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5554

IGNITRON

General:		DATA
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	14.4 volts	
At 600 Amp. Peak Anode Current	17.3 volts	
Cooling:		
Type	Water	
Typical Flow	1.5 to 3 gal./min.	
Pressure Drop at Above Flow.	2 to 5 lb./sq.in.	
Temperature Rise at Lower Rate of Flow		
(150 Amp per Anode)	6°C	
Mounting Position.	Vertical, Flexible Lead Up	
Maximum Rigid Length (Approx.)	17-1/2"	
Diameter, Including Cooling Couplings.	7-1/2" ± 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	900 max.	600 max.	amp
AVERAGE CONTINUOUS ANODE CUR.	100 max.	75 max.	amp
2-HOUR AVERAGE ANODE CURRENT*	150 max.	112.5 max.	amp
1-MINUTE AVERAGE ANODE CUR.**	200 max.	150 max.	amp
SURGE ANODE CURRENT for			
0.15 sec. max.	6000 max.	4500 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. . .	1.5 min.	1.5 min.	gpm
WATER FLOW, AT NO LOAD#	0.5 min.	0.5 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.		volts
AVERAGE IGNITOR CURRENT## . . .	2 max.		volts
IGNITION TIME.	100 max.		volts

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

•, *, **, #, ##: See next page.

5554



5554

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AC WELDER-CONTROL SERVICERatings for 2400 volts rms, 25 to 60 cycles**Maximum Ratings, Absolute Values:**

DEMAND	1200 max.	kva
CORRESPONDING AVERAGE ANODE CURRENT.	75 max.	amp
AVERAGE ANODE CURRENT.	113 max.	amp
CORRESPONDING DEMAND	600 max.	kva
TIME OF AVERAGING ANODE CURRENT:		
At 2400 v RMS	1.5 max.	sec
SURGE ANODE CURRENT, for 0.15 sec. max.	3000 max.	amp
WATER FLOW	1.5 min.	gpm
OUTLET WATER TEMPERATURE	30 max.	°C
PEAK INVERSE AUXILIARY ANODE VOLTAGE:		
With Anode Conducting.	25 max.	volts
With Anode Not Conducting.	150 max.	volts
AVERAGE AUXILIARY ANODE CUR.	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

GENERAL REQUIREMENTS for SELF-EXCITATION and
SEPARATE-EXCITATION are given below

SELF-EXCITATION (ANODE FIRING)

See Circuit 92CS-6722

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.	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)

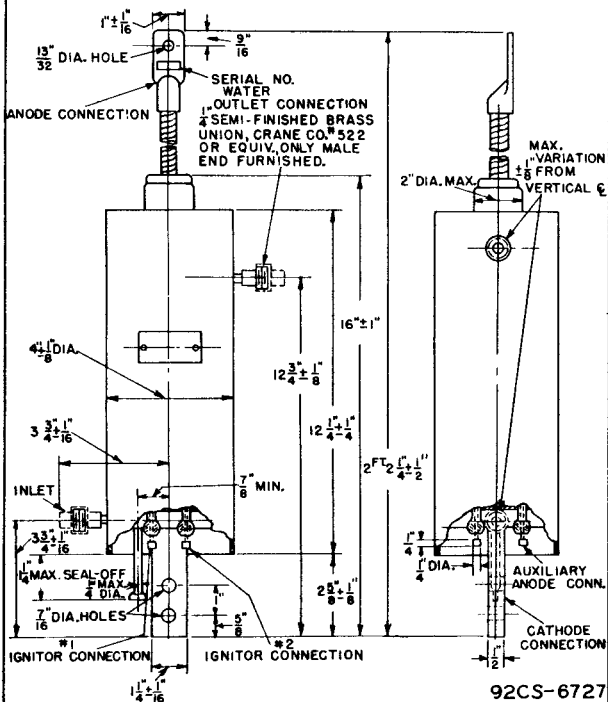
See Circuit 92CS-6722

Minimum volt-ampere requirements are shown on Curve 92CS-6723

- 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.



5554



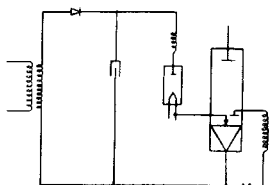
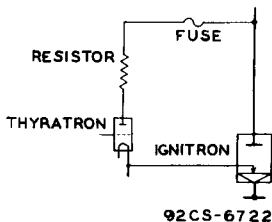
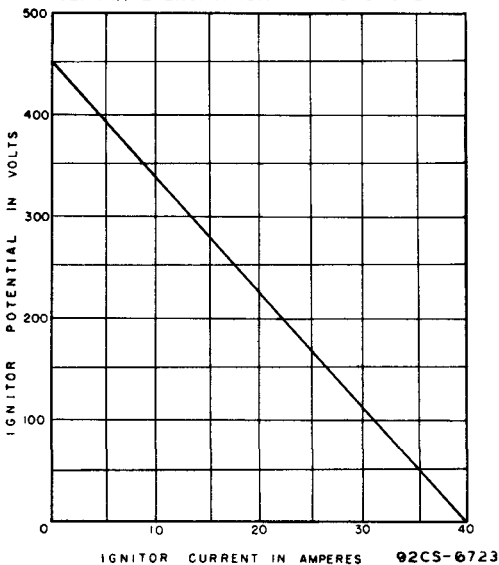
CE-C727

5554



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IGNITRON

ELEMENTARY CIRCUIT FOR
CAPACITOR FIRINGELEMENTARY CIRCUIT FOR
ANODE FIRINGMINIMUM VOLT-AMPERE REQUIREMENTS FOR
SEPARATE-EXCITATION FIRING SYSTEMS

MAY 1, 1946

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

CE-6722-6723



5554 IGNITRON

5554

WELDER-CONTROL SERVICE

