

**Research institute:**

PTS Heidenau  
Pirnaer Str. 37  
01809 Heidenau

**Head of the research institute:**

Dr. Frank Miletzky

**Project leader:**

Dr. Johannes Kappen

Tel: 03529 / 551-623

Fax: 03529 / 551-899

E-Mail: [johannes.kappen@ptspaper.de](mailto:johannes.kappen@ptspaper.de)

Internet: [www.ptspaper.de](http://www.ptspaper.de)

**Research area: Product aims**

Raw materials // Paper of recycling

**Key words:**

Paper sorting, Paper for recycling, Quality, Process improvement

**TITLE:**

**„SortOptAP“ – adaptive control of sorting units for increased value creation in recovered paper sorting**

**Background/Problem area**

Plants sorting dry paper for recycling are typically operated on the upper edge of the design speed range. Throughput and thus the product volume are maximized. Depending on the raw material composition, speed and the skills of the operators significant rate of downtimes can be observed. Any standstill will reduce the amount of paper for recycling to sell and impact the profitability. Relevant impact on whether or not the plant has to be halted have the presence of disturbing materials in the inflow and factors like humidity and composition of the incoming material. Operators do not have a quantitative measurement at hand today and rely on practical knowledge as far as time and experience allow.

**Objectives/Research results**

Objective of the project is to develop an approach to increase the value creation in paper sorting plants. An online assessment of the incoming material and a control of the sorting equipment shall help to increase the average speed of sorting. This will lead to an increase in productivity. A method of characterizing paper for recycling shall be developed taking into account the identification of individual objects. Strategies are to be developed that supports the selection of a most suitable speed of sorting and the adjustment of the machines. The possibility of influencing other parameters will be researched into.

**Application/Economic benefits**

Expected applications are an improved sorting of paper for recycling. Economic benefits will be a maximized productivity of the respective plant, shorter/less downtimes, an improved quality in sorting and a higher overall efficiency.

**Period of time: 01.9.2012 – 31.08.2014**

**Remarks:**

The project ZIM-KF2037913WM2 is coordinated by Bavaria Entsorgungstechnik GmbH. Further partners are: LLA GmbH Berlin, RWTH Aachen und Hochschule München.