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References; Chapter 5 Fuel Additives; 5.1 Consumption of Additives (Demands); 5.2 Engine Deposits and Their Control; 5.2.1 Deposits in Gasoline Engines; 5.2.2 Deposit Control Additives (Detergent Dispersants); 5.2.3 Deposits and Their Control in Diesel Engines; 5.2.4 Detergent Additives and Exhaust Emissions; 5.2.5 Tests for DD Additives in Engines; 5.2.6 Advantages of Using DD Additives in Fuels 5.3 Antiknock Additives (Octane Number Improvers)5.3.1 "knocking"; 5.3.2 Octane number; 5.3.3 Octane Number Improver Additives; 5.4 Cetane Number Improver; 5.4.1 Cetane Number Improver additives; 5.4.2 Cetane Number Measurement; 5.4.3 Cetane Index; 5.5 Fuel Antioxidants (Stabilizers); 5.5.1 Increasing Storage Stability; 5.5.2 Oxidation of Fuels; 5.5.3 Chemical Mechanism of Antioxidants; 5.5.4 Types of Antioxidants; 5.6 Metal Deactivators/Passivators; 5.7 Corrosion Inhibitors; 5.7.1 Mechanism of Rusting/Corrosion; 5.7.2 Anticorrosion Compounds; 5.8 Antistatic Agents; 5.9 Lubricity Improvers 5.10 Friction Modifiers5.11 Dehazer and Demulsifiers; 5.12 Combustion Improvers; 5.12.1 Conventional Approaches; 5.12.2 Unconventional Approaches; 5.13 Flow Improvers and Paraffin Dispersants of Fuels; 5.13.1 Characteristics of Middle Distillate Fuel at Low Temperatures; 5.13.2 Pour Point Depressants; 5.13.3 Flow Improver Additives; 5.13.4 Paraffin Dispersants; 5.13.5 Distillate Operability Test (DOT Test); 5.14 Drag Reducers; 5.15 Anti-icing Additives; 5.16 Antifoam Additives; 5.17 Biocides; 5.18 Coloring Matters and Markers; 5.19 Additive Compositions; References Chapter 6 Blending of Fuels

Sommario/riassunto

Covering the chemical structures and properties of fuels and fuel additives, Fuels and Fuels-Additives provides the science and technology involved in the production of energy efficient and environmentally friendly fuels and the role that fuel additives have in this process. This single source guide on fuels and fuel additives contains the most up-to-date coverage and requirements of the fuels including US and EU standards in automotive emissions, fuel quality and specifications, alternate fuels, biofuels, antioxidants, stabilizers and corrosion inhibitors, and polymeric fuel additives.
