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Research area: Process aims

Pulp production // Recovered paper treatment

Key words:

Deinking, prints with cohesive and cross-linked inks

Title: Process oriented deinking of prints with cohesive and cross-linked inks in laboratory scale**Background/Problem area**

The printing industry is characterised by a technology change from standard technologies like coldset/heatset, rotogravure to individual solutions based on digital printing. Some digital printed products are not suitable for deinking according to the Deinking Scorecard of the European Recovered Paper Council. Test results showed that ink jet inks and liquid toner create problems in the deinking process, liquid toners in terms of dirt specks and ink jet inks in terms of poor removability by flotation and accumulation in process water due to small ink particle size. This project deals with cohesive toners as they are found in liquid toner technology. UV cured prints may also cause similar obstacles in deinking. In comparison to conventional printing technologies differences appear in ink detachment, ink fragmentation and ink removal along the different steps of a modern deinking plant. Currently the impact of modified process steps is not known very well. Especially in lab scale a methodology has to be developed to find out the potential of individual DIP lines. Based on the INGEDE project 10806 "Lab dispersion" better comparable and repeatable procedures are needed.

Objectives/Research results

The target of the project should characterise the deinking potential of cohesive and cross-linked inks based on different available technologies. The actual situation of these prints recycling by using technologies which represent the state of the art of deinking lines should be shown. Pulping, dispersing and flotation have to be tested by using different parameters.

Application/Economic benefits

The project will improve the understanding in deinking behaviour of prints with cohesive and cross-linked inks and lead to a more comparable and repeatable methodology for its characterisation.

Project period: 01.06.2009 – 31.08.2010

Remarks

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