Getter firing in corners of rectangular vacuum display

Objective Heat the getters located in each of four corners of a vacuum display. By flashing or firing the getter, the residual gases are removed from the inside of the display.

Material Four each 6 mm diameter getters in a 3" x 4.5" (76mm x 114mm) vacuum display

Temperature 1200 ºF (649 ºC)

Frequency 280 kHz

Equipment
- Ambrell 5.0 kW induction heating system, equipped with a remote workhead containing two (2) 1.5 µF capacitors (for a total of 0.75 µF).
- An induction heating coil, designed and developed specifically for this application.

Process A four turn helical coil is used to couple energy in the getter mounted below the glass plate. The getter glows bright red when heated to 1200 ºF in two seconds. The getters in each corner are heated sequentially and other components in the display do not heat up.

Results/Benefits Induction heating is the only way to heat the getters through the glass tube without heating the tube or other components. It provides:
- Reliable, repeatable, non-contact heat.
- Precision heating of very small areas.