1. Record Nr. UNINA9910788083903321 **Titolo** Crude oil fouling: deposit characterization, measurements, and modeling / / edited by Francesco Coletti, Geoffrey Hewitt; contributors Dr. John Chew [and eighteen others] Waltham, Massachusetts:.: GPP., 2015 Pubbl/distr/stampa ©2015 **ISBN** 0-12-810259-4 0-12-801359-1 Edizione [1st edition] Descrizione fisica 1 online resource (385 p.) Disciplina 553.2/82 Soggetti Petroleum products - Analysis Petroleum - Refining - Simulation methods Contamination (Technology) - Measurement Fouling - Simulation methods Heavy oil - Simulation methods Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front Cover; CRUDE OIL FOULING; Copyright; CONTENTS; LIST OF CONTRIBUTORS; PREFACE; NOMENCLATURE; ROMANS; GREEK; SUBSCRIPTS: SUPERSCRIPTS: ABBREVIATIONS: Chapter One -Introduction; 1.1 CRUDE DISTILLATION UNITS IN OIL REFINERIES; 1.2 IMPACT OF FOULING ON CRUDE DISTILLATION UNITS; 1.3 CONCLUDING REMARKS: Chapter Two - Basic Science of the Fouling Process; 2.1 FOULING MECHANISMS: 2.2 ROUTES TO CRUDE OIL FOULING FORMATION; 2.3 EVENTS IN CRUDE OIL FOULING; 2.4 VARIABLES AFFECTING FOULING: 2.5 CONCLUSIONS: Chapter Three - Experimental Generation of Fouling Deposits 3.1 SMALL SCALE, ACCELERATED CONDITIONS: MICROBOMB FOULING TESTS3.2 BATCH SYSTEM: STIRRED CELL AT THE UNIVERSITY OF BATH; 3.3 LARGE-SCALE EXPERIMENTS IN FLOW SYSTEMS; Chapter Four -Deposit Characterization and Measurements; 4.1 ANALYSIS OF FIELD FOULING DEPOSITS FROM CRUDE HEAT EXCHANGERS; 4.2 CHEMICAL

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Sommario/riassunto

With production from unconventional rigs continuing to escalate and refineries grappling with the challenges of shale and heavier oil feedstocks, petroleum engineers and refinery managers must ensure that equipment used with today's crude oil is protected from fouling deposits Crude Oil Fouling addresses this overarching challenge for the petroleum community with clear explanations on what causes fouling, current models and new approaches to evaluate and study the formation of deposits, and how today's models could be applied from lab experiment to onsite field usability for not just the refi