

Process to Recycle End of Life Cadmium Telluride Modules and Manufacturing Scrap

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Summary: A novel method for recycling of thin film Cadmium Telluride (CdTe) photovoltaic modules at the end of their life

Description: Photovoltaic technology is a rapidly growing field. Though solar energy is clean as far as the energy being generated, the materials being used to manufacture the modules are not clean and must be disposed of at the end of their life. Currently, there is no industry-wide acceptable way of recycling the waste products from photovoltaic modules. This invention reports a novel method for recycling of thin film Cadmium Telluride (CdTe) photovoltaic modules and manufacturing scrap. This process allows for minimum glass fine generation, requires little or no acid compared to other methods, and generates a pure cadmium and tellurium product at recoveries in excess of 80%. In addition, the process allows for the recovery of a clean soda-lime plate glass product.

Broken FOL PV

Modules

Main Advantages of this Invention:

- 80% yield
- Little to no acid needed
- Solves technical concerns of current system

Potential Areas of Application:

- Photovoltaic recycling
- Reapplication of recovered CdTe

ID number: 11024

Intellectual Property Status: US 8,821,711

NaOH Recycle

Cd Bearing
Sludge

Cd Recovery¹ and Purification

Te in Solution

Te Electrowinning

C2 Furnace - Thin Film Oxidation

Clean Substrate Glass Product

Clean Substrate Glass Product

Cd Recovery¹ and Purification

Cd Product

Delamination

Glass Product

Opportunity: We are seeking an exclusive or non-exclusive licensee for marketing, manufacturing, and sale of this technology.

For more information contact:

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