

## For sustainable development

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Standardization brings people together. At the ISO/TC 6 (Paper, board and pulps) meeting in June, 85 delegates from 17 countries all over the world had gathered.

## ISO Standards spreading around the world

At the beginning of June, Sweden had the pleasure of playing host to an international standardization symposium on pulp and paper. The week long conference was jointly organized by SIS (the Swedish Standards Institute) and NSP (the Nordic Standardization Programme).

“The ISO Standards from this technical committee, namely ISO/TC 6 Paper, board and pulps, are important for the pulp and paper industry in Sweden and Scandinavia,” says Kerstin Ölander at STFI-Packforsk and Programme Manager in the NSP.

“With the aid of the Standards, the pulp and paper industry is able to carry out quality control on its products and conduct discussions with its international trading partners. Companies with production units in various countries also use

them during in-house quality discussions and for product development.

It can be mentioned that experts from STFI-Packforsk have been convenors of some of the various working group meetings. Among the results from some of these are:

- The harmonisation of the procedure for measuring z-directional tensile strength has been successful and an ISO Standard will be published.
- It was discussed whether it is possible to reduce free span, in order to be able to measure compressive strength on paper having a grammage below 100 g/m<sup>2</sup>; this according to ISO 9895. The committee decided not to reduce the test span but to insert a warning regarding low-grammage papers.
- A working group was established

to revise ISO 287, so that the Standard would be applicable when determining moisture content in a lot of samples at the time of sampling.

Robert Wood, Chairman of ISO/TC 6, says that, even in the future, there will be a need for developing International Standards. With new products and end-uses being introduced on to the marketplace, there is an ongoing need for standard methods to measure key properties based on new, modern testing equipment and procedures. Furthermore, the harmonisation of national standards is in progress and Robert Wood views it as a challenge to set up international standards of global relevance that effectively recognize regional differences in practice.”

A highlight of the conference was the lunch in the Town Hall where the Mayor of Stockholm, Barry Andersson, was host. ●

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Robert Wood, Chairman of ISO/TC 6, and the Stockholm Lord Mayor, Barry Andersson, discussing the importance of international contacts at a lunch in the Town Hall, the site of the famous Nobel Banquet.

 **Sverige hade i juni nöjet** att vara värd för ett internationellt standardiseringsmöte för massa och papper. Med hjälp av standarderna kvalitetskontrollerar industrin sina produkter och för diskussioner med internationella handelspartners. Företag med produktionsenheter i olika länder använder dem vid interna kvalitetsdiskussioner och vid produktutveckling. Enligt Robert Wood, PAPTAC, som är ordförande för TC 6 finns det även framgent behov av att utveckla standarderna. Med nya produkter och användningsområden behövs standarder baserade på ny, modern mätteknik. Vidare pågår en harmonisering av nationella standarder; och Robert Wood ser som en utmaning att skapa internationella standarder med global relevans som vid behov tar hänsyn till lokala förhållanden.

# The Foresight project for sustainable profitability

STFI-Packforsk is investing in the future through a project that will lay the foundation for future research by the Company in three value chains, viz. Packaging, Graphic Media and Energy, Chemicals & New Materials.

“We see a trend indicating that the pulp and paper industry has to be more and more sensitive to the needs of the market,” says Carl Olsmats, a Project Manager at STFI-Packforsk. “To meet the future, it is really necessary to proceed with the demands of the market in mind, to create new niche products and to continue from the production orienteering of today.”

The Foresight Project is about augmenting a preparedness for future changes and to lay down a platform for the Company research activities in Packaging, Graphic Media and Energy, Chemicals & New Materials. With today's trends in mind, Foresight is a way of making conclusions about long-term needs and of identifying solutions and techniques to satisfy the needs of tomorrow.

The industry is all geared up in a restructuring process, where, at the same time, one can see economies of scale and consolidation accompanied by a growing trend of products being more and more adapted to needs. On the part of the industry, this concerns long investment ventures which means that it is very vital to have a far reaching perspective.

By building up a know-how surrounding future markets, research work will be able to focus on those areas, processes and materials in which the pulp and paper industry is going to need even more intense research during the forthcoming years.

“The Foresight Project is divided into different stages, where the first part comprises a literature study emanating from sixteen different national and international analyses of trends,” continues Carl.

The literature studies consist of an inventory of the existing foresight that has bearing on all three of the STFI-Packforsk value chains. It indicates that the large, global driving forces are:

- continued economic growth, with certain growth areas in the world becoming stronger, together with a globally expanding middle class.

- an ageing population in the West that has to be provided for by fewer and fewer people while, concurrently, there is



Building up know-how to help the industry satisfy the needs of tomorrow. From the left: Pär Weström, Marianne Klaman, Åsa Abel, Carl Olsmats, Åsa Samuelsson and Anders Sörås.

a high birth rate in developing countries and an increase in urbanization.

- environmental issues will not be solved in the foreseeable future, effects on the climate will influence our society and production systems.

- technical developments are seen as a vital factor for growth and the on-going computerization will continue to restructure work processes.

The second part deals with the STFI-Packforsk value chains: Packaging, Graphic Media and Energy, Chemicals & New Materials. Here, the main focus has been on identifying future needs and to formulate proposals for research and development areas that will meet these future needs.

While the Project has been running, STFI-Packforsk has built up a knowledge base with scenarios for the different markets. This knowledge is a valuable resource, acting as a basis for strategic development for companies in the industry. “We can already see a demand on our know-how and how it can be tangibly utilized in the strategy work of the companies,” adds Carl.

The Foresight Project also deals with providing a basis at STFI-Packforsk in establishing strategic developments of its own. This work will be given top priority during the second half of 2005, when a Foresight Conference has been arranged in Stockholm on 20 and 21 September. The theme of this conference is “Future Role of Print and Media”.

“The Foresight Project concerns setting up a radar system and getting a

helicopter perspective of the areas concerned,” says Carl. “To catch sight of changes in the surrounding world and to analyse what these might generate when it comes to future needs for research and development. This may include anything from purely technical matters to strategic structural solutions such as business models and distribution problems.” ●

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**Trender indikerar** att massa- och pappersindustrin behöver bli allt mer lyhörda för marknadens behov. För framtiden gäller det verkligen att utgå från marknadens behov, skapa unika och nischade produkter och gå från dagens produktionsorientering.

Projektet Framsyn handlar om att öka beredskapen för framtida förändringar och att lägga en plattform för institutets forskning inom tryckta media, förpackningar samt energi, kemikalier och nya material. Framsyn är ett sätt att utifrån dagens trender dra slutsatser om behov på lång sikt och att identifiera lösningar och tekniker som tillgodoser morgondagens behov.

Branschen är inne i en omstrukturering med skalfördelar och konsolidering på samma gång som trenden med mer anpassade produkter ökar. För industrins del handlar det om långa investeringssatsningar vilket innebär att det är av största vikt att ha perspektiv långt in i framtiden.



According to Cathrine Löfgren, manager of the Sustainable Growth project, the customer companies of STFI-Packforsk should be fully aware of the opportunities for contributing to a sustainable growth.

# For sustainable development

These days, the market and society are urging on in a process towards sustainable development. Foresight studies point to sustainability as a vital question for the future. It is required of companies that they be good members of society and show good staying power in their actions. At the same time, demands have been intensified on preparedness for change in an altogether changeable and globalized world.

“To be able to assist companies in this process, we at STFI-Packforsk have concentrated on the further development and building up of our expertise and resources in the area of Sustainability & Foresight,” says Anders Sörås, Vice President.

“As a basis for this, there is our long-standing work with environmental and technical matters, which is able to support the strategic processes for a profitable and sustainable development and future for companies. This concerns the whole concept, from visions and long-term aims to the practical implementation of measures for improving operations. It also includes organizational aspects, reporting and follow-ups, for example, with indicators.”

Work with sustainability and foresight has its focus on the three value chains of Packaging, Graphic Media and Energy, Chemicals & New Materials.

One example of the broad selection of activities and projects is Sustainable Growth, which is being managed by Cathrine Löfgren.

“Sustainable growth is necessary, since there are more and more people who’ll be using the world’s resources,” says Cathrine.

The Project concerns the value chains for packaging and graphic media, with sustainability, including three dimensions, viz. finance, environment and social aspects.

“We want to broaden and strengthen our expertise even further and create a platform of know-how in the industrial sectors where our Company is active. It’s important for us to be able to increase awareness in the companies that we work with as to the opportunities they have for contributing to a sustainable growth,” adds Cathrine.

When it comes to finance and social aspects, the Company intends to commence working jointly with the Royal Institute of Technology in Stockholm, and the Stockholm School of Economics, among others, to strengthen its expertise in these areas.

“Our vision is to establish STFI-Packforsk as a centre of expertise in Sustainable Growth, with the aim of creating a comprehensive view of our value chains.”

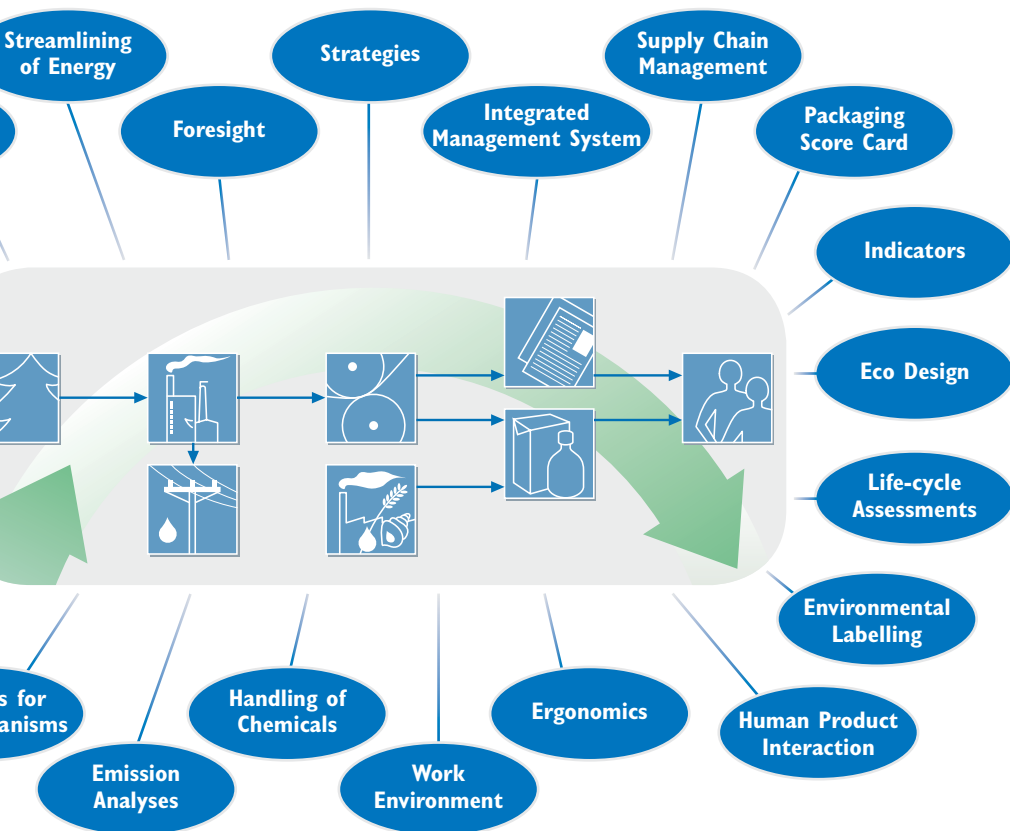
The first stage in the Project was to carry out an external surveillance in order to obtain an up-to-date picture.

Based on the results that emerged from the pilot study, the continuing work is being done in five very interesting sub-projects, viz. case studies, tools for the LCA, (Life Cycle Assessment), usage of chemicals, scrutinizing of legislation and health and hygiene matters.

In the first subproject, a case study is being carried out together with a limited number of companies, where the working methods and tools for liquid board packaging are being developed for or adapted to the STFI-Packforsk value chains and then tested in practice.

“The unique thing about this study is that a complete value chain is being studied and that the parties from the different stages co-operate on the project. Included in this are the material producers as well as packaging manufacturers and commerce. This minimizes the risk of suboptimization, which can happen when each party works alone. Now the entire chain is optimized, from the perspective of Sustainable Growth.”

# STFI-Packforsk sustainability work




To maintain and build up expertise in the area of environmental stress analysis, we are collecting the LCA data of the Company into a common data base and connecting this to a world-leading software programme.

In another subproject, a present situation analysis of chemical usage in packaging companies and graphic media companies is being made, with reference to their work with chemicals and their future needs. The aim furthermore is to see how well these chemicals correspond to those that are in the STFI-Packforsk data base, ChemSource. In addition, it will be assessed how much work is required to extend the data base so that it includes the whole value chain for packaging and graphic media.

“Subsequently, our aim is to further develop the various areas in Sustainable Growth that will be able to satisfy the needs that the participating parties in our value chains have and are going to have, with respect to the comprehensive demands that will be made in the areas of environment, social aspects and finance,” says Cathrine Löfgren in summing up. ●

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 **Marknad och samhälle** driver på i processen mot hållbar utveckling. Av företagen krävs att de är goda samhällsmedborgare och agerar på ett uthålligt sätt. Kraven i en alltmer föränderlig och globaliserad omvärld skärps.

För att kunna bistå företagen har STFI-Packforsk satsat på vidareutveckling och uppbyggnad av kompetens och resurser inom Sustainability & Foresight.

Som plattform finns ett mångårigt arbete med miljö- och teknikfrågor som kan stödja strategiprocessen för en lönsam hållbar utveckling och framtid för företagen. Det gäller hela vägen från visioner och långsiktiga mål till praktisk implementering av förbättringsåtgärder i verksamheten.

Ett exempel i det breda utbudet av aktiviteter och projekt är Hållbar tillväxt. Projektet gäller värdekedjorna för förpackningar och grafiska medieprodukter; och hållbarhetsarbetet omfattar de tre dimensionerna ekonomi, miljö och sociala aspekter.

Det första steget i projektet var att genomföra en omvärldsbevakning för att få fram en nulägesbeskrivning. Med utgångspunkt från den bedrivs det fortsatta arbetet i fem delprojekt. De är en fallstudie, verktyg för LCA, kemikalieanvändning, lagstiftningsbevakning och hygien- och hälsoaspekter.

## Profile



Cathrine Löfgren

Environmental matters have been Cathrine Löfgren's major interest since her childhood days. Today, she works as project manager for Sustainable Growth, among other projects, at the Packaging and Logistics Division.

“It's an exciting area where financial, social and environmental matters are interwoven for us to be economical with our resources so that our children will be able to have the same opportunities for development and prosperity as we have,” says Cathrine.

Cathrine was drawn to STFI-Packforsk by a heading in a job advertisement. It read LCA, Life Cycle Assessment. The job had the breadth that had already interested her at Chalmers, where she combined modules in environment and technology during her chemical engineering course.

Cathrine has managed to see the totality of the life of a product from an environmental point of view, where she has compared the life-cycle analyses of different kinds of packaging and materials. She has investigated how the production of various materials, how long-distance transportation, conversion etc. have an effect on the world's resources.

Cathrine remembers the lobbying that she and some of her colleagues carried out when discussions arose in the EU, primarily linked to the debate on the EU Packaging Directive. This involved getting officials to look at packaging as a part of a product. Today, she works in Miljöpack, a trade and industry group, with assisting companies to meet the essential requirements that have been placed on them in the Directive.

“Over the years, I've amassed a broad knowledge that I'm able to utilize in my current projects.”

In her private life, Cathrine chooses to live close to nature. She spends the majority of her leisure time with her family, i.e. her partner Niklas and their two daughters. In addition, there is occasionally time for a workout session. ●

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# Meeting-point STFI-Packforsk

STFI-Packforsk is a link between science and its applications. This is expressed in the Company slogan, "turning science into reality" and was the theme that permeated activities on its stand at SPCI 2005.

"We asked ourselves how we would best be able to put scientific research to good advantage for visitors to the Fair," says Madeleine Klackenbergh, responsible for the STFI-Packforsk stand at the Fair.

"The obvious answer was to turn the stand into a meeting place for science and industry."

By using mini-seminars that dealt with various research areas in the entire value chain, from the raw material to the end product, participants were able to gain access to the latest findings in research.

## The STFI-Packforsk Quiz

It is more the rule than the exception to participate in competitions arranged at fairs. It is usual for visitors to a fair to be able to leave their business cards at a stand to win prizes of greater or less value.

Participants in the STFI-Packforsk competition were not only able to win an elegant box for themselves, containing authentic EuroFEX paper, but they also had the chance of winning a valuable prize for their company. This was a cost-free analysis, completely suited to the company's own products and processes.

You can read more about the competition and the offered analyses at [www.stfi-packforsk.se/quiz](http://www.stfi-packforsk.se/quiz).

## New website

For a while now, as a reader of Beyond, you have been able to become acquainted with our new Company, STFI-Packforsk. At this point in time, we are expanding access to our operations with a new website, [www.stfi-packforsk.se](http://www.stfi-packforsk.se).

Participants in SPCI 2005 were the first to be given the opportunity of exploring our pages and of acquainting themselves with our latest news.

We trust that you will easily find your favourite pages from our previous website while, at the same time, things new and interesting. ●

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## Winners of the quiz

STFI-Packforsk has the pleasure of announcing four lucky winners of the special analyses as well as mentioning the kind of analysis they have chosen for their respective companies:

*Ewa Ekholm-Stenberg, Billerud Karlsborg AB* won a benchmarking of her mill against theoretical mills

*Thomas Ott, M-real Stockstadt GmbH Print* won a measurement of fibre orientation in the Z-direction of one of his company's papers

*Catharina Andersson, Graphic Packaging International* won a test printing and print evaluation of paper

*Will Pedersen, Mondi Packaging Örebro AB* won an expert evaluation of package usability

# The Prime Minister of Sweden to open European research conference

## Innovative and sustainable use of forest resources

The European forest-based sector, including forestry, bio-energy, wood, fibre and paper products invites you to its research forum in Stockholm, Sweden on 9–10 November, 2005.

The main part of the programme will be devoted to a thorough presentation and discussion of the Strategic Research Agenda of the Forest-based Sector Technology Platform, before it is finally launched.

The forum will include an overview of supporting and ongoing activities in the research field at EU level, with examples of major projects and research networks. It will also present a discussion on how the innovation system for the forest-based sector can be improved. One session will be devoted to what emerging sciences can offer to the sector in the longer perspective.

The conference programme includes several key speakers from the European Commission.

For further information, visit [www.fbs-research.com](http://www.fbs-research.com)

or contact Åke Hansson, Conference Secretary, STFI-Packforsk, +46 8 676 71 38.



## Future Role of Print and Media Conference

20–21 September, 2005

### Conference Seminars, 20 September, Näringslivets Hus, Stockholm

#### Session 1, Print, media and society

- International media production zone
- Search, community and blog
- “Tuleva”
- Sustainability aspects of media production
- Systems thinking

#### Session 2 & 3, Short presentations and panel discussions

- Non traditional use of printing methods
- Imagination: The only limitation for new inkjet applications?
- Printing for advanced composite technology
- New materials for printing
- Added value by appealing effects and visible sensors
- Pigments and beyond
- The forest as the resource for future materials – realistic or not?

#### Session 4, Cutting edge of R&D

- Traceability and security print
- Surface modified substances and materials
- Communicative paper and media electronics

#### Vision – twenty years ahead, Vision 2025

### Workshop, 21 September, Stockholm International Fair, Älvsjö

#### Market changes and characteristics of tomorrow's customer – on the road towards prosperous future business

For further information, visit [www.stfi-packforsk.se](http://www.stfi-packforsk.se)  
or contact [futurerole@stfi.se](mailto:futurerole@stfi.se).

### COMING EVENTS

#### SEPTEMBER

- 20–21 Future Role of Print & Media
- 28–29 Advanced Training: Stock preparation and fibre properties

#### OCTOBER

- 3–6 Packaging Diploma Course, session IV
- 4 Research seminar for partner customers
- 5 T2F mini-seminar on prepress
- 6–7 Paper/ink properties and their relation to offset printability symposium, Madrid, Spain
- 11–12 Advanced Training: Spots and deposits
- 18–19 Advanced Training: Paper surface properties
- 20–21 Förpackningsdagarna 2005
- 25–26 Advanced Training: Fibre development in mechanical pulping

#### NOVEMBER

- 1–2 Advanced Training: Paper web forming, structure and properties
- 2–3 Advanced Training: Fibres from forest to paper
- 7–8 Cost Action E41: Analytical tools with applications for wood and pulping chemistry
- 9–10 The European Forest-based Sector Research Forum 2005: Innovative and sustainable use of forest resources
- 21–22 Packaging Diploma Course, session V
- 22–23 Analys- och provningsdagar
- 29–30 Advanced Training: The potential of digital printing

## Have you changed address?

Please let us know by sending an e-mail to [info@stfi.se](mailto:info@stfi.se).

# B



# Brazilian pilot trials in Europe

Pilão, a Brazilian manufacturer of refiners for the pulp and paper industry, is one of the STFI-Packforsk customers to take advantage of the Company resources for making pilot trials and evaluations, together with its European customers.

The Pilão factory where it makes its refiners is in Brazil. It does not have any pilot units of its own in Europe. As an alternative, Pilão elects to utilise the STFI-Packforsk expertise and infrastructure for its European clients, when it is time to make test runs with particular pulps.

"At the end of 2004 and now, in 2005, we have run a sequence of trials for customers, which resulted in sales for Pilão," says Ivan Battiston at Pilão.

"We understand that it is necessary to do such important trials as well as to provide a high level of quality when it comes to service to our customers".

## Objective assessments

"This is one example of the co-operation we have with suppliers in the pulp and paper industry," says Marco Lucisano at STFI-Packforsk. "It's quite a unique thing

to be able to offer an objective evaluation of a performance of a refining system, specific to each potential client."

When the time comes for a trial run, a particular pulp is delivered in a dry state or by tank lorry from a customer's mill. Because the trial runs take place on a pilot scale, customers are guaranteed that the runs will have industrial relevance.

"The trial run itself doesn't take much time," says Torgny Persson at STFI-Packforsk. "We make use of the supplier's equipment, a refiner in this case, and carry out the trial. Both the supplier and the prospective clients are present during the trial runs."

## Fast evaluation

After the trial, the refined pulp is taken to the laboratory to test its pulp and paper properties. For every trial, a refining graph is drawn up. The entire pilot run is documented by STFI-Packforsk, which compiles a report to be sent one week after the trial has taken place.

"Apart from the results of the laboratory testing and analyses, the customer can request a complete log of all relevant process parameters during the trial," says Marco Lucisano. "This means we're able to evaluate the properties of a refiner on different kinds of pulp from a customer."

All throughout, the customer is present and

keeps an eye on the work during the trial, which consists of everything from stock management logistics to characterizing plus the pulp trial itself.

"The proximity to our laboratory services for testing the pulp properties during the trial period is highly appreciated," says Torgny Persson. "It's a unique model that we offer. This, together with the fact that a customer can be assured that we carry out the trial runs as an objective partner."

Ivan Battiston adds that their end customers are very satisfied with the results of the trials made at STFI-Packforsk and with the laboratory facilities. "They have confidence in the results of the excellent work co-ordinated by Marco Lucisano, which the STFI-Packforsk experts carry out." ●



Ivan Battiston, International Sales Manager at Pilão

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**Pilão, den brasilianska** tillverkaren av kvarnar för massaindustrin har själv ingen pilotanläggning i Europa. Istället väljer Pilão att för sina europeiska kunder använda sig av STFI-Packforsks kompetens och infrastruktur för testkörningar av relevansmassa.

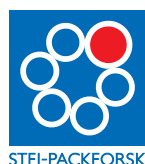
– Under senare tid har vi genomfört en serie pilotkörningar för kunder som lett till försäljning, säger Ivan Battiston, Pilão.

När det är dags för en testkörning levereras kundens relevansmassa i torrt skick eller i tankbilar. Genom denna provkörning som sker i pilotskala får kunden en garanti för att körningarna har industriell relevans.

– Vi använder oss av leverantörernas utrustning, som i detta fall kvarnen, och genomför försöken. Under testkörningarna närvarar både leverantörer och presumtiva kunder, säger Torgny Persson, STFI-Packforsk.



The supplier's equipment, in this case the Pilão Triconic refiner, is used to carry out the trials at STFI-Packforsk.



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