

Metal and Recycling Company

Identification of applications for recycled polyethylene and polypropylene success story.

The Metal & Recycling Company [MRC] is a Kuwaiti pioneer organization managing and recycling the solid waste materials, scrap, surplus and secondary material generated.

Our main target and strategy is to sustain and save our environment by decreasing the amount of the landfill material, starting from our belief that even if we are not going to be affected by the landfilled wastes, the next generations will.

HOW DID YOU FIND OUT ABOUT KFAS, AND THE CO-FUNDING PROGRAM?

Since we started looking for enhancing our technologies we have looked for Kuwaiti organizations supporters, KFAS is a well-known organization in Kuwait, supporting the progress and advancement of science and technology.

WHAT WAS THE PROBLEM YOU WERE TRYING TO SOLVE?

Since MRC is a buyer of mixed plastics (not pre-sorted), it generates a number of streams of which 3 have been identified to be having a low market resale value, namely:

PP C

PP Mix II

PP PE Mix

RESEARCH INSTITUTION

There were two research institutions handling this research:

- Fraunhofer Institute for Process Engineering and Packaging IVV
- SET Technology GmbH

PROJECT DESCRIPTION

Identification of applications for recycled polyethylene and polypropylene. Currently there are limited applications for this type of output material with varying properties. MRC will provide samples of three different materials to the technical consultant who will analyze the provided samples with regard to mechanical properties of the materials and accordingly advise on potential applications and markets for such products. This will involve discussions with various end users (plastic manufacturers who use recycled plastics) and getting their feedback about the product in question.

HOW DID KFAS HELP WITH YOUR PROJECT?

KFAS introduced and connected us to the research institutes and that was the catalyst of the whole project steps.

TO WHAT EXTENT DID KFAS ADD ADDITIONAL VALUE TO YOUR PROJECT?

KFAS played a very important role in providing us with different research institutes and in building a good business relation them.

WHAT WAS THE STI RELATED SOLUTION NEEDED FOR YOUR PROJECT? FOR EXAMPLE, IT ADDRESSED ONE OR MORE OF THE FOLLOWING ITEMS:

- Testing of new, advanced technology material
- Environmental solutions
- Less consumption of raw material, and / or more efficient production
- Increase in profitability
- IT solution
- New service for customers (e.g. financial service)
- Other – please mention below
Click or tap here to enter text.

WORKING WITH THE RESEARCH INSTITUTE

After contacting and meeting with the research institutes, we have provided samples of raw materials and products we have for them to make their studies on the best solutions for enhancing the sorting techniques. The institute also promoted the products to various manufacturers (buyers) of similar recycled raw material and this in itself gave MRC an insight and exposure into international (European) markets.

PROJECT IMPACT

Improve the salability of all plastic material grades generated by MRC and identify new markets and applications for such material. Ultimately, it was concluded that as MRC upgrades its plastic plants and installs vacuum extrusion, it will achieve better product quality which will improve salability of the product. Furthermore, the project concluded that MRC is currently achieving selling and achieving best value possible given current product specifications

WOULD YOU REAPPLY TO A KFAS PROGRAM?

Yes

AS A RESULT OF THIS PROJECT, ARE YOU LIKELY TO INVEST FURTHER IN RESEARCH & DEVELOPMENT?

Sure, this project and the support of KFAS inspired us to invest more in R&D in different production areas such as metal recycling unit.

WOULD YOU RECOMMEND KFAS PROGRAMS TO OTHER COMPANIES?

We will recommend KFAS research grant program for any Kuwait Shareholder company in which KFAS is providing different grant sizes to the research projects and also promotes national and international collaborative research which lead to the establishment of outreach activities.