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## **Tin-Copper-Nickel-Germanium-A Case Study in Lead-Free Implementation**

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## ABSTRACT

Although reservations about lead-free implementation remain, the reality is that it is now generally accepted as the default technology for the electronics industry into the future. But only five years on from the implementation of the EU RoHS Directive some of the challenges involved in identifying and proving the alloys that could be used as lead-free solders that made the implementation possible are already being forgotten. In the paper the author reports on the development of an alloy that has found wide spread use in wave soldering and as a hot air solder levelled printed circuit board finish as an example of how the some challenges in the years leading up to the change were faced and overcome.