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SUBJECT : CABLE OILS

REFERENCE :

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As preliminary consideration has been given to Texas City alkylate as possible oil for cables and as I have not seen clear definition of the cable oil market, I sought to better understand this.

This is simplified by the fact that most cable oil is supplied by only two companies, namely Sun Oil Company and Mobil. Each supplies a distinctly different segment of the cable oil market.

As Monsanto's Texas City materials are the low viscosity type oils, it seems well to point out that this type oil relates to the small portion (by far) of the cable oil market, e.g.

168,000 gal./yr. low vis. oil vs. 1 to 2 million gal./yr. high vis. oils.

Sun Oil Co.

Sun supplies most of the high viscosity oils at about 70¢/gal.

a) 2,000 to 3,000 sec. viscosity oil

This is used by the cable maker to impregnate the paper insulation of the high pressure (up to 300 psi) and high voltage (350 KV) type cables called the pipe type. Sun's product for impregnating the paper is called Sun XX.

b) 750-800 sec. viscosity oil

This product, called Sun #6 Oil is documented as ASTM D1819. It is used to fill the cable pipe into which the above described cable has been inserted.

The market need for these two Sun Oil Co. products is quite large at one to two million gallons per year.

Additionally quite small amounts of Sun #6 Oil are used to impregnate some DC energy storage capacitors.

Mobil Oil Co.

Mobil supplies most of the low viscosity cable oils which are priced in the 50¢ to 70¢/gallon range.

a) Mobilect A

This 100 sec. viscosity oil is used at a level of about 168,000 gallons (4,000 barrels) per year to insulate and cool the lead sheath type cables. These are low pressure 15 psi and low voltage type cables. The market for this type cable oil which is documented as ASTM D1818 is relatively small. This is where our Texas City type alkylate would appear to fit.

General Electric Co. Type 5314A Material

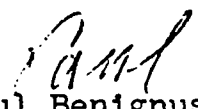
This is the same Mobilect A purchased by G.E. at Lynchburgh, Va. and in quite small amounts at Hudson Falls for certain DC capacitors.

Mobil told G.E. that they will provide only 2 years stock (this amounts to relatively little storage for an oil company) and may discontinue supply on 2 years notice.

The problem here (again) is that these are acid refined oils with questionable future due to environmental contaminants generated during manufacture.

This is why G.E.'s capacitor people continue to ask whether we have a replacement for mineral oil in a limited use market.

The foregoing gives a much better idea than previous writings I have seen about the cable oil market. This now appears simple, clear and easy to understand. Thought you would like to have this picture, as given me directly by the people who serve this cable oil market.


Paul Benignus

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