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REFERENCES; Chapter 3: Understanding the Fundamental Definitions and Concepts of FMEAs; IN THIS CHAPTER; 3.1 DEFINITION OF FMEA; 3.2 PRIMARY OBJECTIVE OF FMEA; 3.3 DEFINITION OF FAILURE MODE EFFECTS AND CRITICALITY ANALYSIS; 3.4 TYPES OF FMEAs; 3.5 FMEA DEFINITIONS AND EXAMPLES
3.5.1 Item3.5.2 Function; 3.5.3 Failure Mode; 3.5.3.1 Failure Modes at System/Subsystem Level versus Component Level; 3.5.4 Effect; 3.5.5 Severity; 3.5.6 Cause; 3.5.7 Occurrence; 3.5.8 Controls; 3.5.9 Detection; 3.5.10 Risk Priority Number; 3.5.11 Recommended Actions; 3.6 IS IT A FAILURE MODE, EFFECT, OR CAUSE?; 3.7 FMEA GLOSSARY; 3.8 WEB COMPANION TO EFFECTIVE FMEAs; 3.9 END OF CHAPTER PROBLEMS; REFERENCES; Chapter 4: Selection and Timing of FMEA Projects; IN THIS CHAPTER; 4.1 GUIDELINES FOR WHEN TO DO FMEAs; 4.2 FMEA PROJECT SELECTION CRITERIA; 4.3 PRELIMINARY RISK ASSESSMENT
4.4 WHEN TO DO DIFFERENT TYPES OF FMEAs4.5 RESPONSIBILITY FOR FMEAs BETWEEN OEMs AND SUPPLIERS; 4.6 INTRODUCING THE ALL-TERRAIN BICYCLE CASE STUDY; 4.7 END OF CHAPTER PROBLEMS; Chapter 5: How to Perform an FMEA Project: Preparation; IN THIS CHAPTER; USE OF THE BICYCLE EXAMPLES IN THE CHAPTER; 5.1 THE SUBJECT OF FMEA PREPARATION; 5.2 PREPARATION TASKS DONE ONCE FOR ALL FMEA PROJECTS; 5.2.1 FMEA Software Selection; 5.2.2 Selecting or Modifying FMEA Worksheets and Scales; 5.2.3 Identifying Roles and Responsibilities; 5.2.4 FMEA Team Training; 5.2.5 Legal Guidelines for Doing FMEAs
5.2.6 Meeting Logistics5.2.7 Defining the System Hierarchy (For System and Design FMEAs); 5.2.8 Defining the Process Steps (for Process FMEAs); 5.2.9 Access to Failure Information; 5.3 PREPARATION TASKS FOR EACH NEW FMEA PROJECT; 5.3.1 Determine the Scope of the Analysis; 5.3.2 Make the Scope Visible (for System and Design FMEAs); 5.3.2.1 FMEA Block Diagram; 5.3.2.2 FMEA Interface Matrix; 5.3.2.3 Parameter Diagram (P-Diagram); 5.3.2.4 Functional Block Diagram; 5.3.3 Make the Scope Visible (for Process FMEAs); 5.3.3.1 Process Flow Diagram (PFD); 5.3.3.2 PFD Worksheet
5.3.4 Assemble the Correct Team

Sommario/riassunto

"This book recognizes that correctly done FMEAs are essential to achieving high quality and reliability in products and processes, and are the central core of Design for Six Sigma, Design for Reliability and other Quality and Reliability programs. The Objective of the book is to define the correct procedure for doing FMEAs and to outline specifically how to successfully apply the FMEA procedure in design, development, manufacturing, and service applications. The book will also share the most common mistakes in doing FMEAs and how to turn these into quality objectives, as well as how to implement effective FMEA processes in companies. It is a practical book showing both the practitioner and manager the key elements of successful FMEA systems. It is based upon the author's extensive experience with thousands of FMEAs, and a many dozen of companies. The reader will understand how to do FMEA correctly, and how to implement effective FMEA programs"--