CONTENT

Prefac	be and the second se	ix
	OVERVIEW	
1.	Philosophical Overview of Testing	2
2.	Advantages, Possibilities, and Limitations of Small-Scale Testing of Catalysts for Fixed-Bec	
	Processes	6
3.	Evaluating Pore Structure and Morphology of Hydrocarbon-Conversion Catalysts	42
	CATALYST DEACTIVATION BY COKE	
4.	Deactivation of Zeolite Catalysts by Coke	62
5.	Modes of Coking and Deactivation of Acid Zeolite Catalysts	77
6.	Catalyst Coking Activation, and Deactivation	91
7.	NMR Techniques for Studying the Coking of Zeolite-Based Catalysts	99
8.	Characterization of Fluid catalytic Cracking Catalyst Coke by ¹³ C NMR and Mass	
	Spectrometry	117
	DEACTIVATION OF FLUID CATALYTIC CRACKING	
	CATALYSTS	
9. 10.	Catalyst Decay as a Side Reaction of the Chain Processes of Catalytic Cracking Catalyst Deactivation in Fluid Catalytic Cracking : A review of Mechanisms and Testing	134
	Methods	147
11.	Sodium Deactivation of Fluid Catalytic Cracking Catalyst	159
12.	Contaminant-Metal Deactivation and Metal-Dehydrogenation Effects During Cyclic	
	Propylene Steaming of Fluid Catalytic Cracking Catalysts	171
	DEACTIVATION OF REFORMING CATALYSTS	
13.	Catalyst Deactivation in Adiabatic Prereforming : Experimental Methods and Models for	
	Prediction of Performance	186
14.	Mechanism of Deactivation in Reforming Catalysts at Start of Run	201
	DEACTIVATION OF HYDROPROCESSING CATALYSTS	
15.	Catalysts Deactivation in Commercial Residue Hydrodesulfurization	208
16.	Deactivation of Light Naphtha Aromatization Catalyst	219
17.	Effect of Process Conditions and Catalyst properties on Catalyst Deactivation in Residue	
	HydroProcessing	229
18.	Catalyst Deactivation in Hydrodemetallization	238
	TESTING OF CATALYST PERFORMANCE	
19.	Activity and Coking Rate of Catalysts Deactivated by Fast-Coking Species Added to the	
	Feed	254
20.	Pilot Reactor Testing of the Effect of Naphtha Boiling Point in Catalytic Reforming	268
21.	Vanadium Mobility in Fluid Catalytic Cracking	283
22.	Improved Methods for Testing and Assessing Deactivation from vanadium Interaction with	
	Fluid Catalytic Cracking Catalyst	296
23.	Riser Simulator : Testing of Adsorption Effects	312
24.	Developments of a Bench-Scale Fluid Catalytic Cracking Microriser	322
25.	Evaluation of Coke Selectivity of Fluid Catalytic Cracking	340
26.	Correlation of Catalyst Performance Between Laboratory Tests and Commercial Units for	251
27	nyuroureaning Kesiauai Oli Lifa Tasting of Light Hydrogenhon Aromatization Catalysts	334 267
∠1. 28	Derformance Testing of Hydroconversion Catalysts	30/
20.	renomance resultg of fryuloconversion caldiysts	517

29.	Development of a Test Procedure to Evaluate Fluid Catalytic Cracking Catalyst Regenerability	401
	MODELING OF CATALYST PERFORMANCE	
30.	A Catalyst Deactivation Model for Residual Oil Hydrodesulfurization and Application to	
	Deep Hydrodesulfurization of Diesel Fuel	414
31.	Modeling Catalytic Deactivation of Benzene Hydrogenation	428
	INDEX	
Autho	Author Index	
Affilia	Affiliation Index	
Subje	Subject Index	