

Specification MOS/CV1379/Issue 1 Dated 20.11.45. To be read in conjunction with K1003	SECURITY	
	Specification Restricted	C.R.T. Restricted

→ Indicates a change

<u>TYPE OF DEFLECTION</u> : - Electrostatic.		<u>MARKING</u>  See K1001/4
<u>BULB</u> : -	Internally coated with conductive coating.	
<u>SCREEN</u> : -	YYN2, WWN23, or YYK40	
<u>RATING</u>	Note	<u>BASE</u> 6 Clip
Heater Voltage (V)	4	<u>DIMENSIONS</u> <u>AND</u> <u>CONNECTIONS</u>  See Drawing on Page 5.
Heater Current (A)	1.1	
Max. Final anode Voltage (kV)	4	
X plate sensitivity (mm/V)	$\frac{600}{V_{a3}}$	
Y plate sensitivity (mm/V)	$\frac{675}{V_{a3}}$	
<u>TYPICAL OPERATING CONDITIONS</u>		
Final anode Voltage (kV)	3	
Second Anode Voltage (V)	600	
Beam Current ( $\mu$ A)	15	

NOTE

- A:- The tube must be adequately free from microphony. This test to be covered by type approval.
- B:- If a first accelerator anode is used in addition to focussing and final anodes, it shall:-
- (i) be connected to contact clip A<sub>1</sub>, and be designed to take the same voltage as A<sub>3</sub>,
  - (ii) be connected to contact clip A<sub>2</sub>, and be designed to take the same voltage as A<sub>2</sub>.

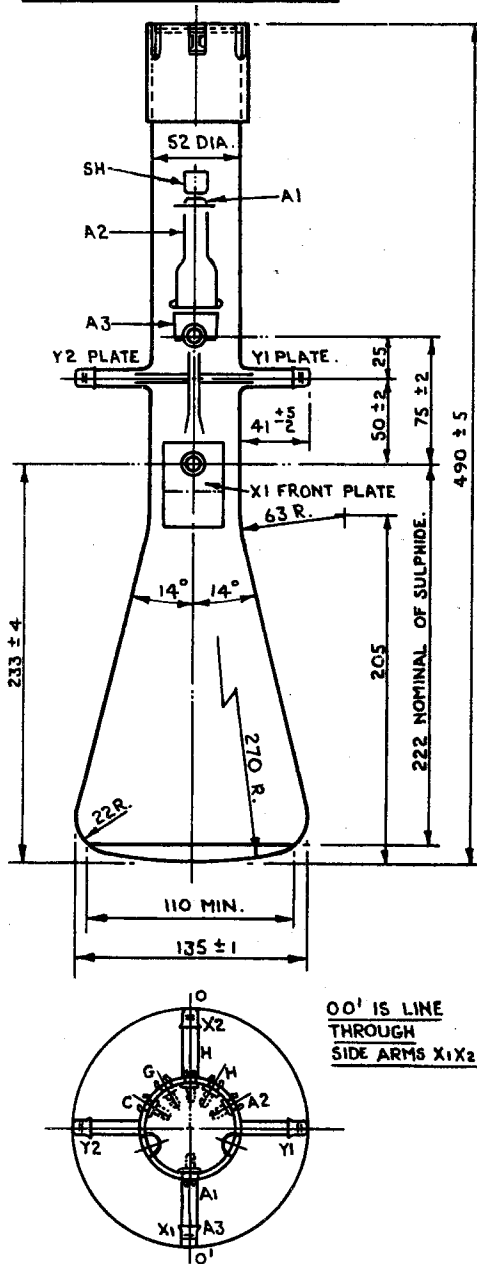
To be performed in addition to those applicable in K1003.

Clause	Test Conditions				Tests	Limits		No. Tested.
	V <sub>h</sub>	V <sub>a3</sub> (kV)	V <sub>a2</sub>	V <sub>g</sub>		Min.	Max.	
(a)	0	0	0	0	<u>Capacitances</u> (pf) 1. Each X plate to all other electrodes. 2. Each Y plate to all other electrodes. 3. Each X plate to each Y plate.	-	14	Type Approval Test only.
(b)	4	0	0	0	I <sub>h</sub> (A)	0.4	1.4	100%
(c)	4	3	-	-	1. V <sub>a2</sub> (V) 2. Line width shall not be greater than that of a standard tube within an area of radius 2.5 cms. around the centre of the screen. 3. Deflection defocussing at any point within an area of radius 4.5 cms. around the centre of the screen shall not be greater than that of a standard tube. 4. V <sub>g</sub> (to be noted)	390	720	100%
(d)	4	3	As in (c)	As in (c)	Cathode current (μA)	-	500	Type Approval Test only
(e)	4	3	As in (c)	-	1. V <sub>g</sub> (V) 2. Increase in negative value of V <sub>g</sub> compared with value noted in test (c)4.	-	-30	100%
(f)	4	3	As in (c)	-30	<u>Grid Insulation</u> Leakage current (μA)  Increase in voltmeter reading (V)	-	5	100%
	Recommended method: See K1003, clause 5.4.2. Insert resistor = 6 meg-ohms							

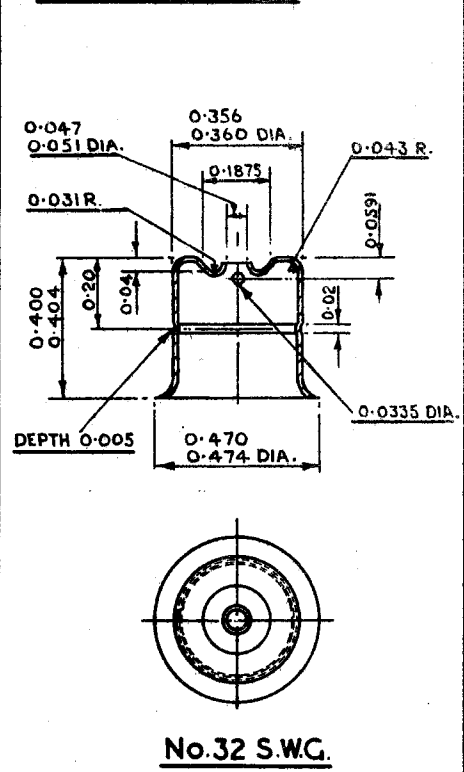
(g)	4	3	As in (c)	Any convenient value	Deflection Sensitivities				
					1. X plate.	(mm/V)	$\frac{500}{V_{a3}}$	$\frac{650}{V_{a3}}$	10%
					2. Y plate.	(mm/V)	$\frac{550}{V_{a3}}$	$\frac{300}{V_{a3}}$	
(h)	4	3	As in (c)	As in (g) All deflector plates connected to a <sub>3</sub> .	Deviation of spot from centre of screen. (mm)		-	7.5	100%
(j)					<u>Spot movement along X axis.</u>				
					Zero voltage between X plates.				
	4	3	As in (c)	-	1. Movement.	(mm)	-	0.5	
				V <sub>g</sub> varied from cut off to standard working brightness					
	4	-	As in (c)	As in (g)	1. Movement	(mm)	-	0.5	100%
				V <sub>a3</sub> varied from 2.7 kV to 3.3 kV					
	4	3	As in (c)	As in (g)	3. Movement	(mm)	-	0.5	
				+10v. between a <sub>3</sub> and X plates					
	4	3	-	As in (g)	4. Movement	(mm)	-	0.5	
				V <sub>a2</sub> varied over range for which spot appears to be focussed.					
(k)	4	3	As in (c)	As in (g)	<u>Zero Drift along X Axis</u>		(mm)	-	0.5
				X <sub>1</sub> plate connected to a <sub>3</sub> . Square waves as shown in Fig. 3, on drawing, applied between X <sub>2</sub> plate and a <sub>3</sub> . Repeat reversing X <sub>1</sub> and X <sub>2</sub> connections					100%

(l)	4	3	As in (c)	As in (c)	1. Current flowing to X <sub>2</sub> . (μA) - 1 2. Current flowing to X <sub>2</sub> . (μA) - 1			100%
					X <sub>1</sub> plate connected to a <sub>3</sub> and -2kV on X <sub>2</sub> plate. Using +5v. instead of -2kV. in the above test. Repeat reversing X <sub>1</sub> and X <sub>2</sub> connections.			
(m)	4	3	As in (c)	As in (g)	The tube must withstand the application of +4 kV to any one deflector plate, the other three being connected to a <sub>3</sub> .			100%
(n)	4	4	See clause 5.14 of K1003.		Over Voltage Test			100%
(o)	4	3	As in (c)	As in (g)	When the screen bears two superimposed traces with recurrence frequencies up to 3000 cycles/sec., there shall be no distortion of one trace by the other.			Type Approval Test only
(p)	4	3	As in (c)	As in (g)	<u>Useful Screen Area</u> Radius (mm) 55 - 100			
(q)	4	3	As in (c)	As in (g)	1. Angle between X axis and line OO' on drawing. -5° +5° 2. Angle between X and Y axes. 85° 95°			100%
(r)	4	3	As in (c)	As in (c)	<u>Life Test</u> Life (hrs) 1000 - 1%			
					Deflection to cover a raster of area 80 mms. x 80 mms.			

**FIG.1. C.R. TUBE.**  
DIMENSIONS IN MILLIMETERS.



**FIG.2. PLATE CAP.**  
DIMENSIONS IN INCHES.



**FIG.3.**

