General:

Cathode: Pool type
Number of Ignitors: 2
Number of Main Anodes: 1
Number of Auxiliary Anodes: 1
Peak Voltage Drop:
- At 100 Amp Peak Anode Current: 12.6 volts
- At 300 Amp Peak Anode Current: 14.1 volts
- At 600 Amp Peak Anode Current: 16.2 volts
- At 1200 Amp Peak Anode Current: 19.1 volts

Cooling:
- Type: Water
- Typical Flow: 3 to 5 gal./min.
- Pressure Drop at Above Flow: 3 to 8 lb./sq.in.
- Temp. Rise at Lower Rate of Flow: 7°C
- Mounting Position: Vertical, Flexible Lead Up
- Maximum Rigid Length (Approx.): 18-1/2" (300 Amp per Anode)
- Diameter, Including Cooling Couplings: 9" ± 1/8"

RECTIFIER SERVICE

For Frequencies from 25 to 60 cycles, Phase Retard = 0

Maximum Ratings, Absolute Values:

- PEAK FORWARD ANODE VOLTAGE: 900 max. 2100 max. volts
- PEAK INVERSE ANODE VOLTAGE: 900 max. 2100 max. volts
- PEAK ANODE CURRENT: 1800 max. 1200 max. amp
- AVERAGE CONTINUOUS ANODE CUR.: 200 max. 150 max. amp
- 2-HOUR AVERAGE ANODE CUR.: 300 max. 225 max. amp
- 1-MINUTE AVERAGE ANODE CUR.: 400 max. 300 max. amp
- SURGE ANODE CURRENT for 0.15 sec. max.: 12000 max. 9000 max. amp
- OUTLET WATER TEMPERATURE: 60 max. 45 max. °C
- INLET WATER TEMPERATURE: 6 min. 6 min. °C
- WATER FLOW, AT CONTINUOUS AVERAGE ANODE CUR. RATING: 3 min. 3 min. gpm
- WATER FLOW, AT NO LOAD: 1 min. 1 min. gpm
- PEAK INVERSE AUXILIARY ANODE VOLTAGE:
  - With anode conducting: 25 max. 25 max. volts
  - With anode not conducting: 150 max. 150 max. volts
- AVERAGE AUXILIARY ANODE CUR.: 5 max. 5 max. amp
- PEAK POSITIVE IGNITOR VOLTAGE: 900 max. 2100 max. volts
- PEAK NEGATIVE IGNITOR VOLTAGE: 5 max. volts
- PEAK IGNITOR CURRENT: 100 max. amp
- AVERAGE IGNITOR CURRENT: 2 max. amp
- IGNITION TIME: 100 max. µsec

GENERAL REQUIREMENTS for SELF-EXCITATION and SEPARATE EXCITATION are given on the next page.

*, **, #, ##: See next page.

MAY 1, 1946

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
TENTATIVE DATA
<table>
<thead>
<tr>
<th>AC WELDER - CONTROL SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratings for 2400 volts rms, 25 to 60 cycles</td>
</tr>
</tbody>
</table>

**Maximum Ratings, Absolute Values:**

- **DEMAND** ............ 2400 max. kva
- **CORRESPONDING AVERAGE ANODE CURRENT** ............ 135 max. amp
- **AVERAGE ANODE CURRENT** ............ 207 max. amp
- **CORRESPONDING DEMAND** ............ 1105 max. kva
- **TIME OF AVERAGING ANODE CURRENT**
  at 2400 volts rms ............ 1.66 max. sec
- **SURGE ANODE CURRENT, for 0.15 sec. max.** ............ 6000 max. amp
- **WATER FLOW** ............ 3 min. gal./min.
- **OUTLET WATER TEMPERATURE** ............ 30 max. ºC
- **PEAK INVERSE AUXILIARY ANODE VOLTAGE:**
  - With anode conducting ............ 25 max. volts
  - With anode not conducting ............ 150 max. volts
- **AVERAGE AUXILIARY ANODE CURRENT** ............ 5 max. amp
- **PEAK POSITIVE IGNITOR VOLTAGE** ............ 2400 max. volts
- **PEAK NEGATIVE IGNITOR VOLTAGE** ............ 5 max. volts
- **PEAK IGNITOR CURRENT** ............ 100 max. amp
- **AVERAGE IGNITOR CURRENT**# ............ 2 max. amp
- **IGNITION TIME** ............ 100 max. µsec

Demand-ampere requirements are shown on curve 92CM-6710 under type 5554

**SELF-EXCITATION (ANODE FIRING)**
See Circuit 92CS-6722 under type 5554

- **PEAK IGNITOR VOLTAGE** ............ 150 min. volts
- **PEAK IGNITOR CURRENT** ............ 40 min. amp

Ignitor series resistance for anode firing
at anode voltages of:

- 600 volts or less (Approx.) ............ 4 .. ohms
- 601 to 1000 volts (Approx.) ............ 10 .. ohms
- 1001 to 1500 volts (Approx.) ............ 20 .. ohms
- 1501 to 2000 volts (Approx.) ............ 35 .. ohms
- 2001 to 2400 volts (Approx.) ............ 50 .. ohms

**SEPARATE EXCITATION (CAPACITOR FIRING)**
See Circuit 92CS-6722 under type 5554

Minimum volt-ampere requirements are shown on curve 92CS-6723 under type 5554

- * Use only one ignitor at a time.
- * Averaged over any 2-minute interval.
- ** Averaged over any 1-minute interval.
- # For systems in which the flow of water is controlled by the load.
- ## Averaged over any 10-second interval.
ARC DROP, OUTLET WATER TEMPERATURE—40°C TO 60°C, WATER FLOW—3 GPM

LOAD CURRENT IN PEAK AMPERES PER TUBE

MAY 1, 1946
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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

CE-6724