



## Significance of Vertical Integration Supplier

**Case:** a certain chemical group which produces organic silicon (annual production of 200,000 tons) used hydrogenated terphenyl in its conduction oil heating system. This oil was produced by a small conduction-oil production enterprise. However, after less than three years, the conduction oil in the conduction oil system cracked severely, which caused the failure of the system.

**Case study:** hydrogenated terphenyl, due to its high operating temperature and good thermal stability, is the preferred choice in the organic silicon industry. Quality hydrogenated terphenyl has a low cracking rate and can be used over long periods at operating temperatures specified by the organic silicon industry. The conduction oil production enterprise in this case did not have its own supply of raw material for terphenyl production but purchased the raw material from various sources in different countries. Therefore, there was no consistency in the quality of the raw material. Additionally, there was no strict control over the quality of the raw material and the poor quality of the material is one of the reasons leading to the failure. Furthermore, the production technology of some companies falls below the level required to produce quality hydrogenated terphenyl, leading to the production of hydrogenated terphenyl conduction oil of poor thermal stability and high thermal cracking rate. Such poor-quality oil cracks rapidly at high temperatures, resulting in severe cracking after a short service time.