

Ladies and Gentlemen,

I would like to welcome you here in Munich today to the 25th anniversary of INGEDE.

It was a great pleasure for me when I was asked if I could imagine holding the keynote speech and taking you on a journey through 25 years of history.

And talking about history, we should start with it. What was our place in world history in 1989? The first Gulf War had just ended, Portugal and Spain became members of the Western European Union and the wall which had divided a country for decades fell in East Germany. The memory of it makes it clear just how much time has passed since then. But it also makes clear that the world at that time was quite different from the one we are living in today.

As was the world of paper-making. While the use of recovered paper was already widespread in the production of packaging paper and board, the utilisation of this fibrous material was rather under-represented in the graphic paper production. Even though a few protagonists already used larger quantities in the production of newsprint or, in the case of Steinbeis Papier up to 100 % in the manufacture of office or heatset offset paper, the overall quota of 18 % was rather below average. As Dr. Putz writes in his article on the topic entitled "Waste Paper Recycling - The Stepchild of the Bioeconomy?", it was only in the 1990s after the introduction of the industrial flotation deinking technology that a clear upward trend in the overall utilisation rate of recovered paper was achieved due to an increased use in graphic papers. At this stage, the total quantity produced in Germany only amounted to approximately 11 million tons of paper, board and packaging.

Paper for recycling was regarded a low-cost, yet problematic source of raw material. The everyday life of a paper-maker was dominated by the removal of printing inks, stickies and problems with all sorts of contaminants. The scientific basis was still quite fragile. Basic research studies were initiated and dissertations written for this specific purpose. The definitions of terms had not yet been finalised, often the product names were merely a synonym for technologies.

The paper industry was structured differently than it is today. Positive economic growth not only in the packaging, but also in the graphical field formed the basis for new technological ideas and concepts which could be implemented quickly. The industry was more diversified. In addition to the already existing larger corporations there were also a large number of owner-managed companies. Paper engineers occupied the leading positions. Openness, trust and the willingness to share knowledge, often developed by common periods of study or at least common places of study, characterised the co-operation far beyond the corporate boundaries. Technological issues were the responsibility of top management. In this way, many managers or plant managers found their way into the various expert committees, for example at Zellcheming. The handling of the topic of deinking in such work groups and the growing challenges of new printing processes which became apparent also made it clear, however, that new approaches were needed to find solutions to these problems.

Under the leadership of Georg Holzhey, Executive Director of Haindl Papier GmbH, a new concept was developed with the support of Professor Baumgarten. After a few preparatory meetings, the outcome of the discussions was the creation of the "Interessengemeinschaft Deinking Technik", abbreviated INGEDE, on 16th June, 1989 in Munich with the participation of twelve companies from the German-speaking countries.

The objectives of INGEDE were formulated as follows

- In order to ensure the supply of the industry with recycled graphic paper and to avoid the growing influence of the legislature (Germany), it is important for the paper mills to work together.
- The industry must define, support and coordinate the necessary research activities in the field of deinking.
- INGEDE must seek cooperation with other industrial sectors in the paper chain.
- Activities and development projects shall be financed from membership fees.

Having been set up as a community for technological research and development, it soon became clear that it was not only necessary to pursue technological objectives, but also to communicate the results with the broader public. It was quickly realised that, in order to persuade third parties, a fundamental understanding of the problems would have to be achieved and solutions would have to be presented. This could not only take place in the internal forums, such as the symposiums, but required targeted and strategically managed public relations efforts. This led to a further key step in the development of INGEDE, namely the decision to make financial resources available for communication purposes. Under the guidance of Mr. Fischer, a graduate chemist and independent entrepreneur, a professional solution for the demanding topic could already be found as early as 1993.

Ambitious objectives, a difficult and demanding environment as well as constantly changing challenges required special personalities at the helm. The objectives of INGEDE were promoted by the respective chairs with much commitment, conviction, creativity, persistence, but also with a great deal of enthusiasm. Beside the initiator Mr. Georg Holzhey and the founding member and first chairman Bernhard Steinbeis, essentially the merits of Dr. Krauthauf and Dr. Höke have to be mentioned. While the former merits recognition for laying the foundations of INGEDE, performing the groundwork, internationalising its membership base and preventing the further dissemination of flexographic printing, his successor successfully adapted the structure of the association, addressed the issue of deinkability in digital printing, enforced the development of internationally valid measuring methods and the integration of additional research institutes in addition to the PTS in Munich and the Institution for Paper Science and Technology in Darmstadt, which had already been involved right from the start. The public relations efforts were intensified even further. The financial requirement of this field is now over 30 percent of the total budget.

This development was driven and supported by a strong management. In his speech on the occasion of the 20-year anniversary, Dr. Krauthauf very clearly pointed out the work which has been successfully performed in this field. However, I would like to add that during his time as a chairman he also got great help from the parent company Haindl Papier GmbH. For this reason, the transition to Dr. Höke required a significant change in the organisational structure and processes. It was impressive to see how the retiring and designated new leadership created a new structure and brought it to life.

The framework conditions in the industry had changed significantly in the meantime. The consolidation of formerly independent units under the umbrella of large corporations and the gradual withdrawal of decision-makers from the body of INGEDE made an almost complete reorganisation necessary. A simple succession of the position was not feasible. In view of the internationalisation of the companies, it was also no longer possible to reconcile the significant increase in effort required of the managers in the companies with the work load of an INGEDE chairman. A steering committee was

established to spread the increased workload of the chairman among several actors, which was also successful.

In addition to this, there was still the spatial and organisational change in administration a short time later, away from the Bavarian paper industry to the recovered paper experts of PTC under the leadership of Andreas Faul. As a long-term employee of Steinbeis Papier GmbH, he got extensive experience and deep know-how of the technological complexities of deinking as well as a good insight into the needs of the now renamed International Association of the Deinking Industry due to his active engagement in many INGEDE projects.

Talking about the objectives of INGEDE, you should also mention the success that has been achieved.

In addition to the following list I would like to repeat quotes by important representatives from previous events, which clearly reflect the appreciation that INGEDE has earned from the perspective of the paper industry. Here is what Dr. Georg Holzhey, Executive Director of Haindl Papier GmbH, said on the occasion of the 10-year anniversary: "One of the big merits of the efforts is the successful bridging of the gap to other branches which are part of the paper cycle." Lars Salovius, Stora Enso, noted at the same event: "INGEDE is an example of an efficient organisation with good leadership, doing valuable work based on the needs of the industry." Dr. Krauthauf said in his address at the 20-year anniversary: "Members of the board, the office and public relations have done impressive job to make INGEDE a powerful association within the European members of the paper chain and recycling committees". Later in his speech he also remarked: "The achievements in the first 20 years are really remarkable." There is nothing really to add to that.

We have managed to establish an international research community beyond the corporate boundaries. This is particularly noteworthy since the previously described concentration processes of the industry also required changed rules of conduct for the employees working there. In the 90s the feared triumphant advance of flexographic printing in Europe could be prevented. The groundbreaking work made for new findings and resulted in method development which is recognised and used around the world today (with a few exceptions). The recyclability of printed products became an important focus. In addition to the requirements for the deinking of ink, the conditions for the removal of stickies were also intensively investigated and described. Together with the companies of the paper chain, a voluntary commitment of the Working Group on Printing Papers for the Return and Recovery of Used Printing Paper (AGRAPA) could be signed in Germany as early as 1994 and a few years later also at the European level. We should also mention another result of the good co-operation, namely the guideline for the optimisation of graphic paper recovery and the "deinkability scorecard", which is currently being revised and expanded.

These successes are also the successes of the members, who do not only finance the projects, but also make suggestions and decisions and work together very closely. This was and is to ensure that research and development projects also meet the needs of the members. In addition to the projects there are also two work groups who are responsible for the topics of "paper for recycling" and "the deinking process". In this way, the exchange between the companies could be further promoted with a strong emphasis on practice.

In the 25 years, almost 6.8 million Euros were invested in projects. Certainly a very worthwhile investment for all parties involved. In a letter addressed to our company, the management of INGEDE thus very impressively translated one of the most recent successes in the revision of the EN

643 into quantitative savings. I quote some portions:" ... one success is the revision of the EN 643, ... with the help of the data (on recovered paper quality; Memo: Söffge) we were able to prevent the laying down of a maximum percentage of 1 % non-paper components. The definition is now at 0.5 %. ... Furthermore, the waste disposal lobby has been trying for many years to increase the moisture limit from 10 to 12 %. With the help of well-founded data from INGEDE members it was possible to defend the limit value of 10 % for the benefit of the paper industry. These two definitions can be converted into an annual cost saving and correspond to the contribution for 40 years of INGEDE membership." In my view, this is another impressive achievement.

Where are we today, 25 years after the founding of the INGEDE? The recovered paper utilisation rate in the EU increased significantly from 38 % to 51 % (2011) and in Germany from 48 % to 71 %. With 73 %, recovered paper has become the most important fibre component in Germany. Looking at European paper production we can see that, in spite of the significant increase of recovered paper for the production of graphic paper, the most significant amount is used for the production of packaging paper and board.

For several years, the graphical paper industry has been experiencing a substantial drop in consumption. Mergers of companies and closures of paper mills are the consequences of the digital revolution as well as the economic crisis in Europe. The only growth we can see currently is in the board and packaging segment. This will not only change our industry, but also our paper for recycling. The graphical share of the collected waste paper is decreasing, the cost of the sorting according to the current model will increase. The discussion on mineral oils in foods, caused by wrapping papers made of secondary fibres, has reignited the debate on the separate collection of graphical paper and board and packaging paper. Even if the associations and political actors currently do not want to hear this, it is necessary to carefully analyse the effects of the modified volume flows. Alternative collection systems for the graphic paper industry are well known from various neighbouring countries. It is time to take up the debate again.

Sooner or later, digital printing will pose the same threat to deinkers as flexographic printing did 25 years ago. The ignorance of certain individuals of the paper chain who are trying to negate scientific insights with power or money is alarming. Where intelligence and cooperation are required, blunt insistence on the position of the supposedly stronger can only cause damage. And then we will all bear the consequences. It is therefore necessary to continue the successful course of INGEDE and further develop the most promising potentials together with co-operative companies. This task is also a major challenge, which has already found the right format in 2009 with the establishment of the "digital printing" round table.

INGEDE, which is now borne by 31 members, is an impressive example of successful international cooperation beyond the corporate boundaries. The goals which were formulated 25 years ago can still be considered as a guiding directive, in addition to the need for public relations.

The members of the Board of Directors, the management and the PR Department have done an excellent job. INGEDE is internationally accepted as a successful and technically adept representative body of the deinking paper industry.

To maintain and develop this is worth all the effort!

Thank you.