

Supercritical fluid cleaning of metal parts contaminated with metal oxides

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Supercritical fluid cleaning of metal parts contaminated with metal oxides has been studied. A new technique based on the use of supercritical carbon dioxide was developed. Various kind of metal oxides (Cu, Al, Fe, Ni, W) were selected as the contaminants on the metal parts. A co-solvent and surfactant were added to the supercritical carbon dioxide in order to increase the removal efficiency. A microscope, XPS and contact angle meter were used to analyze the surface of metal parts. When the co-solvent and surfactant were added to the carbon dioxide, the removal efficiency of metal oxides was improved.