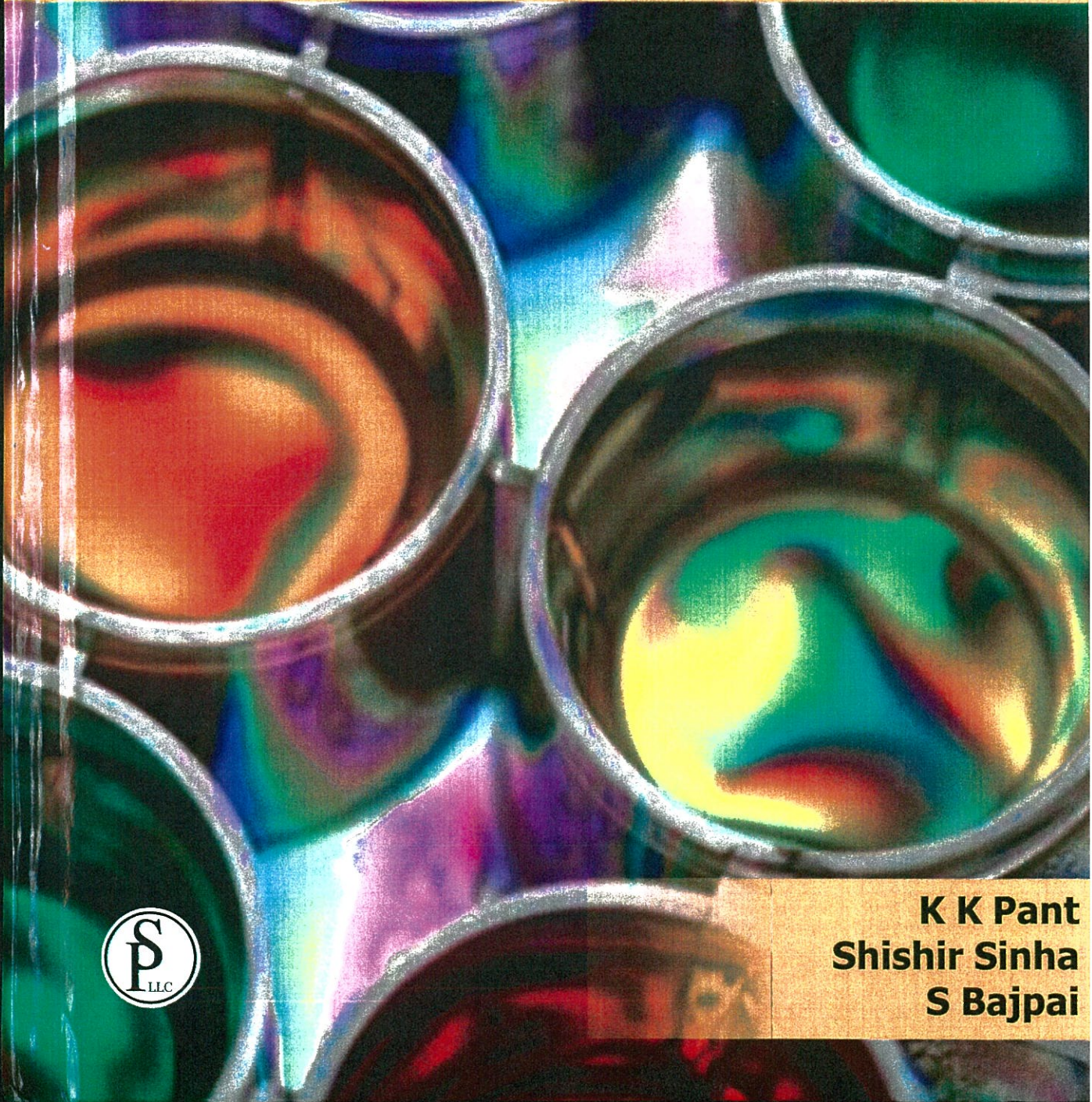


Advances In
PETROLEUM ENGINEERING II
PETROCHEMICAL



K K Pant
Shishir Sinha
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Chemical Technology Series

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Integration of Polymeric-base Wastes into Petroleum Refineries

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ABSTRACT

The continuous growth of world population along with increasing needs to improve life quality of societies and their dependence on fuel and other derived petroleum products suggest that the overall energy demand will increase significantly in the future. This chapter focuses the production of liquid fuels by pyrolysis applied to rubber tyre and different plastic wastes as an option for integration in the refining process. The advantage is that pyrolysis of polymeric-base wastes tends to reverse the polymerization process used in the production of polymers at moderate conditions of temperature and pressure. The liquids obtained depend upon the polymeric blend. Product yields could lead to liquids similar to petroleum derived fuels as well as chemical feedstocks suitable to a wide range of industries. Considering that it is innovative the integration of polymeric-base wastes streams in petroleum refineries, a more detailed analysis on issues related to retrofitting will be presented.

Key words: Pyrolysis, Liquid fuel, Petroleum refining process, Polymeric wastes

INTRODUCTION

At the advent of the new century, world global economy continues to be much dependent on petroleum. Petroleum resources are used to provide fuels for a

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