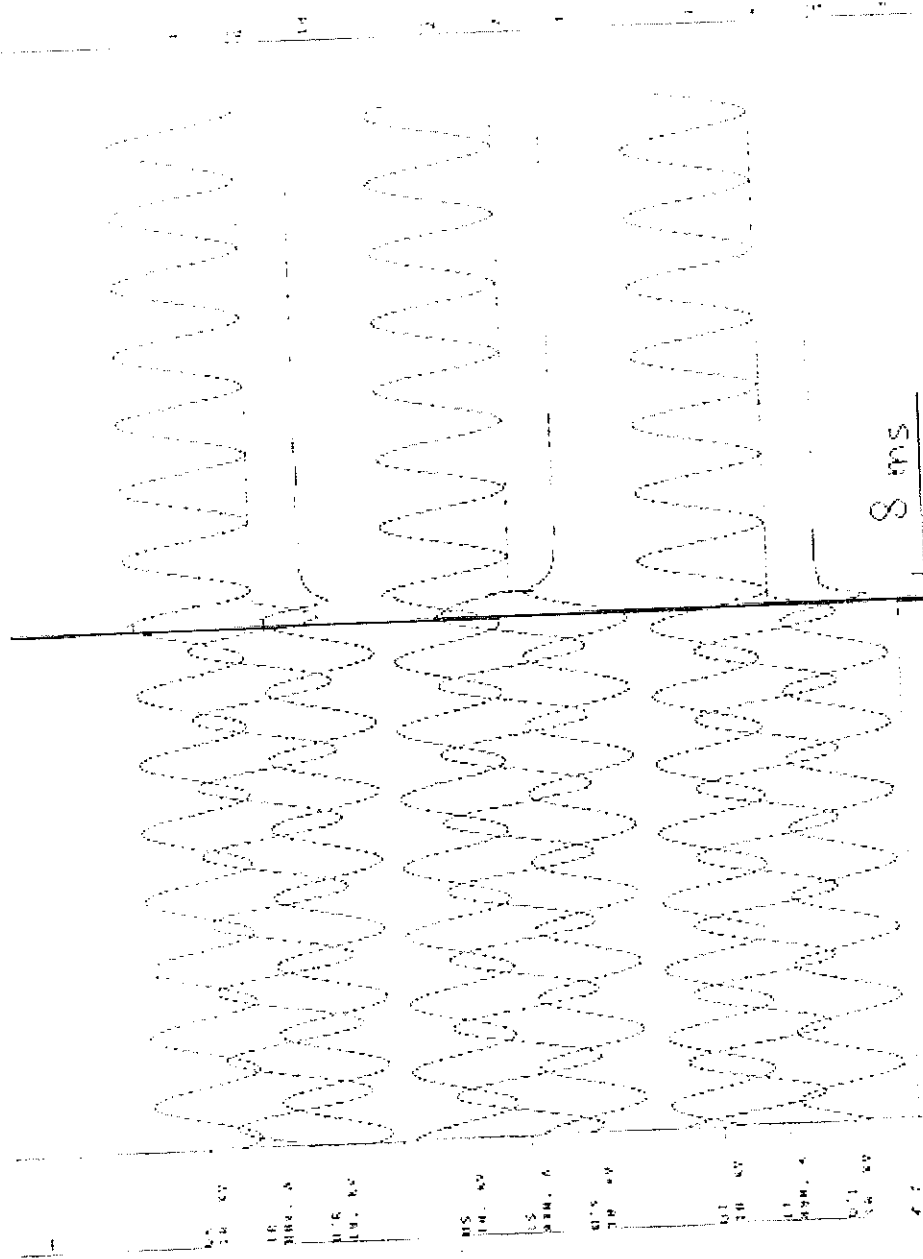


11-2-80 10:00



8 ms

RHD 448  
 P155 QRS 100/1000 100 100 100  
 1000 1000 1000 1000 1000  
 1000 1000 1000 1000 1000  
 1000 1000 1000 1000 1000

1000 1000 1000 1000 1000  
 1000 1000 1000 1000 1000  
 1000 1000 1000 1000 1000

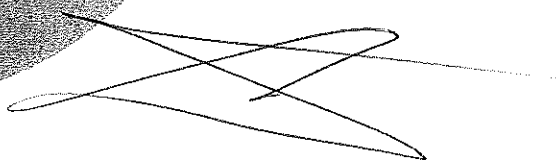
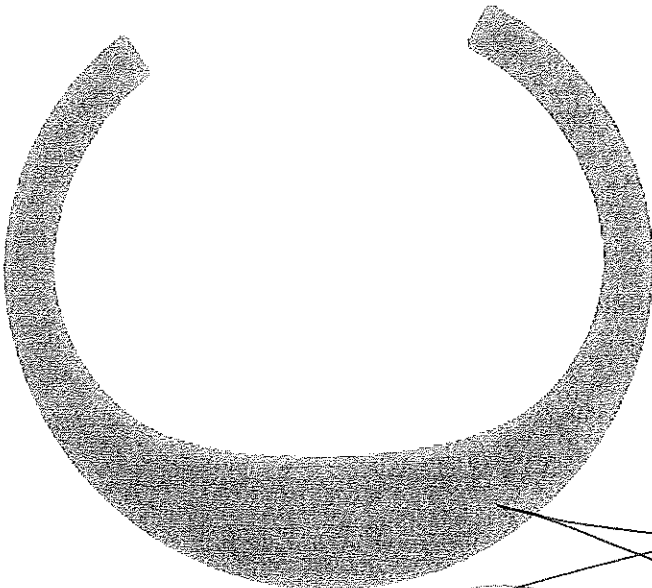
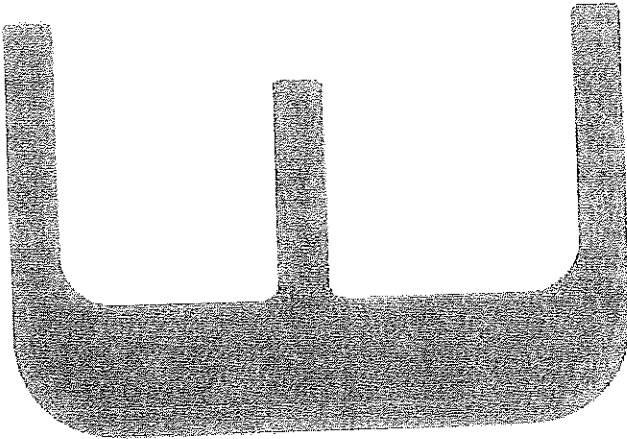
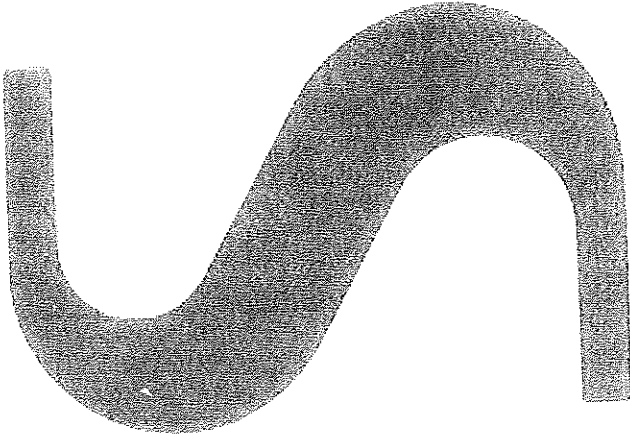
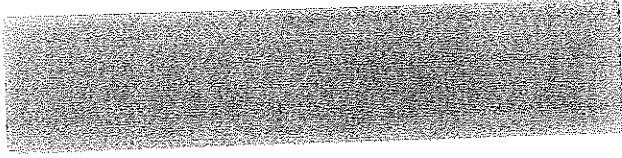
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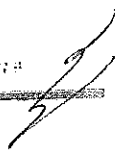
*[Handwritten signature]*

51249068XA



GPS91/15178





client: MONTAN GEBLID S.A. - Grenoble (France)

object: Three pole metal enclosed air insulated intelligent RMS system type 2M.  
Equipped with an increased operating frequency 400 Hz insulated switch  
type 1 2M6.

characteristics of the tested object assigned by the Client

rated voltage: 11.5/24 kV rated current: 530 A rated frequency: 50 Hz  
other characteristics listed on page 2

the tests have been made in accordance with client's instructions  
based on IEC 865 (1982)

test date: June 18th, 1991  
June 20th, 1991

the performance of the apparatus tested and the observations made during the  
tests have been recorded in the table with the test results and oscillograms

this document is composed by 11 pages, 12 oscillograms

Milan, August 7th, 1991

test engineer

*F. Lo Monaco*  
F. Lo Monaco

Vertical stamp: 1991 AUG 10 10:10

Large handwritten signature

keywords: 917010293 120100 234300 340200 410700 530010

This test report is not a certificate of conformity, nor are the results given responsibility for the IEC 865 supplied by the manufacturer.  
This statement may not be reproduced otherwise than in its entirety with the CESI's author's name.

Handwritten signature

rated characteristics of the tested object assigned by the client:

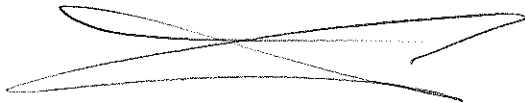


switch	17.5/24	kV
voltage	50	Hz
frequency	630	A
normal current	40	kA
short-circuit making current	16	kA
short-time withstand current	2	s
short circuit duration		
earthing switch	40	2A
short-circuit making current	16	2A
short-time withstand current	2	s
short-circuit duration		
gas pressure for interruption	1.3 bar abs.	

Identification of the object effected.

The tested object truly conforms to the drawings of its type supplied by the Client. These drawings identified by CESI with embossing press and numbered GPS- 91/015167 1 to 12 are assembled in a folder.

015178  
 1779  
 16  
 12  
 11  
 10  
 9  
 8  
 7  
 6  
 5  
 4  
 3  
 2  
 1



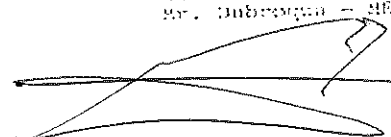
This test report is not a certificate of conformity, nor do the results given necessarily confirm the ratings selected by the manufacturer. This document may not be reproduced otherwise than in its entirety without CESI's authorization.

Table of tests performed

Date	Type of test	no. page
SHORT-TIME AND PEAK WITHSTAND CURRENT TESTS		
June 18th 1991	No.1 test with 16 KA for 1 s on the switch	5
June 18th 1991	No.1 test with 16 KA for 1 s on the earthing switch	6
SHORT-CIRCUIT MAKING TESTS		
June 20th 1991	No.2 tests with 41.2 KA and 41 KA (peak) at 24 kV on the switch	6
June 20th 1991	No.2 tests with 41 KA and 39.5 KA (peak) at 24 kV on the earthing switch	7
THREE PHASE MAINLY ACTIVE LOAD CURRENT SWITCHING TESTS		
June 22nd 1991	No.2 tests with 400 A at 24 kV	8

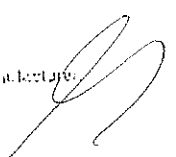
tests witnessed by

Mr. Laurens - MERLIN GERIN S.A.  
Mr. Dubois - MERLIN GERIN S.A.





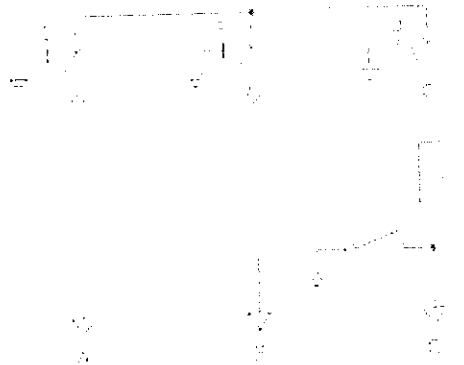
This test report is not a certificate of conformity, nor do the results necessarily confirm the ratings supplied by the manufacturer. This report may not be reproduced otherwise than in its entirety without CESI's authorization.



arrangement of the object for the tests

The tested apparatus was assembled with two other apparatus of same system (see photo on page 11).

The figure below shows the electric diagram of the complete setting (single phase diagram of a three phase circuit) :



1 : switch and earthing switch under test

2-3 : auxiliary switches

A-B-C : cables

For the short time current test on the switch : cables A connected to the supply, switches 1 and 2 in closed position, cables B short circuited at the bottom.

For the short time current test on the earthing switch : cables A connected to the supply, earthing switch 1 in closed position.

For the short circuit making tests on the switch : cables A connected to the supply, switch 2 in closed position, cables B short circuited at the bottom.

For the short circuit making tests on the earthing switch : cables A connected to the supply.

For the mainly active load current switching tests : cables A connected to the supply, switch 2 in closed position, cables B connected to the load.

During all the tests the switch 3 was in open position.

During the tests on the switch the metal enclosure was insulated from earth but connected thereto by a copper wire 0.1 mm in diameter and 30 mm long to indicate any significant leakage current to earth.

short-time and peak withstand current tests

test circuit conditions

circuit diagram use page 9

power factor  $\leq 0.15$

frequency 50 Hz

test arrangement: see page 4

conditions of the apparatus before the tests: new

test no.	oscill. no.	duration "	test current			notes
			maximum peak value kA	r.m.s. value kA	average kA	
1	1	1.03	- 41.0	16.0 16.0 16.0	16.0	test on the switch
2	2	1.21	- 41.0	16.0 15.8 15.8	16.0	test on the earthing switch

conditions of the apparatus after the tests: external parts as before the tests, internal parts not inspected.

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three phase short circuit making tests

tests on the switch

with 16.0 kA

34.0 kV

test circuit conditions

circuit diagram see page 9

power factor < 0.15

frequency 50 Hz

conditions of the apparatus before the test: as after the test: as 1

test	no.	3	4			
oscillograms	no.	284	285			
operating duty		C	C			
applied voltage (phase-to-neutral)	kV	13.8	13.8			
		13.8	13.8			
		13.8	13.8			
making current (peak value) phase	kA	41.5	41.5			
		41.5	41.5			
current	kA	16.0	16.0			
		16.0	16.0			
		16.0	16.0			
duration of	closing	ms	-			
	prearc	ms	-			
control voltage of operating devices for	closing	V	-			
	motor	V	-			
gap operating pressure for	operation	bar	-			
	interruption	bar	1.4	1.4		

conditions of the apparatus after the test: external parts as before the tests, internal parts not inspected.

This test report is not a certificate of conformity, nor do the results given necessarily conform to the ratings supplied by the manufacturer. This document may not be reproduced or further distributed without CESI's authorization.



three phase short circuit making tests

tests on the switching system

with 1000 kA

24.0 kV

test circuit conditions

circuit diagram see page 5

power factor  $\approx 0.25$

frequency 50 Hz

conditions of the apparatus before the tests: as after the test, see 2

test	no.	A	B
oscillations	no.	286	287
operating duty		C	C
applied voltage (phase-to-neutral)	kV	15.8	15.8
		13.8	13.8
		13.8	13.8
making current (peak value) phase	kA	41.0	39.5
		C	E
current	kA	16.0	16.0
		16.0	16.0
		16.0	16.0
duration of	closing	ms	-
	opening	ms	-
contact voltage of operating device for	closing	V	-
	opening	V	-
max operating pressure for	operation	bar	-
	interruption bar		1.4

condition of the apparatus after the tests: external parts as before the tests, internal parts not inspected.

This test report is not a certificate of conformity nor do the results of the tests justify action on the ratings supplied by the manufacturer. This document may not be reproduced or revised in any way without CESI's authorization.

Three-phase mainly active load current switching tests

test duty

with 400 A at 24.0 kV

test circuit conditions

circuit diagram see page 10

supply circuit

power factor:  $\leq 0.7$   
 frequency: 50 Hz  
 neutral condition: method  
 TRV: up to 44 kV LS 54 ps

impedance 6.0  $\Omega$   
 (20 % of the total impedance of the circuit)

load circuit

power factor: 0.7  
 neutral condition: insulated

frequency: 50 Hz  
 damping factor:

average voltage of operating devices for: closing - V  
 opening - V  
 motor - V  
 gas operating pressure for: operation - bar abs.  
 breaking 1.4 bar abs.

conditions of the apparatus before the tests: as after the test no. 4

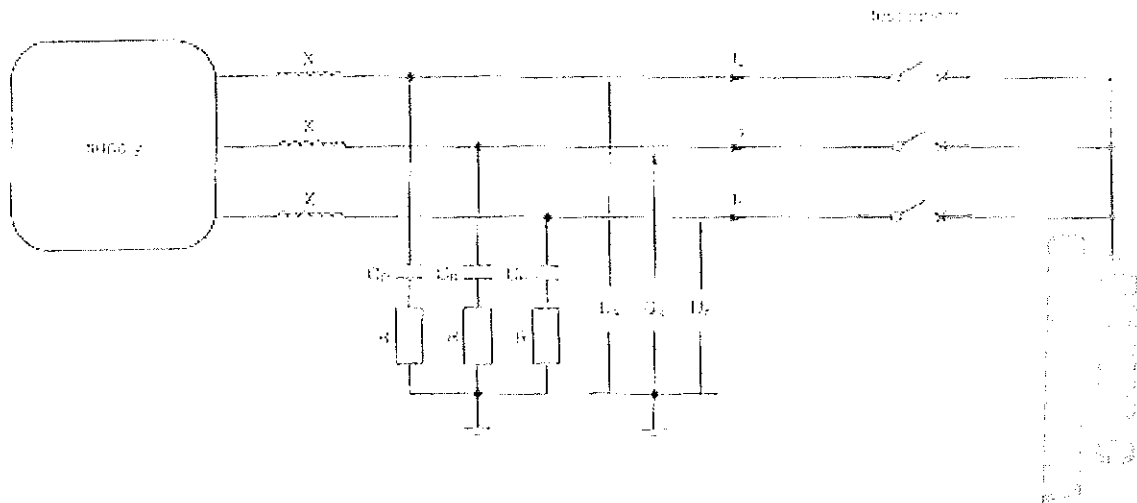
test		no. 7	8
outlet		no. 208	209
operating duty		C-0	C-0
voltage with open apparatus	phase-to-neutral kV	13.8	13.8
		13.8	13.8
		13.8	13.8
voltage with open apparatus	phase-to-phase kV	24.0	24.0
inrush making current		KA	-
maximum closing overvoltage	supply side kV	-	-
	load side kV	-	-
breaking current	A	400	400
	A	400	400
average		A	400
maximum opening overvoltage	supply side kV	-	-
	load side kV	-	-
castrikes		no.	-
duration of	phase	-	-
	closing ms	-	-
	opening ms	-	-
	arc ms	10	11

conditions of the apparatus after the tests: external parts as before the tests  
 internal parts not inspected.

note after all the tests: the performance of the apparatus is considered satisfactory for the tests performed.

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circu diagram

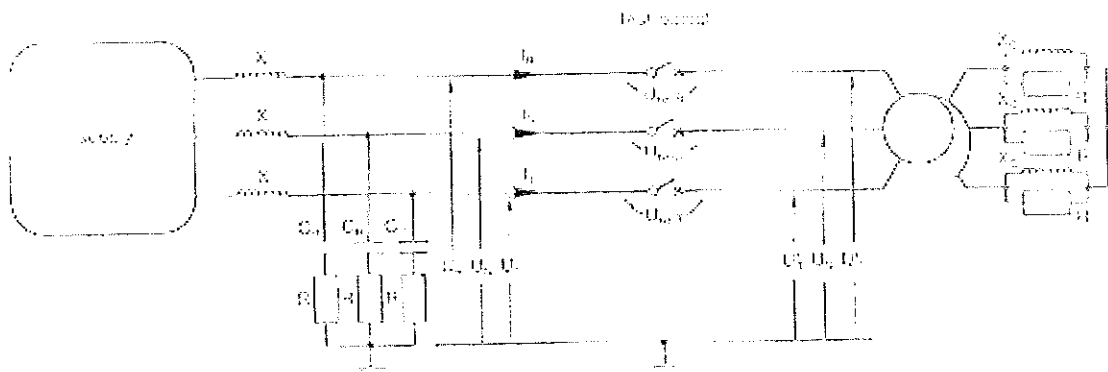


sempre il valore di un parametro è lo stesso di quello del precedente

This test report is not a certificate of conformity, nor do the results given necessarily confirm the ratings supplied by the manufacturer. This document may not be reproduced elsewhere without CESI's authorization.

*[Handwritten mark]*

circuit diagram



*[Vertical handwritten text]*

Figure 1 shows the diagram and the connection on the test board.

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*[Handwritten signature]*

*[Handwritten signature]*

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Presented with notes

*Handwritten mark*

08  
28. 07

15  
28. 45

05  
28. 24

15  
28. 24

07  
28. 24

11  
28. 24

46.0 2A

44.0 2A

46.0 2A

4.016

1000 000

1000 000

1000 000

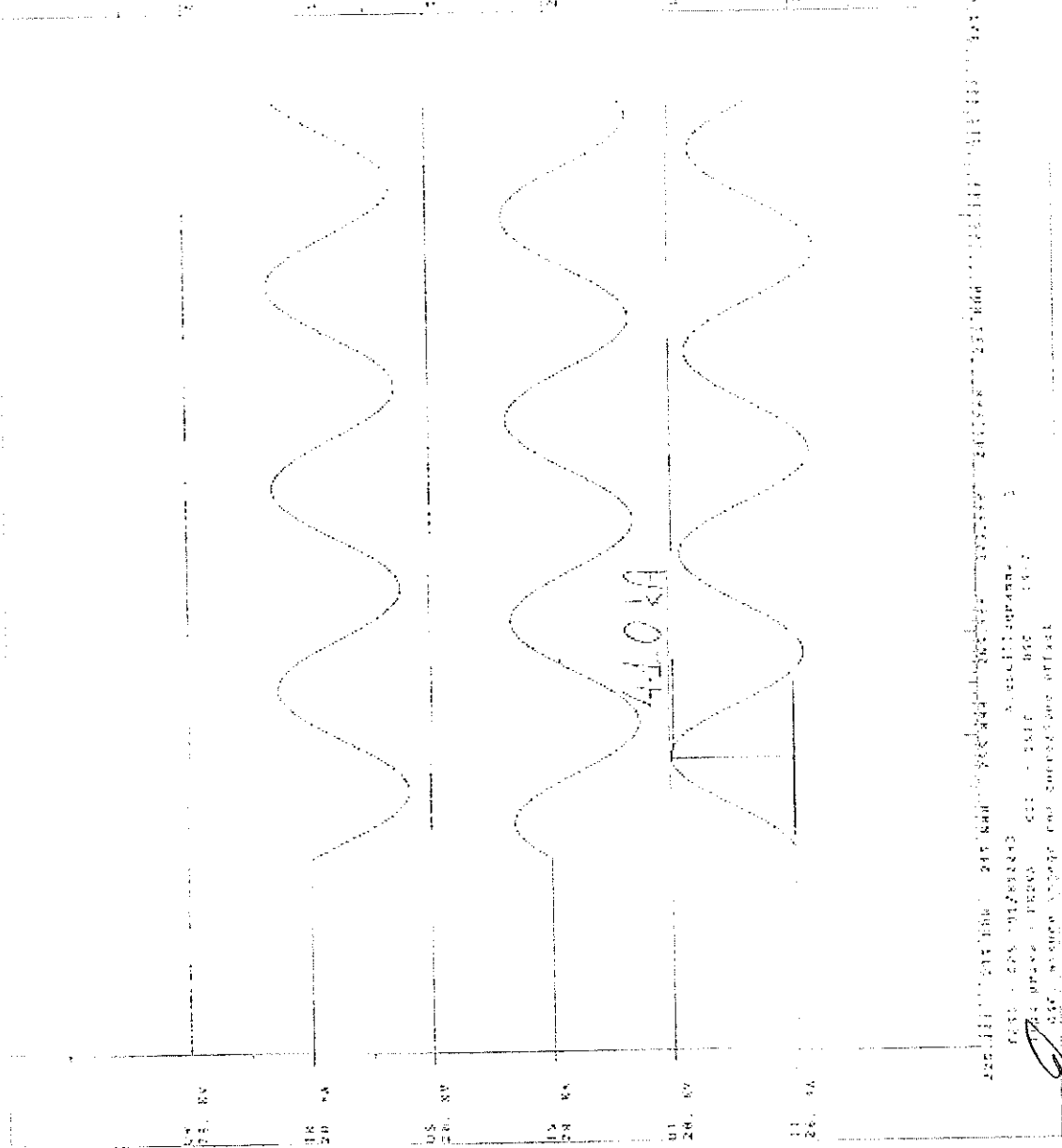
1000 000

1000 000

*Large handwritten mark*

*Handwritten mark*

15500001  
48.415.0A



*[Handwritten signature]*

PROB 11... 200 MHz... 200 MHz... 200 MHz... 200 MHz... 200 MHz... 200 MHz...  
1000 - 200 MHz... 200 MHz... 200 MHz... 200 MHz... 200 MHz... 200 MHz...  
200 MHz... 200 MHz... 200 MHz... 200 MHz... 200 MHz... 200 MHz...  
200 MHz... 200 MHz... 200 MHz... 200 MHz... 200 MHz... 200 MHz...

10000000  
00000000

*[Handwritten signature]*

*[Handwritten signature]*

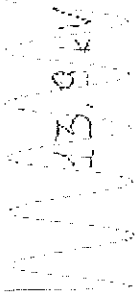






175 6407  
48,002 N4  
09-04-2008 0000

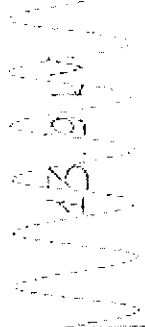
4.15 mA



14  
24.0 V



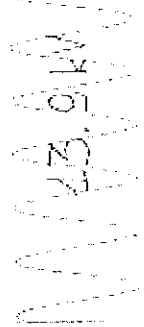
18  
24.0 V



22  
24.0 V



18  
24.0 V



18  
24.0 V



18  
24.0 V

0.21 s

Hand-drawn waveform graph showing a periodic signal with a peak value of 46.0 kV.

175 6407  
48,002 N4  
09-04-2008 0000

0.21 s

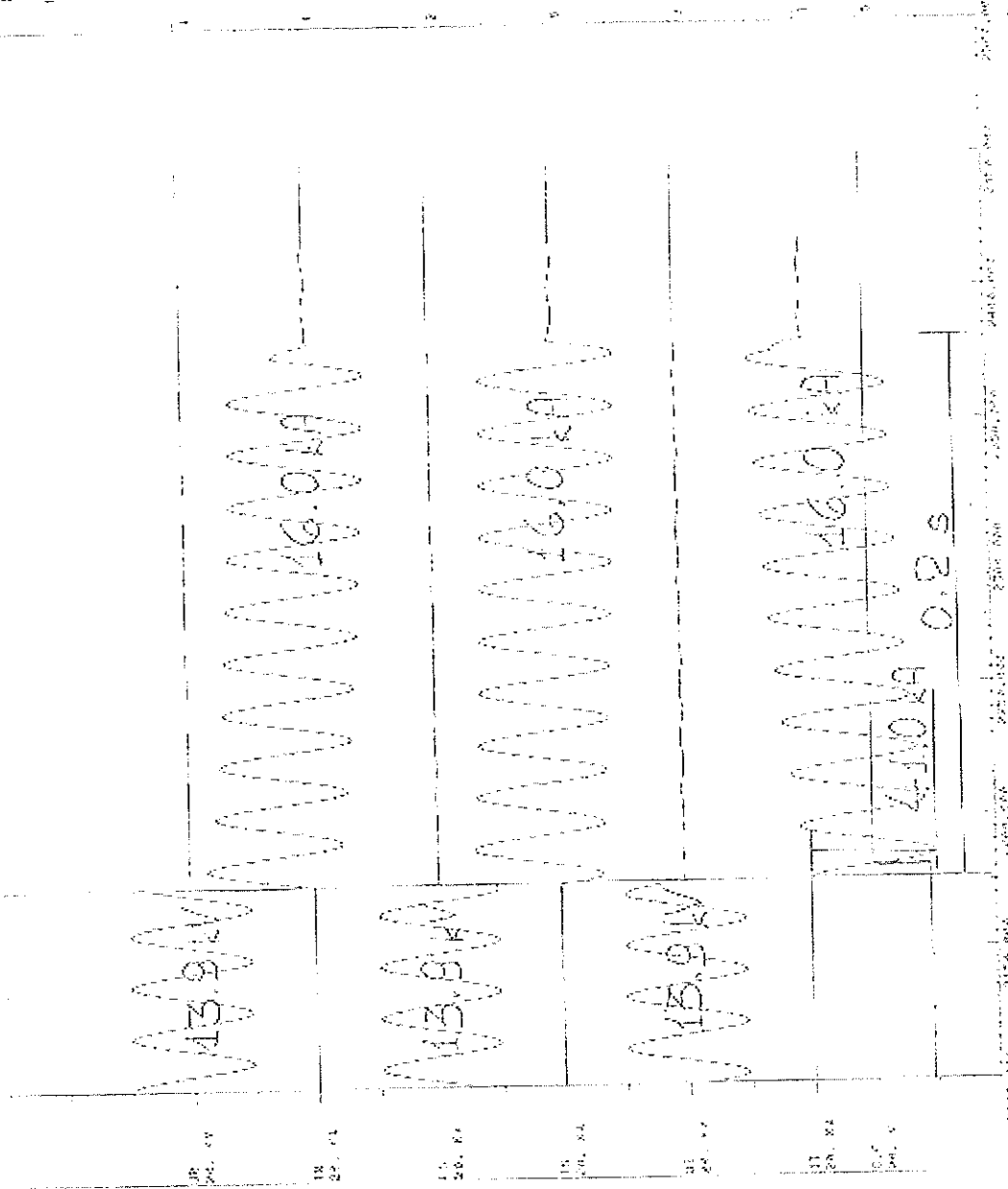
Handwritten signature or scribble at the bottom left.

Handwritten signature or scribble at the bottom right.

Handwritten signature or scribble at the top right.

13. 10. 1971  
47. 28. 19. 63  
10. 10. 1971

*Handwritten mark*



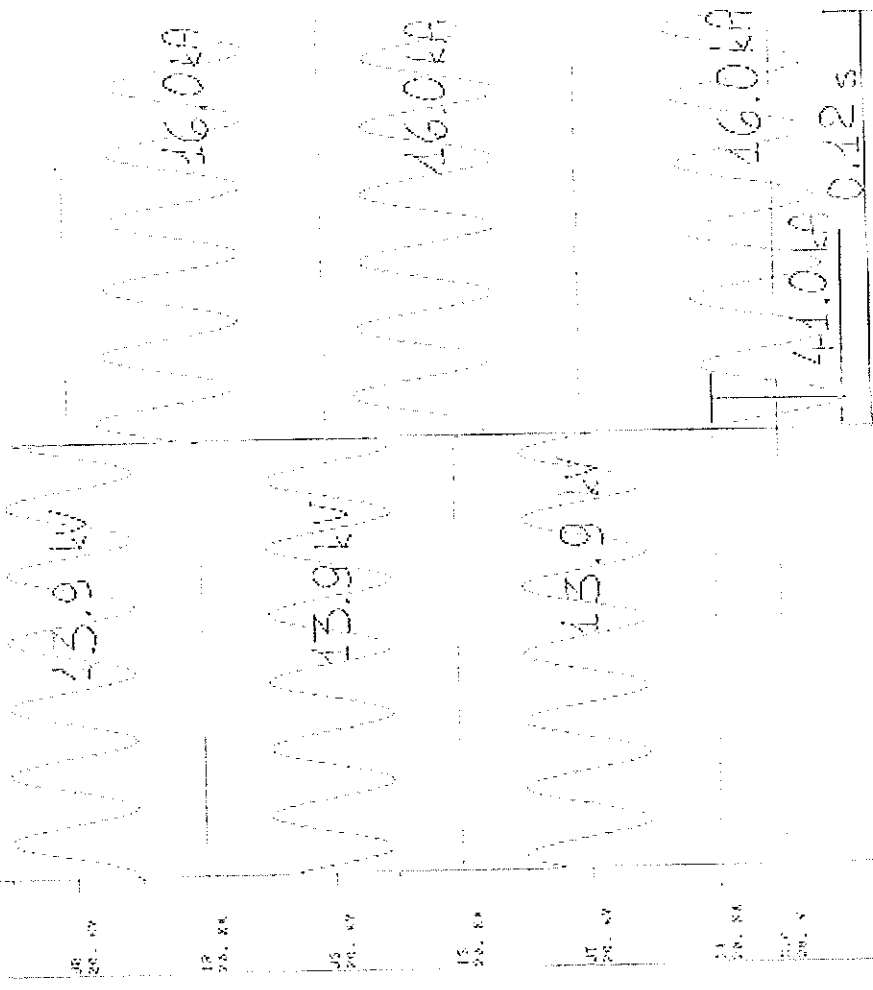
13. 10. 1971  
 47. 28. 19. 63  
 10. 10. 1971  
 13. 9. 1971  
 13. 9. 1971  
 13. 9. 1971  
 13. 9. 1971  
 13. 9. 1971  
 13. 9. 1971  
 0.2 s

PRINTED

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*Handwritten mark*

11/06/01  
46.433 G3  
10-13-1000-1000



2155 dBm  
0.51 - 0.08 100/100000  
E100 - 100000000  
E100 - 100000000  
E100 - 100000000  
E100 - 100000000

0.12 s







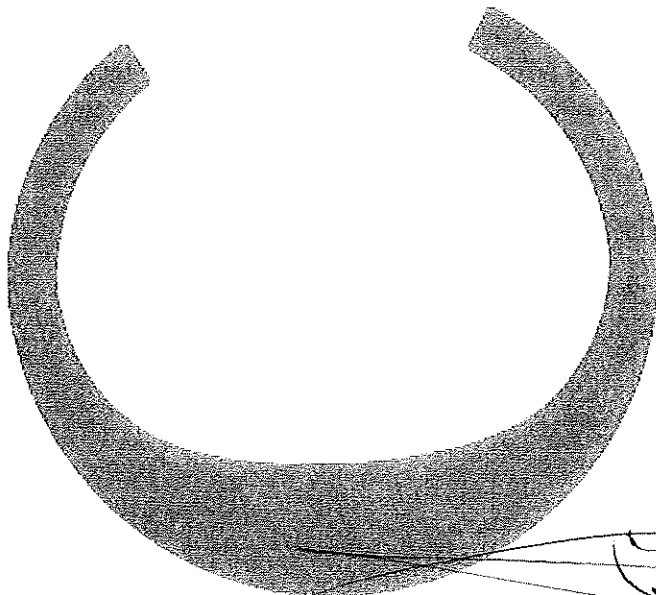
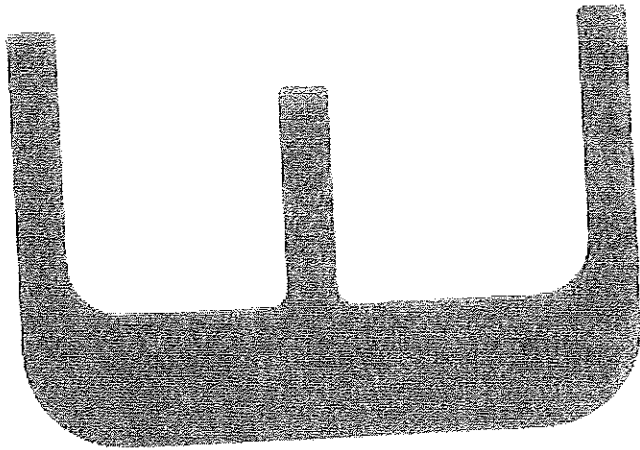
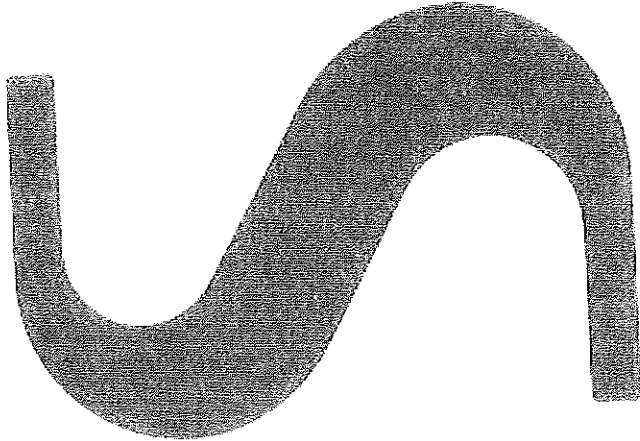
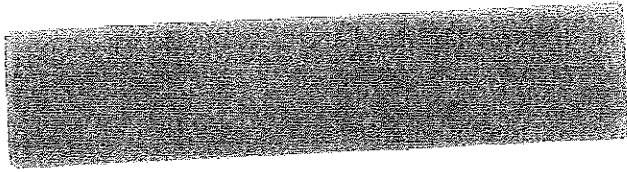






51249069XA

GPS91/15200



0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
A  
B  
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D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P  
Q  
R  
S  
T  
U  
V  
W  
X  
Y  
Z

*[Handwritten signature]*

*[Handwritten mark]*

3/7

client: MERLIN GERIN S.A. - Grenoble (France)

object: Three pole metal enclosed air insulated switchgear SM6 system type QM.  
Fitted with an increased operating frequency SF6 gas insulated switch  
type IQ SM6.

characteristics of the tested object assigned by the Client

rated voltage 17.5/24 kV rated current 200 A rated frequency 50 Hz

other characteristics listed on page 2

the tests have been made in accordance with client's instructions  
based on IEC 694 (1980)

test date June 10th, 1991

the performance of the apparatus tested and the observations made during the  
tests have been recorded in the table with the test results and oscillograms

this document is composed by 7 pages, 2 oscillograms

Grenoble, August 19th, 1991

test engineer

F. Le Mennec

RECEIVED  
1991/08/20

91/012283  
Keywords : 120100 214108 360200 450700 5300

This test report is not a certificate of conformity, nor do the results given necessarily confirm the ratings supplied by the manufacturer.  
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rated characteristics of the tested object assigned by the client

voltage	17.5/24	kV
frequency	50	Hz
normal current	200	A
short-circuit making current	40	KA
short-time withstand current	16	KA
short-circuit duration	1	s
gas pressure for interruption	1.4	bar abs.
earthing switch downstream the fuse		
short-time withstand current	2	KA

Identification of the object affected.

The tested object truly conforms to the drawings of its type supplied by the Client. These drawings identified by CESI with embossing prisms and numbered GPS- 91/019162 1 to 11 are assembled in a folder.

91/019200  
 Page 2  
 CESI

*Handwritten mark*

table of tests performed

date	type of test	see page
June 18th 1991	<p style="text-align: center;">SHORT TIME AND PEAK WITHSTAND CURRENT TEST</p> <p>Test on the searching switch downstream the fuse with 2 kA for 1 s.</p>	8

GERLIN GERIN S.A.

tests witnessed by

Mr. Laurens - GERLIN GERIN S.A.  
Mr. Dubroqua - GERLIN GERIN S.A.

*Handwritten signature*

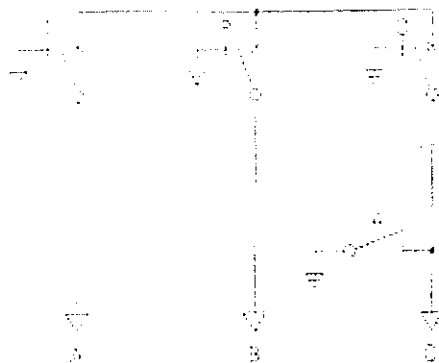
*Handwritten signature*

*Handwritten signature*

This test report is not a certificate of conformity, nor do the results given necessarily conform to the standards supplied by the manufacturer. This document may not be reproduced otherwise than it is entirely without Cesi's authorization.

arrangement of the object for the tests

The tested apparatus was assembled with two other apparatus of SMG system (see photo on page 7).  
 The figure below shows the electric diagram of the complete setting (single phase diagram of a three phase circuit) :



- 4 : earthing switch under test
- 1-2-3 : auxiliary switches
- A-B-C : cables

During the tests the cables C were connected to the supply and the switch 4 was in closed position. All the other switches were in open position.

028-91/015200  
 Page 4

short-circ and peak withstand current tests

test circuit conditions

circuit diagram see page 6 power factor < 0.15 frequency 50 Hz

test arrangements: see page 4

conditions of the apparatus before the tests: see

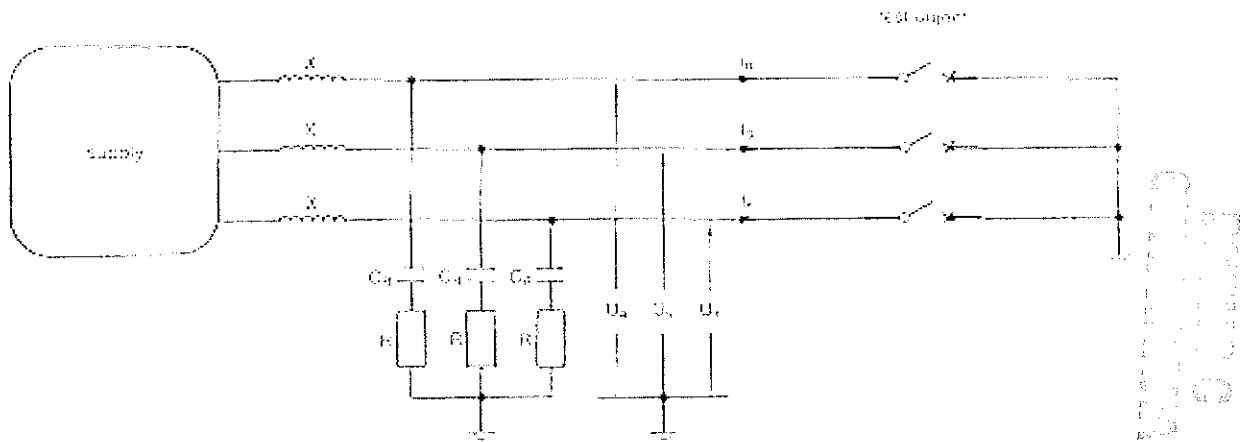
test no.	circuit no.	duration s	test current			notes
			maximum peak value kA	r.m.s. value kA	average kA	
1	3	1.01	- - 5.20	2.00 2.00 2.00	2.00	after the test the operating switch operated correctly.

conditions of the apparatus after the tests: as before the test.

note after the test : the performance of the apparatus is considered satisfactory for the test performed.

This test report is not a certificate of conformity, nor do the results given necessarily confirm the ratings specified by the manufacturer. This document may not be reproduced otherwise than in its entirety without CESI's authorisation.

circuit-diagram

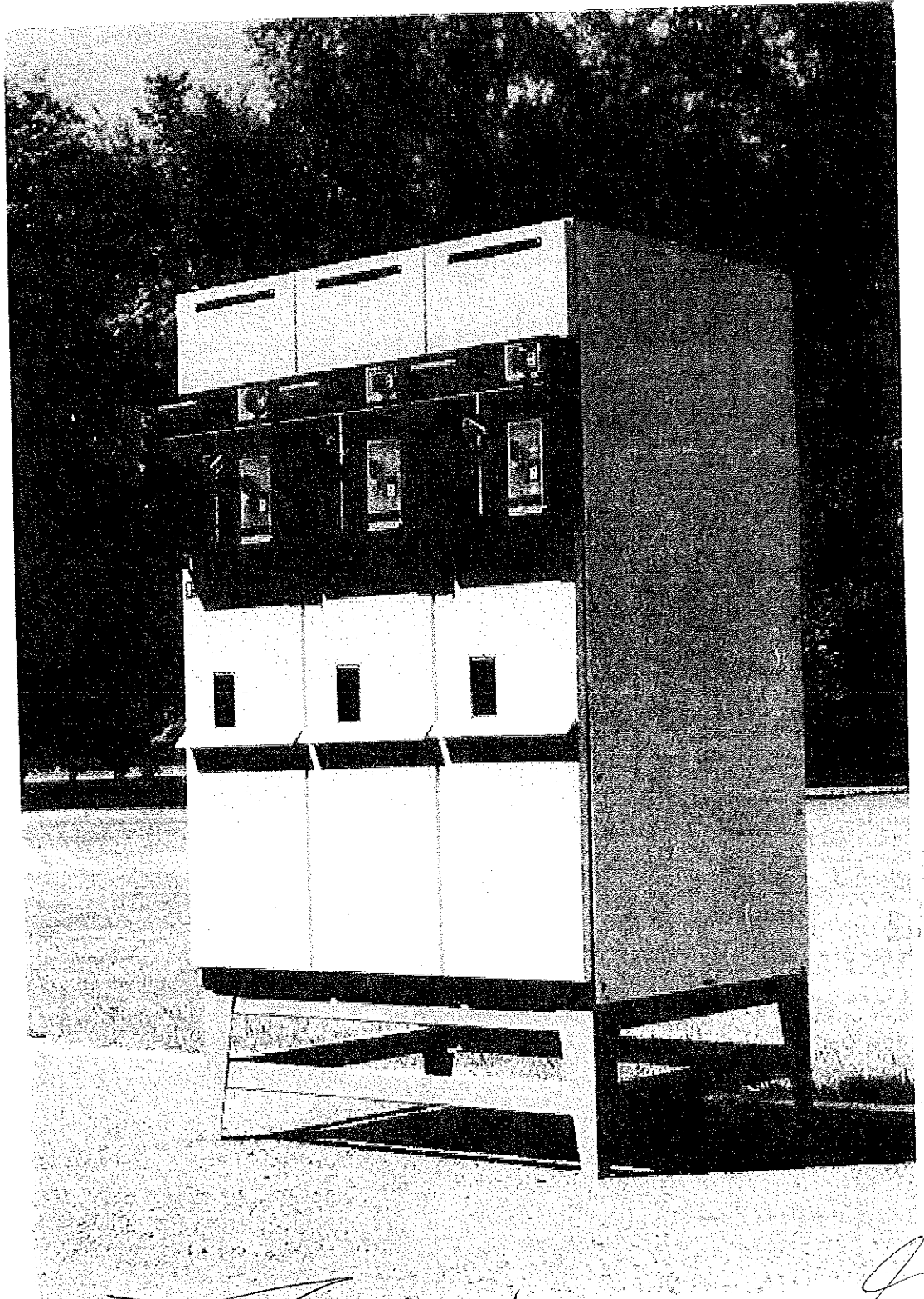


symbols used in this diagram are the same as on the oscillograms

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h/



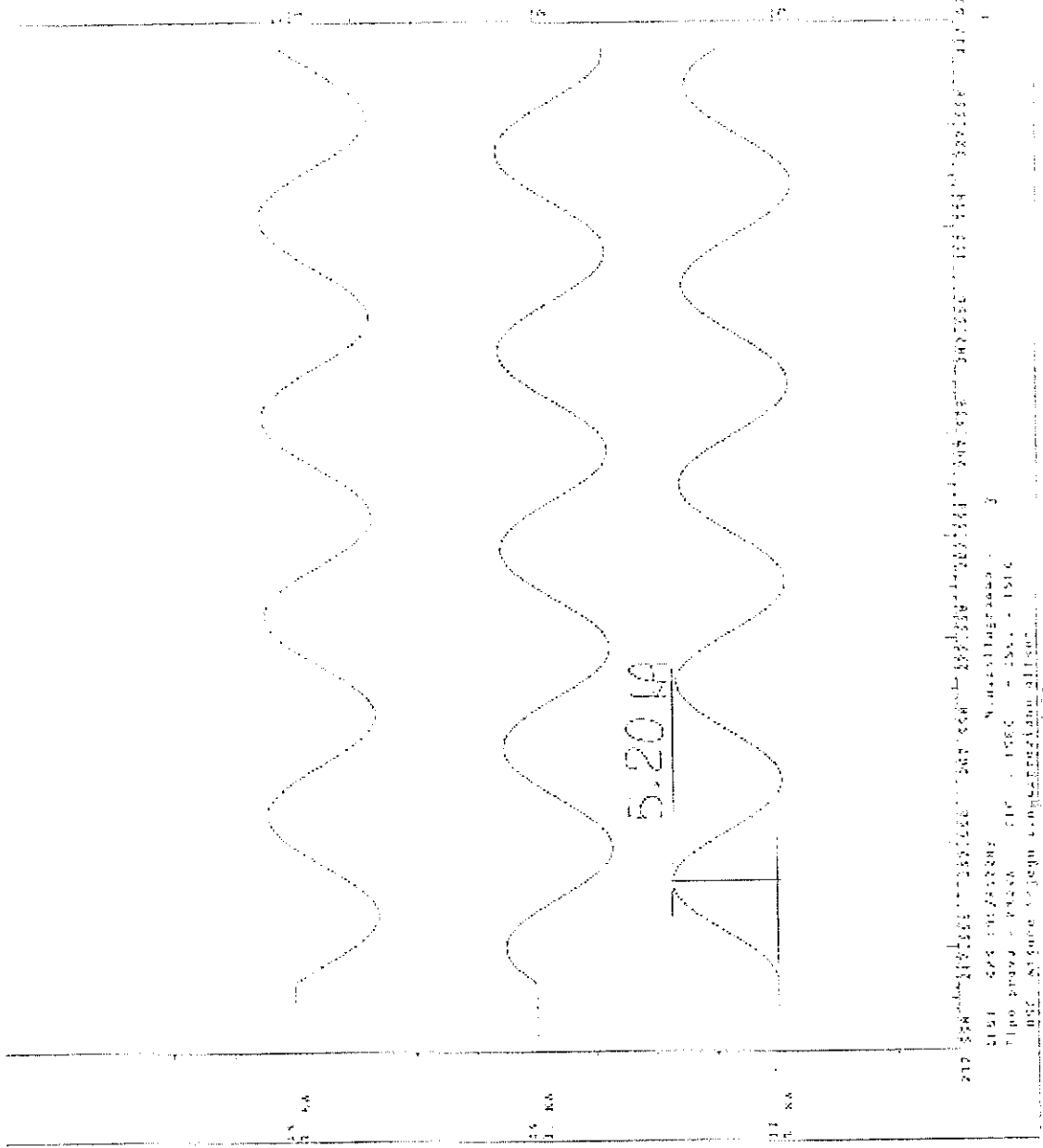
Page 10

This test report is not a certificate of conformity, nor do the results given necessarily equal the ratings supplied by the manufacturer. This document may not be reproduced otherwise than in its entirety without the prior authorization.

*[Handwritten signatures and scribbles]*



03/09/2011  
5:42:08.86



03/09/2011 5:42:08.86  
 Tipo segnale = 1500  
 Tipo prova = 1500  
 Tipo canale = 1500  
 Tipo segnale = 1500  
 Tipo prova = 1500  
 Tipo canale = 1500  
 Tipo segnale = 1500  
 Tipo prova = 1500  
 Tipo canale = 1500

03/09/2011

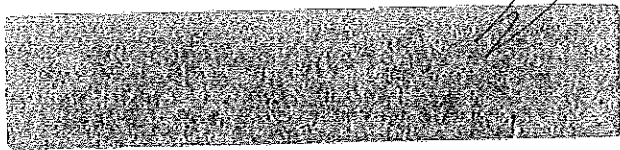
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*[Handwritten signature]*

*[Handwritten signature]*

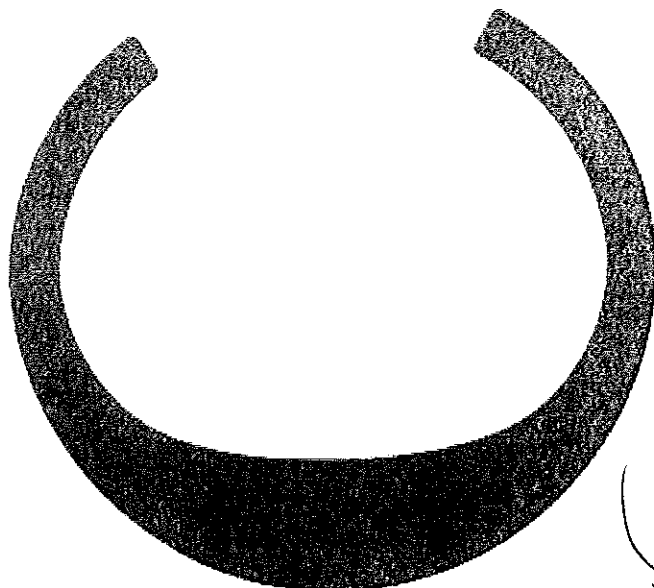
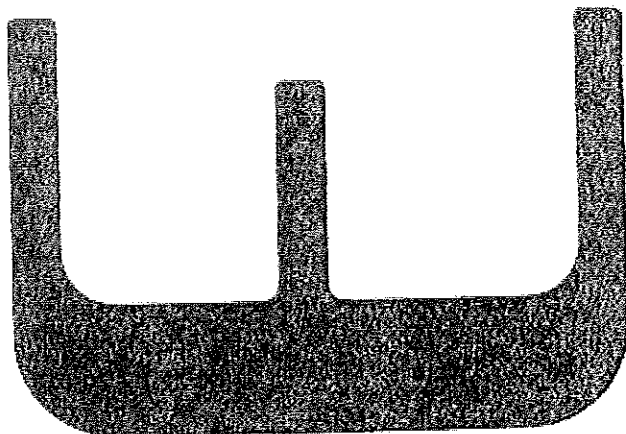
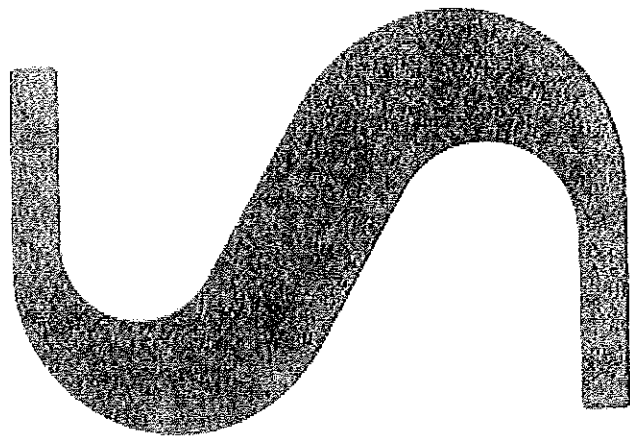
*[Handwritten signature]*

18/11



51249070XA

GPS91/15201



*h*

client: REALTECH S.A. - Grenoble (France)

object: Three pole metal enclosed air insulated switchgear RM6 system type RM.  
Fitted with an internal operating frequency SF6 gas insulated switch.  
Type IQ RM6.

characteristics of the tested object assigned by the client

rated voltage 17,5/24 kV rated current 200 A rated frequency 50 Hz  
other characteristics listed on page 1

the tests have been made in accordance with client's instructions  
based on IEC 694 (1988)

test date: June 18th, 1991

the performance of the apparatus tested and the observations made during the  
tests have been recorded in the table with the test results and oscillograms

this document is composed by 7 pages, 2 oscillograms

01/015791  
REALTECH S.A.  
Grenoble  
France

millon, August 19th, 1991

test engineer

*F. Le Senec*  
F. Le Senec

*[Signature]*

*[Signature]*

*[Signature]*

*[Signature]*

*[Signature]*

keywords : 01/012281 120120 234308 360300 453701 536010

This test report is not a certificate of conformity, nor do the results given necessarily confirm the ratings supplied by the manufacturer.  
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rated characteristics of the tested object assigned by the client:

voltage	17.5/24	kV
frequency	50	Hz
normal current	200	A
short-circuit making current	50	kA
short-time withstand current	20	kA
short-circuit duration	1	s
gas pressure for interruption	1.4	bar abs.
opening switch downstream the fuse		
short-time withstand current	2	kA

identification of the object affected.

The tested object truly conforms to the drawings of its type supplied by the Client. These drawings identified by CESI with embossing press and numbered CPS-91/815162 1 to 13 are assembled in a folder.

200  
 50  
 17.5/24  
 1  
 1.4  
 2  
 50  
 200  
 50  
 17.5/24

Table of tests performed

date	type of test	see page
June 18th 1991	<p style="text-align: center;">SHORT-TIME AND PEAK WITHSTAND CURRENT TEST</p> <p>Test on the earthing switch downstream the fence with 2 KA for 1 s.</p>	5

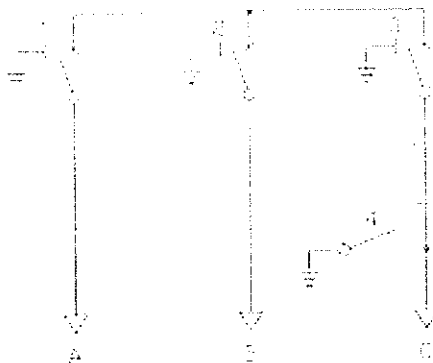
Tests witnessed by

Mr. Lauferas - MERLIN GERIN S.A.  
 Mr. Dubrocan - MERLIN GERIN S.A.

This test report is not a certificate of conformity, nor do the results given necessarily confirm the claims made by the manufacturer. This document may not be reproduced otherwise than in its entirety without CCSI's authorization.

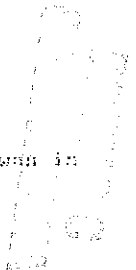
arrangement of the object for the tests

The tested apparatus was assembled with two other apparatus of SMC system (see photo on page 7).  
 The figure below shows the electric diagram of the complete setting (single phase diagram of a three phase circuit):



- 4 : earthing switch under test
- 1-2-3 : auxiliary switch
- A-B-C : cables

During the tests the cables C were connected to the supply and the switch 4 was in closed position. All the other switches were in open position.



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short time and peak withstand current tests

test circuit conditions

circuit diagram see page 6

power factor < 0.15

frequency 50 Hz

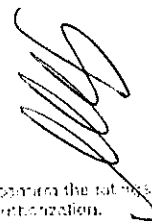
test arrangement: see page 4

conditions of the apparatus before the test: new

test no.	oscill. no.	duration s	test current			notes
			maximum peak value kA	r.m.s. value kA	average kA	
1	3	1.01	- - 5.20	2.00 2.00 2.00	2.00	after the test the earthing switch operated correctly.

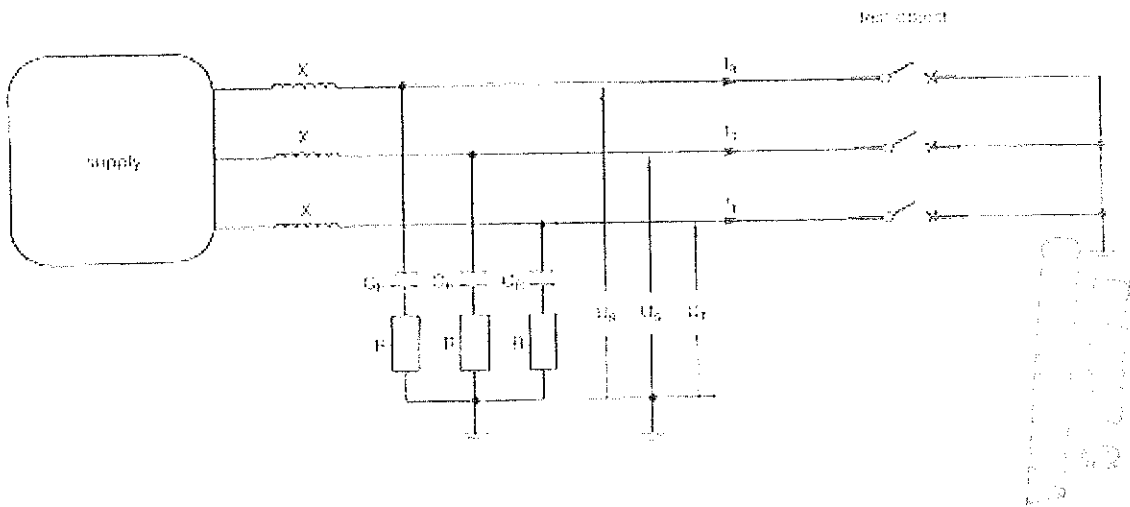
conditions of the apparatus after the test: as before the test

note after the test : the performance of the apparatus is considered satisfactory for the test performed.


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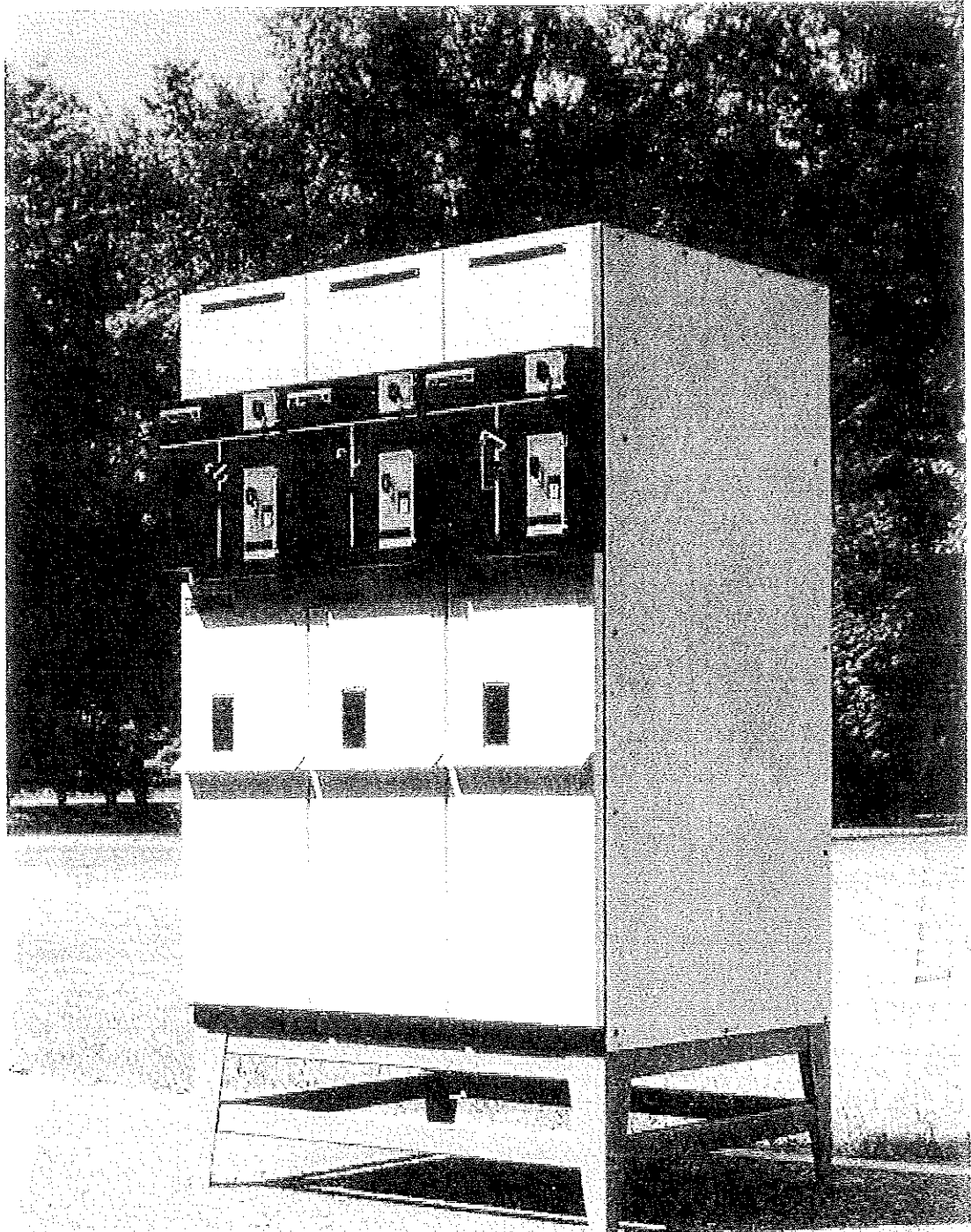
circuit-diagram



note: see in this diagram for the same as on the pag. 4/4/2013

*[Handwritten signatures]*

This test report is not a certificate of conformity, nor do the results given necessarily confirm the ratings supplied by the manufacturer. This document may not be reproduced otherwise than in its entirety without CESI's authorization.



This test report is not a certificate of conformity, nor do the results given necessarily confirm the ratings supplied by the manufacturer. This document may not be reproduced otherwise than in its entirety without CESI's authorization.

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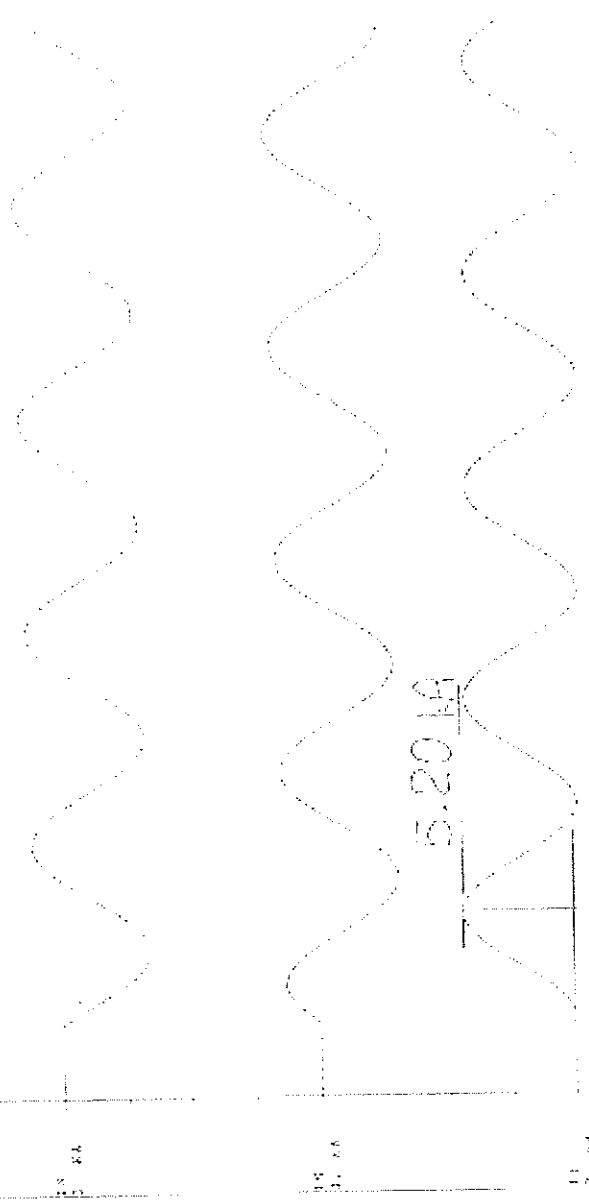
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11/20/2012  
11:20:20



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ECG tracing showing sinus rhythm. The PR interval is 5.20 mV. The QRS complex is narrow. The T wave is upright. The ST segment is normal. The QT interval is normal. The QTc interval is normal. The QTd interval is normal. The QTJ interval is normal. The QTm interval is normal. The QTn interval is normal. The QTp interval is normal. The QTq interval is normal. The QTs interval is normal. The QTt interval is normal. The QTu interval is normal. The QTv interval is normal. The QTw interval is normal. The QTx interval is normal. The QTy interval is normal. The QTz interval is normal.

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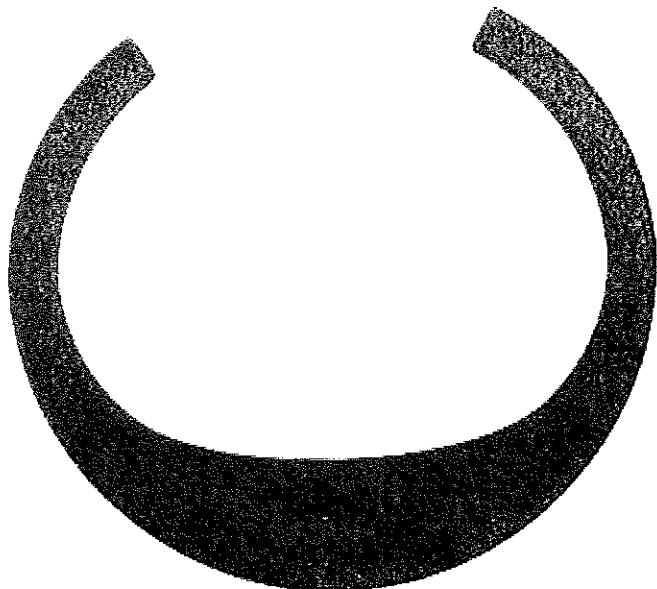
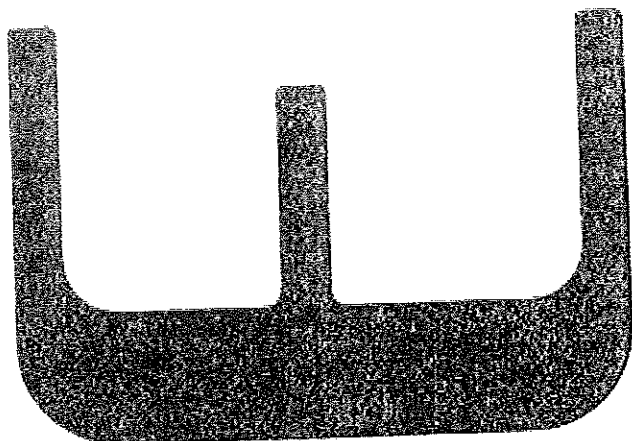
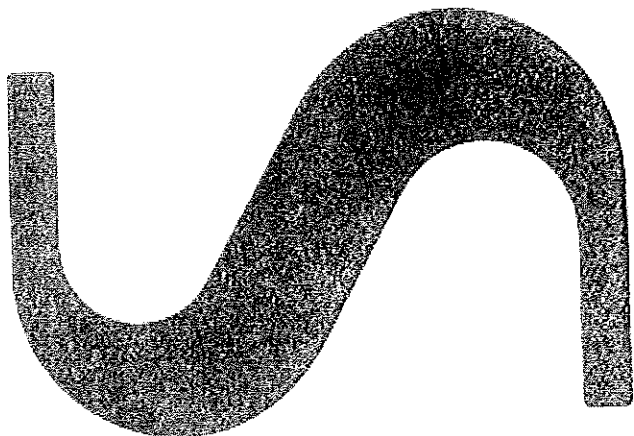
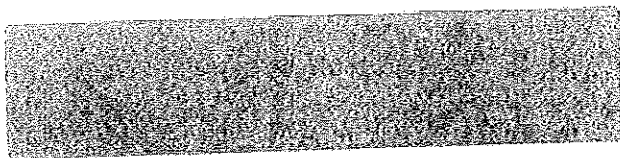
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GPS91/15203



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client MERLIN GERIN S.A. - Grenoble (France)

object Three pole metal enclosed air insulated switchgear GIS system type TR.  
Fitted with an increased operating frequency SF6 gas insulated switch  
type T 8M6.

characteristics of the tested object assigned by the Client

rated voltage 24 kV rated current 630 A rated frequency 50 Hz  
other characteristics listed on page 2

the tests have been made in accordance with client's instructions  
based on IEC 694 (1980)

test date June 21st, 1991

the performance of the apparatus tested and the observations made during the  
tests have been recorded in the table with the test results and oscillograms

this document is composed by 7 pages, 4 oscillograms

order, August 22nd, 1991

test engineer

  
P. Le Monan

91/015284  
keywords : 120100 234303 360201 450307 530010

This test report is not a certificate of conformity, nor do the results given necessarily confirm the claims supplied by the manufacturer.  
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rated characteristic of the tested object assigned by the client:

switch	
voltage	24 kV
frequency	50 Hz
normal current	630 A
short-circuit making current	50 kA
short-time withstand current	20 kA
short-circuit duration	1 s
earthing switch	
short-circuit making current	10 kA
short-time withstand current	20 kA
short-circuit duration	1 s
gas pressure for interruption	1.4 bar abs.

Identification of the object affected.

The tested object truly conforms to the drawings of its type supplied by the Client. These drawings identified by CESI with embossing press and numbered GPS- 91/015203 1 to 12 are assembled in a folder.



*[Handwritten signatures and scribbles]*



table of tests performed

date	type of test	no. page
	SHORT-TIME AND PEAK WITHSTAND CURRENT TESTS	
June 21st 1991	No.1 test with 20 kA for 1 s on the switch	5
June 21st 1991	No.1 test with 20 kA for 1 s on the earthing switch	5

C  
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tests witnessed by

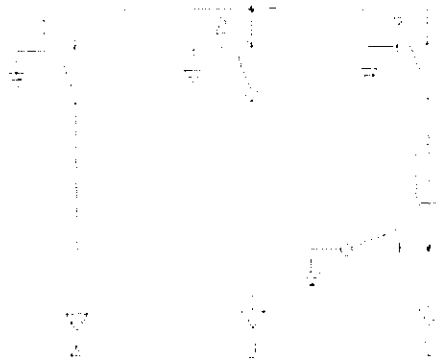
Mr. Laurens - MERLIN GERIN S.A.  
Mr. Dubocqua - MERLIN GERIN S.A.



This test report is not a certificate of conformity nor do the results given necessarily conform to the ratings supplied by the manufacturer. This document may not be reproduced otherwise than in its entirety without CESI's authorization.

arrangement of the object for the tests

The tested apparatus was assembled with two other apparatus of SM6 system (see photo on page 7).  
The figure below shows the electric diagram of the complete setting (single phase diagram of a three phase circuit):



1 : switch and earthing switch under test

2-3 : auxiliary switches

A-B-C : cables

For the short time current test on the switch : cables A connected to the supply, switches 1 and 2 in closed position, cables B short circuited at the bottom.

For the short time current test on the earthing switch : cables A connected to the supply, earthing switch 1 in closed position.

During the test on the switch the metal enclosure was insulated from earth but connected thereto by a copper wire 0.1 mm in diameter and 30 mm long to indicate any significant leakage current to earth.

This test report is not a certificate of conformity, nor do the results given necessarily conform to the values assumed by the manufacturer. This document may not be reproduced otherwise than in its entirety without CESI's authorization.

short-time and peak withstand current tests

test circuit conditions

circuit diagram see page 6 power factor < 0.15 frequency 50 Hz

test arrangement: see page 4

conditions of the apparatus before the tests: new

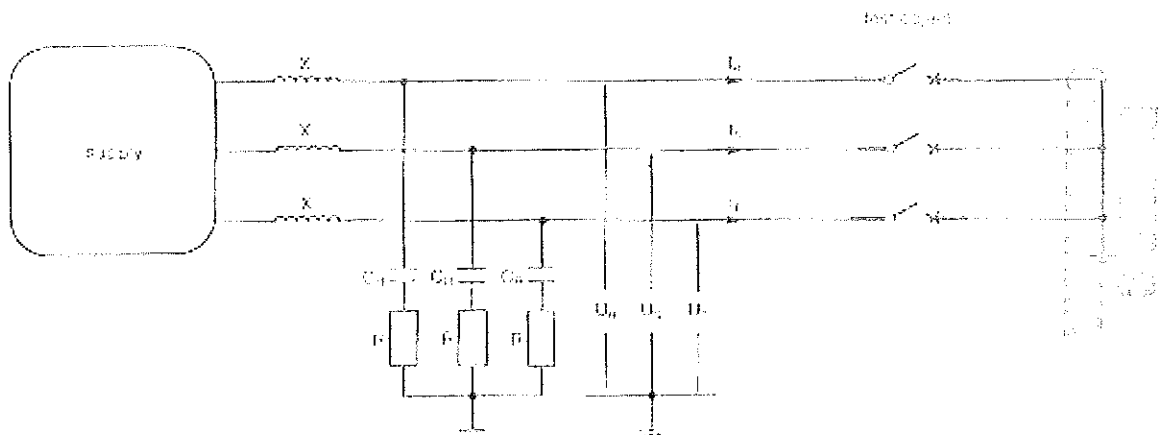
Test no.	oscill. no.	duration s	Test current			notes
			maximum peak value kA	r.m.s. value kA	average kA	
1	1	1.01	- 50.0	20.0 20.0 20.0	20.0	test on the switch
2	2	1.01	- 50.0	20.0 20.0 20.0	20.0	test on the earthing switch

conditions of the apparatus after the tests: external parts as before the tests, internal parts not inspected.

note after the tests : the performance of the apparatus is considered satisfactory for the tests performed.

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circuit-diagram

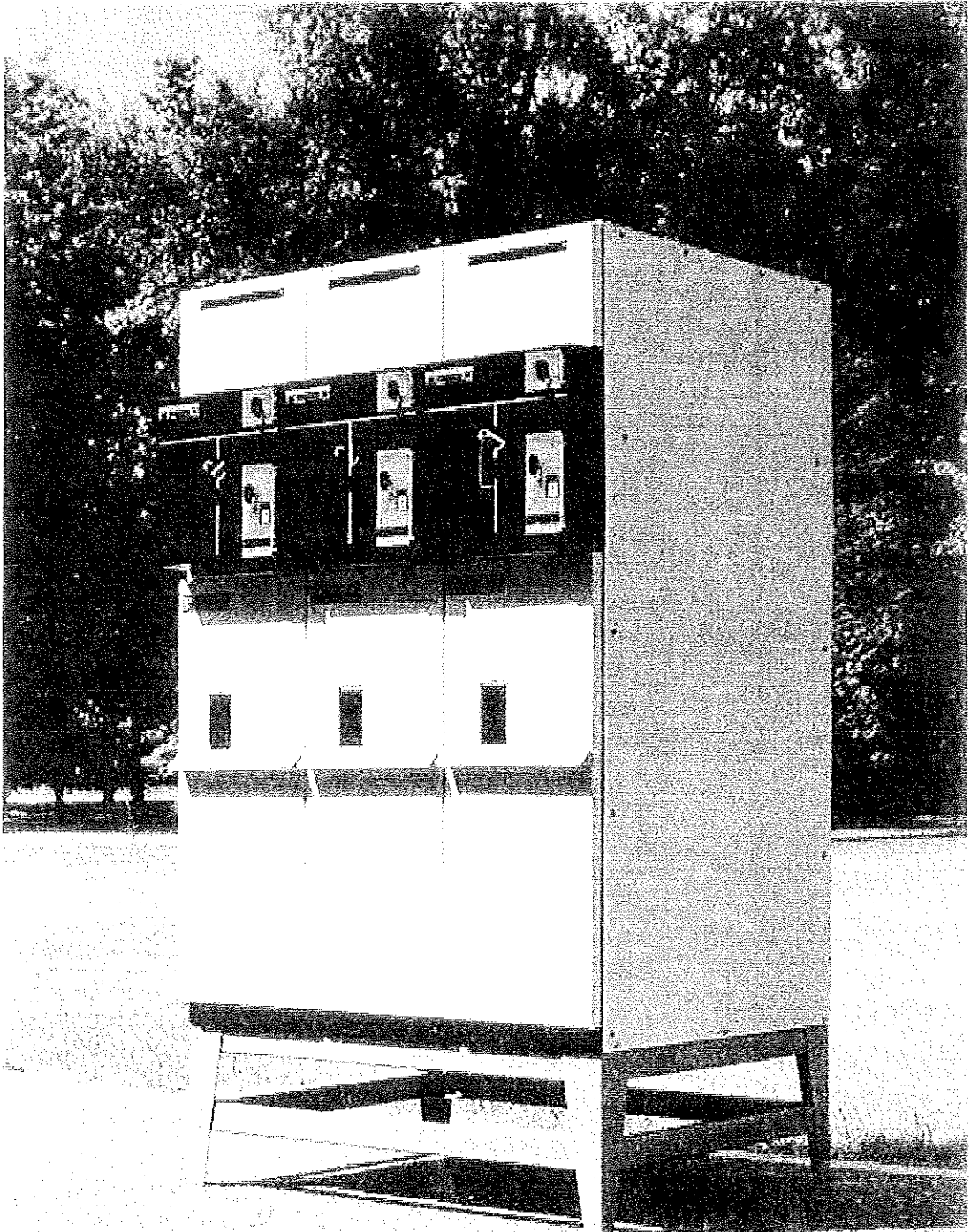


symbols used in this diagram are the same as on the test program

*[Handwritten signatures]*

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*Vertical text on the right side of the image, possibly a date or reference number.*

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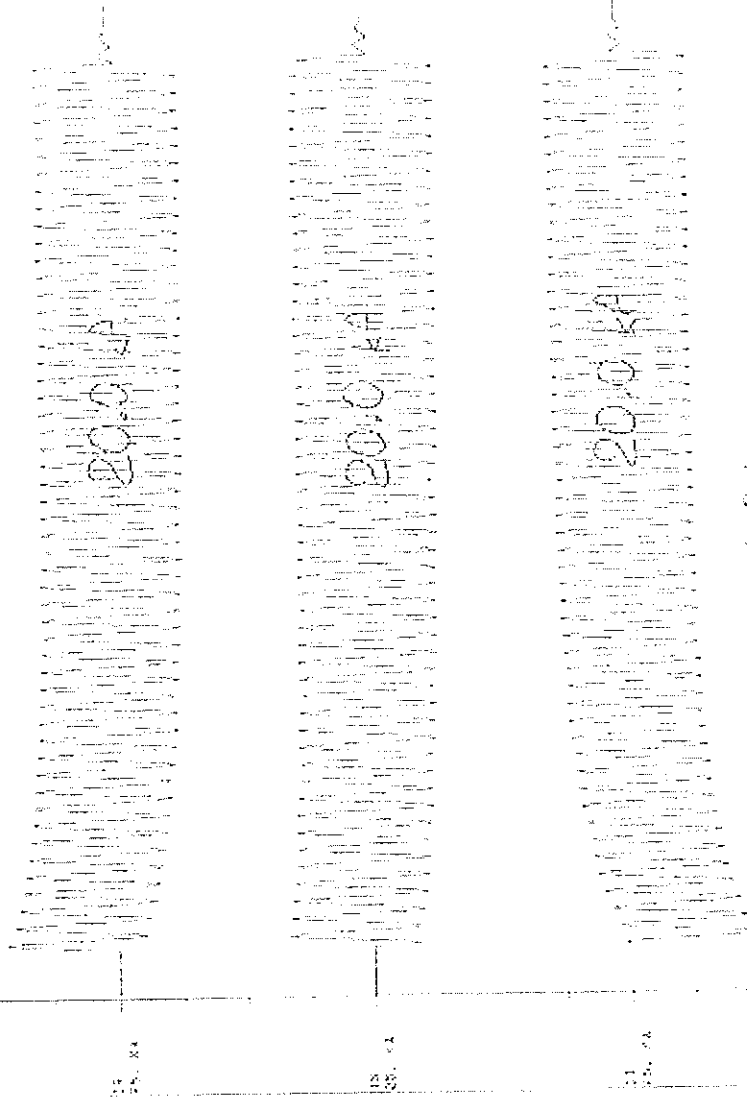
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*Handwritten signature*

This test report is not a certificate of conformity, nor do the results necessarily correspond to the values supplied by the manufacturer. This document may not be reproduced or otherwise used in its entirety without CCSI's authorization.

10/11/14 10:00 AM

5



1.01s

10/11/14 10:00 AM  
 10/11/14 10:00 AM  
 10/11/14 10:00 AM  
 10/11/14 10:00 AM

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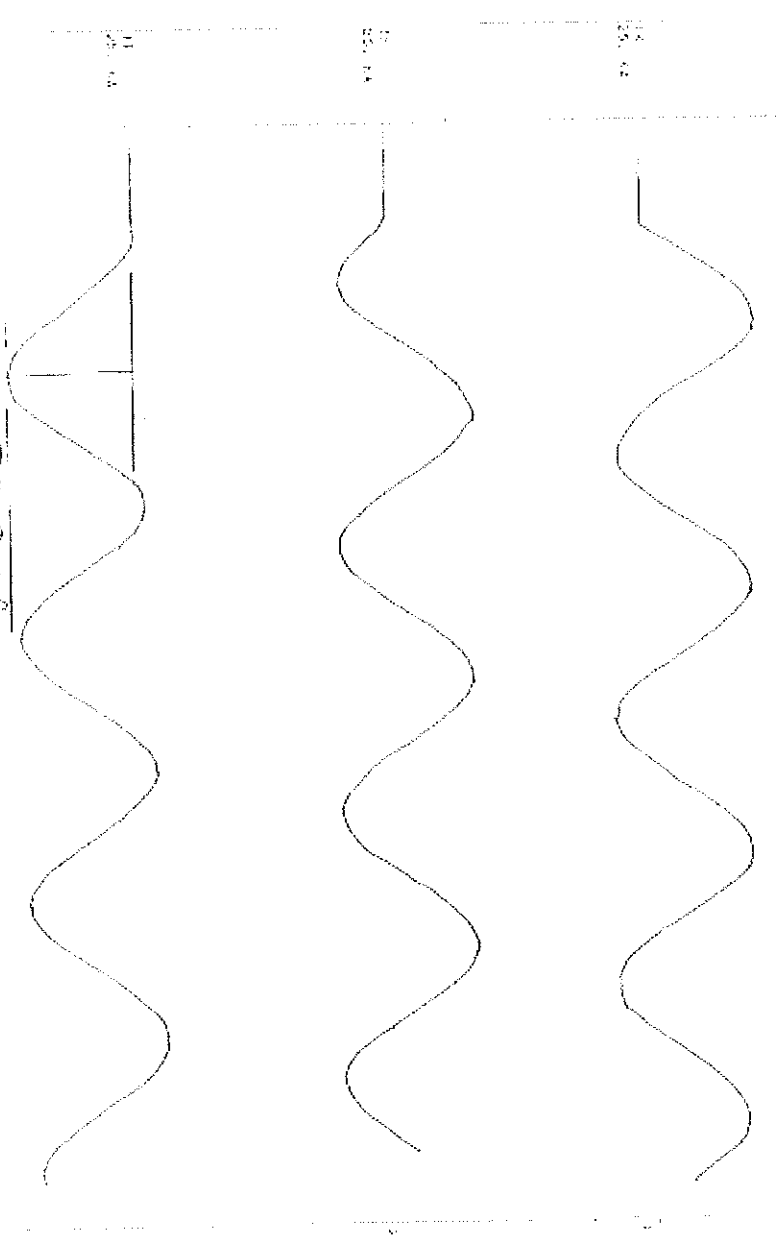
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1830

1. The patient is a 45-year-old male with a history of hypertension and hyperlipidemia. He was brought to the emergency department by ambulance with a chief complaint of chest pain and shortness of breath. The patient is currently on a regular schedule of medications including Lisinopril, Atorvastatin, and Aspirin. He has no known drug allergies and is not taking any herbal supplements or over-the-counter medications. He has a 20-pack-year history of smoking and has quit 10 years ago. He has a family history of premature coronary artery disease in his father and brother. He is currently on a regular diet and has no recent weight changes. He has no recent travel history and no recent contact with anyone who has been ill. He has no recent trauma or falls. He has no recent changes in his usual activities. He has no recent changes in his mental status. He has no recent changes in his bowel or bladder habits. He has no recent changes in his vision or hearing. He has no recent changes in his skin or hair. He has no recent changes in his teeth or gums. He has no recent changes in his nails. He has no recent changes in his hair or skin. He has no recent changes in his vision or hearing. He has no recent changes in his skin or hair. He has no recent changes in his teeth or gums. He has no recent changes in his nails. He has no recent changes in his hair or skin.

50.0 Hz



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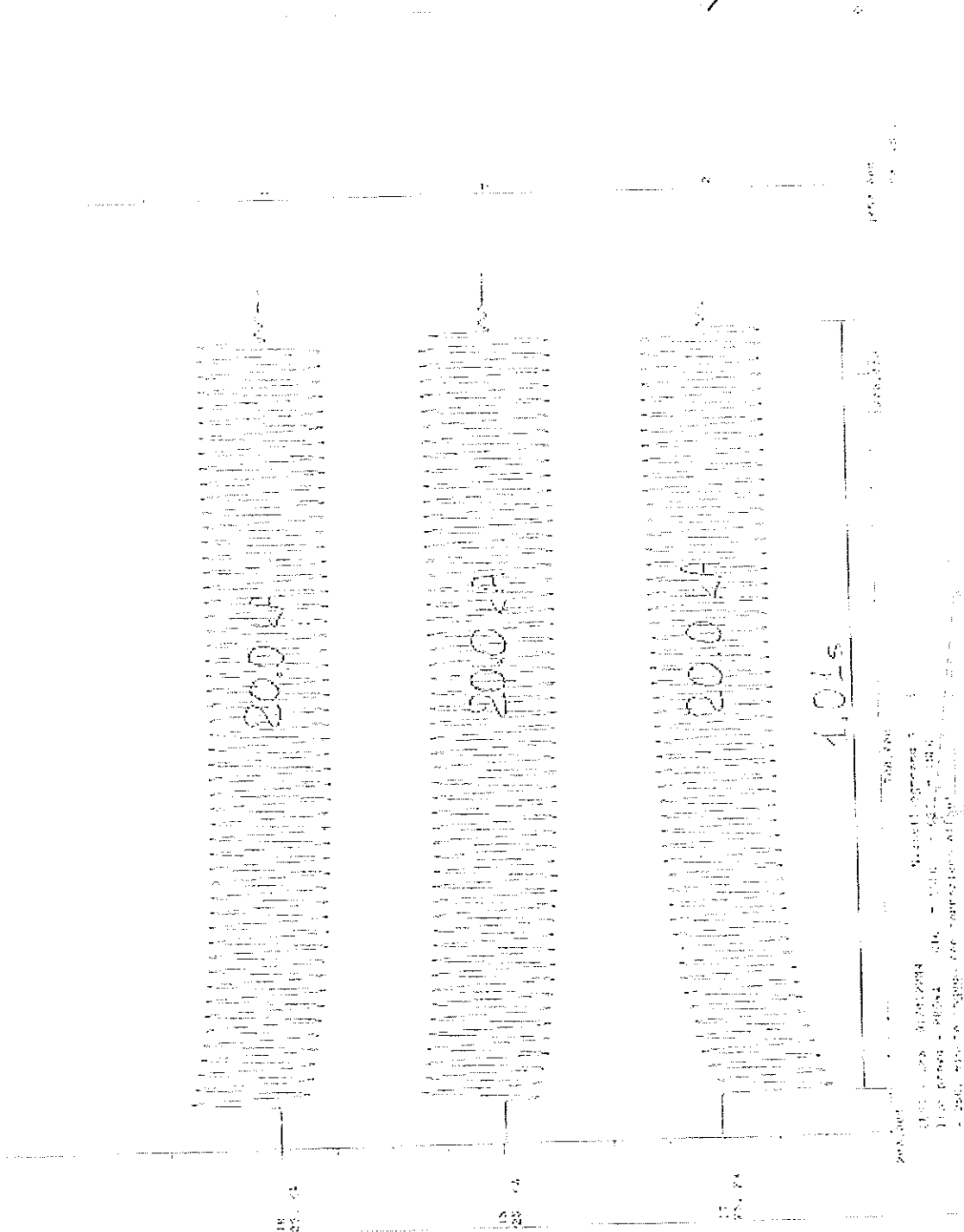
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*[Handwritten signature]*

10/10/07

11/10/07

Temperature, °C



h  
h

*[Handwritten signature]*

*[Handwritten signature]*

*[Handwritten signature]*

10/11/2004 10:00:00 AM  
 10/11/2004 10:00:00 AM  
 10/11/2004 10:00:00 AM  
 10/11/2004 10:00:00 AM

0.000000



12/20/02  
10:00 AM

*[Handwritten mark]*



Waveform generator output showing a triangular wave, a sine wave, and a square wave. The x-axis is labeled 'Time' and the y-axis is labeled 'Voltage'.

30.0 LA

*[Handwritten text]*

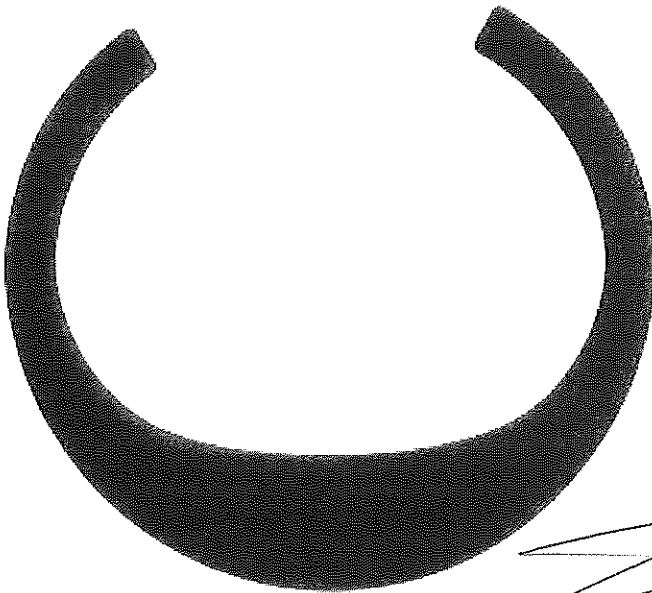
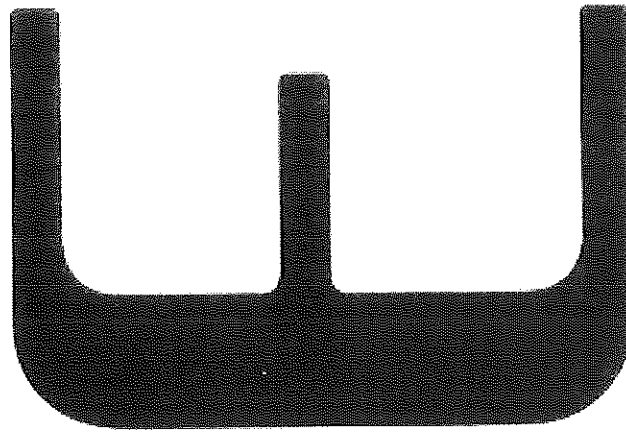
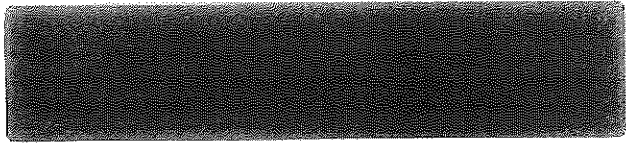
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51249139XA

MP91/012987



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CLIENT : MERRAIN GERIN - GRENOBLE CEDEX (France)

APPARATUS TESTED : THREE POLE METAL-ENCLOSED AIR INSULATED SWITCHGEAR SM6 SYSTEM TYPE IM. Fitted with an increased operating frequency SF6 gas insulated switch type I SM6. (see photo CD1).

DESIGNATION : IK

CHARACTERISTICS ASSIGNED BY THE CLIENT TO THE APPARATUS:

- Rated voltage (U) : 17.5/24 kV  
 - Rated normal current : 400 A

Other characteristics are listed on page 2.

TESTS PERFORMED : - Measurement of the resistance of the main circuit  
 - Verification of temperature rise limits

TESTS MADE IN ACCORDANCE WITH : the Client instruction based on IEC STANDARD Publication 298 (1981) and IEC 694 (1980).

DATE OF TESTS : 18th June 1991

The performance of the apparatus tested and the observations made during the tests, have been recorded in the tables with the results and oscillograms.

This document is composed by 7 pages

91/012987, 17th September 1991

Responsible for the document:

(U. 1020)

91/012987

Keywords: 120130 355108 510206 440204 530311 629408

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## OTHER CHARACTERISTICS ASSIGNED BY THE CLIENT TO THE APPARATUS

- Rated frequency	:	50 Hz
- Rated short-time withstand current of the main circuit	:	20 kA
- Rated peak withstand current of the main circuit	:	50 kA
- Rated duration of short-circuit	:	1 s
- Rated short-time withstand current of the earthing circuit	:	20 kA
- Rated peak withstand current of the earthing circuit	:	50 kA
- Rated duration of short-circuit	:	1 s

## THE TESTS WERE WITNESSED BY:

Mr. LOURENS - MERLIN GERIN S.A.

Mr. DUBROCCA - MERLIN GERIN S.A.

## IDENTIFICATION OF THE APPARATUS:

The tested apparatus truly conforms to the drawings of its type supplied by the client. These drawings, identified by CESI with embossing press and numbered GPR 91/012987 from 001 to 012 are assembled in a folder.

The test report is not a certificate of conformity, nor is the test. It does not necessarily confirm the ratings supplied by the manufacturer. Its dissemination may not be made without CESI's authorisation.

*2/*

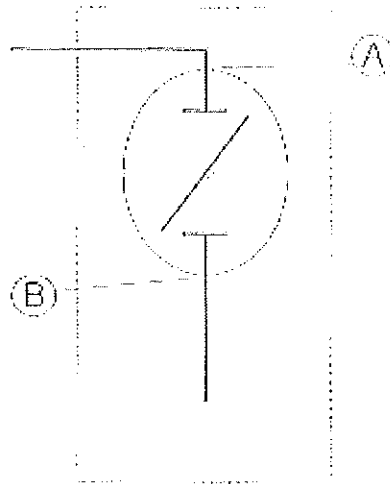
CONTENTS

TEST EFFECTED	DESCRIPTION ON PAGE
- Measurement of the resistance of the main circuit before and after the temperature-rise test.	4
- Verification of temperature rise limits	5
- Photo of the tested apparatus	7

*[Handwritten signatures]*

This test report is not a certificate of conformity, nor do the results given necessarily confirm the findings supplied by the manufacturer. This document may not be reproduced otherwise than in its entirety without CESI's authorization.

MEASUREMENT OF THE RESISTANCE OF THE MAIN CIRCUIT



CERTIFICATE OF CONFORMITY  
 NO. 91/012987  
 DATE: 10/10/01  
 BY: [Signature]

MEASURE (see the above figure)	PHASE	BEFORE THE TEMPERATURE RISE TEST		AFTER THE TEMPERATURE RISE TEST	
		AMBIENT AIR TEMPERATURE °C	RESISTANCE Ω	AMBIENT AIR TEMPERATURE °C	RESISTANCE Ω
A - B	1	23.7	0.049	25.3	0.043
A - B	2	23.7	0.041	25.3	0.042
A - B	3	23.7	0.047	25.3	0.049

*[Signature]*

*[Signature]*

*[Signature]*

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VERIFICATION OF TEMPERATURE RISE LIMITS

Test arrangement

- The apparatus tested was placed on the floor of the test room in the same conditions as in normal service.
- The three phase a.c. low-voltage supply was connected to the incoming terminals of the apparatus tested by means of one flexible aluminium conductor per phase having a cross-sectional area of 140 mm<sup>2</sup> and 2 meters in length.

Measurement of the temperature

- The ambient air temperature was obtained from the average of the temperatures measured by means of three copper-constantan thermocouples immersed inside oil baths containing about half a litre of oil, distributed around the apparatus tested at about its average height and at a distance of about 1m.
- The temperature of all other parts were measured by copper-constantan thermocouples.

Test currents

- The test was carried out with a three-phase current having a r.m.s. value ~~65~~400 A - 50 Hz.

RECEIVED  
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Test results

The maximum temperature rise at the thermal steady state ( $\Delta t \leq 1^\circ\text{C/h}$ ) with an ambient air temperature of 23.9 °C were:

MEASURED PARTS	TEMPERATURE RISE K	
	Measured	Admitted
- Incoming terminal, phase 1	32.4	65
- Incoming terminal, phase 2	30.5	65
- Incoming terminal, phase 3	29.6	65
- Upper fixed contact of the switch-disconnector, phase 1	26.3	65
- Upper fixed contact of the switch-disconnector, phase 2	27.0	65
- Upper fixed contact of the switch-disconnector, phase 3	25.0	65
- Upper moving contact of the switch-disconnector, phase 1	27.5	65
- Upper moving contact of the switch-disconnector, phase 2	27.7	65
- Upper moving contact of the switch-disconnector, phase 3	26.4	65
- Lower moving contact of the switch-disconnector, phase 1	27.9	65
- Lower moving contact of the switch-disconnector, phase 2	27.7	65
- Lower moving contact of the switch-disconnector, phase 3	26.5	65
- Lower fixed contact of the switch-disconnector, phase 1	27.3	65
- Lower fixed contact of the switch-disconnector, phase 2	27.3	65
- Lower fixed contact of the switch-disconnector, phase 3	26.1	65
- Ambient SF6 temperature inside the pole of the switch-disconnector, phase 1	19.2	-
- Ambient SF6 temperature inside the pole of the switch-disconnector, phase 2	19.0	-
- Ambient SF6 temperature inside the pole of the switch-disconnector, phase 3	18.9	-
- Main bus-bar, phase 1	26.1	-
- Main bus-bar, phase 2	27.2	-
- Main bus-bar, phase 3	25.4	-

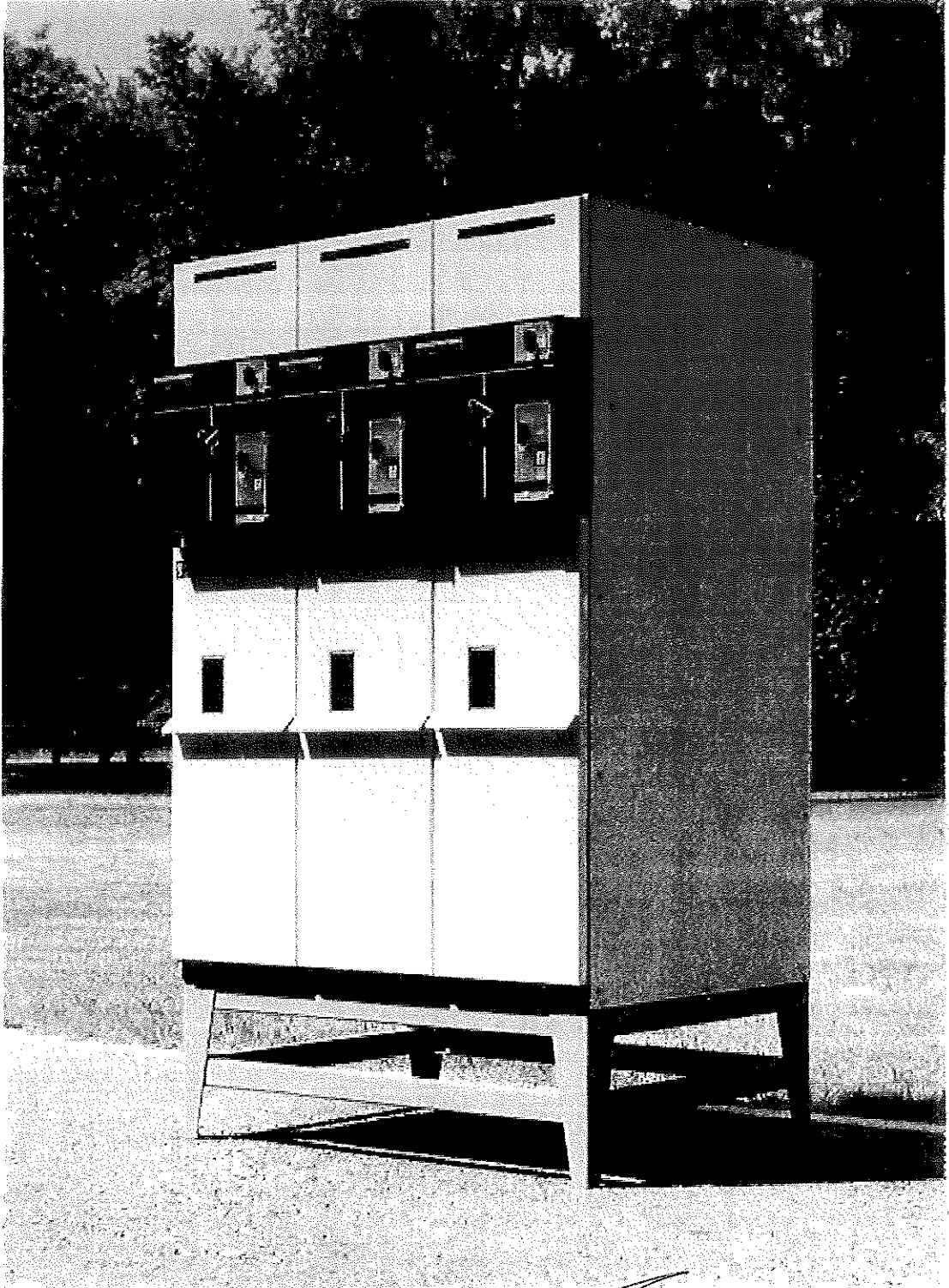
RECEIVED

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1840



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OF THIS DOCUMENT  
IS PROHIBITED

~~PHOTO 001~~

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MP91/012992

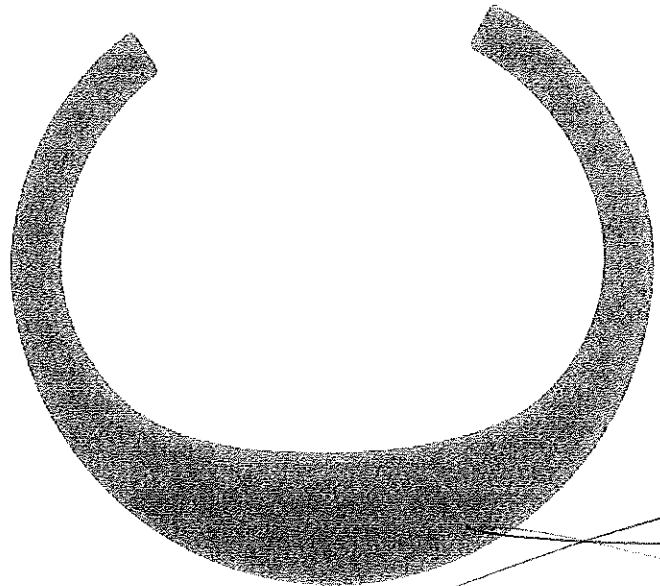
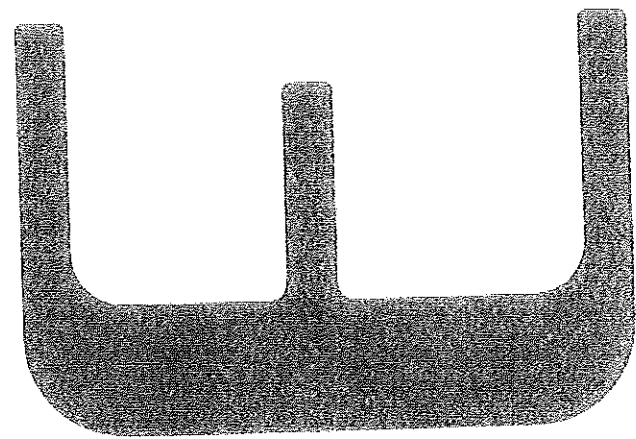
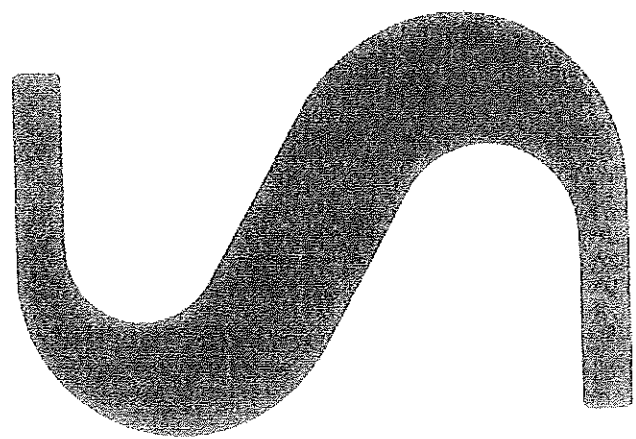
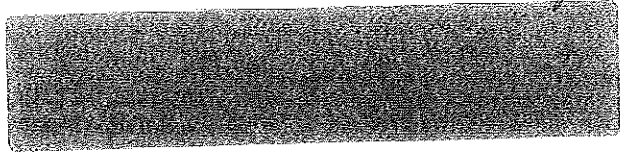


EXHIBIT 3

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CLIENT : MERLIN GERIN - GRENOBLE CEDEX (France)

APPARATUS TESTED : THREE POLE METAL-ENCLOSED AIR INSULATED SWITCHGEAR SM6 SYSTEM TYPE IM. Fitted with an increased operating frequency SF6 gas insulated switch type I SM6. (see photo 001).

DESIGNATION : IM

CHARACTERISTICS ASSIGNED BY THE CLIENT TO THE APPARATUS:

- Rated voltage (U) : 17.5/24 kV
- Rated normal current : 630 A

Other characteristics are listed on page 2.

TESTS PERFORMED : - Measurement of the resistance of the main circuit  
- Verification of temperature rise limits

TESTS MADE IN ACCORDANCE WITH : the Client instruction based on IEC STANDARD Publication 298 (1981) and IEC 694 (1980).

DATE OF TESTS : 18th June 1991

The performance of the apparatus tested and the observations made during the tests, have been recorded in the tables with the results and oscillograms.

this document is composed by 7 pages

18th, 17th September 1991

Responsible for the document  
(U. ...)

91/012992

Keywords: 120100 235105 340204 440204 530310 624404

This test report is not a certificate of conformity. It is the results given necessarily confirm the ratings supplied by the manufacturer. This document may not be reproduced otherwise than in its entirety without CESI's authorization.

## OTHER CHARACTERISTICS ASSIGNED BY THE CLIENT TO THE APPARATUS

- Rated frequency	:	50 Hz
- Rated short-time withstand current of the main circuit	:	20 kA
- Rated peak withstand current of the main circuit	:	50 kA
- Rated duration of short-circuit	:	1 s
- Rated short-time withstand current of the earthing circuit	:	20 kA
- Rated peak withstand current of the earthing circuit	:	50 kA
- Rated duration of short-circuit	:	1 s

## THE TESTS WERE WITNESSED BY:

Mr. LAURENS - MERLIN GERIN S.A.

Mr. DUEROQUA - MERLIN GERIN S.A.

MERLIN GERIN S.A.  
 11, rue de la République  
 91000 Evry  
 FRANCE

## IDENTIFICATION OF THE APPARATUS:

The tested apparatus truly conforms to the drawings of its type supplied by the Client. These drawings, identified by CESI with embossing press and numbered GPS 91/013161 from 001 to 012 are assembled in a folder.

This test report is not a certificate of conformity, nor do the results given necessarily confirm the ratings supplied by the manufacturer.  
 This document may not be reproduced otherwise than in its entirety without CESI's authorization.

CONTENTS

TEST EFFECTED	DESCRIPTION ON PAGE
- Measurement of the resistance of the main circuit before and after the temperature-rise test.	4
- Verification of temperature rise limits	5
- Photo of the tested apparatus	7



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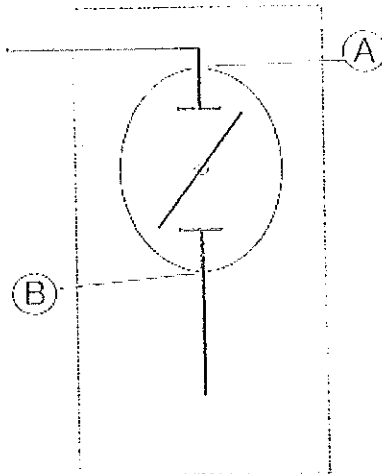
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1845

MEASUREMENT OF THE RESISTANCE OF THE MAIN CIRCUIT



CONSULT THE  
 MANUFACTURER  
 FOR THE  
 SPECIFICATIONS  
 OF THE  
 COMPONENTS

MEASURE (see the above figure)	PHASE	BEFORE THE TEMPERATURE RISE TEST		AFTER THE TEMPERATURE RISE TEST	
		AMBIENT AIR TEMPERATURE °C	RESISTANCE mΩ	AMBIENT AIR TEMPERATURE °C	RESISTANCE mΩ
A - B	1	23.7	0.049	25.3	0.043
A - B	2	23.7	0.051	25.3	0.042
A - B	3	23.7	0.047	25.3	0.040

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## VERIFICATION OF TEMPERATURE RISE LIMITS

## Test arrangement

- The apparatus tested was placed on the floor of the test room in the same conditions as in normal service.
- The three phase a.c. low-voltage supply was connected to the incoming terminals of the apparatus tested by means of one flexible copper conductor per phase having a cross-sectional area of 240 mm<sup>2</sup> and 2 meters in length.

## Measurement of the temperature

- The ambient air temperature was obtained from the average of the temperatures measured by means of three copper-constantane thermocouples immersed inside oil sumps containing about half a litre of oil, distributed around the apparatus tested at about its average height and at a distance of about 1m.
- The temperature of all other parts were measured by copper-constantane thermocouples.

## Test currents

- The test was carried out with a three-phase current having a r.m.s. value of 630 A - 50 Hz.

Test results

The maximum temperature rise at the thermal steady state ( $\Delta t \leq 1^\circ\text{C/h}$ ) with an ambient air temperature of  $23.8^\circ\text{C}$  were:

MEASURED PARTS	TEMPERATURE RISE K	
	Measured	Admitted
- Incoming terminal, phase 1	52.0	65
- Incoming terminal, phase 2	52.0	65
- Incoming terminal, phase 3	51.3	65
- Upper fixed contact of the switch-disconnector, phase 1	52.9	65
- Upper fixed contact of the switch-disconnector, phase 2	55.4	65
- Upper fixed contact of the switch-disconnector, phase 3	51.5	65
- Upper moving contact of the switch-disconnector, phase 1	54.4	65
- Upper moving contact of the switch-disconnector, phase 2	55.5	65
- Upper moving contact of the switch-disconnector, phase 3	53.6	65
- Lower moving contact of the switch-disconnector, phase 1	51.6	65
- Lower moving contact of the switch-disconnector, phase 2	52.2	65
- Lower moving contact of the switch-disconnector, phase 3	50.5	65
- Lower fixed contact of the switch-disconnector, phase 1	47.8	65
- Lower fixed contact of the switch-disconnector, phase 2	48.4	65
- Lower fixed contact of the switch-disconnector, phase 3	47.4	65
- Ambient SF6 temperature inside the pole of the switch-disconnector, phase 1	37.4	-
- Ambient SF6 temperature inside the pole of the switch-disconnector, phase 2	37.6	-
- Ambient SF6 temperature inside the pole of the switch-disconnector, phase 3	37.9	-
- Main bus-bar, phase 1	56.2	-
- Main bus-bar, phase 2	59.1	-
- Main bus-bar, phase 3	55.0	-

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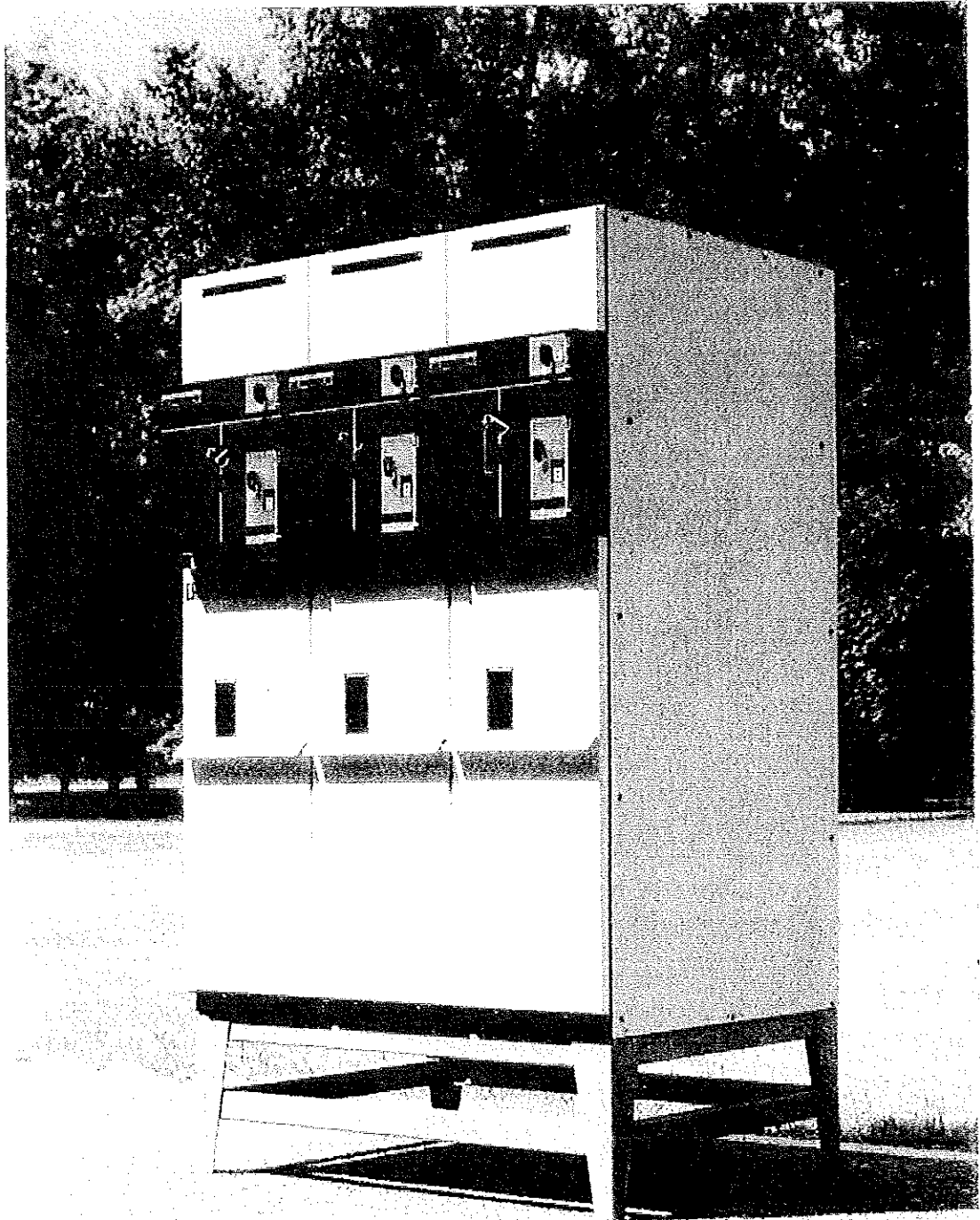


PHOTO 001

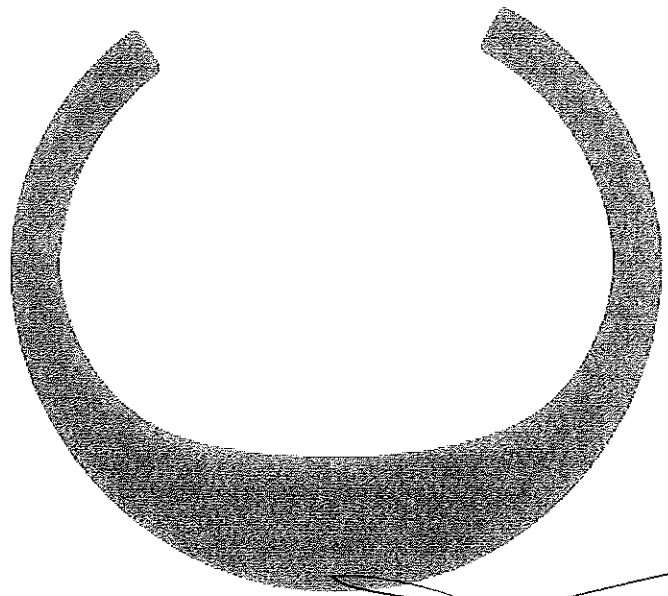
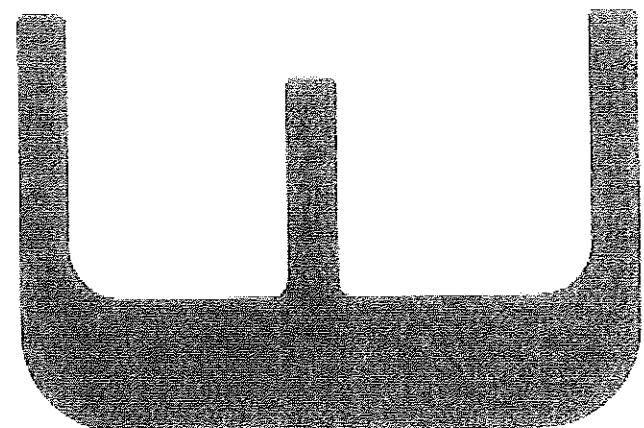
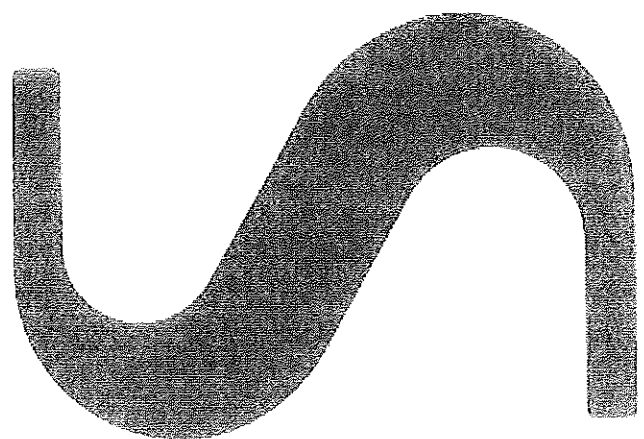
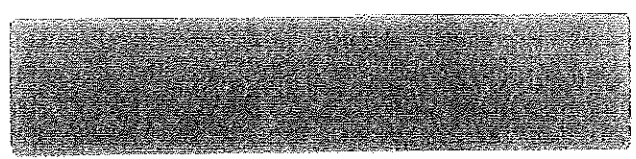
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CLIENT : MERLIN GERIN GRENOBLE CEDEX (France)

APPARATUS TESTED : THREE POLE METAL-ENCLOSED AIR INSULATED SWITCHGEAR SM6 SYSTEM TYPE QM, fitted with an increased operating frequency SF6 gas insulated switch type IQ SM6. (see photo 001).

DESIGNATION : QM

CHARACTERISTICS ASSIGNED BY THE CLIENT TO THE APPARATUS:

- Rated voltage (U) : 12 kV
- Rated normal current : 250 A

Other characteristics are listed on page 2.

TESTS PERFORMED : - Measurement of the resistance of the main circuit  
- Verification of temperature rise limits

TESTS MADE IN ACCORDANCE WITH : the Client's instruction based on IEC STANDARD Publication 298 (1981) and IEC 694 (1969).

DATE OF TESTS : 18th June 1991

The performance of the apparatus tested and the observations made during the tests, have been recorded in the tables with the results and oscillograms.

This document is composed by 7 pages

19th September 1991

Responsible for the document (M. Levy)

91/912648

Keywords 120100 235100 310200 440200 530010 674300

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## OTHER CHARACTERISTICS ASSIGNED BY THE CLIENT TO THE APPARATUS

- Rated frequency	:	50 Hz
- Rated short-time withstand current of the main circuit	:	25 kA
- Rated peak withstand current of the main circuit	:	62.5 kA
- Rated duration of short-circuit	:	1 s
- Rated short-time withstand current of the earthing circuit	:	25 kA
- Rated peak withstand current of the earthing circuit	:	62.5 kA
- Rated duration of short-circuit	:	1 s

## CHARACTERISTICS OF THE FUSE LINK

- Manufacturer	:	MERLIN GERIN S.A.
- Designation	:	FUSARC
- Rated current	:	250 A

## THE TESTS WERE WITNESSED BY:

Mr. LAURENS - MERLIN GERIN S.A.

Mr. BUSBOGNA - MERLIN GERIN S.A.

## DESCRIPTION OF THE APPARATUS:

The tested apparatus truly conforms to the drawings of its type supplied by the Client. These drawings, identified by CESI with embossing press and numbered GPs 91/C13162 from 001 to 013 are assembled in a folder.

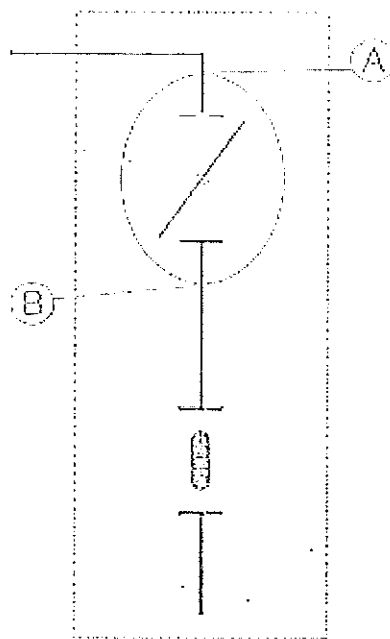
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TEST EFFECTED	DESCRIPTION ON PAGE
- Measurement of the resistance of the main circuit before and after the temperature-rise test.	4
- Verification of temperature rise limits	5
- Photo of the tested apparatus	7

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MEASUREMENT OF THE RESISTANCE OF THE MAIN CIRCUIT



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MEASURE (see the above figure)	PHASE	BEFORE THE TEMPERATURE RISE TEST		AFTER THE TEMPERATURE RISE TEST	
		AMBIENT AIR TEMPERATURE °C	RESISTANCE mΩ	AMBIENT AIR TEMPERATURE °C	RESISTANCE mΩ
A - B	1	23.4	0.057	25.4	0.057
A - B	2	23.4	0.057	25.4	0.050
A - B	1	23.4	0.054	23.4	0.052

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