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4 Thermoanalytical investigations on petroleum and petroleum products  
4.1 Crude oils (degasified crudes); 4.2 Refinery residues; 4.2.1 Description and characterization of the samples; 4.2.2 Implementation and evaluation of tests; 4.2.2.1 Deviations in thermogravimetry; 4.2.3 Thermogravimetry in an inert atmosphere; 4.2.3.1 Directly measured index numbers; 4.2.3.2 Derived index numbers; 4.2.3.3 Simulated distillation; 4.2.3.4 Directly measured index numbers in comparison with the simulated distillation; 4.2.3.5 Derived index numbers for practical application; 4.2.4 Thermogravimetry in air  
4.2.4.1 Directly measured index numbers  
4.2.5 Correlations of analytical data with index numbers from thermogravimetry; 4.2.6 Simulated thermal cracking by TGA; 4.2.6.1 Index numbers from simulated cracking; 4.2.6.2 Correlation of index numbers from simulated cracking with analytical data; 4.2.7 Start temperature of the cracking process in an inert atmosphere; 4.2.8 Differential scanning calorimetry (DSC); 4.2.8.1 Experiments in argon at atmospheric pressure; 4.2.8.2 Experiments in methane at 10 bar pressure; 4.2.8.2.1 Reaction enthalpy from tests at 10 bar pressure  
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4.3.2.1.2 Correlation index numbers with analysis data

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Sommario/riassunto

This exceptional book reveals the results of twelve years of extensive thermoanalytical investigations into petroleum and its products with the aid of 236 tables, 284 diagrams and 159 references. Firstly, the methods employed in obtaining thermoanalytical data, in particular thermogravimetry, differential thermal analysis and differential scanning calorimetry, are presented, and the underpinning theory described. Next, the data obtained from model substances, i.e. pure hydrocarbons, is displayed; it is then explained how multicomponent hydrocarbon systems may be characterized by comparison

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