

“DESIGN AND DEVELOPMENT OF A DEMONSTRATIVE RECYCLING LINE FOR THE SEPARATION OF POST-CONSUMER POLYOLEFIN MIXTURES”

REC-POLYOLEFIN

“Diseño y desarrollo de una planta piloto demostrativa para el reciclado por separación de mezclas poliolefínicas post-consumo”

SUMMARY

Nowadays, the annual total consumption of plastic products in Europe is approximately of 48.8 million tonnes. Over 78 wt.% of this total corresponds to thermoplastics (mainly polyolefins, low density polyethylene, LDPE-17%, high density polyethylene, HDPE-11%, polypropylene, PP-16%) which means that almost 21.5 millions of tonnes of polyolefins are consumed every year. Despite significant advances in recent years, approximately 13.1 millions of tonnes of the European post-consumer polyolefins are still disposed of to landfill. One of the main problems associated to the recycling of post-consumer polyolefin film waste plastics (LDPE, HDPE and PP) is that the items of films separated by Associations, Municipalities and companies awarded for waste management services, are always a mixture of these three components.



With the objective of giving a solution, the project aims to the design and develop a demonstrative recycling line with a production capacity 1000 kg/hour for the separation of mixes of post-consumer polyolefins in order to obtain, on the one hand, high-added value stream consisting of LPDE with a purity of almost 95.5% processable by extrusion and blowing process and, on the other hand, a streams made of HDPE and PP with an amount of LDPE lower than 20% and which could be used in the manufacturing of profiles by extrusion.



As result, REC-POLYOLEFIN project will contribute to the European environmental policy for the recycling of post-consumer plastics (European Directive 94/62/EC and 2008/98/EC).

PARTNERS

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STARTING DATE: September 2011

DURATION: 36 months

BUDGET: 1,127,384 €



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