

1. Record Nr.	UNINA9910554847903321
Autore	Mazzoni Omar S.
Titolo	Electrical systems for nuclear power plants / / Omar S. Mazzoni
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons [Piscatawny, NJ] : , : IEEE Press, , 2018 [Piscataqay, New Jersey] : , : IEEE Xplore, , [2019]
ISBN	1-119-48367-0 1-119-48368-9 1-119-48365-4
Descrizione fisica	1 online resource (259 pages)
Disciplina	621.483
Soggetti	Nuclear power plants - Electric equipment Nuclear power plants - Power supply
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Elements of a power system -- Nuclear power plants, general information -- Special regulations and requirements -- Unique requirements : class 1E power system -- Nuclear plants containment electrical penetration assemblies -- On-site emergency AC source -- On-site emergency DC source -- Protective relaying -- Interface of the nuclear plant with the grid -- Station blackout (SBO) : issues and regulations -- Review of electric power calculations -- Plant life : equipment aging, life extension, and decommissioning -- Electrical and control systems inspections.
Sommario/riassunto	Covers all aspects of electrical systems for nuclear power plants written by an authority in the field Based on author Omar Mazzoni's notes for a graduate level course he taught in Electrical Engineering, this book discusses all aspects of electrical systems for nuclear power plants, making reference to IEEE nuclear standards and regulatory documents. It covers such important topics as the requirements for equipment qualification, acceptance testing, periodic surveillance, and operational issues. It also provides excellent guidance for students in understanding the basis of nuclear plant electrical systems, the industry standards that are applicable, and the Nuclear Regulatory

Commission' rules for designing and operating nuclear plants.' Electrical Systems for Nuclear Power Plants offers in-depth chapters covering: elements of a power system; special regulations and requirements; unique requirements of a Class 1E power system; nuclear plants containment electrical penetration assemblies; on-site emergency AC sources; on-site emergency DC sources; protective relaying; interface of the nuclear plant with the grid; station blackout (SBO) issues and regulations; review of electric power calculations; equipment aging and decommissioning; and electrical and control systems inspections. This valuable resource: -Evaluates industry standards and their relationship to federal regulations -Discusses Class 1E equipment, emergency generation, the single failure criterion, plant life, and plant inspection -Includes exercise problems for each chapter Electrical Systems for Nuclear Power Plants is an ideal text for instructors and students in electrical power courses, as well as for engineers active in operating nuclear power plants.
