



Risk-Informed, Performance Based Industrial Fire Protection
An Alternative to Prescriptive Codes by Thomas F. Barry, P.E.

Preface



The concept of performance-based fire protection engineering, although introduced into practice in the United States during the past decade, is not new. The 1965 National Fire Protection Association Meeting in Washington, D.C., included the presentation of the following paper: “Fire Protection and the Performance Concept.” In addition, in 1978 the National Bureau of Standards published a study report entitled: “Toward a Performance Approach to Life Safety From Fire in Building Codes and Regulations.”

In this book, Tom Barry has successfully merged the concepts of fire risk analysis, risk assessment, and probability modeling into the performance code process being introduced in fire protection engineering today. As defined by Barry, Risk-Informed, Performance-Based Fire Protection is an integration of decision analysis and quantitative risk assessment with a defined step approach for quantifying the performance success of fire protection systems.

There is no doubt that the concept of performance-based fire protection engineering requires that today’s fire protection engineer be thoroughly educated in the means to quantify the judgmental decisions of yesterday. As Tom Barry has indicated: “Risk-based analysis and decision making is widely used by many agencies of the U.S. government, the chemical process industry, the telecommunications industry, the aviation industry, and others. The application of fire and explosion risk and performance-based decision analysis will certainly become an alternative to prescriptive codes.” Risk-informed, performance-based fire protection engineering involves applying quantitative risk assessment evaluation techniques in conjunction with traditional fire protection engineering methods to make informed decisions about the effect of fire and explosion risk on the safety of personnel and the continued operation of the business.

This book is a definite necessity for every practicing fire protection professional. The author has examined and explained the sometimes complicated procedures with excellent examples and outstanding graphics, which benefit both the novice and the practitioner.

Dr. John L. Bryan