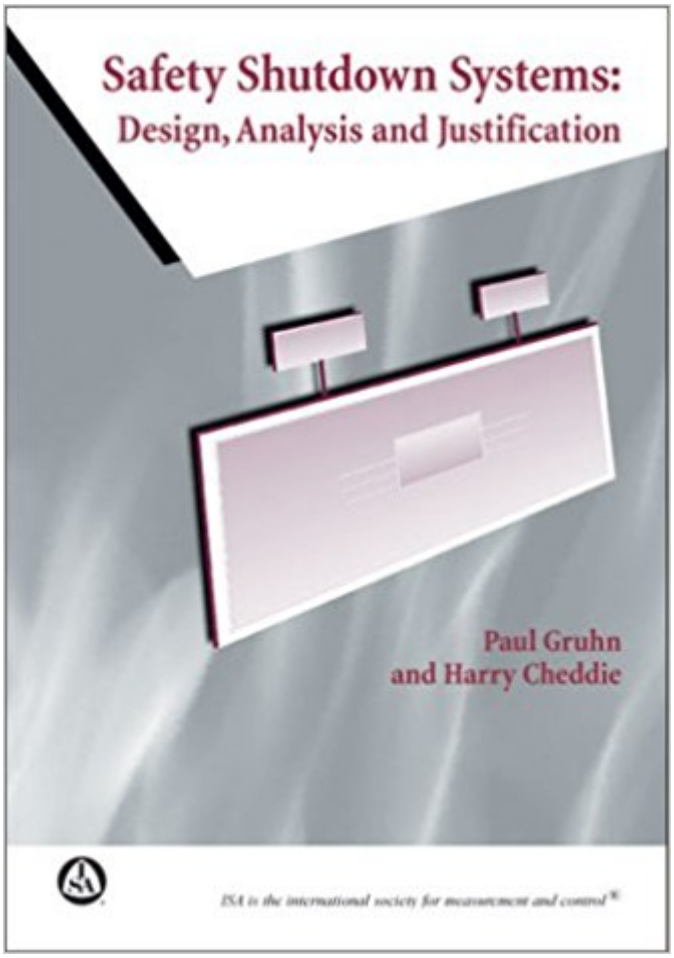
# Safety Shutdown Systems: Design, Analysis, And Justification



## Synopsis

This book is ideal for instrumentation and control system engineers in the process industries who are responsible for designing safety shutdown systems. Managers, sales professionals, technicians and engineers employed by end users, engineering firms, system integrators and consultants can all benefit from the material presented here. The author wrote this book because of the increased realization that today's engineering systems (and the computers used to control them) are capable of large-scale destruction. When even a single accident could be disastrous, the luxury of learning from experience no longer exists. The book is a practical how-to text on the analysis, design, application and installation of safety shutdown systems. What is a Safety Shutdown? Risk-What Constitutes a Hazard Process Control vs Safety Control Protection Layers Economic Justification for a Safety System The Design Life Cycle: An Overview Developing the Functional Specifications Determining the Safety Integrity Levels Choosing a Technology Initial System Evaluation Issues related to Field Devises Engineering a System Installing a System Functional Testing of a System Managing Changes to a System.

## Book Information

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## Customer Reviews

This is truly an excellent introductory book on Safety Shutdown Systems, that will give you an overview on all the fundamentals, concepts, and specific aspects that need to be considered when designing an emergency shutdown system for a new facility or when evaluating an existing one. The text is written in aclear an readable way that make even easier to understand topics that often

can be confusing. The style of the book reminds of the self-study guides published by ISA as the Independent Learning Modules (but this is not part of the ILM series).This book is primarily intended for the thousands of instrumentation and control systems engineers in the process industries (e.g. , refining, chemical, petrochemical, offshore, etc.) who are responsible for designing, installing, and maintaining safety instrumented systems (SIS). The kind of people usually employed by end-users, engineering firms, systems integrators, and consultants. Additionally managers and sales individuals will also benefit from a basic understanding of this subject.The book is organized as follows:- Design life cycle.- Risk.- Process control versus safety control.- Protection layers.- Developing the safety requirement speficifications.- Determining the safety integrity level.- Choosing a technology.- Initial system evaluation.- Issues relating to field devices.- Engineering a system.- Installing a system.- Functional testing.- Managing changes to a system.- Justufucation for a sefety system.- Safety Instrumented System (SIS) design checklist.- Case study.I am an Industrial Practitioner of Process Control. I have been working for more than 16 years as an Instrumentation, Automation, and Process Safety and Control Engineer for the Oil & Gas Industry. I have found this book to be an useful refresher in my day to day activities.

This book should be on the shelve of every chemical engineer wanting to understand safety instrumented systems! The authors had successfully made a difficult subject easy to understand. No lengthy paragraphs. Everything is short, sharp and sweet, straight to the point. Their witty writing style and Gruhn’s cartoons put the message across most vividly.

Beginners in Graphic Design: Graphic Design Basics for Beginners, Save Time and Jump Start Your Success (graphic ... graphic design beginner, design skills) The Works of John Owen: The Mortification Of Sin, Catechisms, Of Justification by Faith, Pneumatologia, Of Communion with God the Father, Son and Holy ... (27 Books With Active Table of Contents) Faith Alone---The Doctrine of Justification: What the Reformers Taught...and Why It Still Matters (The Five Solas Series) Doctrine, Dynamic and Difference: To the Heart of the Lutheran-Roman Catholic Differentiated Consensus on Justification (Ecclesiological Investigations) Justification: God's Plan & Paul's Vision Art Needs No Justification Justification The Amnesty of Grace: Justification by Faith from a Latin American Perspective The Wisdom to Doubt: A Justification of Religious Skepticism Choosing Safety: A Guide to Using Probabilistic Risk Assessment and Decision Analysis in Complex, High-Consequence Systems