

Research institute:

PTS Munich
Hess-Strasse 134

80797 Munich, Germany

Head of the research institute:

Dr.-Ing. P. W. Rizzi

Project leader:

Dr. E. Hanecker

Tel: +49 89 / 12146-495

Fax: +49 89 / 12146-36

E-mail: e.hanecker@ptspaper.de

Internet: www.ptspaper.de

Research area: Process aims

Pulp production / recovered paper treatment

Key words:

Deinking, ink removal, stickies removal

Subject:

Evaluation of process stages by comparative studies in INGEDE member companies

Background / Problem area

The quality profile of deinked pulps (DIPs) depends on the quality of recovered papers, on the installations available in recycling plants, and on the process chemicals used. Moreover, DIP qualities are determined by the specific requirements imposed on recycled-fibre based papers. The quality differences resulting from these criteria were identified within the framework of the INGEDE project "Characterisation of DIPs". Comparative studies were carried out to investigate deinked pulps from all INGEDE member companies. The studies have identified comparable quality attributes among different undeinked and deinked recycled pulps produced in industrial deinking plants.

The results show a higher amount of dirt specks in the deinked pulps. Reasons are most probably the increased 4-color printing. The Ink elimination and the final brightness reach comparable values like the years before. Comparing the efforts for deinking and cleaning a higher amount of chemicals and better technology were used. Furthermore the total yield has decreased and the raw material composition has changed.

The macro sticky amount (sampling period January – July) in the undeinked pulps and final DIPs is dramatically higher compared to 1996 and 1999. A comparison of a selection of the lines, which have taken part in all three rounds, show the contrary to the trend to finer slots. It can be assumed that on the one hand the amount of adhesives is doubled in the raw material and on the other that the removability has decreased.

Objective / Research results

The project is aimed at the influence of the process design and the raw material on removal efficiency looking at worst and best case at comparable raw material:

- Ink removal
- Sticky removal
- Speck removal.

Pulp samples from the feed and accept of selected process stages are to be analysed to compare the performance of individual cleaning facilities. From the results of this comparative study, recommendations are to be derived as to how to optimise the stock treatment process.

Application / Economic benefits

The results will contribute to increase the knowledge of the deinking process and lead to optimisation steps.

Project period: 1st May 2004 – 31st October 2005

Remarks

The INGEDE 9704 PTS research project is being sponsored by the International Association of the Deinking Industry INGEDE e.V..

Are you interested? Then send us this short description with your name and address via fax. The project manager will contact you afterwards.

I want more information

I want to participate in the project

Company:

Adress:

Name:

Phone/Fax:

Mail: