

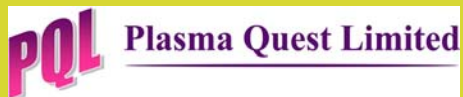
PARTNERS

RTD performers



“DEVELOPMENT OF RECOVERY PROCESSES FOR RECYCLING OF VALUABLE COMPONENTS FROM FPDs (In,Y, Nd) FOR THE PRODUCTION OF HIGH ADDED VALUE NPs”

Industrial and SMEs



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RECYVAL-NANO PROJECT

WEEE contains considerable quantities of valuable components used in high-tech applications that currently are not recycled.

Europe needs to improve and develop Recovery, Recycling and Reuse of critical materials in order to avoid the dependency on imports, high prices and risk of supply imposed by countries owning mineral reserves.

The main goal of the project has been the development of recycling processes for recovery and reuse of indium, yttrium and neodymium metals from Flat Panels Displays (FPD), one of the most growing waste sources.

RECYVAL-NANO project technology:

- FPDs recycling line based on manual separation of valuable fractions including glassplates containing indium and automated mercury-treatment system to obtain other mercury free output materials such as dust fraction containing yttrium.
- Refining processes of glasspowder containing indium based on shredding and spinner technologies.
- Solvent extraction processes using Cyanex and DEHPA as extraction agents



Achieved goals:

- Extracted solutions with a purity of up to 98.08 % of indium .
- Extracted solutions with yttrium purity larger than 95 %
- Transformation of indium extracted solutions to indium ethylhexanoate increased the purity up to 99 %.

