1. Record Nr. UNINA9911006506403321

Titolo	AASHTO guide specifications for LRFD seismic bridge design
Pubbl/distr/stampa	: American Association of State Highway and Transportation Officials (AASHTO)
Soggetti	Bridges - Design and construction - Specifications - United States Bridges - Earthquake effects Earthquake resistant design Structural analysis (Engineering) Earthquake hazard analysis Strains and stresses Elastic analysis (Engineering) Load factor design Soil-structure interaction Soil mechanics Shear strength of soils Shear flow Seismic waves - Damping Energy dissipation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	section 1. Introduction -- section 2. Definitions and notation -- section 3. General requirements -- section 4. Analysis and design requirements -- section 5. Analytical models and procedures -- section 6. Foundation and abutment design -- section 7. Structural steel components -- section 8. Reinforced concrete components -- References -- Appendix A: Foundation-rocking analysis -- Appendix B: Design flowcharts.
Sommario/riassunto	Covers seismic design for typical bridge types and applies to non-critical and non-essential bridges. Approved as an alternate to the

	seismic provisions in the AASHTO LRFD Bridge Design Specifications. Differs from the current procedures in the LRFD Specifications in the use of displacement-based design procedures, instead of the traditional force-based R-Factor method. Includes detailed guidance and commentary on earthquake-resisting elements and systems, global design strategies, demand modeling, capacity calculation, and liquefaction effects. Capacity design procedures underpin the Guide Specifications' methodology; includes prescriptive detailing for plastic hinging regions and design requirements for capacity protection of those elements that should not experience damage.--

2.

Record Nr.	UNINA9910965552703321
Autore	Cobb Harold M
Titolo	The history of stainless steel / / Harold M. Cobb
Pubbl/distr/stampa	Materials Park, Ohio, : ASM International, c2010
ISBN	9781523163601 1523163607 9781627083560 1627083561 9781615031382 1615031383
Edizione	[1st ed.]
Descrizione fisica	1 online resource (374 p.)
Disciplina	620.17
Soggetti	Stainless steel - History Stainless steel industry - History
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Contents -- List of Tables and Figures Tables -- Preface -- Acknowledgments -- Credits -- About the Author -- Introduction -- The Early Discoveries -- The Discovery of Chromium (1797) -- Michael Faraday Pioneers the Alloying of Steel (1820) -- Iron-Chromium Alloys and the Production of Ferrochromium (1821) -- Woods and Clark Describe an Acid- and Weather- Resistant Alloy (1872) -- Discoveries

in the 1890s -- The Discovery of Martensitic and Ferritic Chromium Stainless Steels (1904) -- The Discovery of the Chromium-Nickel Austenitic Stainless Steels (1906) -- The Discovery of Corrosion Resistance (1908) -- Another Important Ferritic Chromium Stainless Steel Is Discovered (1911) -- Discoveries of the Commercial Usefulness of Stainless Steel -- Usefulness of a Martensitic Chromium Stainless Steel Discovered in England and America (1911- 1912) -- Usefulness of Ferritic Chromium Stainless Steels Discovered in America (1911- 1914) -- Usefulness of Chromium-Nickel Stainless Steels Discovered in Germany (1912) -- Usefulness of Chromium-Silicon Steels -- The Great Stainless Steel Symposium (1924) -- Data on Stainless Steels Presented -- History and Patents -- An Iron-Chromium-Nickel Alloy -- Continuing Role of ASTM -- The Life of Harry Brearley (1871-1948) -- The Early Years -- Brearley Becomes Manager of Firth Brown Research Laboratories -- The Firth-Brearley Stainless Steel Syndicate -- The American Stainless Steel Company (1918-1936) -- Brearley's Later Years -- The Early Books and Papers on Stainless Steel (1917- 1949) -- Paper by Dr. W.H. Hatfield (1917) -- Paper on Stellite and Stainless Steel by Elwood Haynes (1920) -- Stainless Steel Paper by Marble (1920) -- Firth-Sterling Steel Company Trade Publication (1923) -- Paper on Cutlery Stainless Steel by Owen K. Parmiter (1924).
Stainless Iron and Steel by John Henry Gill Monypenny (1926) -- The Book of Stainless Steels (1933 and 1935) -- Stainless Steels by Carl Andrew Zapffe (1949) -- Appendix: Text of 1920 Paper by W. H. Marble -- The Chrysler Building (1930) The Miracle on 42nd Street -- The First Skyscrapers -- Nirosta (18-8) Stainless Steel -- The Groundbreaking and Race -- Opening Ceremonies -- Van Alen's Vision -- The Exterior -- Edward G. Budd (1870- 1946), Inventor and Entrepreneur -- The Early Years -- The Automobile Body Business -- A New Kind of Stainless Steel Arrives in America -- Earl Ragsdale's Shot Weld Patent -- The World's First Stainless Steel Airplane- The Pioneer -- The World's First Stainless Steel Rubber-Tired Train -- The Burlington Zephyr -- The Flying Yankee -- The Mark Twain Zephyr -- Transit and Trucking -- The War Years -- The Postwar Years -- A Review of the Budd Era -- The Gateway Arch -- History of Stainless Steel Melting and Refining -- The Wild Process -- The Rustless Process -- The Linde Argon-Oxygen Decarburization (AOD) Process -- Two New Classes of Stainless Steel -- Duplex Stainless Steel -- Precipitation-Hardening Steel -- Stainless Steel Applications -- Household Products -- Food Handling -- Architecture -- Aircraft -- Automobiles -- Trains -- Canada restores a Fleet of Stainless Steel railcars -- The Plummer Classification System of Trade Names -- The Unified Numbering System (UNS) for Metals and Alloys -- The Stainless Steel Numbering System -- The Naming and Numbering of Stainless Steels -- Early Classes of Stainless Steel -- Stainless Steel Trade Names -- Standardization -- Stainless Steel Bibliography -- A Stainless Steel Timeline -- Index.

Sommario/riassunto

The History of Stainless Steel provides a fascinating glimpse into a vital material that we may take for granted today. Stainless steel, called "the miracle metal" and "the crowning achievement of metallurgy" by the prominent metallurgist Carl Zapffe, is a material marvel with an equally fascinating history of people, places, and technology. As stainless steel nears the hundredth anniversary of its discovery, The History of Stainless Steel by Harold Cobb is a fitting perspective on a vital material of our modern life. Aptly called the miracle metal by the renowned metallurgist Carl Zapffe, stainless steel is not only a metallurgical marvel, but its history provides an equally fascinating story of curiosity,

competitive persistence, and entrepreneurial spirit. The History of Stainless Steel is the world's first book that captures the unfolding excitement and innovations of stainless steel pioneers and entrepreneurs. Many new insights are given into the work of famous pioneers like Harry Brearley, Elwood Haynes, and Benno Strauss, including significant technical contributions of lesser known figures like William Krivsky. This fascinating history of stainless steel exemplifies the great push of progress in the 20th Century. From the stainless steel cutlery of Brearley in 1913, stainless steel burst on the modern scene in many tangible ways. Excerpted text by William Van Alen, architect of the Chrysler Building, describes the early architectural use of stainless steel. Another historic application of stainless steel is the revolution in rail travel by the Edward G. Budd Company, which built the first light-weight stainless steel passenger trains-with an astounding 90% reduction in fuel costs. This remains recognized today as one of the technological marvels of the modern world. Harold Cobb, a metallurgist who has spent much of his career in the stainless steel industry, uncovers many interesting stories and insights, including a special perspective on the prominent role of stainless steel in the activities of emerging technical societies such as the American Society for Metals and the American Society for Testing and Materials. Amply illustrated and with a 78-page timeline, this publication truly evokes the inspirations created by and from stainless steel.