

DEPARTMENT 246 - STANDARD MANUFACTURING PROCESS

AROCLOR

APPENDIX K

BACKGROUND INFORMATION

The manufacture of Aroclors was developed quite by chance. The Indian Refining Company, in the latter part of 1926, approached the Swann Chemical Company located in Anniston, Alabama, regarding the production of Biphenyl which the Indian Refining Company wanted to use as a neat transfer medium. The Swann Chemical Company agreed to produce Biphenyl, but first a process had to be developed.

Two years later, in 1928, a pilot plant for producing Biphenyl became operative. However, in the meantime, the Indian Refining Company dropped all interest in Biphenyl. Since a process had been developed for manufacturing Biphenyl, the Swann Chemical Company started looking for other outlets for this material. The simplest outlet was in the form of Chlorinated Biphenyls which were produced in the laboratory in 1929.

The Chlorinated Biphenyls produced exhibited good electrical properties. This was reported to the General Electric Company who immediately became interested in the product which ultimately developed into large scale consumption in electrical transformers and capacitors.

The trade name "Aroclors" was adopted for the Chlorinated Biphenyl products. The properties of Aroclors vary from mobile oily liquids to fine white crystals and hard transparent resins. The excellent electrical properties, fire resistance and inertness of the Aroclors make them useful for many applications.

Plant equipment was installed to produce Aroclors at the rate of 3000 pounds per day or 1 million pounds per year. In the following years, this production rate was insufficient to meet the increased sales requirements.

The Swann Chemical Company was purchased by the Monsanto Company in 1935. This purchase gave Monsanto access to the patent rights for the production of Aroclors.

Production capacity needed to be expanded, and since Monsanto had a chlorine plant as "Plant B" (now called the W. G. Krummrich Plant), the Aroclor production was transferred from the Anniston Plant to the Monsanto, Illinois Plant, where operations at an increased productive capacity started in September, 1936.

By 1940, the Krummrich Plant production capacity was inadequate, and, in 1941, a similar production unit was installed at the Anniston Plant.

At WCK the Aroclor process remained essentially unchanged until October, 1968, when CEA 1800 was started up. A major portion of

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APPENDIX K (Cont'd)

BACKGROUND INFORMATION (Cont'd)

the chlorination step became a continuous operation rather than batch. Porocel absorbers replaced attapulugus earth treatment. Several years earlier the Anniston Plant had converted several batch chlorinators to a continuous unit.

In August, 1971, the first Aroclor fractionating column was started up to produce Aroclor 1016, a product similar to Aroclor 1242 in performance, but environmentally less persistent. A second action taken by Monsanto in response to pressure from environmentalists was the phasing out of "open" applications. The timetable was as follows:

Non-electric Aroclors:	March, 1971 (last sales to National Cash Register)
Pydrauls:	June, 1971 (last production)
Therminols, FR-series:	Sales discontinued in early 1972
Santovacs:	Sales discontinued in early 1972
MCS-1109:	February, 1972 (last production)
Turbinol 153:	Sales to be discontinued in mid-1972

The only remaining application will be for transformers and capacitors for the electrical industry.