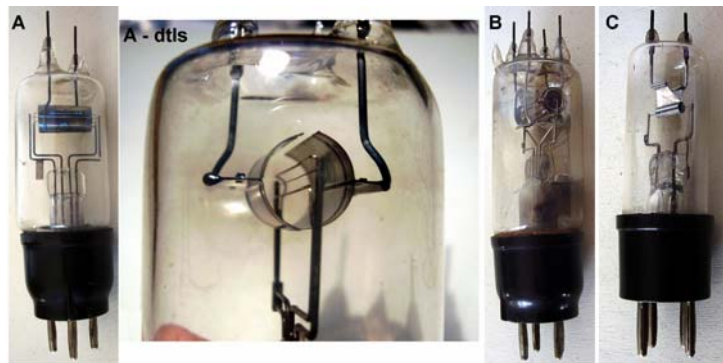


New updates, March 2024

***** New historic vacuum tubes added to the collection!**

The collection of historic vacuum tubes grows with the addition of new unique samples! Recently acquired some experimental magnetrons designed by Eric Megaw at the GEC Research Laboratories, Wembley in the second half of the 1930s. Some of the added samples well illustrate the research work carried out by Megaw in the development of tubes for very high frequencies, work described by the same in his 1947 paper '[An early application of decimetre waves to communication between ships](#)'. Of particular interest we see an experimental magnetron with a grid for direct signal modulation and one capable of operating at very high frequencies, 3 GHz or more.



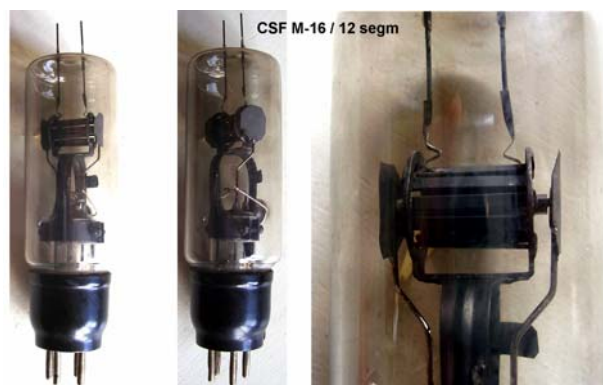
Some of the Megaw's experimental samples:

A, A-dtls - A [gridded split-anode magnetron](#) intended for direct modulation of the carrier.

B - [Laboratory sample of E880](#), approved as NT75

C - [Experimental magnetron for very high frequency](#), 3 GHz or more

Another find of exceptional historical interest is one of two CSF M-16s, specially modified by his personal friend Henri Gutton with 12 segments, which were brought to Megaw by Maurice Ponte in May 1940, just as Megaw had started designing his cavity magnetron E1189. We are talking about that E1189 which gave rise to microwave radar and of which ASE preserves the very first 8-cavity laboratory sample ever made. After conducting tests on the two magnetrons just received, Megaw decided to modify his initial design, replacing the thoriated tungsten filament with an oxide-coated unipotential cathode. A complete description of the preliminary discussions with Gutton and Berline and of the steps that led to the completion of the E1189 design are given by Megaw himself in his paper '[The high-power pulsed magnetron: a review of early developments](#)'. The design and its implications have been summarized in the article '[The development of eight-cavity E.1198 at GEC](#)'.



Gutton's 12-segment variant of the [CSF M-16](#), designed for Megaw to experiment with behavior in the different oscillating modes, according to module 12, module 6 and module 3.

To continue...