662.66 RAP 2nd ed.

CONTENTS

Preface to the second edition		1
СНАР	TER	
I.	Basic reactions of hydrogenation and heir thermodynamic probability	3
II.	Hydrogenation of individual compounds	11
III.	The mechanism of solid fuel hydrogenation evaluating the suitability of	
	coals for hydrogenation	37
IV.	Evaluating the suitability of coals for hydrogenation	53
V.	Flowsheet of coal Hydrogenation	59
VI.	Preparation of the raw material for hydrogenation	62
VII.	Catalysts for the hydrogenation process	72
VIII.	Liquid-Phase Hydrogenation	91
IX.	Vapor-Phase hydrogenation of middle oil	150
Х.	Material Balances for various systems of coal hydrogenation	179
XI.	Basic schemes for hydrogenation of tars, various crude residues and other liquid feed	s 187
XII.	Characteristics of Various hydrogenation products.	203
XIII.	Reaction heat of hydrogenation	215
XIV.	Gases from hydrogenation hydrogen used for hydrogenation	220
XV.	Hydrogenation as a method for Re-Fining and desulfuration of Gasolines	227
XVI.	Aromatization of gasolines	231
XVII.	Production of high-Octane additives	251
XVII.	The Importance of carbon monoxide for synthesis processes	259
XIX.	The mechanism of hydrocarbon synthesis	264
XX.	Catalysts for hydrocarbon synthesis	282
XXI.	Alternative courses of syntheses	316
XXII.	Reaction of alkenes with a mixture of carbon monoxide and hydrogen	330
XXIII	Principal methods of hydrocarbon synthesis	335
XXIV	7. Purification of synthesis gas	349
XXV	7. Hydrocarbon synthesis	364
XXV	I. Synthesis products and their treatment	387
XXVI	I. Synthesis processes	410