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Study on solvent refining and regeneration of base oils from waste oils

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Waste mineral oil, as a product of large quantities of petrochemical products, belongs to the hazardous waste prescribed by the state. All countries in the world attach great importance to the treatment of such substances. A series of measures and systems have been formulated for the disposal of waste oil to promote the recycling of waste oil. Direct abandonment or combustion will cause serious environmental pollution. Waste oil regeneration is faced with the problems of low efficiency, poor removal rate and high energy consumption. On the basis of our previous research, we creatively adopted solvent refining pretreatment, then combined membrane treatment technology with hydrogenation technology. After solvent refining, the ash content in waste oil was greatly reduced, and the bottleneck of the original hydrogenation technology was solved. It was first invented in the world by novelty checking. This project has been authorized by China Patent "A Regeneration Method for Waste Lubricating Oil" and "An Electrochemical Regeneration Method for Waste Lubricating Oil", and has built an industrial production line. The annual output can be adjusted according to the actual treatment capacity. The whole process can be carried out in a close system under normal temperature conditions to meet the requirements of environmental protection and safety.

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