



Release for
transferred production

DH7-11,

ELCOMA

KWALITEITS LABORATORIUM PROFESSIONELE KATODESTRAALBUIZEN

RAR-84/75.034

2-1

75-02-21

ONDERWERP : Release for transferred production in Brive of type:
DH7-11

The CRT type D7-11 made in Brive has been tested in Eindhoven on several parameters according to the F,L and life test specifications, to come to a:

" Release for transferred production " in Brive.

Annexed reports give test-and measuring-results of the above mentioned CRT -types.

As can be seen from the results, summarised in report RAR 84/75035 dated 75-02-21, these type can be given,

" Release for transferred production " in Brive.

K. Wassenaar.

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ONDERWERP : Release for transferred production DH7-11

1) Content : Resume of test II results

RAR-84/74-125 content test II results batch 1
74.141 content test II results batch 2
74.142 content test II results batch 3
74.155 content test II results batch 4
74.156 content test II results batch 5
74.164 content test II results batch 6
74.179 content test II results batch 8
RAR-84.74.166 content L-test results batch 1
75.003 content L-test results batch 2
75.027 content L-test results batch 3
50.144 content lifetest results batch 1
50.150 content lifetest results batch 2 en 3
50.153 content lifetest results batch 2
50.155 content lifetest results batch 3
Resume of lifetest results

2) Summary of test II results

a. Batch 1 up to and 6 received 363 pieces
measured 363 pieces
good after repair 278 pieces
rejected 85 pieces

Rejected: 12x gasvalue too high 8x insulation F/g1 too high
 3x bad screen quality 7x g1-modulation too high
 18x dirt in diaphragm 29x spotcharging Y plates
 3x usefull scan too small 1x If too high
 2x dirt on delf.plates 1x heater broken
 1x broken

In the first 6 batches we rejected tubes due to:

- a) gasvalue
- b) emission
- c) focusfaults
- d) insulation F/g1
- e) sparking at high tension

All these problems are solved

b. Batch 7 up to and 16 received 1352 pieces
measured 124 pieces
rejected 4 pieces : 2x insul.F/G1
 1x screen qual.
 1x usefull screen

We did not meet problems with the quality of these batches,
it was not necessary to reject any of these batches.

ONDERWERP :

3) Summary of L-test results

- batch 1 The electrical and mechanical measurements are satisfactory
- batch 2a The mean value of -Vg1 is rather low, but within tolerances
b Modulation of some tubes is rather high, but within tolerances
The remaining electrical and mechanical measurements are satisfactory.
- batch 3 1 Tube -Vg1 and Ik rather low but within tolerances
The remaining electrical and mechanical measurements are satisfactory.

Remark: Except the faults occurring in the first batches as already mentioned in summary of test II results, the results are good.

4) Summary of lifetest results

- batch 1 The results are satisfactory
- batch 2 The results are satisfactory
- batch 3 2 Tubes Ik after 1000 hours rather low but within tolerances.
2 Tubes gasvalue good after 1000 hours

Burned over tubes(50.150): 1 tube insulation K/G1 after 1000 hours (to repair gas and/or emission): 1 tube modulation too high after 1000 hours.

Remark: The general impression is good.

5) Conclusion

From the results we conclude that there is no objection against release of C.R.T. type DH7-11 for production and measuring in Brive.

G.Geevers

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RELEASE FOR TRANSFERRED PRODUCTION DH7-11

Received 15 samples.

6 x poor insulation F/G1	2 x 300 μ A	
	1 x 165 μ A	
	1 x 140 μ A	
	1 x 24 μ A	
	1 x 16 μ A	Limit $\leq 4 \mu$ A.

Result analysis:

tube number 83

The poor insulation is caused partly by a big getter mirror. The other part is caused by a depositing proces in grid one. Metal and/or barium is deposited on the cathode holder. (wrong sweeping?)

2 x gas value too high 72nA
140nA limit \leq 50nA

1 x modulation too high (black cathode)

1 x If too high 104 mA limit \leq 100 mA.

5 x tubes are good.

L test and life test will be measured.

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RAR 84/74.141

1

74-10-24

ONDERWERP : Release for transferred production DH7-11 batch 2

Received 65 pieces

marked C23
E4I

Results 22 pieces good

33 pieces gasvalue too high

6 pieces modulation too high

2 pieces dirt in diaphragm.

1 piece spot burned in

1 piece stains in powder

39 pieces for sweeping to the factory.

After sweeping and 1 week shelflife test

33 pieces good

6 pieces gascross

Total results after repair: 55 ex good, 10 rejected

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RAR 84/74.142

3-1

74-11-08

ONDERWERP : Release for transferred production DH7-11

Batch 3

Received 35 pieces

marked C23
E4I

Results: 26 pieces gasvalue too high
1 piece spotcharging Y
2 " dirt in diaphragm
1 " modulation too high
5 " good

From this batch 10 pieces swept again in Eindhoven.

After sweeping: 1 tube gascross
1 tube modulation too high
8 tubes good

Afterwards: 5 tubes on shelflife test for 1 week
5 tubes on life test for 1 week

The tubes on life test better than before (will be kept on life test untill 1000 hours)

The tubes on shelflife test, no changing of values of the good tubes
The bad tubes are worse.

Afterwards we have send the lot of 17 tubes for sweeping to the factory (The rest of the batch)

After 1 week shelflife test

Results: 3 pieces gascross
14 pieces good

Total results after sweeping in Eindhoven

22 tubes good
1 tubes spotcharging Y
2 tubes dirt in diaphragm.
4 tubes gascross
1 tube modulation too high
5 tubes on life test.

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RAR 84/74.155 .

1

74-11-26

ONDERWERP : Release for production DH7-11 batch no 4

Received 88 pieces

code nr. C23
E4J

Results: measured 16 pieces

good	5	"							
	2	pieces	dirt on diaphragm						
	2	"	modulation too high						
	2	"	"	"	"	+	gasvalues too high		
	4	"	"	"	"	+	"	"	+
	1	"	gascross				gascross		

86 ex for sweeping to factory Eindhoven

1x for analysing to Mr.Radstake(dirt diaphragm)
1x broken in Eindhoven

Results after repair:

After sweeping 86 pieces

6x spotcharging Y
5x modul.too high
1x broken heater
74x good(delivered to the store)

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RAR 84/74.156

1

74-11-26

ONDERWERP : Release for transferred production DH7-11 batch5

Received: 44 pieces : a. 34 pieces with yellow mark
b 10 pieces without mark

code nr C23
E4J

a) Results 34 pieces

- 10 pieces gascross
- 3 pieces modulation too high
- 5 pieces spotcharging Y
- 1 piece dirt on deflection plate
- 1 piece dirt on diaphragm.
- 7 pieces high tension
- 7 pieces good delivered to the store

27 pieces for sweeping send to the factory in Eindhoven for repair.

b) Results 10 pieces

- 9 pieces good delivered to the store
- 1 piece at high tension sparking near aquadag
- 1 piece for sweeping send to the factory.

After sweeping 28 pieces(a+b)

- 3x dirt on diaphragm
- 1x " " defl.plate
- 8x spotcharging Y

16x good(delivered to the store)

Total result of 44 pieces:

- 32 pieces good
- 12 rejected.

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RAR 84/74.164

1

74-11-27

ONDERWERP : Release for transferred production DH7-11 batch 6

Received 116 pieces

code nr. C23

E4J

Results 85 pieces good

14	"	spotcharging (2x analyse)
10	"	dirt in diaphragm (2x analyse.)
3	"	gascross (repair)
2	"	useful scan x too small
1	"	dirt on defl. plate
1	"	modulation too high (repair)

Remarks:

1. Flash-over/ emission.

Several tubes of the 85 "good" pieces have flash-overs aquadag gun, without influence on cathode emission, therefore they are accepted.

2. Spotquality: (dirt in diaphragm, charging Y-plate.)

Of the 85 accepted tubes, about 30% show dirt on diaphragm and spotcharging. According to normal criteria they would have been rejected. Because of a backlog in production we have accepted this tubes in consult with the Commercial Department.

Analysis: Cathode oblique welded.

G1-G2 oblique: 1,71 - 1,83

1,69 - 1,71

1,69 - 1,84. Limit 1,7 \pm 0,05Also found fingerprints on Y plates.3. Screenburning.

The result of 2 tubes was 9,5 and 8,5%. Of the tubes which were swept over (previous batch.) the burning in values were 2,3 and 4,9%.

This burning in results are found at a high screenloading, therefore not the absolute values are important, but the difference.

Conclusion: The sweeping in Brive is presumable not optimal.

(too wide scan?)

4. Lifetest. Of this batch 6 tubes are put on lifetest.5. L-test: Of this batch 5 tubes will be measured on L-test.6. Total result after repair. (sweeping.)

4 tubes after sweeping good.

Total: 89 pieces Good.

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KWALITEITS LABORATORIUM PROFESSIONELE KATODESTRAALBUIZEN

RAR -84/74.179

1-1

74-12-10

ONDERWERP : Release for transferred production D H 7 - 11 batch 8

Received 253 pieces

Measured 32 pieces (normal inspection)

Good 30 pieces (2 tubes have flashover aquadag-gun
without any influence on the modulation/emission)

1 piece spotcharging Y plates

1 piece insulation F/g1

Batch is good.

Delivered to the store 247 pieces

Will be used for L-test and life test

4 pieces + 1 piece spotcharging
to be scrapped 1 piece insulation F/g1Remark: The V_{g1} (cut-off) is rather low, see figures below:

The range for the V_{g1} for cut-off is 30 to 80 V. so the average value should be about 50 to 55 V. In that case the risk of rejects on too low V_{g1} is smaller.

Tube nr.	V_{g1} (v)
916	46
945	46
962	42
963	44
978	46
979	36
981	42
983	38
987	39
1063	55
1065	47
1067	44
1075	41
1076	55
1080	42
1084	40
1087	45
1094	42
1104	47
1114	45
\bar{X}	44,7
S	5,2
$\bar{X}-3S$	29,1
$\bar{X}+3S$	60,3

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KWALITEITS LABORATORIUM PROFESSIONELE KATODESTRAALBUIZEN

RAR 84/74.166

10-1

74-11-22

ONDERWERP : Release for transferred production DH7-11

First batch

Test results are given on attached sheets.
no 2 up to and 8 incl. L-test sheets.
no 9 and 10 lifetest sheets.

Conclusion

0 hours results: Brightness of some tubes is rather low. *measurements.*
The remaining electrical and mechanical are
good. See also RAR-84/74.125

1000 hours: The results are satisfactory.

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R.R. - 84/27166 sheet 2

STEMPEL: C-23 E-49.		ONTVANGEN OP: 24-09-20.		VOOR: Release for prod. tabel 1.		GEZIEN:		DH 7-11.											
METING	REMARK (T)	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108
Vf (V ²)		0	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vg (V ¹)		1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vh (V ²)		1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vj (V ¹)		1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vk (V ²)		1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
VL (MA)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Vm (MA)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MEASUREMENT		91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108
REMARK (T)		1-79	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None
BUISNUMMER		59	69	70	84	95													
EISEN		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
EENHEDEN.		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension	
CONCLUSIE		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension		No Right Dimension	

CONTROLÉ - CONTROLE
 KONTROLLE - TEST
 VooRlopig
 N.V. PHILIPS' GLOEILAMPENFABRIEKEN, EINDHOVEN, NEDERLAND.
 CODE Nr.
 TYPE
 DH 7-11.
 BLADEN
 BLATT
 FEUILLES.
 SHEETS
 362-2
 BLAD
 BLATT
 FEUILLE
 SHEET
 (T) = See R.R. 6-5-0/402

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RAC-84/34/66 sheet 3

DH 7-11.

GEZIEN:

VOOR:

ONTVANGEN OP:

STEMPEL:

METING	Y	Y ₁	Y ₂	X ₁	X ₂	Y ₁	Y ₂	X ₁	X ₂	Y ₁	Y ₂	X ₁	X ₂	Y ₁	Y ₂	X ₁	X ₂	Y ₁	Y ₂	X ₁	X ₂	
V _f (V=)	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
V ₁ (V=)	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj
V ₂ (V=)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
V ₃ (V=)	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for
V ₄ (V=)	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
V ₅ (V=)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
V ₆ (V=)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V ₇ (V=)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V ₈ (M)	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV
V ₉ (M)	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV
V ₁₀ (M)	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV
V ₁₁ (mm)	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.
REMARK (T)	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78	11-12-78
BUISNUMMER	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
MIN	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIN	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
MAX	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MIN	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8
MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIN	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
MAX	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6
MIN	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6	+6
MAX																						
EENHEDEN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
CONCLUSIE:																						

CONTOLE - CONTROLE
KONTROLLE - TEST

VOORLOPIG

N.V. PHILIPS' GLOEILAMPENFABRIEKEN, EINDHOVEN, NEDERLAND.

PAR PAR PAR SIGN
CODE N.
TYPE

BLADEN BLATTER FEUILLES SHEETS
BLAD BLATT FEUILLE SHEET

DH 7-11.

296-2

(T) = see R16-3-0/402.

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DH 9-11

RAL-84/94166 sheet 4

	STEMPEL:	ONTVANGEN OP:	VOOR:	GEZIEN:
V_2	6.3 (V ²)	6.3	6.3	6.3
V_1	0 (V ¹)	0	0	0
V_2	1200 (V ²)	1200	1200	1200
V_3	300 (V ³)	300	300	300
V_{495}	1200 (V ⁵)	1200	1200	1200
V_4	R (V ⁴)	R	R	R
V_5	Lead (V ⁵)	Lead	Lead	Lead
I_4	(MA)			
I_6	(MA)			
METING	I_{92}	I_{92}	I_{92}	I_{92}
REMARKS (7)	18	18	18	18
BUISNUMMER	49	69	70	84
EISEN	MIN	MIN	MIN	MIN
EENHEDEN	MA	MA	MA	MA

CONCLUSIE 362-3

CONTROLLE - CONTROLE KONTROLLE - TEST

VOORLOPIG

N.V. PHILIPS' GLOEILAMPENFABRIEKEN, EINDHOVEN, NEDERLAND.

CODE No. DH 9-11

(71) - See RV 6-3-0/402

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RAA-04/24166 sheet 5.

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STEMPEL:		ONTVANGEN OP:			VOOR:			GEZIEN:		
1/2 (V ¹)	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
1/4 (V ¹)	adj.	adj.	adj.	adj.	adj.	adj.	adj.	adj.	adj.	adj.
1/2 (V ¹)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
1/4 (V ¹)	for	for	for	for	for	for	for	for	for	for
1/4 (V ¹)	300	300	300	300	300	300	300	300	300	300
1/4 (V ¹)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
1/2 (V ¹)	R	0	0	0	0	0	0	0	0	R
1/2 (V ¹)	40x40	0	0	0	0	0	0	0	0	R
1/4 (M ¹)	h	5/cm ²								10x10
1/4 (M ¹)	h									h
METING	Brightness	Aptogalens.	Colombpoint	Changins						Burn. strong in em. testing
Remark (T)	DB DH DN DP 1-31	DB DH DN DP 44	DB DH DN DP	DB DH DN DP 96						55 7 80
BUSNUMMER	49	10.6	12.2	19.8	11.8	11.8	13.2	9.2	1.6	12.0
MIN	10.6	12.2	19.8	11.8	11.8	13.2	9.2	1.6	12.0	10.0
MAX										12.2
EISEN	X	R								
100"										
5 P 5 STUKS										
EENHEDEN	ca/cm ²	ca/cm ²	ca/cm ²	ca/cm ²	ca/cm ²	ca/cm ²	ca/cm ²	ca/cm ²	ca/cm ²	ca/cm ²
CONCLUSIE										

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RAR-84/74166 sheet 6

DH 7-11.

STEMPEL:		ONTVANGEN OP:		VOOR:		GEZIEN:	
1/2	(V ²)	b.3	b.3	b.3	b.3	b.3	b.3
1/4	(V ¹)	0.24	0.24	0.24	0.24	0.24	0.24
1/2	(V ¹)	1200	1200	1200	1200	1200	1200
1/2	(V ²)	frc	frc	frc	frc	frc	frc
1/2	(V ²)	300	300	300	300	300	300
1/2	(V ²)	1200	1200	1200	1200	1200	1200
1/4	(V ¹)	R	R	R	R	R	R
1/4	(V ¹)	45	45	45	45	45	45
1/4	(V ¹)	10	10	10	10	10	10
MEETING		Linsmiddel.		Linsmiddel. X.		Linsmiddel. X.	
Remark (T)		X	Y	left down	right down	left down	right down
		1-11-33-35-61.	1-11-33-61-65	1-11-33-61-62-72-126-129.	1-11-33-61-62-72-126-129.	1-11-33-61-62-72-126-129.	1-11-33-61-62-72-126-129.
		32-126-129.	32-126-129				
BUISNUMMER		79	0.65	0.44	0.44	0.66	0.66
		69	0.49	0.43	0.43	0.74	0.74
		70	0.71	0.44	0.44	0.60	0.60
		84	0.56	0.39	0.39	0.75	0.75
		95	0.66	0.37	0.37	0.60	0.60
			0.61	0.48	0.48	0.73	0.73
			0.11	0.43	0.43	0.71	0.71
			0.11	0.05	0.05	0.09	0.09
EISEN		MIN.					
		MAX.	0.6				
S P 5 STUKS		X MIN.					
		X MAX.					
		R MAX.					
		MIN.					
		MAX.					
EENHEDEN		MIN.					
		MAX.					
CONCLUSIE							

(T) = see R16-8-0/402.

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RAR-84/74166 sheet 8.

DH 7-11.

STEMPEL:		ONTVANGEN OP:				VOOR:				GEZIEN:																							
METING		RECEIVED BY				FOR				BY																							
Remark (T)																																	
BUISNUMMER		59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
MIN.		270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	
MAX.		270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	
R		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
EISEN		MIN.		MAX.		MIN.		MAX.		MIN.		MAX.		MIN.		MAX.		MIN.		MAX.		MIN.		MAX.		MIN.		MAX.		MIN.		MAX.	
EENHEDEN		mm		mm		mm		mm		mm		mm		mm		mm		mm		mm		mm		mm		mm		mm		mm		mm	
CONCLUSIE																																	

(T) = see R/b-s-o/102.

CONTROLE - CONTROLE
KONTROLLE - TEST

Voorlopig

CODE Nr.
TYPE

N.V. PHILIPS' GLOEILAMPENFABRIEKEN, EINDHOVEN, NEDERLAND.

ONDERWERP : Release for transferred production DH 7-11 batch 2
L-test and lifetest results.

1) Content:

Test results, given on attached sheets.

Sheet no 2 up to and 8 gives L-test results

Sheet no 9 gives life test results of tubes swept
again in Eindhoven.

Sheet no 10 and 11 gives lifetest results of the 2nd
release batch.

2) Summary of Results

a. 0 hours (see also RAR-84/74.141 and RAR-84/74.142)

1) The mean value $-V_{g1}$ (cut off) is rather low,
but within tolerances.

2) The modulation of some tubes is rather high,
but within tolerances

3) The other electrical and mechanical measurements
are satisfactory.

b. 1000 hours

1) Of the tubes that were burned over (life test nr. 50150)
the results of 5 tubes is:

1 tube : insulation $k/g1$

1 tube : modulation too high

2) life test nr 50153: good (5 tubes)

3) Conclusion

Except the faults occurred in the first batches (gas,
spotcharging and sparking at high tension) as
already mentioned before, the results are good.

G. GeEVERS

Copy Messrs.: Dechering
Menet
Varekamp
Wassenaar

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REMARK (T) 1-39
 1 654 Good > -850
 2 655 Good > -250
 3 661 dome > -250
 4 718 Good > -250
 5 720 Good > -350

METING	STEMPEL				ONTVANGEN OP				VOOR				GEZIEN			
	(V ¹)	(V ²)	(V ³)	(V ⁴)	(V ¹)	(V ²)	(V ³)	(V ⁴)	(V ¹)	(V ²)	(V ³)	(V ⁴)	(V ¹)	(V ²)	(V ³)	(V ⁴)
VE	0	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vq1	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vq2	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vq3	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vq4	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vq5	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vq6	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
VY	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
VZ	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
IX	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
IX6	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200

CONCLUSIE: all tubes have spotclamping Y.
 tubes 1-2-5: flash lower.

362-8

BLAD BLATT FEUILLE SHEET

PAR PAR PAR SIGN

BLADEN BLATTER FEUILLES SHEETS

CODE Nr. DH 7-11.

TYPE

N.V. PHILIPS' GLOEILAMPENFABRIEKEN, EINDHOVEN, NEDERLAND.

22000 529 B

98254

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PAR-84/75003 Head 3

DH 9-11.

STEMPEL :		ONTVANGEN OP :						VOOR :						GEZIEN :					
№	(V=)	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	
V1	adj	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
V2	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	
V3	for	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	
V4	for	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
V5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
V6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
V7	(GMA)																		
V8	(MA)	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	
V9	deflect. (mm)																		
METING		Y	X	Y1	X1	Y2	X2	Y1	X1	Y2	X2	Y1	X1	Y2	X2	Y1	X1	Y2	X2
Remark (T)		1-12-2-11-12-21		5-11-12-15		12-17-24													
BUISNUMMER		1654	-0,5	195		8,5	10,8	10,8	10,8	10,8	10,8	10,8	10,8	10,8	10,8	10,8	10,8	10,8	10,8
		265	-0,5	-1,0		3,62	5,62	10,85	10,85	10,85	10,85	10,85	10,85	10,85	10,85	10,85	10,85	10,85	10,85
		366	-2,0	-2,5		8,65	8,65	10,9	10,9	10,9	10,9	10,9	10,9	10,9	10,9	10,9	10,9	10,9	10,9
		4713	-0,5	0		3,8	8,8	10,9	10,9	10,9	10,9	10,9	10,9	10,9	10,9	10,9	10,9	10,9	10,9
		5720	+3,5	0		3,7	3,7	10,85	10,85	10,85	10,85	10,85	10,85	10,85	10,85	10,85	10,85	10,85	10,85
EISEN						0,3	0,3	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
MIN						3,3	3,3	9,5	9,5	9,5	9,5	9,5	9,5	9,5	9,5	9,5	9,5	9,5	9,5
MAX						4,0	4,0	11,9	11,9	11,9	11,9	11,9	11,9	11,9	11,9	11,9	11,9	11,9	11,9
MIN																			
MAX																			
MIN																			
MAX																			
MIN																			
MAX																			
EENHEDEN						1/1000	1/1000	1/1000	1/1000	1/1000	1/1000	1/1000	1/1000	1/1000	1/1000	1/1000	1/1000	1/1000	1/1000
CONCLUSIE																			

(T) = see RV6-3-0/402

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RAR-84/75003 *Mad 4*

STEMPEL:			ONTVANGEN OP:						VOOR:			GEZIEN:			
			6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Vf	(V ²)	0	0	C.O.	0	0	0	0	0	0	0	0	0	0	0
Vg1	(V ¹)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vg2	(V ²)	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Vg3	(V ²)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vg4	(V ¹)	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Vg5	(V ²)	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Vg6	(V ²)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
V7	(V ²)	R	R	R	R	R	R	R	R	R	R	R	R	R	R
V8	(V ²)	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40
IX	(MA)	read	read	read	read	read	read	read	read	read	read	read	read	read	read
I96	(MA)	read	read	read	read	read	read	read	read	read	read	read	read	read	read
METING			I92	196	198	198	198	198	198	198	198	198	198	198	198
REMARKS (T)			10	10	10	10	10	10	10	10	10	10	10	10	10
BUSNUMMER			654	670	670	670	670	670	670	670	670	670	670	670	670
EISEN			1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
EENHEDEN			MA	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA
CONCLUSIE															

CONTROLE - CONTROLE
 KONTROLLE - TEST
 VOORLOPIG
 N.V. PHILIPS GLOEIAMPENFABRIEKEN, EINDHOVEN, NEDERLAND

PAR
 PAR
 PAR
 SIGN

CODE N.
 TYPE

BLADEN
 BLATT
 PAR
 FEUILLES
 SHEETS

BLAD
 BLATT
 FEUILLE
 SHEET

362-3.

DH 7-11.

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(7) - See RV 6-3-0/402

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R.R.R.-84/19803 klad 5.

CONTROLE - CONTROLE
KONTROLLE - TEST
VOORLOPIG

PAR PAR PAR SIGN
CODE N:
TYPE
DH 7-11.

N.V. PHILIPS' GLOEILAMPENFABRIEKEN, EINDHOVEN, NEDERLAND.

STEMPEL:		ONTVANGEN OP:					VOOR:					GEZIEN:					
1/F	(V ²)	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Vq1	(V ²)	avg	avg	avg	avg	avg	avg	avg	avg	avg	avg	avg	avg	avg	avg	avg	avg
Vq2	(V ²)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vq3	(V ²)	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for	for
Vq4	(V ²)	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Vq5	(V ²)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vv	(V ²)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Vv	(V ²)	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40	40x40
In	(M)	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to
Iq6	(M)																
METING		Aftersloot					Colombpoint					Changing					
Remerk(T)		DB	DH	DM	DP	DB	DH	DM	DP	DB	DH	DM	DP	DB	DH	DM	DP
		1-31	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
		Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al	Al
		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
		3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
		4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
		5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
EISEN		MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN
		MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX
		1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
EENHEDEN		ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²	ca/m ²
CONCLUSIE		Note					Note					Note					
												%					

(T) = See RV 6.5-0/402

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RAR-84/75003 *Blade*

DH 7-11.

STEMPEL:

ONTVANGEN OP:

VOOR:

GEZIEN:

1/2 1/3 1/4 1/5 1/6 1/7 1/8 1/9 1/10 1/11 1/12

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CONTROLE - CONTROLE / KONTROLLE - TEST

VOORLOPIG

CODE Nr. / TYPE

DH 7-11.

N.V. PHILIPS' GLOEILAMPENFABRIEKEN, EINDHOVEN, NEDERLAND.

(T) = see R16-3-o/402.

Table with columns for STEMPEL, ONTVANGEN OP, VOOR, GEZIEN and rows for METING (1-164), Remark (T), BUISNUMMER (1-5), EISEN (MIN, MAX), S.F. 5 STUKS, EENHEDEN, and CONCLUSIE.

STEMPEL:		ONTVANGEN OP:				VOOR:		GEZIEN:	
METING		Recept. 16	Recept. 15	Recept. 18	Recept. 16	Recept. 16	Recept. 16	Recept. 16	Recept. 16
Remark (T)		1 654 269.5	2 655 269.5	3 661 269.5	4 713 269.5	5 720 269.5	1 654 269.5	2 655 269.5	3 661 269.5
BUSNUMMER		15	18	16	16	16	159	159	159
EISEN		MIN. 264	MIN. 264	MIN. 264	MIN. 264	MIN. 264	MIN. 264	MIN. 264	MIN. 264
EENHEDEN		16	16	16	16	16	16	16	16
CONCLUSIE		Good.							

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(T) = see R/V b. s. o / 402.

ELCOMA

KWALITEITS LABORATORIUM PROFESSIONELE KATODESTRAALBUIZEN

RAR-84/75-027

10-1

75-02-03

ONDERWERP : release for transferred production DH7-11 Batch 3
L test and life test results

1) Contents:

Test results given on attached sheets.
Sheet no.2 up to and 8 give L-test results
Sheet no.9 and 10 give life test results.

2) Summary of results:

- a L-test results(see also RAR-84/74.179)
1. 1 tube spot quality bad caused by charging Y plates(already known)
 2. 1 tube -Vg1 and Ik rather low but within tolerances.
 3. The other electrical and mechanical measurements are satisfactory.
- b Lifetest(remark: For this test rejected tubes of a previous batch are used)
1. 0 hours
 - 1 tube modulation too high(after 320 hours good)
 - 1 tube modulation rather high(after 320 hours)
 - 2 tubes gasvalue.
 2. 1000 hours
 - 2 tubes Ik rather low but within tolerances
 - 2 gasvalues good after 1000 hours.

3) Conclusion

The total results are satisfactory.

G.Geevers

Copy messrs.: Dechering
Menet
Varekamp
Wassenaar

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DM 7-11.

STEMPEL	ONTVANGEN OP						VOOR						GEZIEN						
	6.3	6.3	6.3	6.3	6.3	6.3	74-10-11.	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Vf	(V=)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vg1	(V=)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vg2	(V=)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vg3	(V=)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vg4	(V=)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vg6	(V=)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Vy	(V=)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Vx	(V=)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Ih	(M)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Iq6	(M)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

REMARKS (T) 1-39 A1 895 None > -250 > 1800 > 1200 > 1200 > 1400 > 5000 > 8000 > 5000 1114 " > -250 > 1800 > 1200 > 1400 > 5000 > 8000 983 " > -250 > 1800 > 1200 > 1400 > 5000 > 8000 986 " > -250 > 1800 > 1200 > 1400 > 5000 > 8000 1076 " > -250 > 1800 > 1200 > 1400 > 5000 > 8000

CONCLUSIE 362-3

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STEMPEL		ONTVANGEN OP						VOOR			GEZIEN				
YF	(V=)	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	
191	(V=)	adv	adv	adv	adv	adv	adv	adv	adv	adv	adv	adv	adv	adv	
192	(V=)	for	for	for	for	for	for	for	for	for	for	for	for	for	
193	(V=)	for	for	for	for	for	for	for	for	for	for	for	for	for	
194	(V=)	for	for	for	for	for	for	for	for	for	for	for	for	for	
195	(V=)	for	for	for	for	for	for	for	for	for	for	for	for	for	
196	(V=)	0	0	0	0	0	0	0	0	0	0	0	0	0	
197	(V=)	0	0	0	0	0	0	0	0	0	0	0	0	0	
198	(MA)	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	
199	(MA)	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	SJV	
200	(mm)	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	deflect.	
METING:		Y	X	Y ₁	X ₁	Y ₂	X ₂	Y ₁	X ₁	Y ₂	X ₂	Y ₁	X ₁	Y ₂	X ₂
Remant (T)		11-12-70	11-12-70	5-11-12-15	5-11-12-15	12-17-54	12-17-54	40	11-13	14	40	11-13	14	40	11-13
BUSNUMMER		895	+3,5	0	3,75	10,90	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
		1114	+1,0	+0,5	3,70	10,75	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
		987	+0,5	+2,0	3,80	11,00	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
		981	-3,5	-0,5	3,80	10,75	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
		1026	0	-1,5	3,70	11,00	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
			+0,5	+0,1	3,75	10,80	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
			7	3,5	0,10	0,25	< 0	0	0	0	0	0	0	0	0
			-6	-6	3,3	9,5	9,5								
			+6	+6	4,0	11,9	11,9								
EISEN		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
EENHEDEN		X	X	X	X	R	R	R	R	R	R	R	R	R	R
CONCLUSIE		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm

DH 7-11.

(T) = see R.V. 6-3-0/402.

DH 9-11.

STEMPEL	ONTVANGEN OP	VOOR	GEZIEN
VF (V=)	6.3 6.3	6.3 6.3	6.3 6.3
Vg1 (V=)	1200 1200	1200 1200	1200 1200
Vg2 (V=)	for for	for for	for for
Vg3 (V=)	300 300	300 300	300 300
Vg4 (V=)	1200 1200	1200 1200	1200 1200
Vg5 (V=)	R R	R R	R R
Vg6 (V=)	read read	read read	read read
Vx (MA)			
Vy (MA)			
IX			
Iq6			

REMARKS (I)
 Ix. Iq2 current 10 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1
 Iq1 current 10 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1
 Iq3 current 10 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1
 Iq4 current 10 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1
 Iq5 current 10 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1
 Iq6 current 10 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1

362-5.
 CONCLUDE

DH 9-11.

(7) - See RV 6-3-0/462

KWALITEITS-LABORATORIUM PROFESSIONELE KATODESTRALBUIZEN

LEVENSDUUR OSCILLOGRAFBUIZEN

Page 84/24 166 sheet 9

Type : OH 7-11		Instellingen brandraam, nr. 17		METEN EN BRANDEN VOOBSCHRIFT d.d. 30-5-71		Type: OH 7-11		GEMENSTE LEVENSDUUR: 1000 uur																
Proefnr.: 50144		Buisnr. pos. VF		Speciale metingen of wensen:		Afwijking t.o.v. normale productie:																		
Aantal : 6		2 oyoelus V																						
Datum : 74-10-09		2 69 10 " V																						
Inzender: Qual. Lab.		3 70 3 " V																						
Poederp.:		4 84 4 " V																						
Pompvoorsch.:		5 95 11 " V																						
Brandvoorsch.:		6 E 9 " V																						
Fabr. datum : Aug, 74		Gepluist: XXXXXX																						
74-10-1	Eis	30-76	not	Vg1- 150 µA	not	Ik bij Vg1- Vg1- V	IL bij Vg1- V	Inav. bij Vg1- Inav.	Mod. bij Vg1- Inav.	Kat. eff.	Gas- kruis	Scherm- kwal.	Hel- heid	Held. Δ	Scherm- opl.	Lek- stroom	Gas	+K/-F	-K/+F	I	II	III	IV	Opmer- kingen.
	Einheid	V	V	µA	µA	µA	µA	µA	µA	µA	µA	µA	µA	µA	µA	µA	µA	µA	µA	µA	µA	µA	µA	
1	74-10-11	0	55	40	1530	120	15	3,75	geen	goed	13,4	6	11	0,4	0,2	0,5-0,5	0,5-0,5	0,4	0,2	0,5-0,5	0,5-0,5	0,5-0,5	0,5-0,5	
	74-10-18	160	54	39	1430	60	14	3,60	"	lets	12,8	6	8	0,1	0,1	0,2-0,2	0,2-0,2	0,1	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
	74-11-01	500	54	38	1550	115	14	3,91	"	"	10,6	5	3	0,2	0,1	0,2-0,2	0,2-0,2	0,2	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
	74-11-23	1000	54	38	1330	60	14	3,35	"	"	10,2	5	2	0,3	0,1	0,2-0,2	0,2-0,2	0,1	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
2		0	47	30	1110	120	17	3,45	geen	goed	13,4	10	11	0,3	0,1	0,4-0,5	0,5-0,5	0,2	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
		160	47	30	1040	70	16	3,23	"	lets	12,8	10	8	0,2	0,1	0,2-0,2	0,2-0,2	0,2	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
		500	44	30	1000	110	12	3,43	"	"	11,8	9	8m	0,1	0,1	0,2-0,2	0,2-0,2	0,1	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
		1000	44	28	720	60	11	2,47	"	"	11,8	8	4	0,1	0,1	0,2-0,2	0,2-0,2	0,1	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
3		0	56	39	1610	120	17	3,85	geen	goed	13,4	9	37	0,2	0,1	0,4-0,5	0,6-0,7	0,2	0,1	0,4-0,5	0,6-0,7	0,6-0,7	0,6-0,7	
		160	56	39	1500	60	16	3,58	"	lets	12,8	9	5	0,1	0,1	0,2-0,2	0,2-0,2	0,1	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
		500	55	39	1520	80	14	3,73	"	"	11,2	8	5	0,2	0,1	0,2-0,2	0,2-0,2	0,2	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
		1000	55	40	1540	80	13	3,78	"	"	10,9	8	2	0,1	0,1	0,2-0,2	0,2-0,2	0,1	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
4		0	54	38	1362	132	16	3,43	geen	goed	13,8	9	9	0,1	0,1	0,4-0,5	0,6-0,8	0,1	0,1	0,4-0,5	0,6-0,8	0,6-0,8	0,6-0,8	
		160	54	38	1330	90	16	3,35	"	lets	12,8	9	1	0,1	0,1	0,2-0,2	0,2-0,2	0,1	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
		500	54	38	1300	110	14	3,28	"	"	10,9	8	1	0,1	0,1	0,2-0,2	0,2-0,2	0,1	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
		1000	53	36	1099	70	12	2,82	"	"	10,9	8	0	0,1	0,1	0,2-0,2	0,2-0,2	0,1	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
5		0	59	41	1455	105	17	3,20	geen	goed	13,4	8	13	0,2	0,1	0,4-0,5	0,6-0,5	0,2	0,1	0,4-0,5	0,6-0,5	0,6-0,5	0,6-0,5	
		160	58	41	1500	50	17	3,40	"	lets	13,8	8	2	0,2	0,1	0,2-0,2	0,2-0,2	0,2	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
		500	58	41	1530	100	16	3,46	"	"	12,2	7	2	0,3	0,2	0,2-0,2	0,3-0,2	0,3	0,2	0,2-0,2	0,3-0,2	0,3-0,2	0,3-0,2	
		1000	58	42	1630	50	16	3,60	"	"	12,2	7	1	0,2	0,1	0,2-0,2	0,2-0,2	0,2	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
6		0	46	29	1030	80	16	3,30	geen	goed	20,6	10	72	0,2	0,2	0,4-0,4	0,4-0,4	0,2	0,2	0,4-0,4	0,4-0,4	0,4-0,4	0,4-0,4	
		160	45	29	1090	60	15	3,61	"	lets	19,7	10	69	0,1	0,1	0,2-0,2	0,2-0,2	0,1	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
		500	44	28	950	88	14	3,25	"	"	14,7	2	49	0,2	0,1	0,2-0,2	0,2-0,2	0,2	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	
		1000	44	28	1020	50	14	3,50	"	"	14,7	2	2	0,8	0,1	0,2-0,2	0,2-0,2	0,8	0,1	0,2-0,2	0,2-0,2	0,2-0,2	0,2-0,2	

Brive batch 1

Isolates

KWALITEITS-LABORATORIUM PROFESSIONELE KATODESTRAALBUIZEN
LEVENSDUUR OSCILLOGRAAFBUIZEN

PAE-01/35003 Had 9

Type : 0H.7-11	Instellingen brandraam, nr.	1200	V
Proefnr. : 50150	Buisnr.	pos.	V
Aantal : 5	1296	V/F	V
Datum : 74-10-28	2324	V _{g4}	V
Inzender: GMU.LLAB.	3346	V _{nav.}	V
Poederp.:	4259	V _{nav.}	V
Pompprooschr.:	5252	Raster	V
Brandvooschr.:	6	V+K/-F	V
Fabr. datum	SEPT. 74	V-K/+F	V
		Gepuist/afgevoerd	V

METEN EN BRANDEN VOORSCHRIFT d.d.: 30-3-71 Type: 0H.7-11
Speciale metingen of wensen:
GEMENSTE LEVENSDUUR 1000 UUR

Afwijking t.o.v. normale productie:
**2° en 3° SERIE BRIVE OVERREBRAND OP 22629
BUIZEN MET MOULATIE EN GAS TE H006.**

**Tubes from Brive production
Bad on modulation and gasvalue**

Sweepled again in Findhoven (after sweeping:tubes are good)

buis- nr.	meet- datum	aantal brand uren	Eis		-V _{g1} 15μA I _L	NOT.	Kat. opp.	I _k bij V _{g1} -0V	I _L bij	I _{nav.} bij V _{g1} -0V	Mod. I _{g1} bij I _{nav.}	Kat. eff.	Gas- kruis	Scherm kwal.	Hel- heid der hel-	Δ Held.	Scherm opl.	Lek- stroom	Gas	Isotaries				Opmer- kingen.	
			0 h 1000h	30-76																μA	μA	μA	μA		μA
1	74-10-30	0	55	38	1390	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
2	74-11-06	160	52	37	1280	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
3	74-11-20	500	52	37	1060	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
4	74-12-11	1000	52	36	865	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
5		0	41	25	782	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
6		160	40	25	870	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
7		500	39	26	750	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
8		1000	39	26	755	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
9		0	48	32	996	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
10		160	46	32	1010	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
11		500	45	33	880	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
12		1000	45	33	880	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
13		0	52	34	1260	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
14		160	54	35	1310	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
15		500	52	36	1150	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
16		1000	52	33	1075	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
17		0	44	30	950	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
18		160	44	28	990	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
19		500	43	28	730	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		
20		1000	38	NTM	410	NOT.	600	μA	μA	μA	μA	NOT.	GEEN	NOT.	≥ 12,0	NOT.		4-18	≤ 45	≤ 25	≤ 25	≤ 3	≤ 3		

