time interval since previous test	min	-		
Operation		CO		
Phase		C	B	A
Applied voltage, phase value	kV	9,06	9,03	9,05
Applied voltage, between phases	kV	15,7		
Making current, peak	kA	1,39	1,02	-1,50
Breaking current, phase value	kA	0,638	0,639	0,639
Average current, three phase	kA	0,639		
Breaking current, DC-component	%	8	2	10
Recovery voltage, phase value	kV	8,98	8,95	8,98
Recovery voltage, between phases	kV	15,5		
TRV, peak	kV	-	-	-
Make time	ms	43,7	43,7	43,7
Arc duration	ms	7,6	3,1	7,6
Opening time	ms	15,5		
Break time	ms	23,1	18,6	23,1



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

Remarks: Recloser closed and cleared.

TEST NUMBERS

100526-6020	100526-6032
100526-6021	100526-6033
100526-6022	100526-6034
100526-6023	100526-6035
100526-6024	100526-6036
100526-6025	100526-6037
100526-6026	100526-6038
100526-6027	100526-6039
100526-6028	
100526-6029	
100526-6030	
100526-6031	

CONDITION BEFORE TESTS

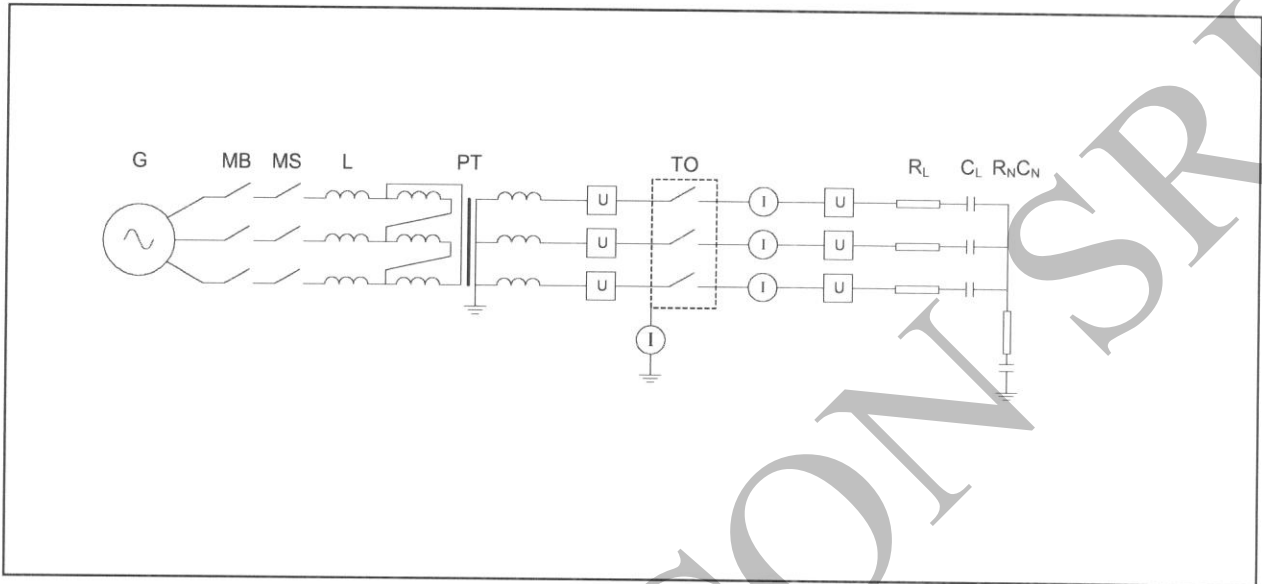
Recloser in same condition.

Supply to moving contacts.

Load on fixed contacts.

Frame earthed via an earth fault current indicating CT.

TEST-CIRCUIT S04



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

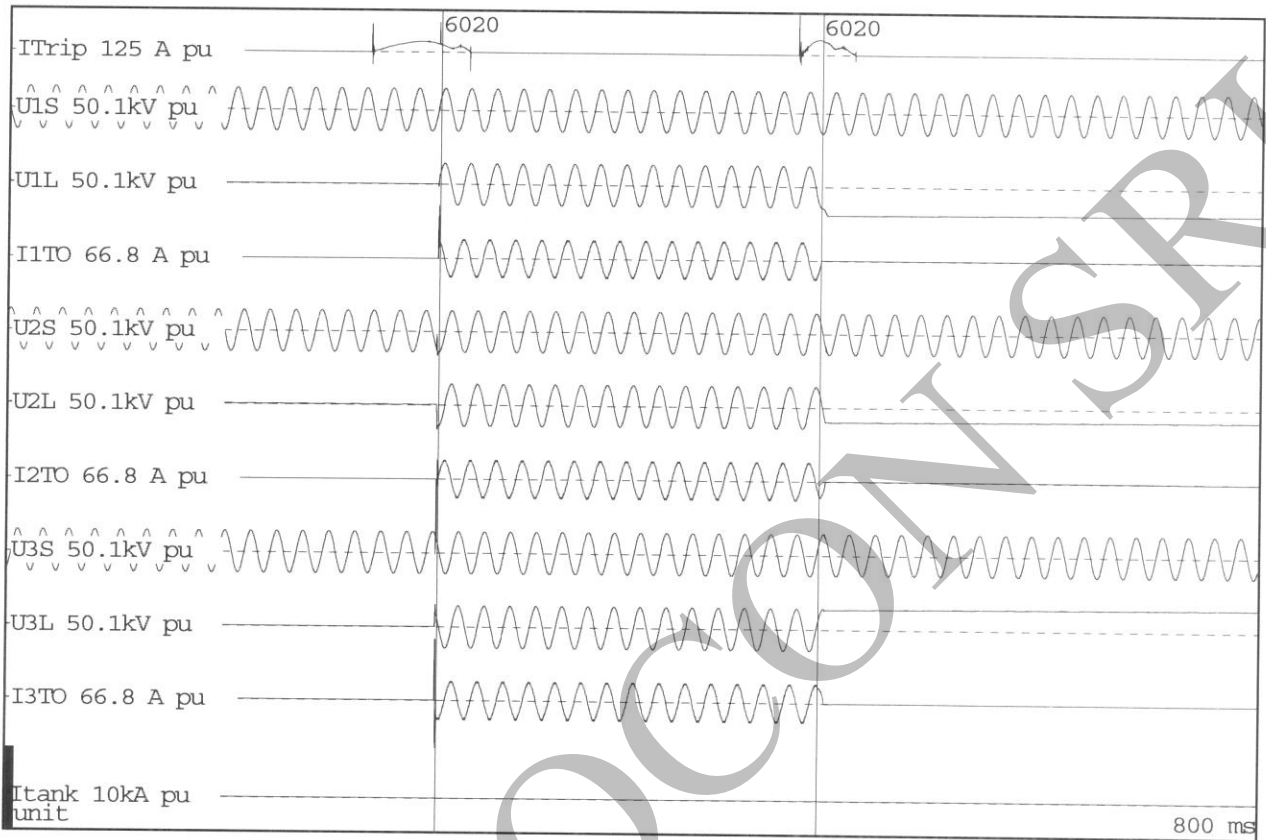
TRV control elements added (supply)		
C_1	μF	-
R_1 (in parallel)	Ω	-
R_1 (in series)	Ω	-
L_1	mH	-
C_0	nF	-
Neutral		-

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

Load		
Impedance	Ω	4470
Cos phi		< 0,1
Neutral		via RN CN

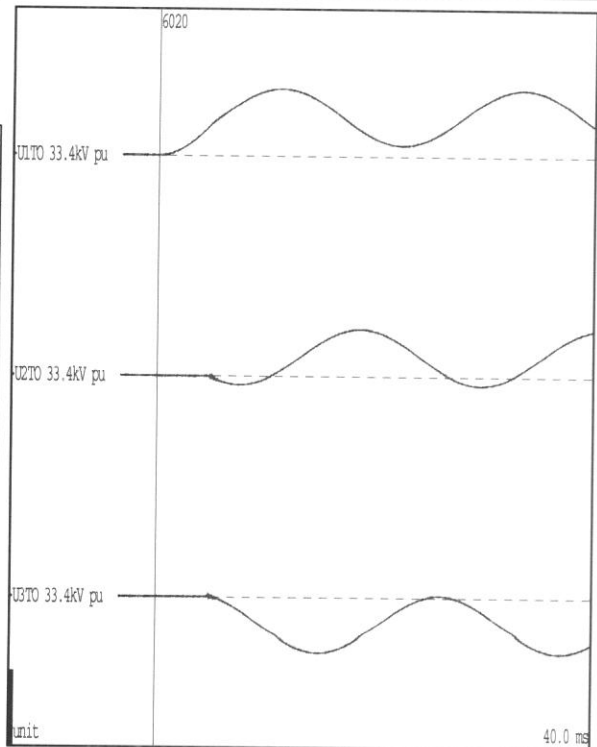
Capacitive load		
C_L	μF	2,9
R_L	Ω	40
C_s	μF	-
L_L	mH	-
C_N	μF	0,03
R_N	Ω	1500
Frequency of inrush current	Hz	3000

Remarks: -



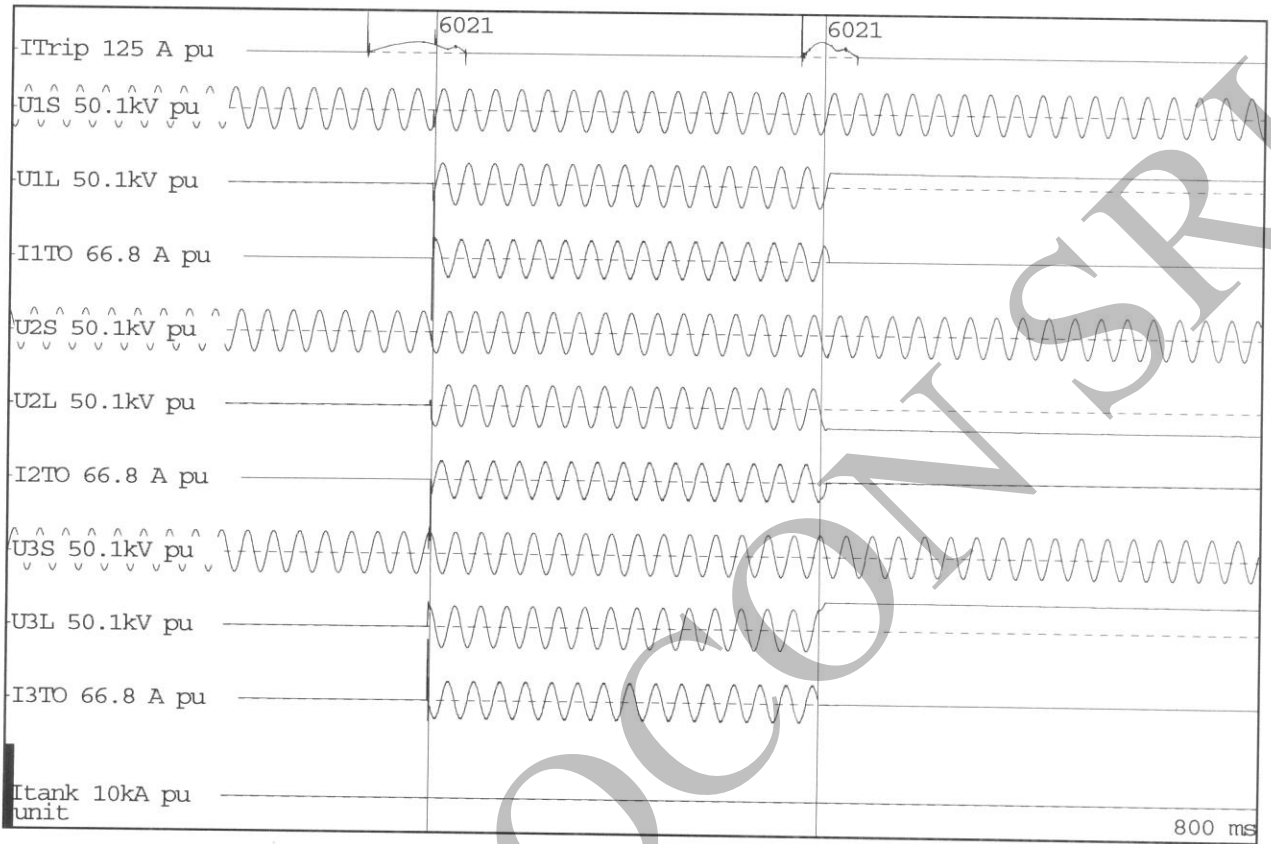
TEST NUMBER: 100526-6020

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,06
Applied voltage, between phases	kV	15,7		
Make time	ms	44,7	44,7	44,7
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	9,09	9,06	9,09
Test voltage, between phases	kV	15,7		
Opening time	ms	15,3		
Arc duration	ms	0,3	3,7	3,7
Break time	ms	15,6	19,0	19,0
Recovery voltage, peak value	kV	30,4	21,5	-24,8
Supply voltage, peak value	kV	-13,1	-13,0	13,2
Load voltage, peak value	kV	-17,6	-8,76	12,1



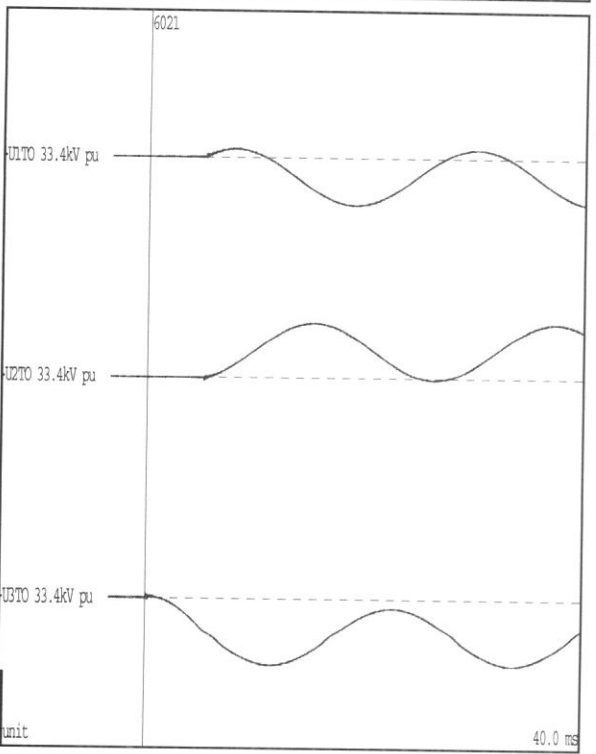
Voltage closing coil	- V.d.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- V.d.c.	Operating pressure	

Remarks: Recloser closed and cleared.



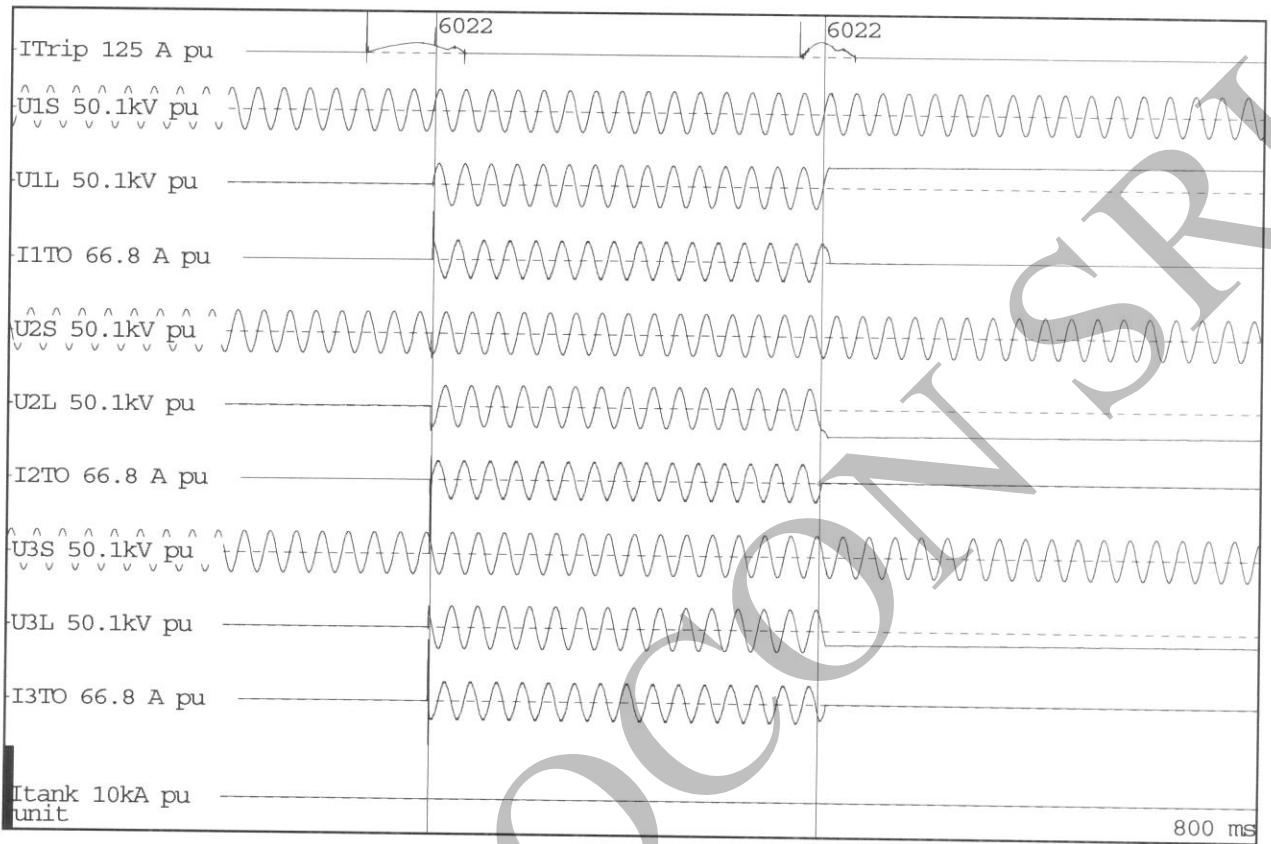
TEST NUMBER: 100526-6021

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,05	9,03	9,05
Applied voltage, between phases	kV	15,7		
Make time	ms	44,3	44,3	44,3
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	9,06	9,09
Test voltage, between phases	kV	15,7		
Opening time	ms	15,4		
Arc duration	ms	4,0	4,0	0,2
Break time	ms	19,4	19,4	15,6
Recovery voltage, peak value	kV	-21,7	24,7	-30,0
Supply voltage, peak value	kV	13,1	-13,0	13,3
Load voltage, peak value	kV	8,98	-12,0	17,4



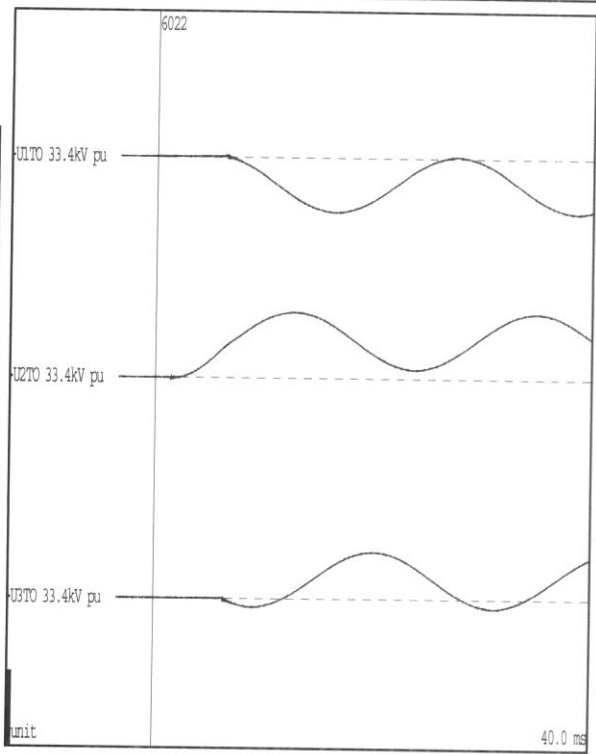
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



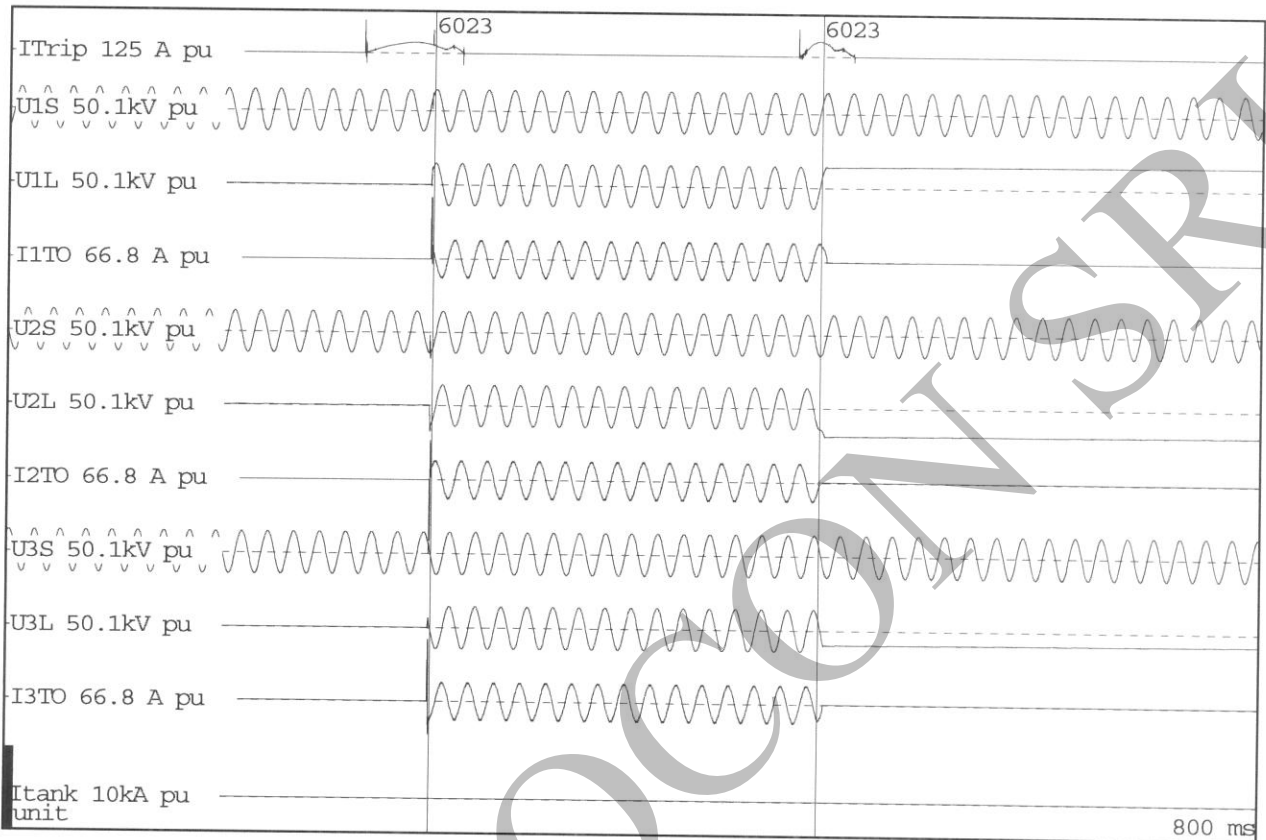
TEST NUMBER: 100526-6022

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,06
Applied voltage, between phases	kV	15,7		
Make time	ms	125	124	124
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	15,8		
Arc duration	ms	4,8	1,1	4,8
Break time	ms	20,6	16,9	20,6
Recovery voltage, peak value	kV	-25,0	29,7	21,4
Supply voltage, peak value	kV	13,1	-13,2	-13,0
Load voltage, peak value	kV	12,4	-17,1	-8,61



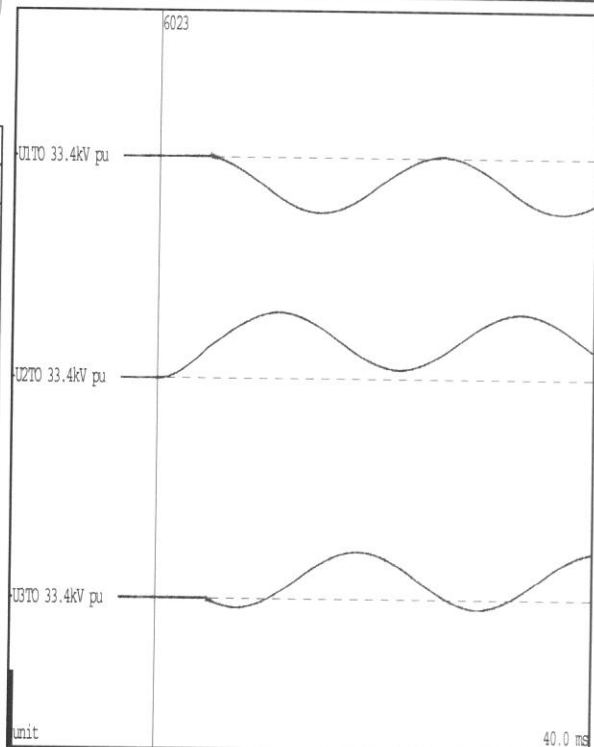
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



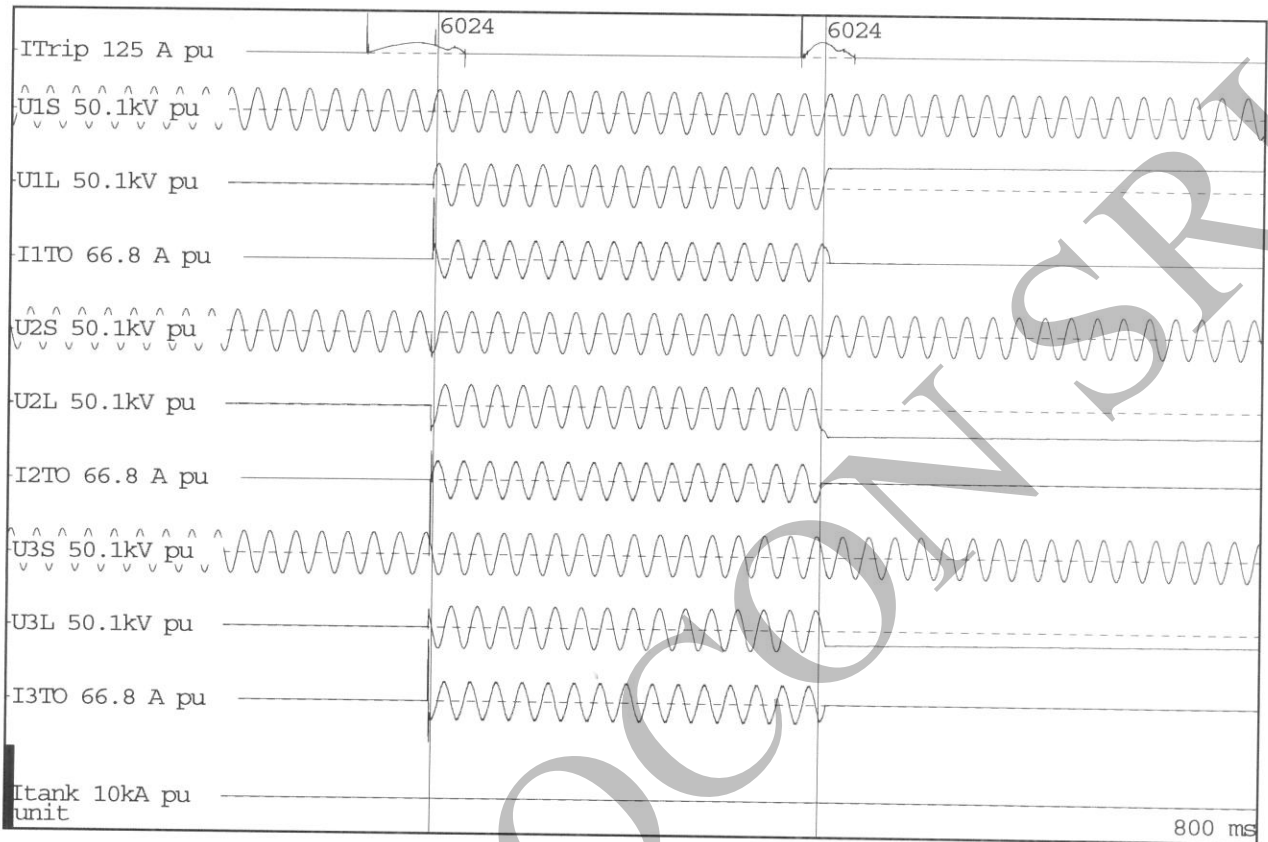
TEST NUMBER: 100526-6023

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,05
Applied voltage, between phases	kV	15,7		
Make time	ms	44,3	44,3	44,3
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	9,06	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	15,6		
Arc duration	ms	3,6	0,1	3,6
Break time	ms	19,2	15,7	19,2
Recovery voltage, peak value	kV	-25,0	29,8	21,4
Supply voltage, peak value	kV	13,2	-13,2	-12,9
Load voltage, peak value	kV	12,4	-17,1	-8,52



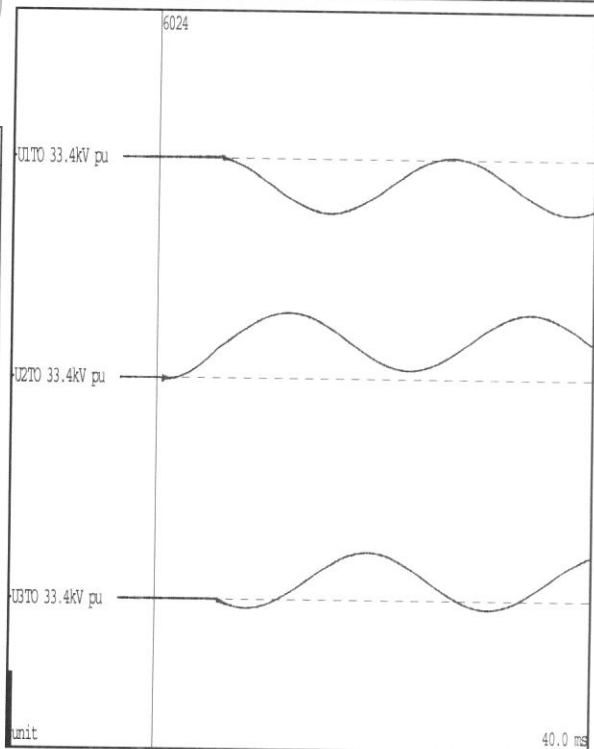
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



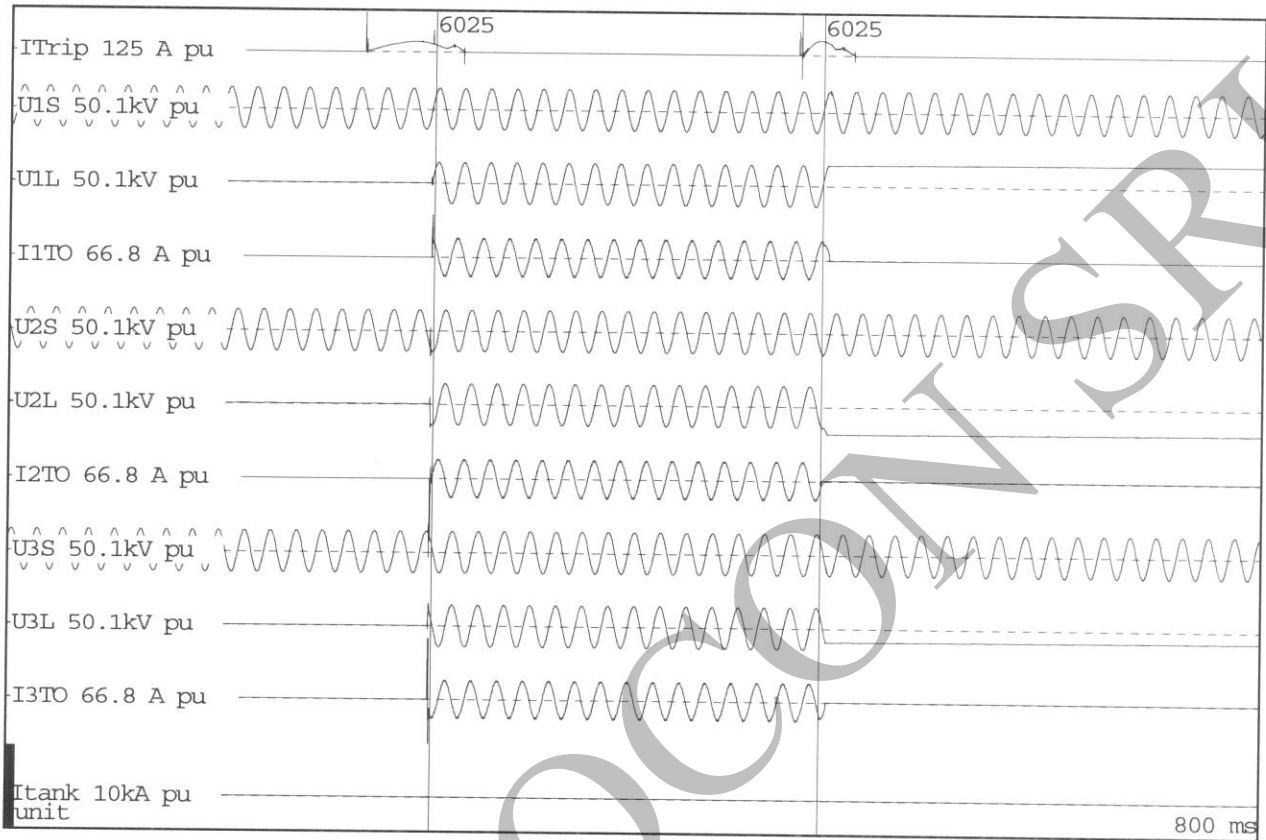
TEST NUMBER: 100526-6024

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,05
Applied voltage, between phases	kV	15,7		
Make time	ms	43,6	43,6	43,6
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	9,09	9,06	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	16,4		
Arc duration	ms	4,4	0,4	4,4
Break time	ms	20,8	16,8	20,8
Recovery voltage, peak value	kV	-25,1	29,6	21,6
Supply voltage, peak value	kV	13,1	-13,2	-13,0
Load voltage, peak value	kV	12,3	-16,9	-8,70



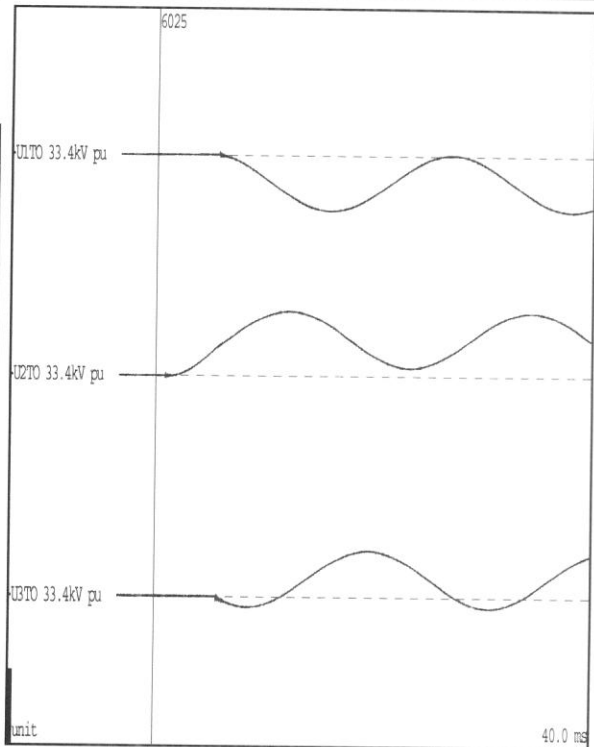
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



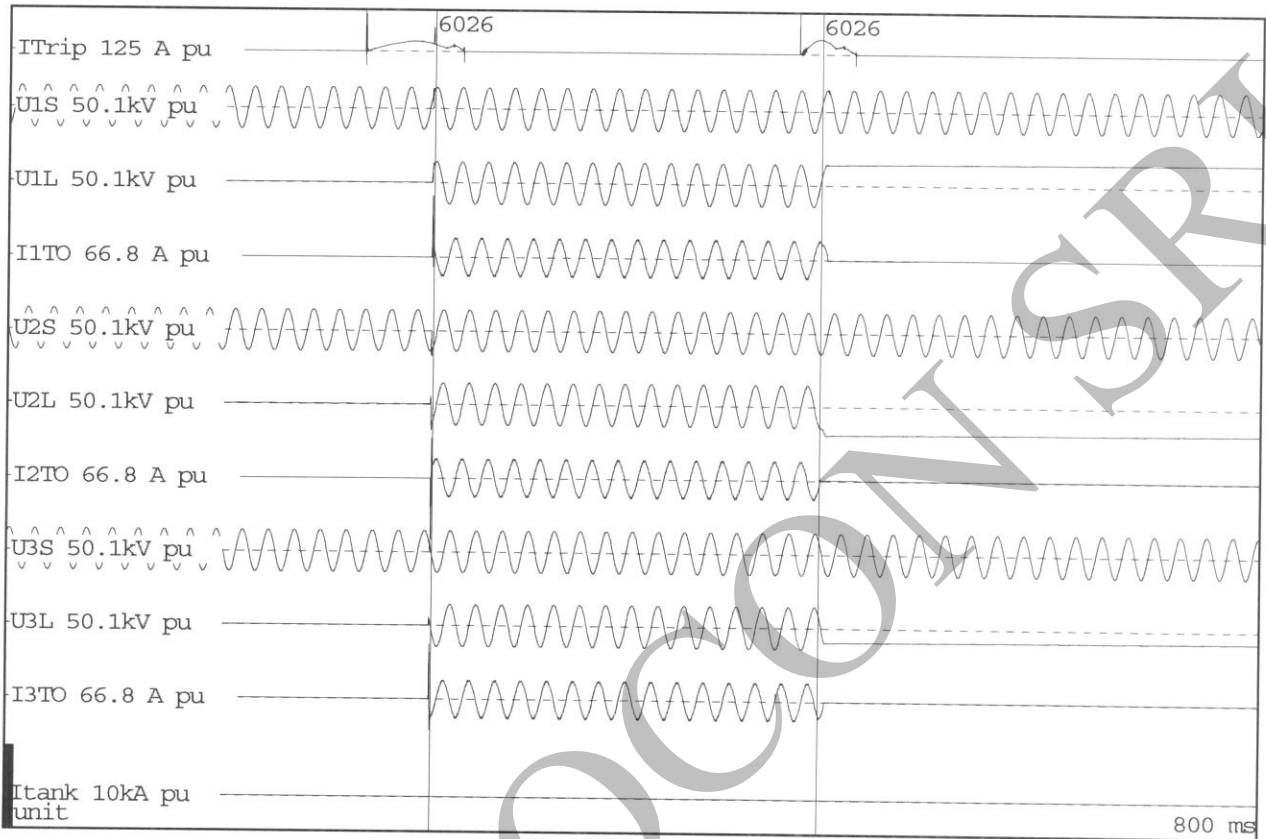
TEST NUMBER: 100526-6025

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,07	9,03	9,05
Applied voltage, between phases	kV	15,7		
Make time	ms	43,0	43,0	43,0
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	9,09	9,06	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	16,0		
Arc duration	ms	4,3	0,7	4,3
Break time	ms	20,3	16,7	20,3
Recovery voltage, peak value	kV	-25,3	29,3	20,9
Supply voltage, peak value	kV	13,2	-13,2	-12,9
Load voltage, peak value	kV	12,6	-16,6	-8,05



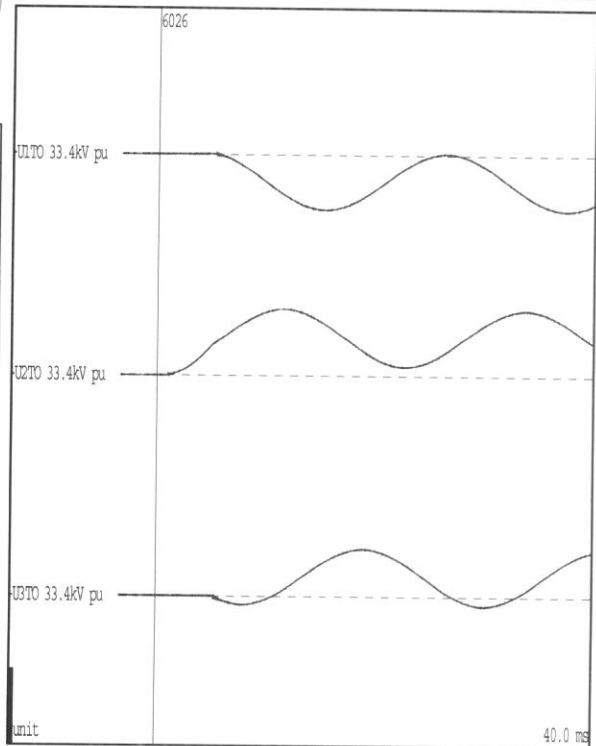
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



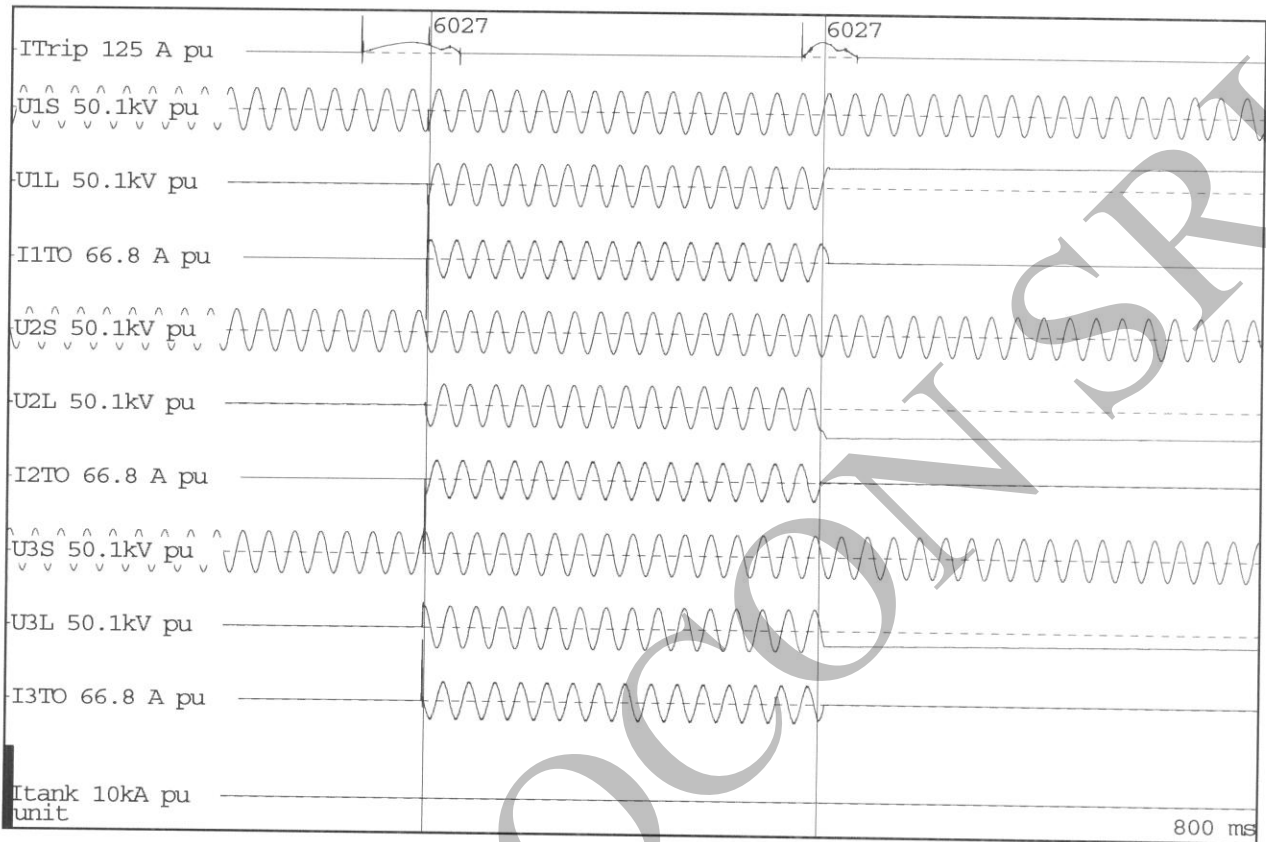
TEST NUMBER: 100526-6026

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,07	9,03	9,05
Applied voltage, between phases	kV	15,7		
Make time	ms	43,7	43,7	43,7
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	9,09	9,07	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	14,7		
Arc duration	ms	4,0	0,6	4,0
Break time	ms	18,7	15,3	18,7
Recovery voltage, peak value	kV	-25,0	30,0	21,5
Supply voltage, peak value	kV	13,2	-13,2	-13,0
Load voltage, peak value	kV	12,3	-17,3	-8,71



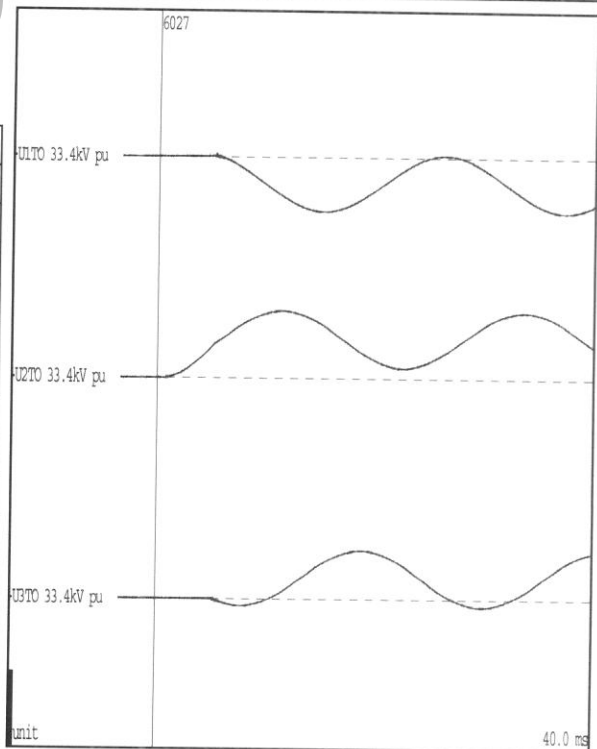
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



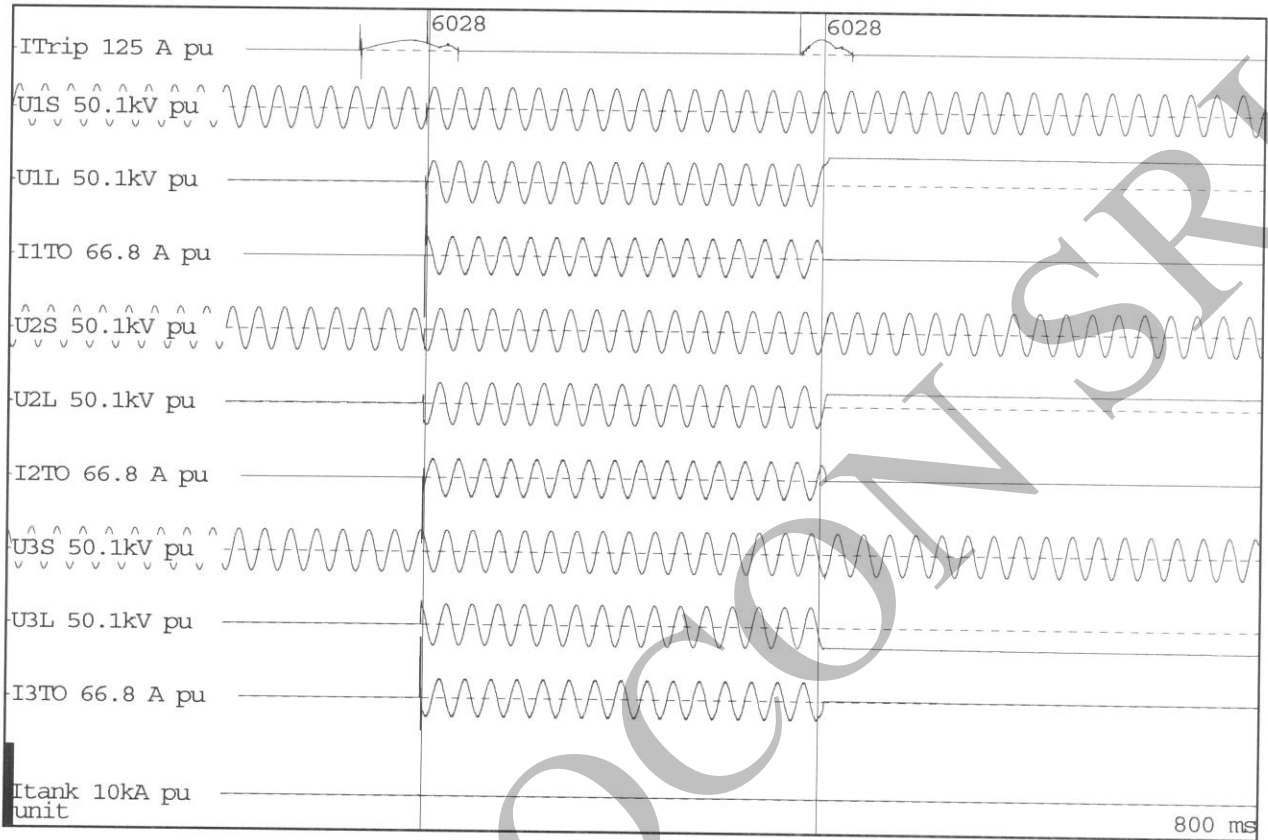
TEST NUMBER: 100526-6027

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,05
Applied voltage, between phases	kV	15,7		
Make time	ms	43,1	43,1	43,1
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	9,09	9,06	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	14,5		
Arc duration	ms	4,0	0,5	4,0
Break time	ms	18,5	15,0	18,5
Recovery voltage, peak value	kV	-24,6	30,5	22,1
Supply voltage, peak value	kV	13,2	-13,1	-13,0
Load voltage, peak value	kV	11,9	-17,8	-9,20



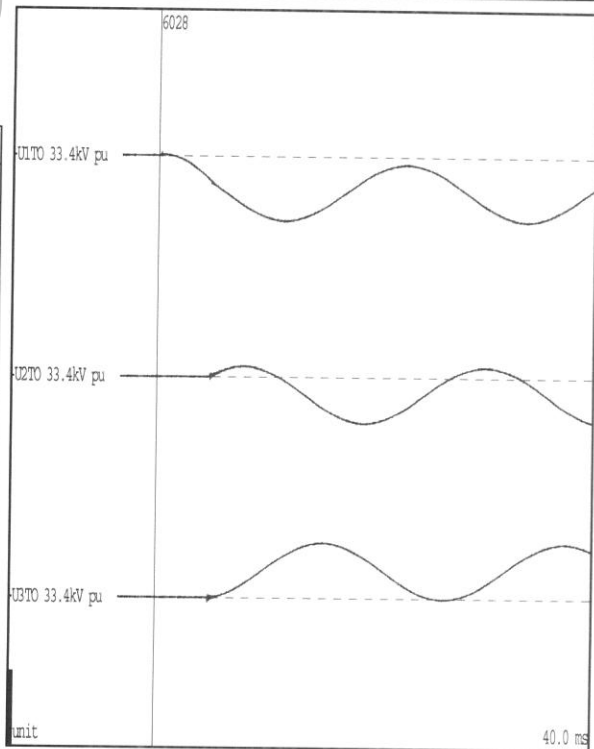
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



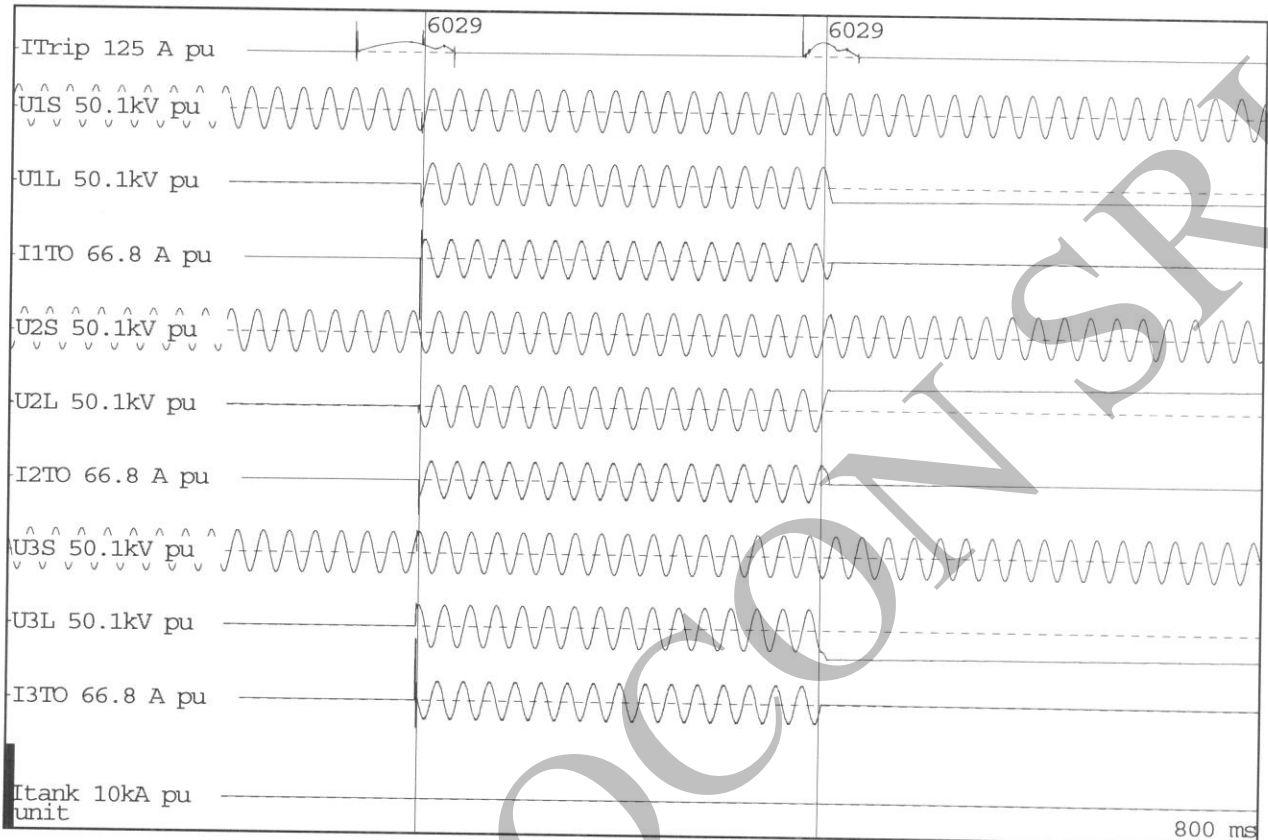
TEST NUMBER: 100526-6028

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,05
Applied voltage, between phases	kV	15,7		
Make time	ms	43,0	43,0	43,0
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	9,09	9,06	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	16,0		
Arc duration	ms	0,3	3,7	3,7
Break time	ms	16,3	19,7	19,7
Recovery voltage, peak value	kV	-29,4	-20,7	25,1
Supply voltage, peak value	kV	13,3	12,9	-13,0
Load voltage, peak value	kV	16,7	7,95	-12,3



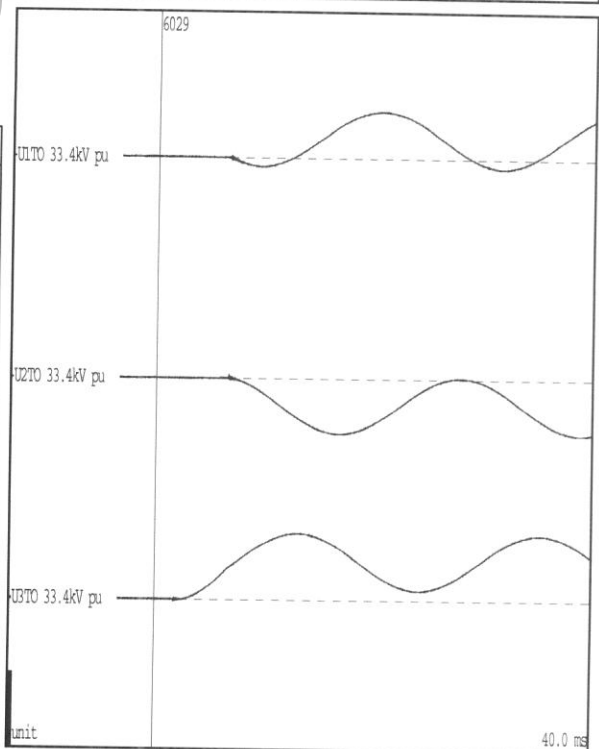
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



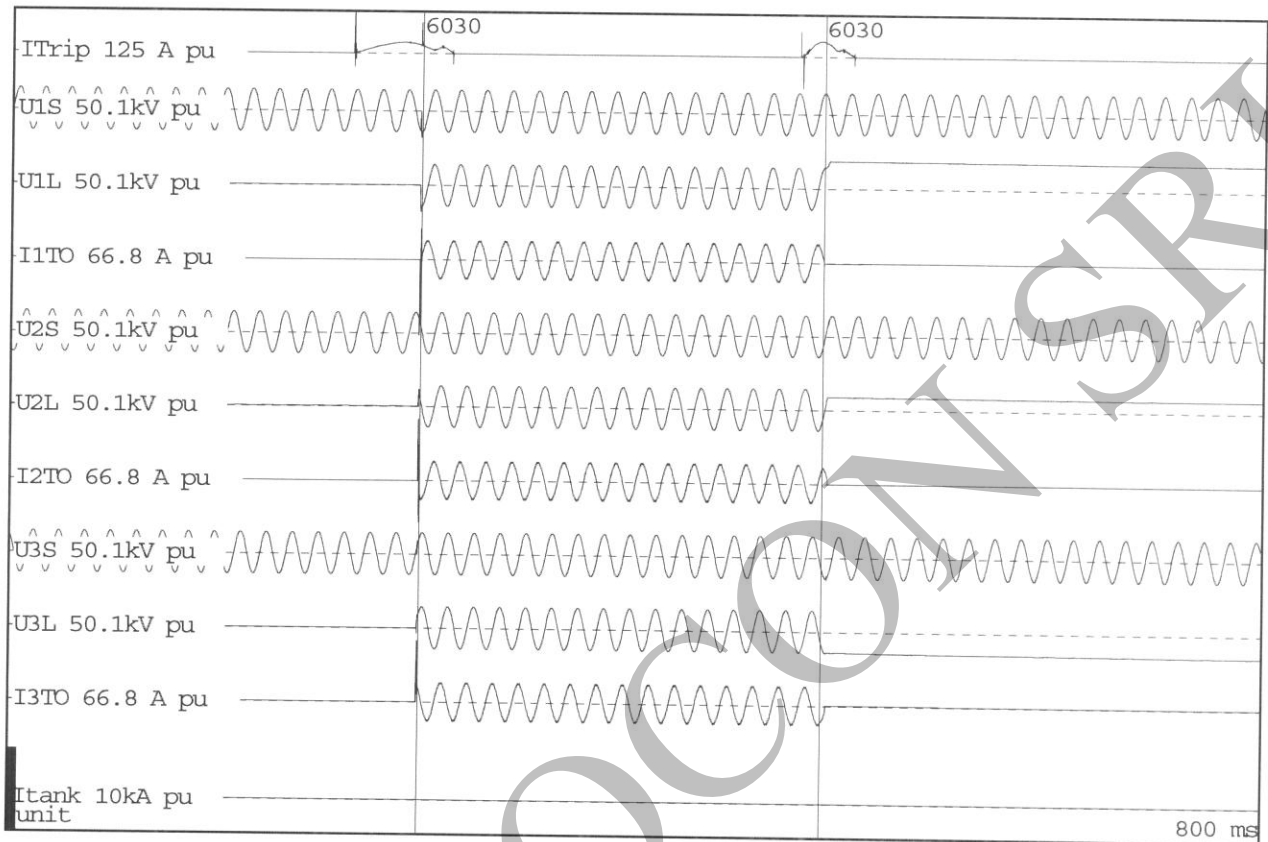
TEST NUMBER: 100526-6029

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,06
Applied voltage, between phases	kV	15,7		
Make time	ms	42,6	42,6	42,6
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	15,1		
Arc duration	ms	5,1	5,1	1,4
Break time	ms	20,2	20,2	16,5
Recovery voltage, peak value	kV	21,5	-25,0	30,0
Supply voltage, peak value	kV	-13,0	13,1	-13,1
Load voltage, peak value	kV	-8,70	12,2	-17,2



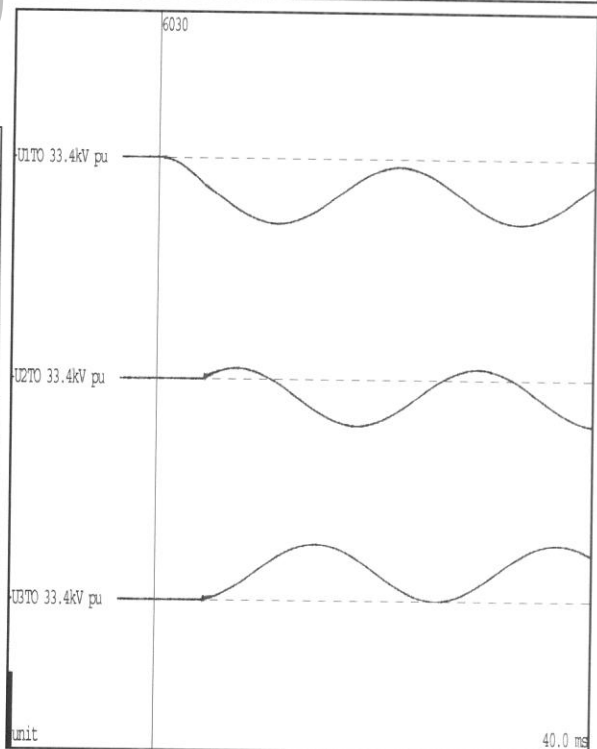
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



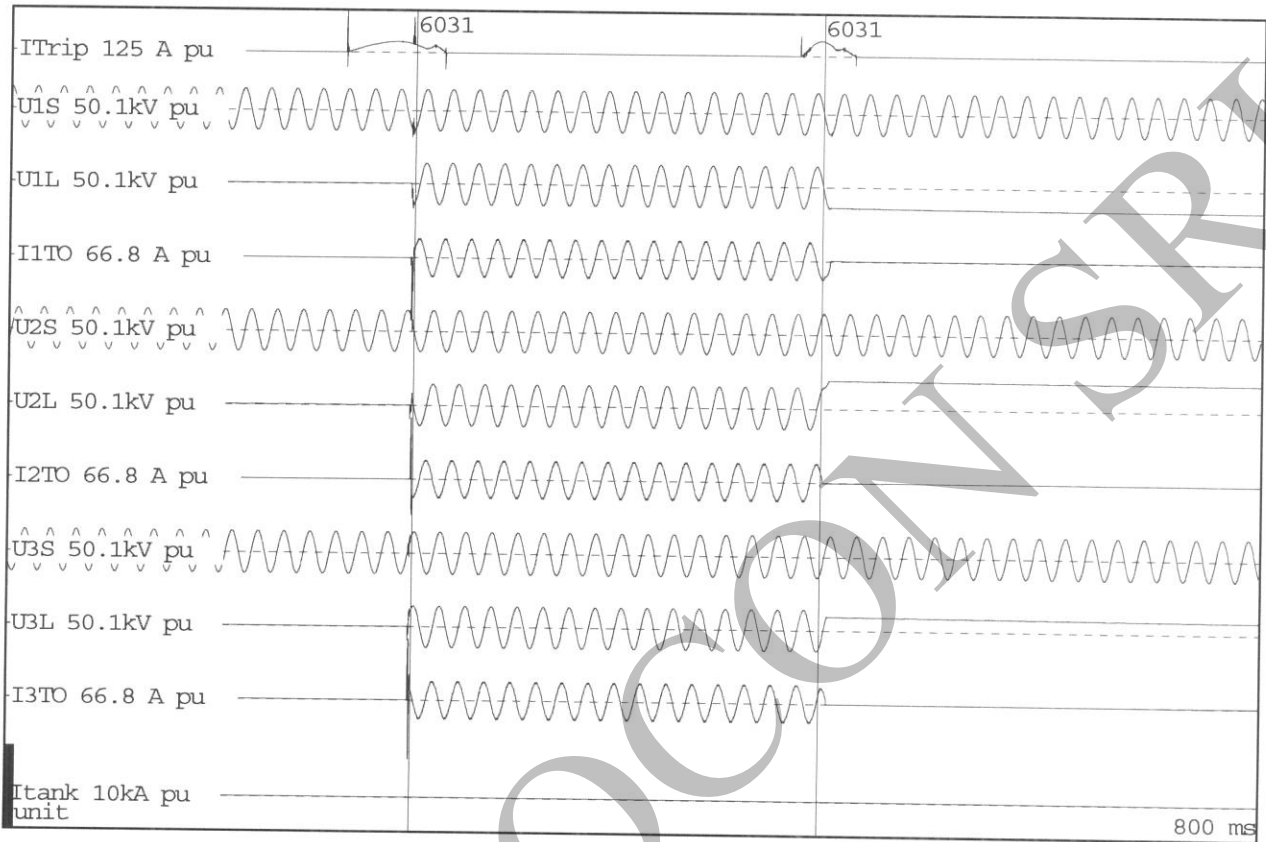
TEST NUMBER: 100526-6030

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,06
Applied voltage, between phases	kV	15,7		
Make time	ms	42,9	42,9	42,9
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	9,06	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	16,3		
Arc duration	ms	0,4	3,3	3,3
Break time	ms	16,7	19,6	19,6
Recovery voltage, peak value	kV	-29,4	-20,7	25,5
Supply voltage, peak value	kV	13,3	12,9	-13,0
Load voltage, peak value	kV	16,7	8,00	-12,7



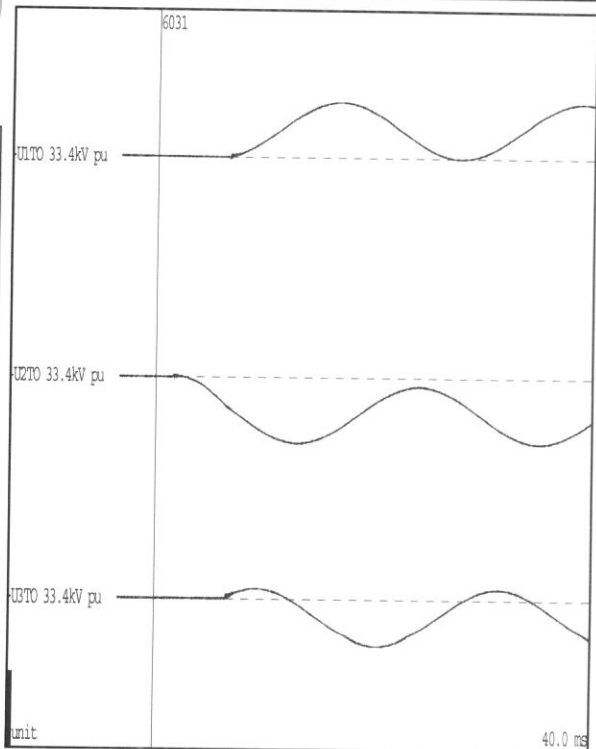
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



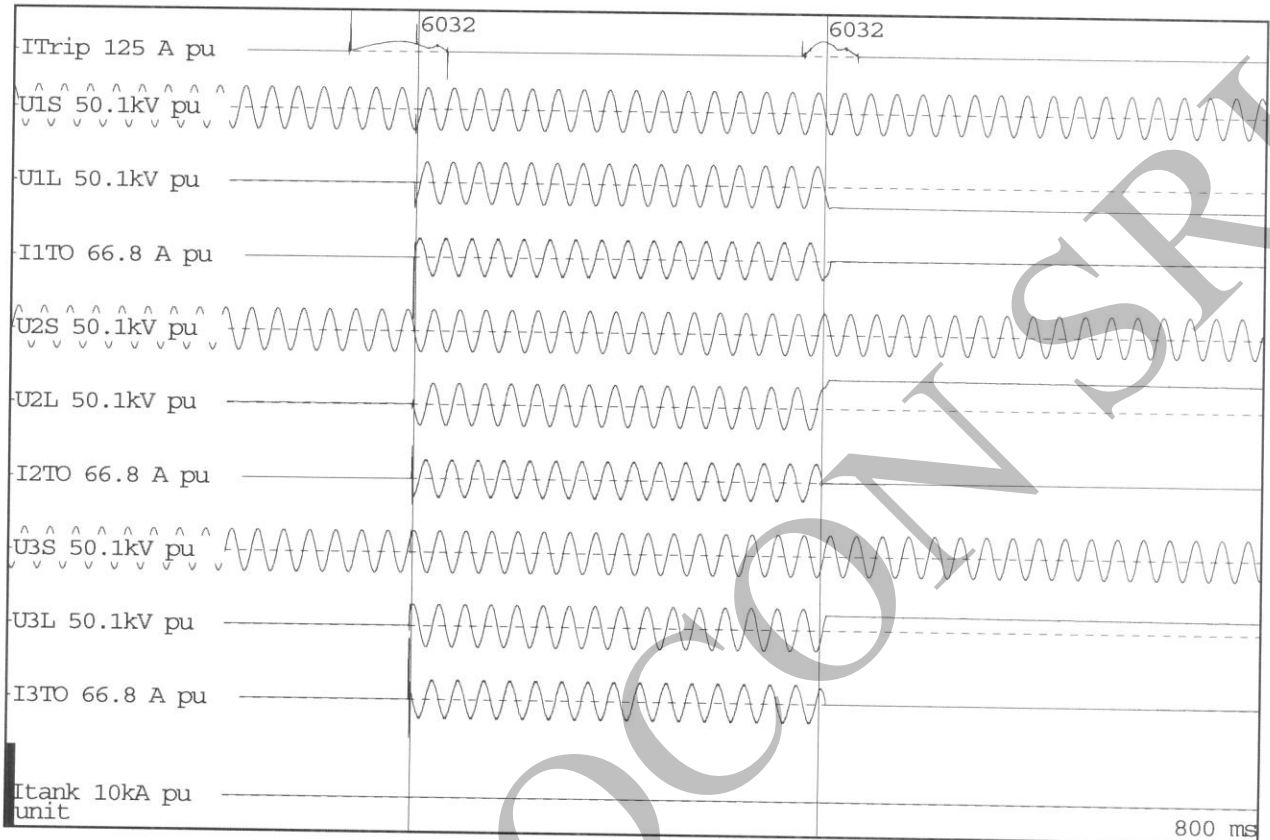
TEST NUMBER: 100526-6031

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,04
Applied voltage, between phases	kV	15,7		
Make time	ms	42,7	42,7	42,7
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	9,08	9,06	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	15,2		
Arc duration	ms	5,0	1,3	5,0
Break time	ms	20,2	16,5	20,2
Recovery voltage, peak value	kV	25,2	-29,8	-21,2
Supply voltage, peak value	kV	-13,0	13,2	13,1
Load voltage, peak value	kV	-12,5	17,1	8,49



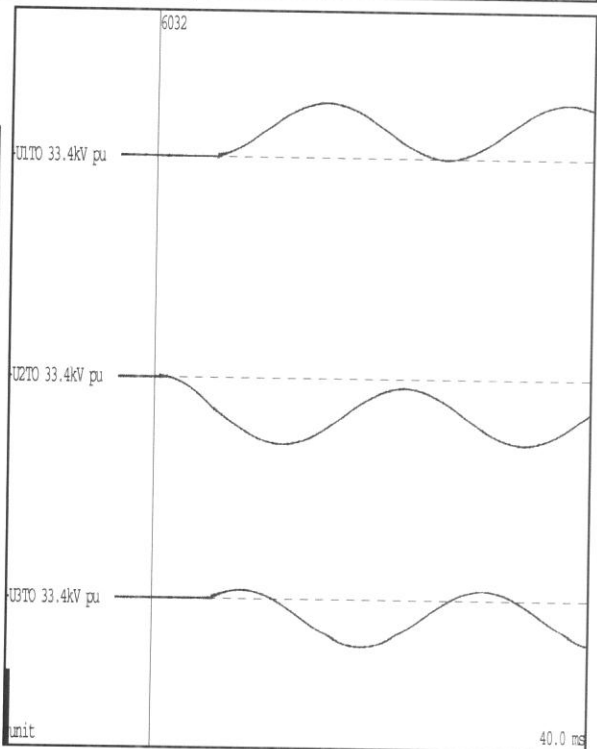
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



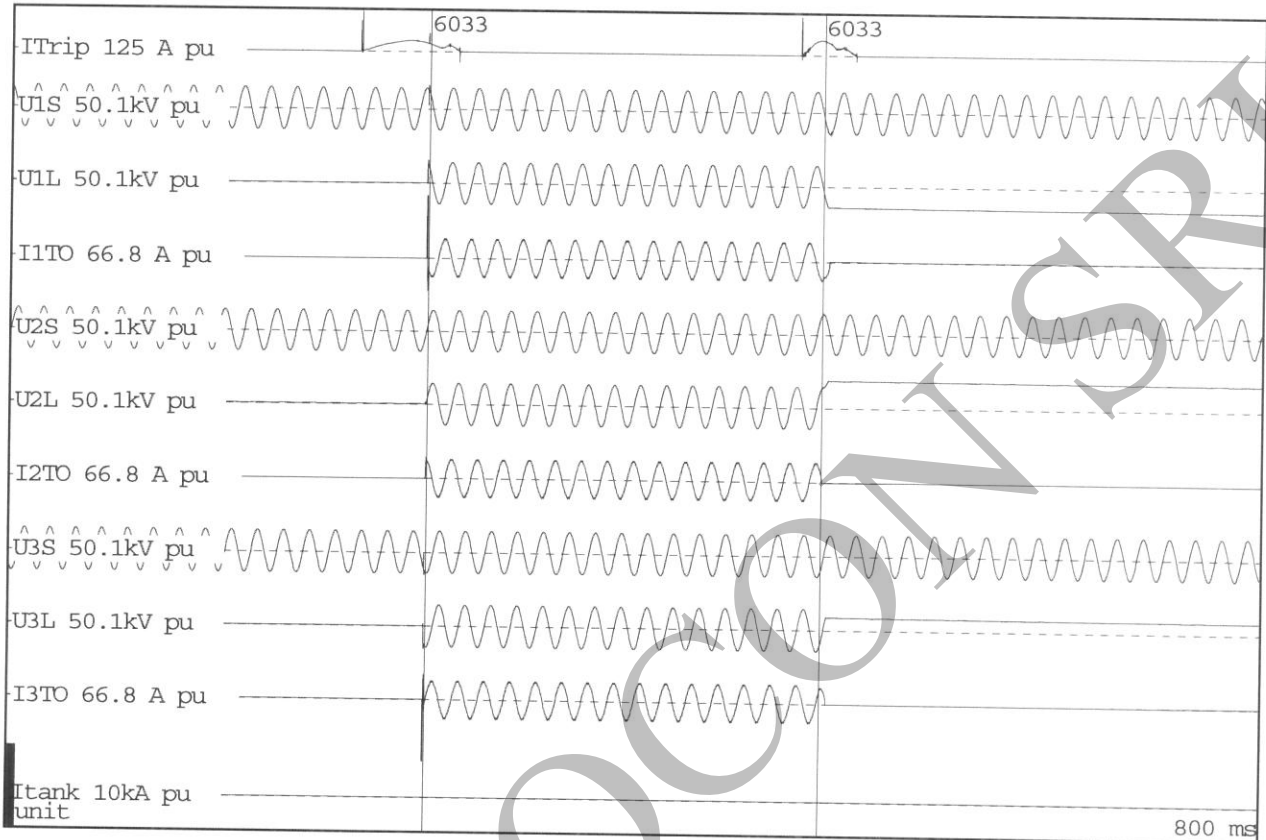
TEST NUMBER: 100526-6032

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,07	9,03	9,06
Applied voltage, between phases	kV	15,7		
Make time	ms	43,2	43,2	43,2
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	9,09	9,06	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	15,8		
Arc duration	ms	4,2	0,6	4,2
Break time	ms	20,0	16,4	20,0
Recovery voltage, peak value	kV	25,2	-30,1	-21,5
Supply voltage, peak value	kV	-13,0	13,2	13,1
Load voltage, peak value	kV	-12,3	17,4	8,80



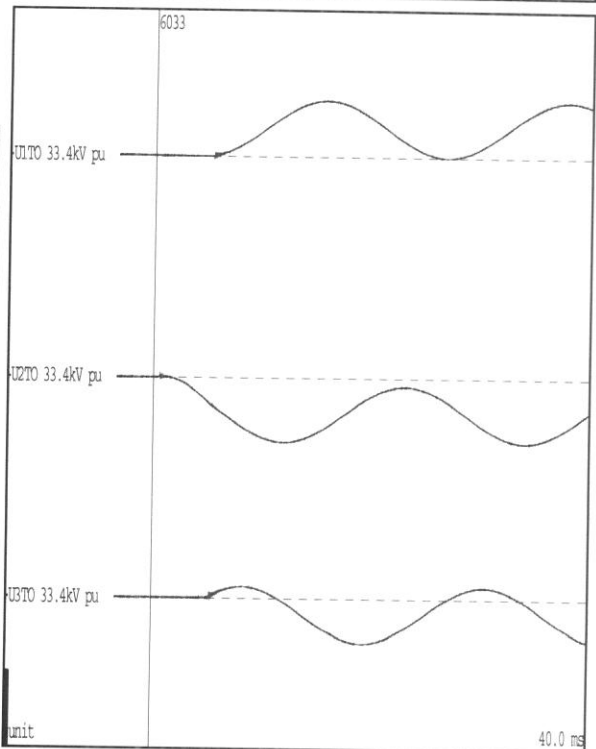
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



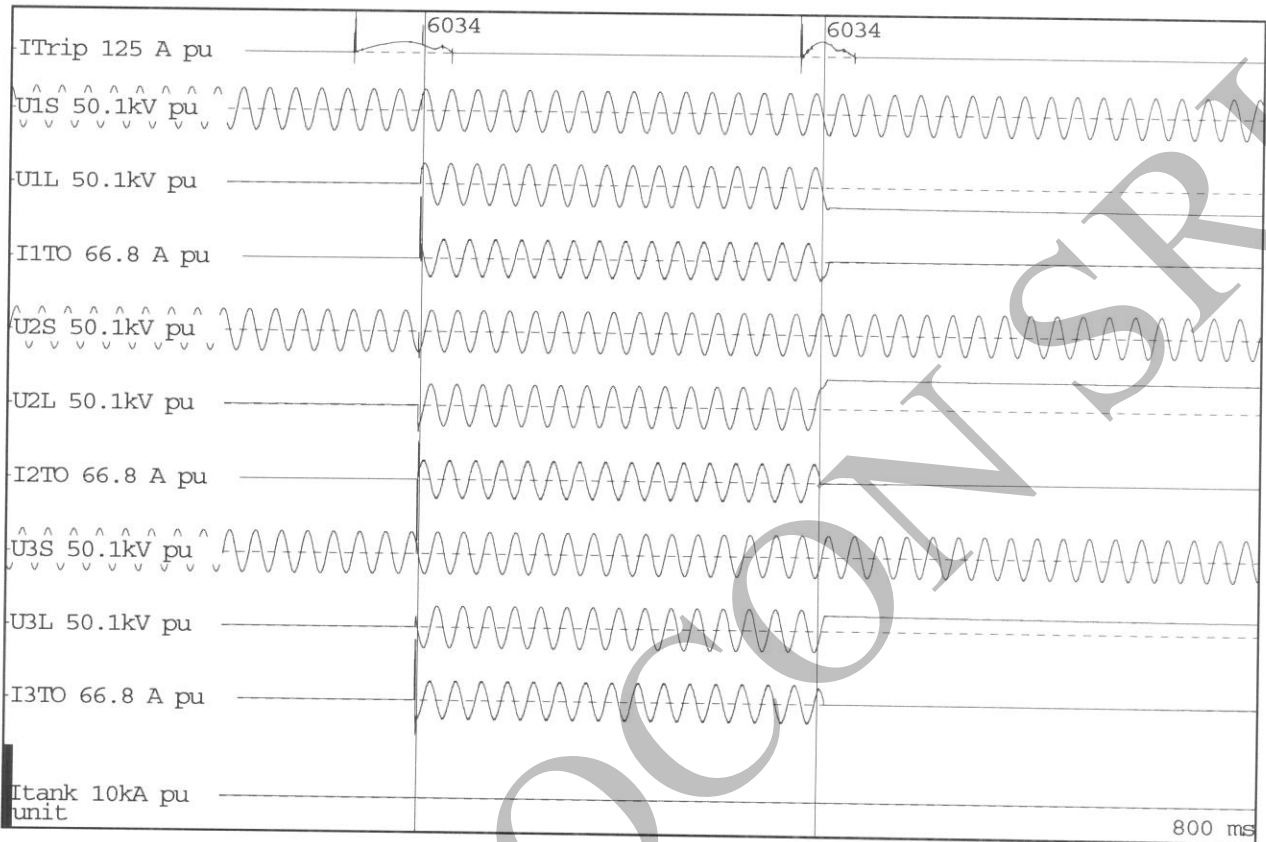
TEST NUMBER: 100526-6033

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,05
Applied voltage, between phases	kV	15,7		
Make time	ms	43,5	43,5	43,5
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	9,11
Test voltage, between phases	kV	15,8		
Opening time	ms	15,0		
Arc duration	ms	4,1	0,7	4,1
Break time	ms	19,1	15,7	19,1
Recovery voltage, peak value	kV	25,5	-29,3	-20,5
Supply voltage, peak value	kV	-13,1	13,2	13,1
Load voltage, peak value	kV	-12,7	16,7	7,83



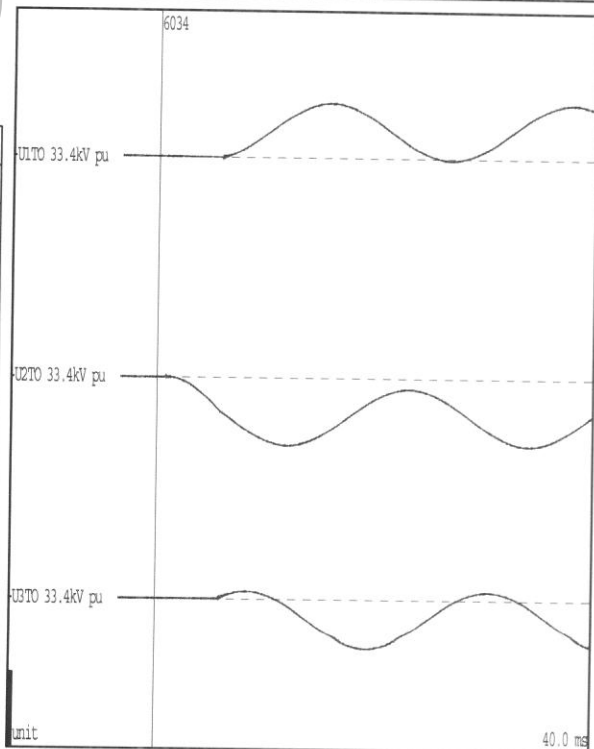
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



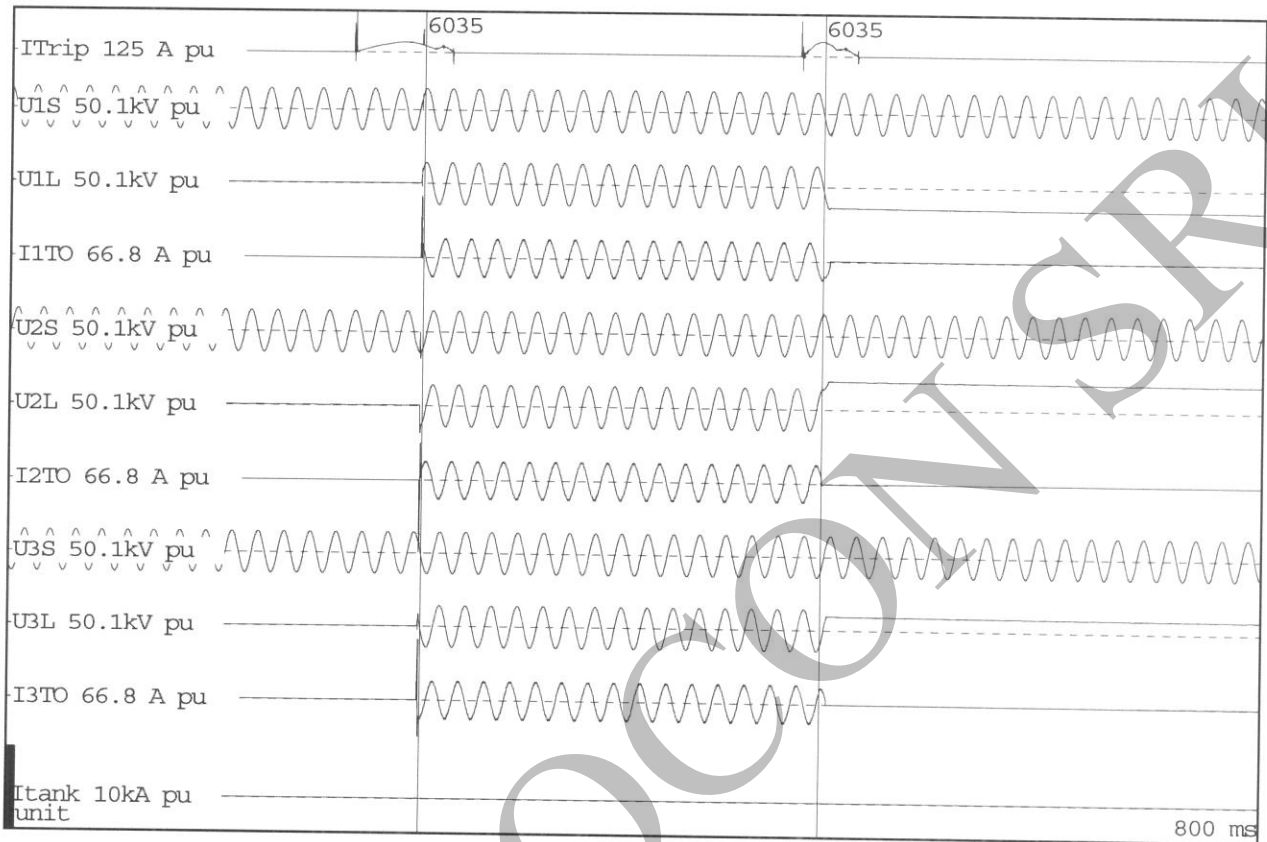
TEST NUMBER: 100526-6034

Operation	CO			
	C	B	A	
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,05
Applied voltage, between phases	kV	15,7		
Make time	ms	43,5	43,5	43,5
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	9,09	9,06	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	15,0		
Arc duration	ms	4,4	0,6	4,4
Break time	ms	19,4	15,6	19,4
Recovery voltage, peak value	kV	24,8	-30,6	-22,0
Supply voltage, peak value	kV	-13,1	13,2	13,1
Load voltage, peak value	kV	-11,9	17,9	9,30



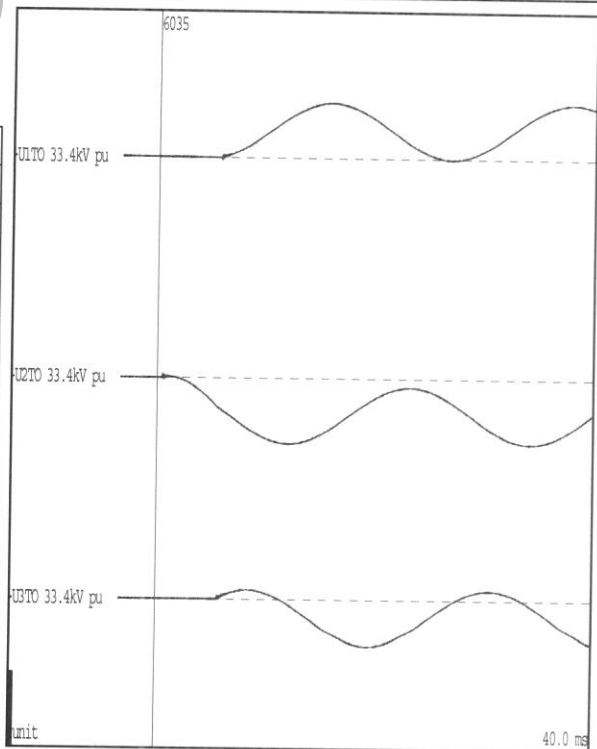
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



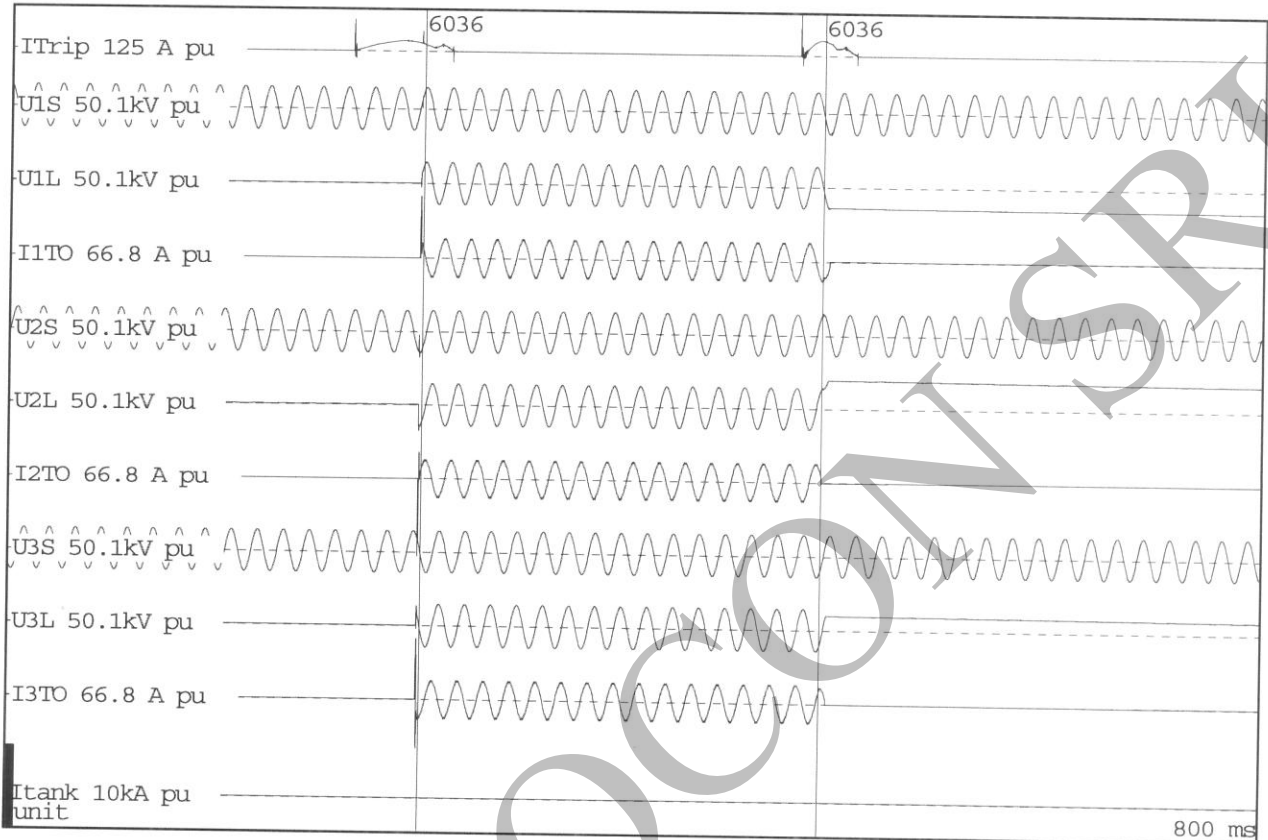
TEST NUMBER: 100526-6035

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,06
Applied voltage, between phases	kV	15,7		
Make time	ms	43,7	43,7	43,7
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	9,08	9,06	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	15,3		
Arc duration	ms	4,4	0,5	4,4
Break time	ms	19,7	15,8	19,7
Recovery voltage, peak value	kV	25,2	-29,6	-21,3
Supply voltage, peak value	kV	-13,0	13,2	13,1
Load voltage, peak value	kV	-12,4	17,0	8,60



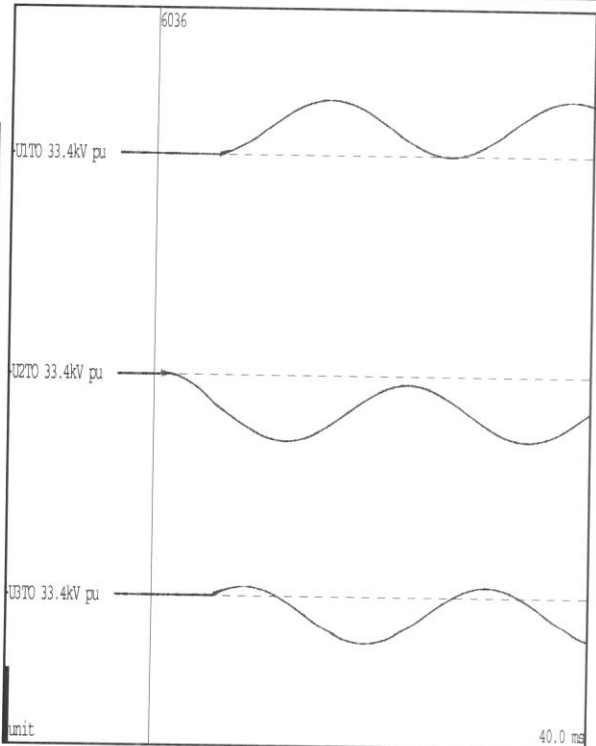
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



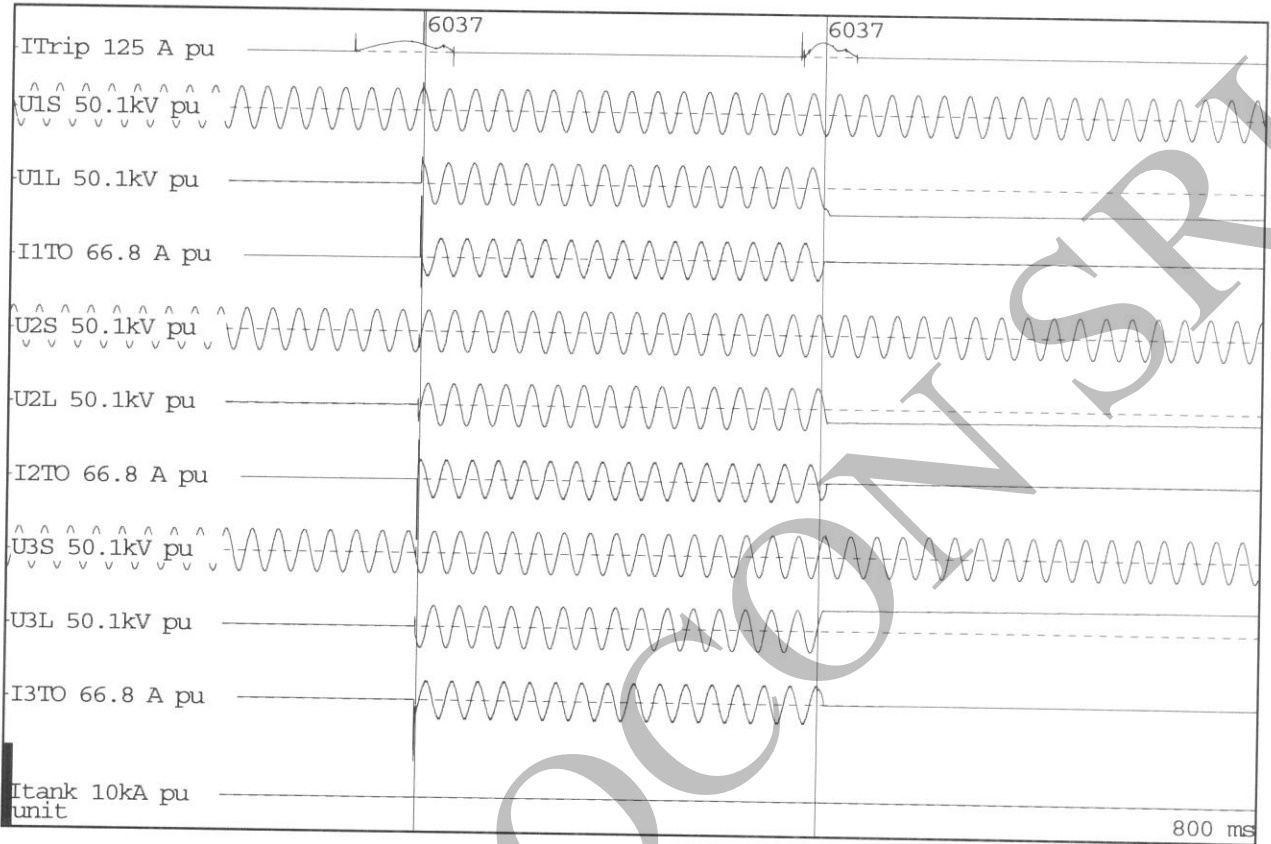
TEST NUMBER: 100526-6036

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,06	9,03	9,06
Applied voltage, between phases	kV	15,7		
Make time	ms	43,7	43,7	43,7
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	9,11
Test voltage, between phases	kV	15,8		
Opening time	ms	15,5		
Arc duration	ms	4,4	0,6	4,4
Break time	ms	19,9	16,1	19,9
Recovery voltage, peak value	kV	25,2	-29,7	-21,3
Supply voltage, peak value	kV	-13,0	13,2	13,1
Load voltage, peak value	kV	-12,4	17,1	8,62



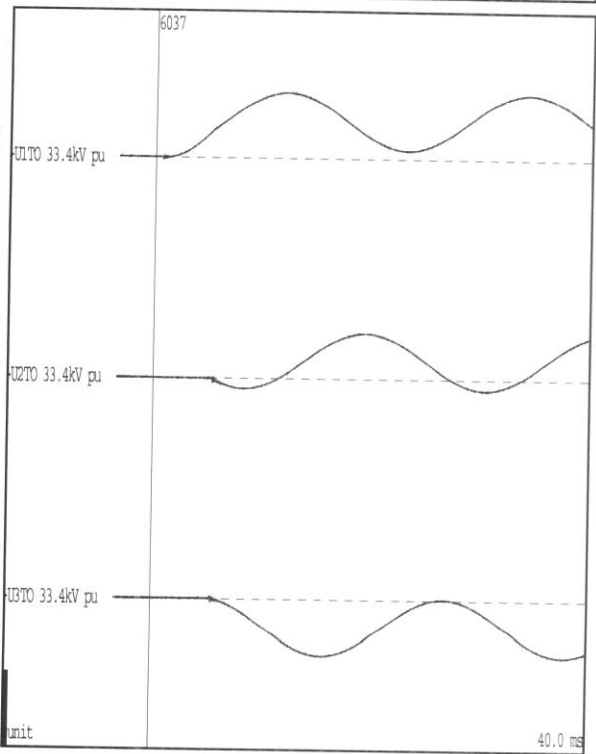
Voltage closing coil	- Vd.c.	Gas pressure at 20 °C	- MPa
Voltage opening coil	- Vd.c.	Operating pressure	

Remarks: Recloser closed and cleared.



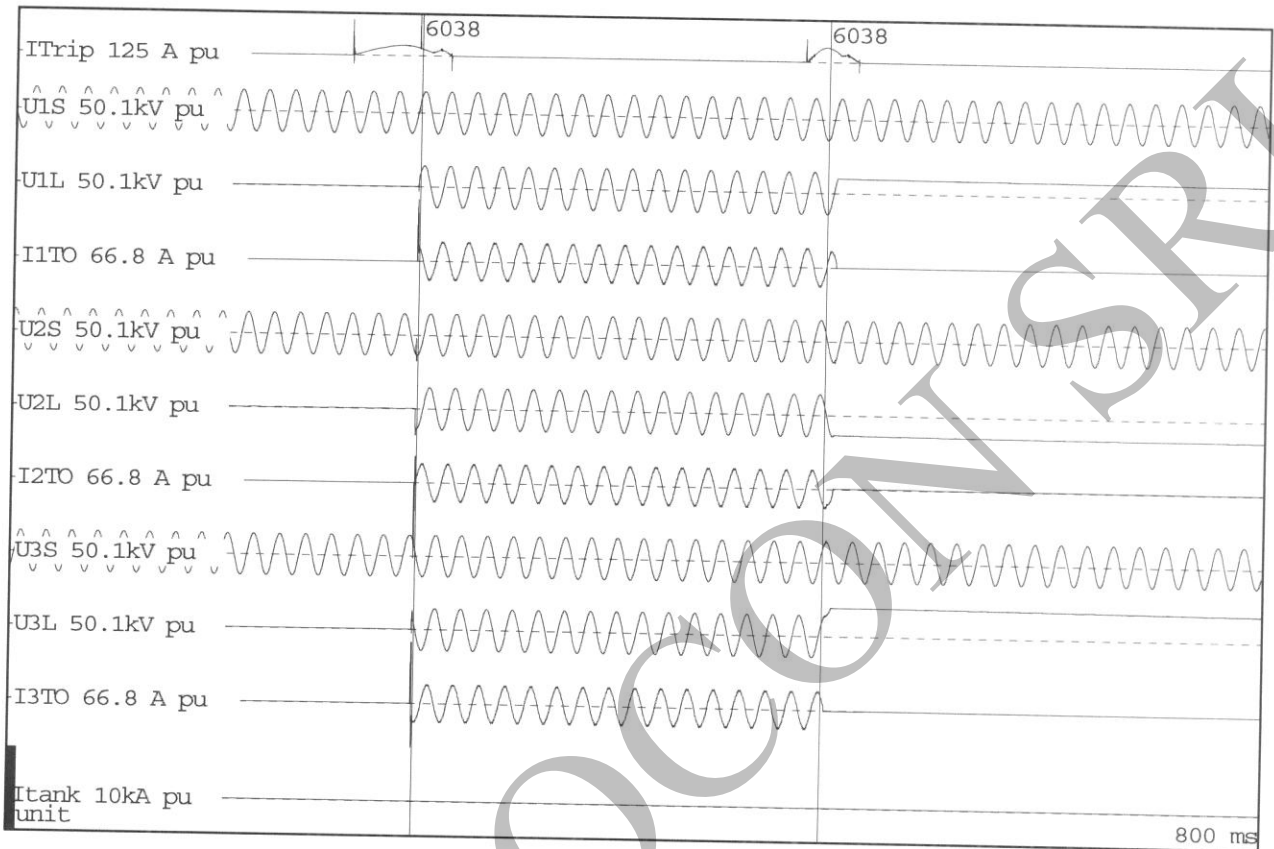
TEST NUMBER: 100526-6037

Operation		CO		
		C	B	A
Phase				
Applied voltage, phase value	kV	9,07	9,04	9,06
Applied voltage, between phases	kV	15,7		
Make time	ms	43,5	43,5	43,5
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	9,09	9,07	9,10
Test voltage, between phases	kV	15,7		
Opening time	ms	15,6		
Arc duration	ms	0,6	4,1	4,2
Break time	ms	16,2	19,7	19,8
Recovery voltage, peak value	kV	29,5	20,7	-25,3
Supply voltage, peak value	kV	-13,1	-12,9	13,2
Load voltage, peak value	kV	-16,7	-7,89	12,7



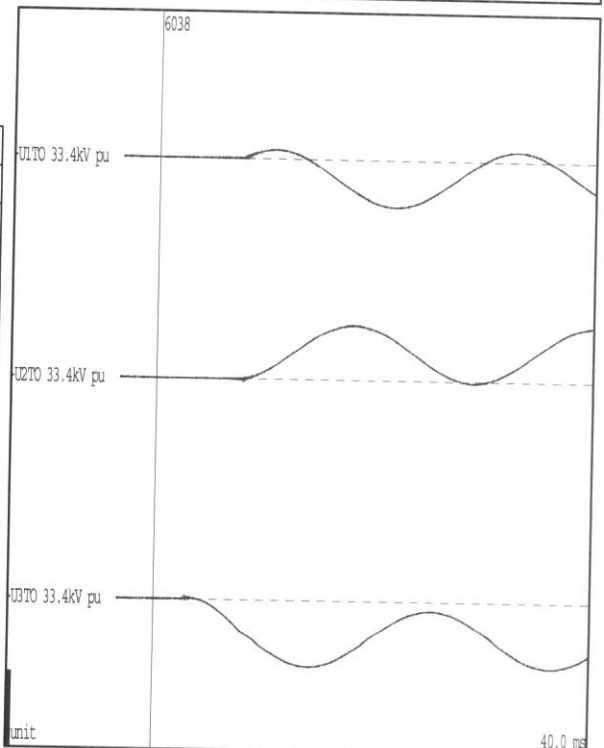
Voltage closing coil - Vd.c. Gas pressure at 20 °C - MPa
 Voltage opening coil - Vd.c. Operating pressure

Remarks: Recloser closed and cleared.



TEST NUMBER: 100526-6038

Operation	CO			
	C	B	A	
Phase				
Applied voltage, phase value	kV	9,07	9,03	9,06
Applied voltage, between phases	kV	15,7		
Make time	ms	43,2	43,2	43,2
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	9,06	9,11
Test voltage, between phases	kV	15,7		
Opening time	ms	15,1		
Arc duration	ms	6,0	6,0	2,2
Break time	ms	21,1	21,1	17,3
Recovery voltage, peak value	kV	-21,7	24,7	-29,9
Supply voltage, peak value	kV	13,1	-13,0	13,3
Load voltage, peak value	kV	8,90	-12,0	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.