

Appendix C - Hermeticity Testing Market Survey

Hermeticity Testing Market Survey - Part A Suzanne Millar, Heriot-Watt University

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Please delete and add comments as appropriate.

[1] Do you manufacture products with or work with cavity volumes less than 10mm³? {If Y please go to Q3}

[2] Do you anticipate volumes dropping below this in the future?

[3] Do you test the products in-house? {If Y please go to Q5}

[4] Who tests the devices?

[5] Do you test the hermeticity of packages? {If Y please go to Q8}

[6] What are your reasons?

[7] Would you be interested in knowing the leak rate of the packages?

[8] What percentage of your produce is hermeticity tested

[9] Do you use the Helium Fine Leak Test? {If Y please go to Q12}

[10] What test method do you use?

[11] Is the minimum detectable leak rate less of the order of $6e^{-18}$ atm.cm³.s⁻¹?

[12] Do you follow MIL-STD-883 Method 1014?

[13] What pressure and dwell time do you use?

Pressure:

Dwell:

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[14] Are you aware of the helium leak test's limitations with respect to cavities of volumes less than 10mm³?

Y/N

[15] Would you like to receive more information about the limitations?

Y/N

[16] Would you be interested in a method applicable to MEMS, optoelectronics and advanced microelectronics?

Y/N

[17] Would you be interested in further information regarding failure analysis and reliability of MEMS?

Y/N

[18] What industry publications do you read?

[19] What trade shows do you attend?