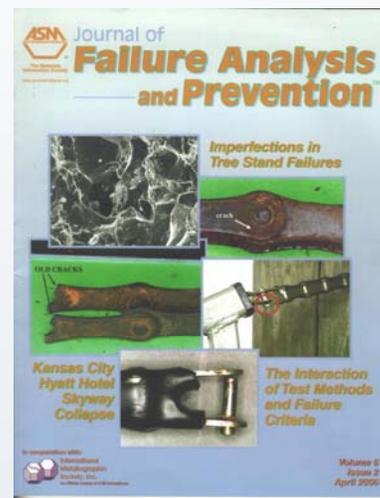




ASM International Reprints AMPTIAC's Material Failure Modes Series in the *Journal of Failure Analysis and Prevention*

ASM International®, a materials professional society, published AMPTIAC's three-part series on material failure modes in their *Journal of Failure Analysis and Prevention (JFAP)*. This series, which was originally published in three sequential issues of the *AMPTIAC Quarterly*, served as an extensive tutorial on the various material failure mechanisms. After reading Part I of the Material Failure Modes series, the editor of *JFAP*, Dr. McIntyre R. Louthan, Jr., invited AMMTIAC to submit the three articles for publication in their Journal. Subsequently, the AMPTIAC (predecessor to AMMTIAC) articles appeared in the October and December 2005, and April 2006 issues of the *JFAP*.

AMPTIAC's three-part series on material failure modes, printed in the *MaterialEASE* section of the *AMPTIAC Quarterly* and reprinted in ASM International's *JFAP*,



covered the most common and significant material failure mechanisms. The more notable mechanisms included fracture, ductile failure, elastic deformation, creep, fatigue, impact, spalling, wear, brinelling, thermal shock, radiation damage, and corrosion. Several methods of prevention in relation to some of these failure modes were provided in order to help designers protect new systems from these known failure mechanisms.



The articles and excerpts have also been reprinted in the *Journal of Alion's System Reliability Center* and the Society of Manufacturing

Engineers *Webnews*. Having this series printed in a variety of other technical publications as well as in the *Quarterly*, enabled AMMTIAC to achieve its mission to a greater extent by disseminating important technical information to a much broader customer base. Furthermore, through this supplementary information dissemination mechanism, AMMTIAC and the IAC program received greater exposure to an audience that may be unfamiliar with the IACs.

To further disseminate this widely popular series and to establish an even more valuable tutorial, AMMTIAC integrated the three articles into a single volume and placed it on the new AMMTIAC website for download. This Material Failure Modes Desk Reference serves as a guide for any professional making material selection and design decisions, as well as the broader AMMTIAC customer base, and is currently available for free (<http://ammtiac.alionscience.com/pdf/deskref.pdf>).

