C.R. COLEMAN - RUABON.

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W.A. VODDEN - RUABON.

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Subject: Electrical Fluids MTS.

P.G. Benignus, St. Louis.
P.J.A. Marsh, Brussels.
W.R. Richard, St. Louis.

T3A (1) cc R Munch
(2) For Monthly Summary Details

Visited Brown-Boveri, Baden on 17th May for a discussion on the possibility of using Pyroclor in large transformers. They have a study group for long term projects which is considering this. Their main concern is the possibility of achieving low losses in askarel impregnated cellulosic insulation, if necessary by continuous circulation of the askarel through a purification column. They were not particularly worred about low impulse strength in asymmetric fields, although I did mention this aspect, using published data. They were not worried about the flammability of arc-formed gasses of some askarel blends.

In Yugoslavia I visited EI Nis, who are running late in the installation of their new capacitor plant. Their questions dealt with the use of mixtures of Aroclor 1248 with 1242 to use up existing stocks.

Also visited MINEL in Belgrade for a discussion on capacitors and transformers. They require a sample of Aroclor containing epoxy additive as soon as possible. On transformers, their questions were mainly on test methods but they would also welcome information on the use of askarel transformers in mines. We then made a joint visit to the Nikola Tesla Elektrotechnical Institute who have the responsibility of approving the askarel transformers made by MINEL. They drew my attention to high values of power factor on drums of Pyroclor sampled at MINEL. They are going to repeat these tests.

Also in Yugoslavia, visited Energoinvest who have expressed interest in constructing Pyroclor transformers. They already have a very large French regeneration plant for Pyralene which has not been used for several years and wanted assurance that it was suitable for Pyroclor.

I attended the meeting of CIGRE Study Committee 15, Working Group 02 held in Arnem, Holland on 2nd June. Jay of Prodelec announced a new product called Pyralene 2000. This has been developed for the impregnation of mixed dielectric capacitors and consists of dichloro-diphenyls but is without crystallization problems at low temperatures. It also contains a wetting agent. He also described some unsuccessful work on aryl-alkyl sulphones for energy storage capacitors, now abandoned. Reynolds described work done between 1949 and 1960 on alternative impregnants. This has recently been revived because of interest in a suitable impregnant for metallized film capacitors. Castor oil is the best and butyl acetal ricinoleate is the closest synthetic. Dibutyl-seboeate was found no good.

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- There was a BCI meeting in London on 8 June to prepare for the forthcoming I C meeting in Brussels.

The I C meeting was attended from 16th - 19th June. Good progress was made on sampling methods, scavenger test methods and askarel specifications. The progress on electrical test methods was very limited. The resistivity clause for transformer askarels has been reduced to 1T Ωcm minimum. The possibility of reduced electrical specifications for trichlorodiphenyl delivered in drums to distant customers was debated but received some opposition.

Whilst in Belgium, ACEC Ghent was visited to deal with a Pyroclor complaint. Steps have been taken to deal with this and details have been reported elsewhere. Samples were brought back for testing for water content, oil content and electricals.

ACEC, Charleroi was also visited to advise on the commissioning of their new capacitor plant now nearing completion. My advice has been issued.

Further advice has been sent to ELCO Israel in connection with their projected change to Aroclor 1242. Mr. Tyrman, on his recent visit to Huabon, omitted to clarify several details and the plant specialist was unable to be present.

Laboratory work for ACEC, Ghent, Belgium showed that the presence of PCB had an effect on the compatibility of materials with Pyroclor.

A limited procedure for the production of a trial batch of Aroclor 1242 containing Hull Span 325 has been drafted and sent to Newport for comment before being more widely circulated.

A sample of Union Carbide's alpha olefin epoxide has been obtained and tested in Aroclor 1242. Refining by Fullers' Earth was not successful when carried out under the same conditions that have been successful with Span 325.

R Marsh >

↑ Did you not suggest distillation?

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