Energy Recovery from Automobile Shredder Residue (ASR) at Oppama Plant

Nissan partially modified a waste incinerator at the Oppama Plant and began energy recovery from automobile shredder residue (ASR) in the autumn of 2003. Full-scale operation of 5,500t/year has been started from January 2005.

Waste from Nissan plants and ASR from end-of-life vehicles (ELVs) are burned together in the incinerator. Thermal energy generated during incineration is converted into steam that is effectively used for humidification and other purposes in the pre-painting processes at the plant.

Since ASR generates large quantities of heat, controlling the temperature during incineration has been difficult. Another problem has been that unburned substances tended to stick to the inner walls of the incinerator and the evaporation pipes of the boiler. These problems have been resolved through optimum temperature control.

System for Energy Recovery from ASR at Oppama Plant

ASR is what remains after material recycling is done to recover as much ferrous and non-ferrous metallic material as possible from the automobile shredder residue. It mainly consists of glass, plastics, fibers and other substances. One March small car results in about 160 kg and one Cedric sedan in about 260 kg of ASR.