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PRESS RELEASE

RELIABILITY OF ROHS ELECTRONIC ASSEMBLIES *FIRST ENCOURAGING RESULTS FOR THE AERONAUTIC INDUSTRY*

The reliability of the electronic assemblies only would be little impacted by the “Lead-free” transistion.

This astonishing observation made during collective researches of the project AMELIE intended to transpose fundamental knowledge in the field of the reliability (components, soldering, completions of PCB, test methodologies...) for the case of lead-free electronic assemblies, **cannot however be generalized without some care.**

In case of short life-cycle products such as great public applications (for example cellular telephones), the lead-free assemblies really doesn't pose problems. The situation is however very different for the professional and industrial applications. It would be pretentious to say today that the lead-free assembly is an totally acquired solved.

Indeed, whereas the actors of the electronic assembly for military et aeronautic equipment or space applications, profit from an exemption until 2010 for the application of the European directive RoHS, some of them, gathered in the AMELIE project, **anticipate already the problems of the long-term reliability which its implementation in processes of the Backward type raises particularly.**

Our first results do not enable us to discriminate the two alloys SnPb or SAC305/405 and that after 1500 thermal cycles - 55°C/+125°C. **This reassuring report leads us to continue the tests** until the failures in order to extract some by simulation from fundamental the statistics and to extrapolate equivalencies for other ranges of packaging and sizes.

In parallel, studies are undertaken more particularly on the chemical completion tin which remains well established in Europe. In addition to advantageous qualities of spreading out, this completion reveals a defect proven of intimacy with provocative copper the growth of intermetallic tin/copper and reducing its absorptivity. **This duality requires a strict control of the various thermal variations** through the processes of assembly. Studies are carried out between SOLECTRON and the CIRE group in order to lead the user to control the cycle of life of this completion.



LIFE Environment Project
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Transferability Activities
Supported by the European Union and ADEME





Begun at the end of 2005, with the financial support of the European Union and the ADEME, and, planned to finish during 2008, AMELIE project envisages, in complement of the participation in the major conferences and international seminars, **to transfer some results to the industrialists of the sector.**

These transferability actions, begin since 2007 and will be relayed, near the European networks, of the national trade unions and the trade associations. Because the reliability of the lead-free assemblies will still require many years of studies, **we intend to continue AMELIE's work** around new factors of improvement which will appear and **seek, for that, of new European partnerships.**

Press and Tranferability Conctact

Vincent RIBES
 Tel : +33 556 79 44 39
vribes@adeiso.com

Technical Contact (Possibilité d'interview) :

Dr. Alexandre VAL
 AMELIE's Project Manager
alexandreval@fr.slr.com
 Tél : +33 557 12 84 42
 Fax : +33 557 12 74 90

WEBSITE : www.life-amelie.info

AMELIE's Consortium

ADERA,
 ADEISO,
 ALENCON PLASTIC,
 CIRE,
 CNRT BN MATERIAUX,
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