

Tube Of The Month

TRIGATRON

One of the common uses for vacuum tubes is as a switch. Some common types have been modified to switch at high speeds as was needed in early vacuum tube computers. RADAR is still a user of high power vacuum and gas tubes for switching voltage to magnetrons. One odd tube developed and still used by the British for switching, is the trigitron. The RAF had problems with their RADARs at high altitudes. What they came up with isn't actually a vacuum tube. It would be more correct to call it a pressure vessel. After many experiments, a mixture of 93% argon and 7% oxygen was pumped into the envelope at a pressure of about 65 PSI. Two of the three electrodes within the envelope would conduct when the trigger electrode was pulsed. This example of the CV100 we have shown here would control up to 250 KW at a voltage of 24 KV.

Vacuum tubes are like light bulbs and when dropped, they break with a pop as the tube implodes. Not very dangerous. The trigitron is another problem. When it breaks, it explodes. To protect the operator from flying glass, they made a machine similar to what they use to make socks for people. The thread seems to be nylon line and a coating of lacquer. Very nice stitch work.

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