

Preface

Fuels occupy one of the main places in the history of modern mankind. More than ever today it is impossible to imagine our life without fuels. You drive your car, fly by airplane, travel by ship, and warm your house using different fuels. In this book, we will talk only about liquid fuels producing from *petroleum products* (called also *distillates* or *refined products*), such as *liquefied petroleum gas* (LPG), *naphtha*, *gasoline*, *kerosene (jet fuel)*, *gas oil (diesel fuel)*, and *fuel oil* and corrosion in them. All these petroleum products are obtained from *crude oil*. We will also discuss corrosion in liquid *biofuels* which began occupy essential place in supply of energy and heat in many countries.

Metallic constructions for transportation and storage of crude oil, petroleum products and biofuels are made mainly from carbon steel. In spite of removing most corrosive species from fuels the paradox is that metallic constructions contacting with them are being damaged. Different polymeric and composite materials contact fuels. On the one hand, materials can deteriorate fuels. On the other hand, fuels can worsen important functional properties of materials. Therefore we will discuss metallic, polymeric and composite materials including organic coatings which also can contact fuels. Resistance of all these materials to fuels is very important in preserving both environment and fuels from deterioration. These problems can be sum up as following questions:

Why are crude oils, petroleum products, fuels and biofuels aggressive to metals, alloys and polymeric materials? Which corrosion control and monitoring methods are used in order to prevent corrosion failures in systems for transportation and storage petroleum products?

In this book, I summarized experience based on my long practical and research work, as well numerous literature data which are collected and analysed.

Thus I invite you to the marvelous world of liquid fuels, their aggressiveness, corrosion control and monitoring methods.

Corrosion in Systems for Storage and Transportation of
Petroleum Products and Biofuels

Identification, Monitoring and Solutions

Groysman, A.

2014, XIX, 297 p. 75 illus., 25 illus. in color., Hardcover

ISBN: 978-94-007-7883-2