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**Research area Keywords:**
Environmental technology / water
Saveall, water circuit, water quality, solids loss

**Subject:**
Developing a systematic decision support for optimum saveall selection

**Background/Problem area**
Savealls serve to reduce fibre losses and lower the solids concentration of circuit waters in different papermaking applications. Part of their outflow is discharged as production effluent. The origin, quantity and loading of the outflow and fluctuation in inflow volumes depend greatly on the specific mill conditions and paper grade produced. The required clear water quality depends on the consumers to be supplied by the saveall. Many state-of-the-art savealls are not capable of producing the required water quality, which necessitates costly secondary treatments of the circuit water. Selecting a suitable saveall is a very complex decision that must often be made on the basis of insufficient data. No systematic information is currently available on the pros and cons of different saveall types and mechanisms. Identifying a suitable solution usually requires lengthy searches and complicated comparisons.

**Objective/Research results**
The project aims at developing a systematic decision support for optimum saveall selection. The tool will enable papermakers to identify the technically optimum saveall for their specific application quickly, at low cost and on the basis of objective, manufacturer-independent information. It makes the market situation transparent and provides an overview of current product offers, but does not compare their investment and operating costs.

**Step 1: Determining the saveall types currently on the market**
Conducting a market search to determine all saveall types on offer together with their load parameters and specific characteristics. The search will be based on manufacturer information and the results of a previous PTS survey.

**Step 2: Performance and current uses of the savealls**
Targeted evaluation and editing of the data collected by the survey and numerous system analyses of PTS, to compile a data base which provides structured, detailed information on the grade- and plant-specific suitability of individual saveall types.

**Step 3: Preparing a catalogue of selection criteria**
The catalogue contains all factors determining the technological suitability for a specific application, as a decision basis for optimum saveall selection.

**Step 4: Creating a decision support**
Implementing a software-based decision support that proposes a group of suitable savealls according to the criteria catalogue. Ideally, the final decision will then depend on economic factors only.

**Application/Economic benefits**
The data base allows objective decisions in order to identify the technologically optimum saveall. It facilitates and shortens the decision-making process, gives an overview of present product offers and makes the market situation transparent. This will permit targeted selections of the optimum saveall type, thus minimising the necessary investments. In some cases, it will also save the costs of secondary clear water treatment.

**Project period:** 01.01.2004 – 31.12.2004

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