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Titolo	Corrosion of Constructional Steels in Marine and Industrial Environment [[electronic resource]] : Frontier Work in Atmospheric Corrosion // by Jayanta Kumar Saha
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Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (187 p.)
Collana	Engineering Materials, , 1612-1317
Disciplina	620.11223
Soggetti	Structural materials Chemical engineering Electrochemistry Structural Materials Industrial Chemistry/Chemical Engineering
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Theoretical Evidences -- Practical Approach -- Experimental Evidence -- Analysis.
Sommario/riassunto	The book entails investigative methods for better understanding of the degradation process and uses of high performance paints formulation and also compares them on mild steel (MS) and weathering steel (WS) through various AC/DC electrochemical test methods and surface characterization through electron microscopy, XRD and Raman spectroscopy. This book also deals with the corrosion studies undertaken considering three phases (solid, liquid and gas) with latest techniques and the emphasis has also been given on degradation of materials due to atmospheric corrosion as this is of immense interest to present engineers and researchers. MS has got versatile application as structural steel for construction of buildings, bridges, flyovers, pipelines etc. But this is very much prone to corrosion in industrial and marine environments in presence of harmful pollutants and other industrial effluents in addition to normal humid atmosphere. These

corrosion problems are much severe in a tropical country like India with vast coastline. MS corrodes relatively faster and thus leads to colossal loss in every year and to reduce this loss some kind of protection in the form of paints and coatings is always used. Painting is an effective means but quite costly amounting 10-15% of the initial construction cost of superstructures besides cost of repainting at regular interval.
