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PROCESS OF TREATING CRACKED HYDROCARBONS.

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This invention relates to improvements in process of treating cracked hydrocarbons, and refers more particularly to an improvement in the usual method of treating cracked pressure distillate or cracked gasolene, the invention being more particularly directed to facilitate the removal of the sulphur compounds.

In treating cracked pressure distillate or end point gasolene, one of the usual practices is to treat with sulphuric acid, caustic, or sodium plumbite. After this chemical treatment, the oil is usually redistilled with steam to a finished marketable gasolene passing the doctor test and the corrosion test.

It is understood that the foregoing method is merely illustrative of the usual method of treating the products in question. We have discovered that a more effective removal of the sulphur compounds may be obtained by substituting in whole or in part for the sulphuric acid a solution of copper sulphate in sulphuric acid; for example, copper sulphate in various concentrations of sulphuric acid solutions, although in most cases a less quantity of copper sulphate relative to sulphuric acid may be used, because it is a better refining agent under the conditions of treating cracked products containing sulphur than is the sulphuric acid alone.

The subjecting of distillate to the simultaneous action of sulphuric acid and copper sulphate gives the doubly beneficial effects of refining with the acid as well as with the copper sulphate and sulphuric acid solution. It is recognized that a relatively small amount of copper sulphate will be dissolved in concentrated sulphuric acids, but there is a solution equilibrium between the sulphuric acids and the copper sulphate, the solubility increasing with dilution of the sulphuric acids.

The other refining agents usually made use of in connection with the refining of light distillates such as alkalies, water and absorbent earth may be used. It is of course, recognized, that the use of these other reagents is old, and it is understood that the chief purpose of this invention is to claim the use of copper sulphate in sulphuric acid solution as a step in the refining of these oils.

We have found that with some cracked products containing sulphur compounds, as for example, that of the California cracked oils, approximately 0.3 pounds per barrel of copper sulphate will desulphurize these cracked products so that they pass the commercial tests of doctor and corrosion.

We claim as our invention:

1. A step in a process for treating cracked products containing sulphur compounds, comprising agitating the oil in the presence of copper sulphate in sulphuric acid solution.

2. A step in a process for treating a cracked hydrocarbon distillate containing sulphur compounds comprising introducing to the distillate a sulphuric acid solution containing copper sulphate and agitating the distillate, the copper sulphate present being substantially .3 pounds per barrel of distillate treated.

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