

Study and Appropriate Analysis of Waste Tyre Carbon Black

Sumit Ganguly, Divyanshu Kumar, Dinesh Mandal, Md. Naushad Ansari,
Sonu Kumar, Ajay Kr Singh and Santanu Pal

Department of Mechanical Engineering
K. K. Polytechnic, Dhanbad, India

Abstract: *The amount of trash tires being disposed of is growing exponentially every day. In addition to taking up a significant quantity of precious ground, this waste tire poses a risk of a fire. An estimated 1.5 billion trash tires are produced annually worldwide, with China and India accounting for 41% of this total. Thermally reprocessing the tires into useful goods like activated carbon, various solid carbon forms (carbon black, graphite, and carbon fibers), and liquid fuels is a better way to use them more efficiently from an economic and environmental perspective. Pyrolysis is one of the heat processes that can turn used tires into solid, gas, or oil. With some quality enhancements, such as the removal of ash and sulfur, a solid product, for example, can be used as carbon black. Its use in a variety of goods is restricted by its high ash concentration. Numerous additives from the original tire contaminated the pyrolytic carbon black (CB) that was produced. Chemical reactions that took place in the pyrolysis reactor also produced contaminants. In order to maximize the benefits of activated carbon, we must separate the metal content from the carbon black that is produced by pyrolyzing waste tires*

Keywords: pyrolytic carbon black