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ACI349-13 Code Requirements for Nuclear Safety-Related Concrete Structures (ACI 349-13) and Commentary ACI 349M-13 Code Requirements for Nuclear Safety-Related Concrete Structures (ACI 349M-13) and Commentary ACI 349K-13 Code Requirements for Nuclear Safety-Related Concrete Structures and Commentary (Korean) Concrete Structures in Earthquake An Introduction to Natural Hazard Analysis and Design Criteria Advances on bond in concrete Proceedings of the 18th International Conference on Environmental Degradation of Materials in Nuclear Power Systems - Water Reactors A Practical Course in Advanced Structural Design Structures and Architecture - Bridging the Gap and Crossing Borders Size-Scale Effects in the Failure Mechanisms of Materials and Structures ACI Manual of Concrete Practice Concrete and Grout in Nuclear and Hazardous Waste Disposal 11th PhD Symposium in Tokyo Japan Anchorage in Concrete Construction ACI Structural Journal Over 200 U.S. Department of Energy Manuals Combined: CLASSICAL PHYSICS; ELECTRICAL SCIENCE; THERMODYNAMICS, HEAT TRANSFER AND FLUID FUNDAMENTALS; INSTRUMENTATION AND CONTROL; MATHEMATICS; CHEMISTRY; ENGINEERING SYMBIOLOGY; MATERIAL SCIENCE; MECHANICAL SCIENCE; AND NUCLEAR PHYSICS AND REACTOR THEORY The Air Almanac Anchors in Concrete--design and Behavior Aging, Shaking, and Cracking of Infrastructures Building Code Requirements for Structural Concrete (ACI 318-05) and Commentary (ACI 318R-05) Wind Loads and Anchor Bolt Design for Petrochemical Facilities Concrete International Transportation The Navy List Code Requirements for Nuclear Safety-related Concrete Structures (ACI 349-13) and Commentary : an ACI Standards Kirchliche Disciplin in den drei ersten christlichen Jahrhunderten U.S. Foreign Trade Fracture and Damage of Concrete and Rock - FDCR-2 European Intellectual Property Law Reinforced Concrete

Federal Outlays in Illinois Infrared Astronomical Satellite (IRAS) Catalogs and Atlases: The Point source catalog declination range -300 [greater than delta greater than] -500 UBC-IBC Structural (1997-2000) Design and Construction of LNG Storage Tanks Daily Series, Synoptic Weather Maps Seismic Analysis of Safety-related Nuclear Structures, and Commentary on Standard for Seismic Analysis of Safety Related Nuclear Structures American National Standard for Nuclear Analysis and Design of Concrete Radiation Shielding for Nuclear Power Plants CCNP and CCIE Data Center Core DCCOR 350-601 Official Cert Guide NASA Reference Publication CCNP Data Center Application Centric Infrastructure 300-620 DCACI Official Cert Guide

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This book gathers 23 papers by top experts from 11 countries, presented at the 3rd Houston International Forum: Concrete Structures in Earthquake. Designing infrastructures to resist earthquakes has always been the focus and mission of scientists and engineers located in tectonically active regions, especially around the "Pacific Rim of Fire" including China, Japan, and the USA. The pace of research and

innovation has accelerated in the past three decades, reflecting the need to mitigate the risk of severe damage to interconnected infrastructures, and to facilitate the incorporation of high-speed computers and the internet. The respective papers focus on the design and analysis of concrete structures subjected to earthquakes, advance the state of knowledge in disaster mitigation, and address the safety of infrastructures in general. This is the eBook version of the print title. Note that the eBook does not provide access to the practice test software that accompanies the print book. Access to the personal video mentoring is available through product registration at Cisco Press; or see the instructions in the back pages of your eBook. Learn, prepare, and practice for CCNP/CCIE Data Center Core DCCOR 350-601 exam success with this Cert Guide from Cisco Press, a leader in IT certification learning and the only self-study resource approved by Cisco. · Master CCNP/CCIE Data Center Core DCCOR 350-601 exam topics · Assess your knowledge with chapter-ending quizzes · Review key concepts with exam preparation tasks · Learn from more than two hours of video mentoring CCNP and CCIE Data Center Core DCCOR 350-601 Official Cert Guide is a best-of-breed exam study guide. Expert authors Somit Maloo and Firas Ahmed share preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. Material is presented in a concise manner, focusing on increasing your understanding and retention of exam topics. The book presents you with an organized test-preparation routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. The book also contains more than two hours of personal video mentoring from the Pearson IT Certification Complete Video Course. Go to the back pages of your eBook for instructions on how to access the personal video mentoring content. Well regarded for its level of detail, assessment features, and challenging review questions and exercises, this study

guide helps you master the concepts and techniques that will help you succeed on the exam the first time. This official study guide helps you master all the topics on the CCNP/CCIE Data Center Core DCCOR 350-601 exam, including · Network · Compute · Storage Network · Automation · Security This book forms the Proceedings of the International Conference held in Vienna in November 1992 dealing with ageing, fatigue and fracture of concrete and concrete structures. Special sections cover demolition and recycling, and anchorage engineering. As well as selected international contributions, five specially invited plenary papers are included from Austria, Spain, Japan, Denmark and Sweden. Invited international contributions to this exciting new research field are included in this volume. It contains the specially selected papers from 45 key specialists given at the Symposium held under the auspices of the prestigious International Union of Theoretical and Applied Mechanics at Turin in October 1994. Worldwide, the use of natural gas as a primary energy source will remain vital for decades to come. This applies to industrialized, emerging countries and developing countries. Owing to the low level of impurities, natural gas is considered to be a climate-friendly fossil fuel because of the low CO<sub>2</sub> emissions, but is at the same time an affordable source of energy. In order to enable transport over long distances and oceans (and hence create an economic and political alternative to pipelines) , the gas is liquefied, which is accompanied by a considerable reduction in volume, and then transported by ship. Thus, at international ports, many LNG tanks are required for temporary storage and further use. The trend towards smaller liquefaction and regasification plants with associated storage tanks for marine fuel applications has attracted new players in this market who often do not yet have the necessary experience and technical expertise. It is not sufficient to refer to all existing technical standards when defining consistent state-of-the-art specifications and requirements. The switch to European standardisation has made it necessary to revise and adapt existing national codes to match European standards. Technical committees at national and international level have begun their work of updating and completing the EN 14620 series. In the USA, too, the

corresponding regulations are also being updated. The revision of American Concrete Institute standard ACI 376 Requirements for Design and Construction of Concrete Structures for the Containment of Refrigerated Liquefied Gases, first published in 2011, will be completed in the spring of 2019, and the final version, published in autumn 2019. This book provides an overview of the state of the art in the design and construction of liquefied natural gas (LNG) tanks. Since the topic is very extensive and complex, an introduction to all aspects is provided, e.g. requirements and design for operating conditions, thermal design, hydrostatic and pneumatic tests, soil surveys and permissible settlement, modelling of and calculations for the concrete structure, and the actions due to fire, explosion and impact. Dynamic analysis and the theory of sloshing liquid are also presented. Includes data for the Executive Branch of the Federal Government only. Over 19,000 total pages ... Public Domain U.S. Government published manual: Numerous illustrations and matrices. Published in the 1990s and after 2000. TITLES and CONTENTS: ELECTRICAL SCIENCES - Contains the following manuals: Electrical Science, Vol 1 - Electrical Science, Vol 2 - Electrical Science, Vol 3 - Electrical Science, Vol 4 - Thermodynamics, Heat Transfer, And Fluid Flow, Vol 1 - Thermodynamics, Heat Transfer, And Fluid Flow, Vol 2 - Thermodynamics, Heat Transfer, And Fluid Flow, Vol 3 - Instrumentation And Control, Vol 1 - Instrumentation And Control, Vol 2 Mathematics, Vol 1 - Mathematics, Vol 2 - Chemistry, Vol 1 - Chemistry, Vol 2 - Engineering Symbology, Prints, And Drawings, Vol 1 - Engineering Symbology, Prints, And Drawings, Vol 2 - Material Science, Vol 1 - Material Science, Vol 2 - Mechanical Science, Vol 1 - Mechanical Science, Vol 2 - Nuclear Physics And Reactor Theory, Vol 1 - Nuclear Physics And Reactor Theory, Vol 2. CLASSICAL PHYSICS - The Classical Physics Fundamentals includes information on the units used to measure physical properties; vectors, and how they are used to show the net effect of various forces; Newton's Laws of motion, and how to use these laws in force and motion applications; and the concepts of energy, work, and power, and how to measure and calculate the energy involved in various applications. \* Scalar And Vector Quantities \* Vector

Identification \* Vectors: Resultants And Components \* Graphic Method Of Vector Addition \* Component Addition Method \* Analytical Method Of Vector Addition \* Newton's Laws Of Motion \* Momentum Principles \* Force And Weight \* Free-Body Diagrams \* Force Equilibrium \* Types Of Force \* Energy And Work \* Law Of Conservation Of Energy \* Power - ELECTRICAL SCIENCE: The Electrical Science Fundamentals Handbook includes information on alternating current (AC) and direct current (DC) theory, circuits, motors, and generators; AC power and reactive components; batteries; AC and DC voltage regulators; transformers; and electrical test instruments and measuring devices. \* Atom And Its Forces \* Electrical Terminology \* Units Of Electrical Measurement \* Methods Of Producing Voltage (Electricity) \* Magnetism \* Magnetic Circuits \* Electrical Symbols \* DC Sources \* DC Circuit Terminology \* Basic DC Circuit Calculations \* Voltage Polarity And Current Direction \* Kirchhoff's Laws \* DC Circuit Analysis \* DC Circuit Faults \* Inductance \* Capacitance \* Battery Terminology \* Battery Theory \* Battery Operations \* Types Of Batteries \* Battery Hazards \* DC Equipment Terminology \* DC Equipment Construction \* DC Generator Theory \* DC Generator Construction \* DC Motor Theory \* Types Of DC Motors \* DC Motor Operation \* AC Generation \* AC Generation Analysis \* Inductance \* Capacitance \* Impedance \* Resonance \* Power Triangle \* Three-Phase Circuits \* AC Generator Components \* AC Generator Theory \* AC Generator Operation \* Voltage Regulators \* AC Motor Theory \* AC Motor Types \* Transformer Theory \* Transformer Types \* Meter Movements \* Voltmeters \* Ammeters \* Ohm Meters \* Wattmeters \* Other Electrical Measuring Devices \* Test Equipment \* System Components And Protection Devices \* Circuit Breakers \* Motor Controllers \* Wiring Schemes And Grounding THERMODYNAMICS, HEAT TRANSFER AND FLUID FUNDAMENTALS. The Thermodynamics, Heat Transfer, and Fluid Flow Fundamentals Handbook includes information on thermodynamics and the properties of fluids; the three modes of heat transfer - conduction, convection, and radiation; and fluid flow, and the energy relationships in fluid systems. \* Thermodynamic Properties \* Temperature And Pressure Measurements \* Energy, Work, And Heat \*

Thermodynamic Systems And Processes \* Change Of Phase \* Property Diagrams And Steam Tables \* First Law Of Thermodynamics \* Second Law Of Thermodynamics \* Compression Processes \* Heat Transfer Terminology \* Conduction Heat Transfer \* Convection Heat Transfer \* Radiant Heat Transfer \* Heat Exchangers \* Boiling Heat Transfer \* Heat Generation \* Decay Heat \* Continuity Equation \* Laminar And Turbulent Flow \* Bernoulli's Equation \* Head Loss \* Natural Circulation \* Two-Phase Fluid Flow \* Centrifugal Pumps INSTRUMENTATION AND CONTROL. The Instrumentation and Control Fundamentals Handbook includes information on temperature, pressure, flow, and level detection systems; position indication systems; process control systems; and radiation detection principles. \* Resistance Temperature Detectors (Rtds) \* Thermocouples \* Functional Uses Of Temperature Detectors \* Temperature Detection Circuitry \* Pressure Detectors \* Pressure Detector Functional Uses \* Pressure Detection Circuitry \* Level Detectors \* Density Compensation \* Level Detection Circuitry \* Head Flow Meters \* Other Flow Meters \* Steam Flow Detection \* Flow Circuitry \* Synchro Equipment \* Switches \* Variable Output Devices \* Position Indication Circuitry \* Radiation Detection Terminology \* Radiation Types \* Gas-Filled Detector \* Detector Voltage \* Proportional Counter \* Proportional Counter Circuitry \* Ionization Chamber \* Compensated Ion Chamber \* Electroscope Ionization Chamber \* Geiger-Müller Detector \* Scintillation Counter \* Gamma Spectroscopy \* Miscellaneous Detectors \* Circuitry And Circuit Elements \* Source Range Nuclear Instrumentation \* Intermediate Range Nuclear Instrumentation \* Power Range Nuclear Instrumentation \* Principles Of Control Systems \* Control Loop Diagrams \* Two Position Control Systems \* Proportional Control Systems \* Reset (Integral) Control Systems \* Proportional Plus Reset Control Systems \* Proportional Plus Rate Control Systems \* Proportional-Integral-Derivative Control Systems \* Controllers \* Valve Actuators MATHEMATICS The Mathematics Fundamentals Handbook includes a review of introductory mathematics and the concepts and functional use of algebra, geometry, trigonometry, and calculus. Word problems, equations, calculations, and practical

exercises that require the use of each of the mathematical concepts are also presented. \* Calculator Operations \* Four Basic Arithmetic Operations \* Averages \* Fractions \* Decimals \* Signed Numbers \* Significant Digits \* Percentages \* Exponents \* Scientific Notation \* Radicals \* Algebraic Laws \* Linear Equations \* Quadratic Equations \* Simultaneous Equations \* Word Problems \* Graphing \* Slopes \* Interpolation And Extrapolation \* Basic Concepts Of Geometry \* Shapes And Figures Of Plane Geometry \* Solid Geometric Figures \* Pythagorean Theorem \* Trigonometric Functions \* Radians \* Statistics \* Imaginary And Complex Numbers \* Matrices And Determinants \* Calculus

CHEMISTRY The Chemistry Handbook includes information on the atomic structure of matter; chemical bonding; chemical equations; chemical interactions involved with corrosion processes; water chemistry control, including the principles of water treatment; the hazards of chemicals and gases, and basic gaseous diffusion processes. \* Characteristics Of Atoms \* The Periodic Table \* Chemical Bonding \* Chemical Equations \* Acids, Bases, Salts, And Ph \* Converters \* Corrosion Theory \* General Corrosion \* Crud And Galvanic Corrosion \* Specialized Corrosion \* Effects Of Radiation On Water Chemistry (Synthesis) \* Chemistry Parameters \* Purpose Of Water Treatment \* Water Treatment Processes \* Dissolved Gases, Suspended Solids, And Ph Control \* Water Purity \* Corrosives (Acids And Alkalies) \* Toxic Compound \* Compressed Gases \* Flammable And Combustible Liquids

ENGINEERING SYMBOLOGY. The Engineering Symbology, Prints, and Drawings Handbook includes information on engineering fluid drawings and prints; piping and instrument drawings; major symbols and conventions; electronic diagrams and schematics; logic circuits and diagrams; and fabrication, construction, and architectural drawings. \* Introduction To Print Reading \* Introduction To The Types Of Drawings, Views, And Perspectives \* Engineering Fluids Diagrams And Prints \* Reading Engineering P&IDs \* P&ID Print Reading Example \* Fluid Power P&IDs \* Electrical Diagrams And Schematics \* Electrical Wiring And Schematic Diagram Reading Examples \* Electronic Diagrams And Schematics \* Examples \* Engineering Logic Diagrams \* Truth Tables And

Exercises \* Engineering Fabrication, Construction, And Architectural Drawings \* Engineering Fabrication, Construction, And Architectural Drawing, Examples MATERIAL SCIENCE. The Material Science Handbook includes information on the structure and properties of metals, stress mechanisms in metals, failure modes, and the characteristics of metals that are commonly used in DOE nuclear facilities. \* Bonding \* Common Lattice Types \* Grain Structure And Boundary \* Polymorphism \* Alloys \* Imperfections In Metals \* Stress \* Strain \* Young's Modulus \* Stress-Strain Relationship \* Physical Properties \* Working Of Metals \* Corrosion \* Hydrogen Embrittlement \* Tritium/Material Compatibility \* Thermal Stress \* Pressurized Thermal Shock \* Brittle Fracture Mechanism \* Minimum Pressurization-Temperature Curves \* Heatup And Cooldown Rate Limits \* Properties Considered \* When Selecting Materials \* Fuel Materials \* Cladding And Reflectors \* Control Materials \* Shielding Materials \* Nuclear Reactor Core Problems \* Plant Material Problems \* Atomic Displacement Due To Irradiation \* Thermal And Displacement Spikes \* Due To Irradiation \* Effect Due To Neutron Capture \* Radiation Effects In Organic Compounds \* Reactor Use Of Aluminum MECHANICAL SCIENCE. The Mechanical Science Handbook includes information on diesel engines, heat exchangers, pumps, valves, and miscellaneous mechanical components. \* Diesel Engines \* Fundamentals Of The Diesel Cycle \* Diesel Engine Speed, Fuel Controls, And Protection \* Types Of Heat Exchangers \* Heat Exchanger Applications \* Centrifugal Pumps \* Centrifugal Pump Operation \* Positive Displacement Pumps \* Valve Functions And Basic Parts \* Types Of Valves \* Valve Actuators \* Air Compressors \* Hydraulics \* Boilers \* Cooling Towers \* Demineralizers \* Pressurizers \* Steam Traps \* Filters And Strainers NUCLEAR PHYSICS AND REACTOR THEORY. The Nuclear Physics and Reactor Theory Handbook includes information on atomic and nuclear physics; neutron characteristics; reactor theory and nuclear parameters; and the theory of reactor operation. \* Atomic Nature Of Matter \* Chart Of The Nuclides \* Mass Defect And Binding Energy \* Modes Of Radioactive Decay \* Radioactivity \* Neutron Interactions \* Nuclear Fission \* Energy Release

From Fission \* Interaction Of Radiation With Matter \* Neutron Sources \* Nuclear Cross Sections And Neutron Flux \* Reaction Rates \* Neutron Moderation \* Prompt And Delayed Neutrons \* Neutron Flux Spectrum \* Neutron Life Cycle \* Reactivity \* Reactivity Coefficients \* Neutron Poisons \* Xenon \* Samarium And Other Fission Product Poisons \* Control Rods \* Subcritical Multiplication \* Reactor Kinetics \* Reactor European Intellectual Property Law offers a full account of the main areas of substantive European intellectual property law - including the law of copyright and related rights, patents and plant variety rights, trademarks, design rights, and rights in data and information. Based on the 1995 edition of the American Concrete Institute Building Code, this text explains the theory and practice of reinforced concrete design in a systematic and clear fashion, with an abundance of step-by-step worked examples, illustrations, and photographs. The focus is on preparing students to make the many judgment decisions required in reinforced concrete design, and reflects the author's experience as both a teacher of reinforced concrete design and as a member of various code committees. This edition provides new, revised and expanded coverage of the following topics: core testing and durability; shrinkage and creep; bases the maximum steel ratio and the value of the factor on Appendix B of ACI318-95; composite concrete beams; strut-and-tie models; dapped ends and T-beam flanges. It also expands the discussion of STMs and adds new examples in SI units. Structures and Architecture - Bridging the Gap and Crossing Borders contains the lectures and papers presented at the Fourth International Conference on Structures and Architecture (ICSA2019) that was held in Lisbon, Portugal, in July 2019. It also contains a multimedia device with the full texts of the lectures presented at the conference, including the 5 keynote lectures, and almost 150 selected contributions. The contributions on creative and scientific aspects in the conception and construction of structures, on advanced technologies and on complex architectural and structural applications represent a fine blend of scientific, technical and practical novelties in both fields. ICSA2019 covered all major aspects of structures and architecture, including: building envelopes/façades; comprehension

of complex forms; computer and experimental methods; futuristic structures; concrete and masonry structures; educating architects and structural engineers; emerging technologies; glass structures; innovative architectural and structural design; lightweight and membrane structures; special structures; steel and composite structures; structural design challenges; tall buildings; the borderline between architecture and structural engineering; the history of the relationship between architects and structural engineers; the tectonic of architectural solutions; the use of new materials; timber structures, among others. This set of book and multimedia device is intended for a global readership of researchers and practitioners, including architects, structural and construction engineers, builders and building consultants, constructors, material suppliers and product manufacturers, and other professionals involved in the design and realization of architectural, structural and infrastructural projects. This self-contained book focuses on the safety assessment of existing structures subjected to multi-hazard scenarios through advanced numerical methods. Whereas the focus is on concrete dams and nuclear containment structures, the presented methodologies can also be applied to other large-scale ones. The authors explain how aging and shaking ultimately lead to cracking, and how these complexities are compounded by their random nature. Nonlinear (static and transient) finite element analysis is hence integrated with both earthquake engineering and probabilistic methods to ultimately derive capacity or fragility curves through a rigorous safety assessment. Expanding its focus beyond design aspects or the state of the practice (i.e., codes), this book is composed of seven sections: Fundamentals: theoretical coverage of solid mechanics, plasticity, fracture mechanics, creep, seismology, dynamic analysis, probability and statistics Damage: that can affect concrete structures, such as cracking of concrete, AAR, chloride ingress, and rebar corrosion, Finite Element: formulation for both linear and nonlinear analysis including stress, heat and fracture mechanics, Engineering Models: for soil/fluid-structure interaction, uncertainty quantification, probabilistic and random finite element analysis, machine learning, performance based earthquake engineering,

ground motion intensity measures, seismic hazard analysis, capacity/fragility functions and damage indices, Applications to dams through potential failure mode analyses, risk-informed decision making, deterministic and probabilistic examples, Applications to nuclear structures through modeling issues, aging management programs, critical review of some analyses, Other applications and case studies: massive RC structures and bridges, detailed assessment of a nuclear containment structure evaluation for license renewal. This book should inspire students, professionals and most importantly regulators to rigorously apply the most up to date scientific methods in the safety assessment of large concrete structures. Structural behavior of reinforced concrete elements strongly depends on the interaction between the reinforcing bars and the surrounding concrete, which is generally referred as “bond in concrete”. In service conditions, the reinforcement-to-concrete bond governs deformability through the tension stiffening of concrete surrounding the bar as well the crack development and crack width. At Ultimate Limit State, bond governs anchorage and lap splices behavior as well as structural ductility. When plain (smooth) bars were used, the steel-to-concrete bond was mainly associated with “chemical adhesion/friction” that is related to the surface roughness of the rebar. As steel strengths increased the need to enhance interaction between steel and the surrounding concrete was recognized, and square twisted rebars, indented rebars or, later on, ribbed rebars came into the market, the latter being the type of deformed bar most commonly adopted since the 1960/70s. When ribbed rebars became widely used, several research studies started worldwide for better understanding the interaction between ribs and the surrounding concrete. Researchers evidenced the development of micro-cracks (due to the wedge action of the ribs) towards the external face of the structural element. If confinement is provided by the concrete cover, by transverse reinforcement or by an external transverse pressure, the full-anchorage capacity is guaranteed and a pull-out failure occurs, with crushing of concrete between the ribs. On the contrary, with lesser confining action, a splitting failure of bond occurs; the latter may

provoke a brittle failure of the lap splice or, in some cases, of anchorages. However, after many years of research studies on bond-related topics, there are still several open issues. In fact, new materials entered into the market, as concrete with recycled aggregates or fibre reinforced concrete; the latter, having a kind of distributed reinforcement into the matrix (the fibres), provides a better confinement to the wedge action of the ribs. In addition, concrete and steel strength continuously increased over the years, causing changes in the bond behavior due to differences in mechanical properties of materials but also to the different concrete composition at the interface with the steel rebar causing a different bond behavior. Moreover, the lower water/cement ratio of these high-strength concrete makes the bleeding phenomena less evident, changing the concrete porosity in the upper layers of the structural element and thus making the current casting position parameters no-longer reliable. Finally, concrete with recycled aggregates are becoming more important in a market that is looking forward to a circular economy. As such, all the experimental results and database that allowed the calibration of bond rules now present in building codes for conventional concrete, may not be representative of these new types of materials nowadays adopted in practice. Furthermore, after more than 50 years of service life, structural elements may not satisfy the current safety requirements for several reasons, including material degradation (with particular reference to steel corrosion) or increased loads, by also considering the seismic actions that were non considered by building codes at the time of the original design. The structural assessment of existing structures requires proper conceptual models and new approaches for evaluating the reliability of existing structures by also considering the remaining expected service life. In addition, specific rules for older materials, as plain smooth bars, should be revised for a better assessment of old structures. Last, but not least, interventions in existing structures may require new technologies now available such as post-installed rebars. While many advances have been achieved, there remain areas where a better understanding of bond and its mechanisms are required, and

where further work is required to incorporate this understanding into safe and economic rules to guide construction and maintenance of existing infrastructures. These aspects were widely discussed within the technical community, particularly in the fib Task Group 2.5 and in the ACI 408 Committee dealing with bond and anchorage issues. Furthermore, special opportunities for discussing bond developments were represented by the International Conferences on 'Bond in Concrete' held each decade since 1982 as well as by joint workshops organized by fib TG2.5 and ACI 408. Within this technical collaboration, this Bulletin was conceived, and, thus, it collects selected papers presented at the joint fib-ACI Convention Session on Bond in Concrete held in Detroit (USA) in 2017. The bulletin is based on four main Sections concerning: - General aspects of bond - Anchorages and laps of bars and prestressing tendons - Bond under severe conditions - Degradation of bond for corrosion - Bond in new types of concrete The main aim of the Bulletin is to shed some new lights on the advances in understanding and application of bond related issues achieved over the last few years, and identify the challenges and priorities to be addressed in the next years. Another important aspect of the bulletin is to provide practical information from research findings. Introductory technical guidance for civil engineers and other professional engineers and construction managers interested in analysis and design criteria to mitigate natural hazards. Here is what is discussed: 1. CRITERIA AND GUIDELINES FOR EXTREME STRAIGHT-LINE WIND, TORNADO, AND HURRICANE DESIGN 2. CRITERIA AND GUIDELINES FOR FLOOD, SEICHE, AND TSUNAMI DESIGN 3. PROBABILISTIC FLOOD HAZARD ASSESSMENT AND DETERMINATION OF FLOOD DESIGN PARAMETERS 4. SSC DESIGN AND EVALUATION TO MITIGATE FLOOD-RELATED HAZARDS A Practical Course in Advanced Structural Design is written from the perspective of a practicing engineer, one with over 35 years of experience, now working in the academic world, who wishes to pass on lessons learned over the course of a structural engineering career. The book covers essential topics that will enable beginning structural engineers to gain an advanced understanding prior to entering the

workforce, as well as topics which may receive little or no attention in a typical undergraduate curriculum. For example, many new structural engineers are faced with issues regarding estimating collapse loadings during earthquakes and establishing fatigue requirements for cyclic loading - but are typically not taught the underlying methodologies for a full understanding. Features: Advanced practice-oriented guidance on structural building and bridge design in a single volume. Detailed treatment of earthquake ground motion from multiple specifications (ASCE 7-16, ASCE 4-16, ASCE 43-05, AASHTO). Details of calculations for the advanced student as well as the practicing structural engineer. Practical example problems and numerous photographs from the author's projects throughout. A Practical Course in Advanced Structural Design will serve as a useful text for graduate and upper-level undergraduate civil engineering students as well as practicing structural engineers. A comprehensive treatment of current fastening technology using inserts (anchor channels, headed stud), anchors (metal expansion anchor, undercut anchor, bonded anchor, concrete screw and plastic anchor) as well as power actuated fasteners in concrete. It describes in detail the fastening elements as well as their effects and load-bearing capacities in cracked and non-cracked concrete. It further focuses on corrosion behaviour, fire resistance and characteristics with earthquakes and shocks. It finishes off with the design of fastenings according to the European Technical Approval Guideline (ETAG 001), the Final Draft of the CEN Technical Specification 'Design of fastenings for use in concrete' and the American Standards ACI 318-05, Appendix D and ACI 349-01, Appendix B. Trust the best-selling Official Cert Guide series from Cisco Press to help you learn, prepare, and practice for exam success. They are built with the objective of providing assessment, review, and practice to help ensure you are fully prepared for your certification exam. CCNP Data Center Application Centric Infrastructure DCACI 300-620 Official Cert Guide presents you with an organized test-preparation routine using proven series elements and techniques. "Do I Know This Already?" quizzes open each chapter and enable you to decide how much time you need to spend on each section. Exam topic lists make



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Training, Practice Tests, and more Pearson Test Prep online system requirements: Browsers: Chrome version 40 and above; Firefox version 35 and above; Safari version 7; Internet Explorer 10, 11; Microsoft Edge; Opera. Devices: Desktop and laptop computers, tablets running on Android and iOS, smartphones with a minimum screen size of 4.7". Internet access required. Pearson Test Prep offline system requirements: Windows 10, Windows 8.1, Windows 7; Microsoft .NET Framework 4.5 Client; Pentium-class 1 GHz processor (or equivalent); 512 MB RAM; 650 MB disk space plus 50 MB for each downloaded practice exam; access to the Internet to register and download exam databases Also available from Cisco Press for CCNP Data Center DCACI study is the CCNP Data Center Application Centric Infrastructure DCACI 300-620 Official Cert Guide Premium Edition eBook and Practice Test. This digital-only certification preparation product combines an eBook with enhanced Pearson Test Prep Practice Test. This integrated learning package: \* Allows you to focus on individual topic areas or take complete, timed exams \* Includes direct links from each question to detailed tutorials to help you understand the concepts behind the questions \* Provides unique sets of exam-realistic practice questions \* Tracks your performance and provides feedback on a module-by-module basis, laying out a complete assessment of your knowledge to help you focus your study where it is needed most Prepared by the Task Committee on Wind-Induced Forces and Task Committee on Anchor Bolt Design of the Petrochemical Committee of the Energy Division of ASCE. This report presents state-of-the-practice set of guidelines for the determination of wind-induced forces and the design of anchor bolts for petrochemical facilities. Current codes and standards do not address many of the structures found in the petrochemical industry. As a result, engineers and petrochemical companies have independently developed procedures and techniques for handling engineering issues such as the two contained in this report. A lack of standardization in the industry has led to inconsistent structural reliability, however. This volume is intended for structural design engineers familiar with design of industrial-type structures. This two-volume set represents a collection of papers presented at the 18th

International Conference on Environmental Degradation of Materials in Nuclear Power Systems - Water Reactors. The purpose of this conference series is to foster an exchange of ideas about problems and their remedies in water-cooled nuclear power plants of today and the future. Contributions cover problems facing nickel-based alloys, stainless steels, pressure vessel and piping steels, zirconium alloys, and other alloys in water environments of relevance. Components covered include pressure boundary components, reactor vessels and internals, steam generators, fuel cladding, irradiated components, fuel storage containers, and balance of plant components and systems.

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