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Nota di contenuto	Preface (Ronald W. Gedney) -- Contributors -- Introduction (Jasbir Bath and Carol A. Handwerker) -- Lead-Free Assembly Project -- Alloy Group -- Process Group -- Component Group -- Reliability Group -- Follow-On Projects/Work -- 1. Alloy Selection (Carol A. Handwerker, Ursula Kattner, Kilwon Moon, Jasbir Bath, Edwin Bradley, and Polina Snugovsky) -- 1.1. Introduction -- 1.2. Lead-Free Alloys Considered by iNEMI in 1999 as Replacements for Tin-Lead Eutectic Solder -- 1.3. Fundamental Properties of Lead-Free Solder Alloys Affecting Manufacturing and Reliability -- 1.4. R&D Issues Remaining in Lead-Free Solder Implementation -- 1.5. Summary -- References -- 2. Review and Analysis of Lead-Free Solder Material Properties (Jean-Paul Clech) -- 2.1. Introduction -- 2.2. Tin-Lead Properties and Models -- 2.3. Tin-Silver Properties and Creep Data -- 2.4. Tin-Silver-Copper Properties and Creep Data -- 2.5. Alloy Comparisons -- 2.6. General Conclusions/Recommendations -- Appendix A: Tin-Silver Creep Data -- Appendix B: Tin-Silver-Copper Creep Data -- Acknowledgments -- References -- 3. Lead-Free Solder Paste Technology (Ning-Cheng Lee) -- 3.1. Introduction -- 3.2. Materials -- 3.3. Rheology -- 3.4.

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Sommario/riassunto

Based on the results of a more than two-year study, Lead-Free Electronics: iNEMI Projects Lead to Successful Manufacturing is the first practical, primary reference to cover Pb-free solder assembly as well as the analysis and reasoning behind the selection of Sn-Ag-Cu as the recommended Pb-free replacement for Sn-Pb. Reflecting the results of a two-year study, Lead-Free Electronics: iNEMI Projects Lead to Successful Manufacturing provides full coverage of the issues surrounding the implementation of Pb-free solder into electronic board assembly. This book is extremely timely???most electronic manufacturers are going to change over to Pb free soldering by 2006 to meet new European laws. All manufacturers around the globe are going to be affected by this change. The text provides specific results from the thirty company NEMI project activities. It contains integrated and fully documented book chapters with references to existing published work in the area. These serve as tremendous resources for engineers and companies faced with making the switch to Pb-free solder assembly.
