MONSANTO EUROPE

PLASTICIZERS AND SPECIALTY CHEMICALS GROUP

TECHNICAL SERVICE DEPARTMENT

LOUVAIN-LA-NEUVE

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TELEPHONE CALL REPORT

Dr Shen

of B.I.C.C., Wood Lane, London (01.743.1212).

Subject : Capacitor Impregnation Fluids

I called Dr Shen to ask if he had had an opportunity to assess the fluids MCS 1889 and MCS 1972. Apparently nothing significant has been done, since he is still waiting for more information on these fluids. I said that I would let him have brief details of physical properties and chemical nature of these products. He is also interested in having some data sheets on Santicizers 160 and 261 and samples.

B.I.C.C.'s interest is primarily in fluids for power-factor correction capacitors. He confirmed that DOP alone does not seem to be satisfactory functionally, partly because the viscosity is too high at lower temperatures and partly because of hydrolytic instability. To overcome the former, blends of DOP with trichlorobenzene have been tried and various additives used in attempts to stabilize the system. Esters with higher D.K. than DOP would be interesting in permitting greater flexibility in blending fluids. Cost is important and DOP seems to be setting the standard.

He commented that the neo-caprate esters are of interest because they have good hydrolytic stability. At present however, they are too expensive and do not have good viscosity characteristics.

Ideally they are looking for fluids with high D.K., low viscosity and low volatility, good thermal and hydrolytic stability. The relationship between D.K. and cost is not easy to assess, since unlike in motor-run capacitors, a higher D.K. does not result in a significantly smaller unit. The advantage of higher D.K. is that it gives more latitude in design for high voltage operation.

Dr Shen confirmed that in Europe most ballast and motor-run capacitors are now based metallized film designs without impregnation.

H.A. Vodden

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