

BOOK REVIEW

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Review of: *Forensic Fire Scene Reconstruction*

REFERENCE: Icové DJ and DeHaan JD. *Forensic fire scene reconstruction*, Pearson Prentice Hall, Upper Saddle River, New Jersey 2003, 369 pp.

First, what the textbook is not. It is not a rehash of DeHaan's *Kirk's Fire Investigation* or other fire investigation texts. *Forensic Fire Scene Reconstruction* links fire investigation with engineering analysis and the scientific method. The result is an excellent resource for fire investigators.

Icové and DeHaan have produced a very readable text. The book is extremely well punctuated with actual case examples. The cases discussed are some of the most noteworthy and tragic. For those who have been involved with fire investigation for many years the cases read as a history of fire investigation.

At the outset the authors stress the integrated nature of forensic fire scene reconstruction and investigation. The next five chapters—Basic Fire Dynamics, Fire Pattern Analysis, Fire Scene Documentation, Arson Crime Scene Analysis, and Fire Modeling—describe the latest tools available to investigators and how to effectively use them. In each case, the authors provide examples of how to apply the principles discussed. Even the most complex fire dynamics

calculations are easy to follow and are linked to practical, real-world situations.

Chapter 7, Fire Death and Injuries, needs to be singled out. The authors' discussion of the problems associated with investigating fire-related deaths is very well done. They discuss both the technical and procedural problems that can arise. In addition, they describe the physiological impacts of the fire that can explain victim behavior and injuries. This is a topic not often covered in fire investigation texts.

Chapter 8 is a useful reference of fire test methods. Relevant ASTM methods are synopsized. Calorimetry applications and other full-scale testing methods are discussed. Chapter 9 is a collection of case studies. The studies illustrate how the tools discussed in the text were applied. Some of the examples challenge the reader to consider additional analyses that might have been appropriate. The last chapter briefly discusses new technologies that enhance fire scene documentation and case management.

Forensic Fire Scene Reconstruction compliments NFPA 921, "Guide for Fire and Explosion Investigations." With the courts increasing reliance on Daubert principles, understanding the techniques described in this text and how to apply them become increasingly important to any investigator who plans to be rendering an expert opinion in the future.

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