

MINISTRY OF SUPPLY

Specification MDS/CV300/Issue 1 Dated 28.1.46. To be read in conjunction with K1003	<u>SECURITY</u>	
	<u>Specification</u> Restricted <i>Unclass</i>	<u>Tube</u> Restricted <i>Unclass</i>

—————> Indicates a change

<u>TYPE OF DEFLECTION</u> :- Magnetic		<u>MARKING</u> See K1001/4
<u>BULB</u>	:- Internally coated with conductive coating	
<u>SCREEN</u>	:- Blue BEN	
<u>RATING</u>	Note	<u>BASE</u> International Octal
Heater Voltage (V)	4.0	<u>DIMENSIONS</u> <u>AND</u> <u>CONNECTIONS</u> See Drawing on Page 4
Heater Current (A)	1.0	
Maximum Anode Voltage (KV)	8	
Desirable Spot Size (mm)	0.5	
Normal Working Anode Voltage (KV)	5.4	
Working Beam Current (µA)	15.0	
Pulsed Beam Current (µA)	100.0	

NOTE

A:- The gun assembly shall be sufficiently robust to withstand considerable mechanical shocks without suffering displacement.

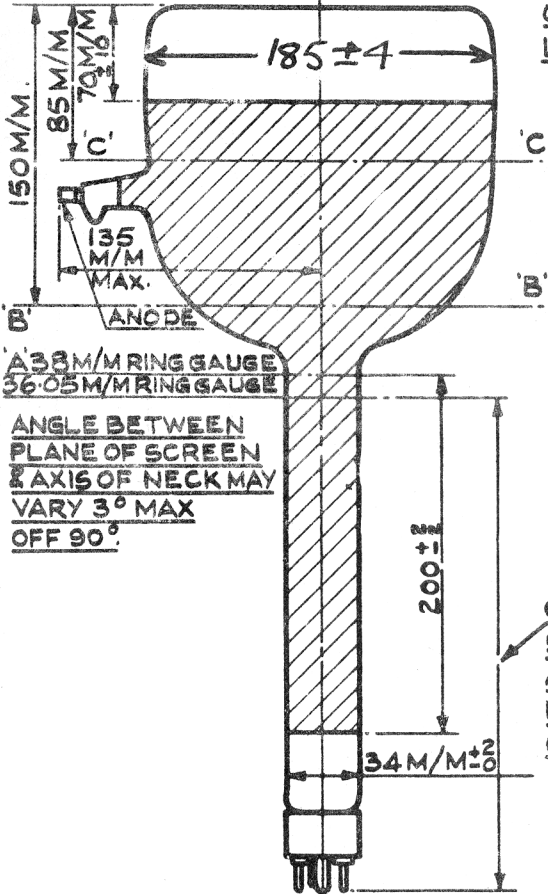
TESTS

To be carried out in addition to those applicable in K.1003

Clause	Test Conditions				Test	Limits		No. Tested
	V _h	V _a (KV)	V _g	I _b (μ A)		Min.	Max.	
(a)					Interelectrode Capacitances (Pf) Grid to all other electrodes	-	25	5%
(b)	4.0	0	0	-	I _h (A)	-	1.2	100%
(c)	4.0	5.4	Adjusted	-	Line width	-	1mm	100%
	Front edge of coil assembly mounting set 1.5mm from axis AA (see drg.) Coil current adjusted for optimum focus and V _G to give a beam current equal to 50 microamps; 94mm scan in X & Y directions successively							
(d)	4.0	5.4	Adjusted	15.0	V _g	To be at least 26V negative to cathode value to be noted		100%
	Focussing conditions as in test (c)							
(e)	4.0	5.4	Adjusted	3.0	Increase in negative value of V _g compared with value noted in test (d)	-	7	100%
	Focussing conditions as in test (c)							
(f)	4.0	5.4	Adjusted	100.0	Decrease in negative value of V _g compared with value in test (e)	-	20	100%
	Focussing conditions as in test (c)							
(g)	4.0	5.4	Adjusted	0.1	1) V _g 2) Increase in negative value of V _g compared with value noted in test (e)	42	77 9	100%
	Focussing conditions as in test (c)							

Clause	Test Conditions				Test	Limits		No. Tested
	V _h	V _a (KV)	V _g	I _b (μ A)		Min.	Max.	
(h)	4.0	5.4	-	-	Grid Insulation 1) Leakage Current (μ A) 2) Increase in voltmeter reading.		7.7 100%	100%
(j)	4.0	5.4	Within Working Range	-	There shall be no shadowing at any orientation of trace			100%
	Focussing conditions as in test (c). Deflection field to give a repeating line 165 mms in length, centred on centre of screen.							
(k)	4.0	5.4	Within Working Range	-	Deviation of centre of unfocussed spot from centre of screen (mms)	-	10	100%
	No focus coil energisation							
(l)	4.0	5.4	Within Working Range		The screen shall not be worse for non-uniformity than a standard tube.			100%
	No focussing coil energisation. Deflecting fields to give raster of area approximately 12cms x 12cms.							
(m)	4.0	5.4	Adjusted	-	Life Test Life (hours)	1000		1%
	Normal brightness and continuous spot movement over raster of area approx. 12cms x 12cms.							

ANY PROTUBERANCE DUE TO SEALING OFF OR ANODE CONNECTION SHALL LIE BETWEEN 'BB' & 'CC'.



A 33 M/M RING GAUGE
56.05 M/M RING GAUGE

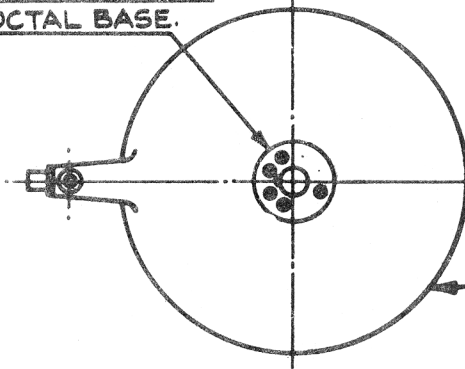
ANGLE BETWEEN
PLANE OF SCREEN
& AXIS OF NECK MAY
VARY 3° MAX
OFF 90°.

BASE CONNECTIONS

<u>PIN</u>	<u>ELECTRODE</u>
1	NO CONNECTION
2	HEATER
3	NO PIN
4	NO PIN
5	GRID
6	NO PIN
7	HEATER
8	CATHODE.

OVER THIS LENGTH STRAIGHTNESS
SHALL BE SUFFICIENTLY GOOD FOR
A GAUGE 3.7 CMS. INTERNAL DIA &
10 CMS. IN LENGTH TO SLIDE FREELY
OVER NECK & BASE.

INTERNATIONAL
OCTAL BASE.



ANGLE BETWEEN PLANE
THROUGH ANODE CONNECTION
& AXIS OF TUBE & PLANE THROUGH
BASE SPIGOT. NOT TO EXCEED 15°.

VIEW OF UNDERSIDE OF BASE.

ALL DIMENSIONS IN MILLIMETRES.