SCHULTZ

Continuous, Long-term and Stable Supply

Case: a listed company uses hydrogenated terphenyl in the conduction oil heating system of its organic silicon production project. Due to equipment leakage, it urgently requires hydrogenated terphenyl conduction oil and purchases it from a small conduction oil production enterprise. However, due to the short order time, the supplier does not have sufficient stock and uses certain cyclanes in the production process without authorization. When the equipment overhauling is completed and operation resumes, the company finds that the temperature of the conduction oil system rises above the recommended level and dehydration occurs. Almost 20 tons of conduction oil volatilizes at the beginning of the work, leading to huge economic loss.

Case study: generally, the highest operating temperature of the conduction oil is 330–340°C. This occurs at the start of the organic silicon production system's operation and lasts for 8–12 hours. During normal operation, the operating temperature is about 300°C. Certified hydrogenated terphenyl will work well under such conditions. However, the highest operating temperature of cyclanes is generally 320°C. Therefore, at the high temperatures during the initial running of the organic silicon production system, the cyclanes conduction oil cracks rapidly. As a result, the atmospheric boiling point of the conduction oil decreases, while the saturated vapor pressure rises. The lighter-composition material escapes and volatilize through the overhead tank; this explains the loss of 20 tons of oil in this case.