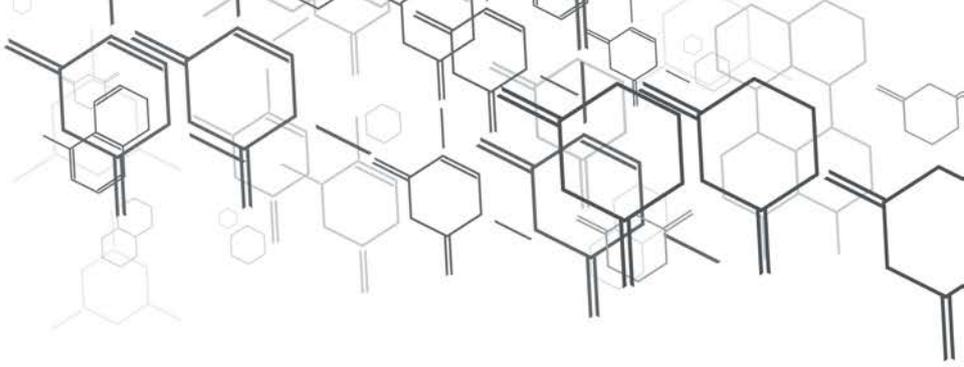


Solution for VACUUM INTERRUPTERS



The vast majority of vacuum interrupters have ceramic envelopes and are processed in vacuum furnaces where, after completion of the bakeout cycle, temperature is raised to 800-850° C to perform the sealing by means of appropriate brazing alloys. This brazing process under vacuum at these temperatures for about 15 minutes is perfectly adequate to fully activate the non-evaporable getters mounted in vacuum interrupters.

The use of non-evaporable getters in these devices is needed mainly to maintain the inner pressure at levels lower than 10^{-6} torr during their typically very long shelf life: since their main job is to sorb gases during the shelf life, non-evaporable getters suitable for vacuum interrupters must show good gettering performances at room temperature. Being this feature typical of sintered porous getters, heaterless SAES St175 getters in shape of pills mounted in a proper recess of the stem of the fixed electrode are probably the most elegant gettering solution for vacuum interrupters. An additional advantage of this solution comes from the superior mechanical characteristics of sintered getters, that prevent the release of loose particles, extremely dangerous for vacuum interrupters.

Another reliable getter solution for these devices consists of a cut piece of St101 coated strip mounted by spot welding to the anode or the vapor shield of the vacuum interrupter. In order to achieve the adequate gettering efficiency at room temperature, the length of coated strip to be mounted in a vacuum interrupter is typically ranging from 10 to 30 cm, depending on the size of the interrupter.

In any case both these gettering solutions have proved to be perfectly suitable to maintain the required vacuum level during all the operational life of a vacuum interrupter, that is typically 20 years.



Boost your product performance with SAES Getters solutions:

- St175 Sintered Porous Getters
- St101

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