ADVANCED TRAINING COURSE on “DEINKING AND RECYCLING”

June 2-3-4, 2015

CTP – Grenoble – France

ADVANCED TRAINING COURSE on “PAPER AND BOARD PACKAGING RECYCLING” (7th session)

ADVANCED TRAINING COURSE on “DEINKING” (12th session)

40th ANNIVERSARY of developing knowledge, new technologies and concepts for the Industry in Deinking & Recycling at CTP

3 day-conference followed by a Practical Training Session at CTP Laboratories

Organized by Centre Technique du Papier – Grenoble – France

In collaboration with PTS
ADVANCED TRAINING COURSE on “DEINKING AND RECYCLING”

Who should attend?
- Deinking plant operators, engineers & technicians,
- Mill & Production managers,
- Deinking process related chemicals vendors and staff,
- Professionals and Scientists in institutes and industry,
- Environmental experts.

Why attend?
- Benefit from international research experts experience,
- Obtain fundamental knowledge required to optimise and control daily processes,
- Be aware of the latest developments in the Deinking industry,
- Use the know-how acquired in technological developments to implement real performance improvements in your mill,
- Make significant economies in time and resources by optimizing the Deinking processes,
- Exchange with specialists in Deinking and learn about the newest practices in the industry.

Deinking Course Experts:
Bruno Carré & Benjamin Fabry

Who should attend?
- Production & mill managers,
- Sales engineers and officers,
- Quality and operations managers,
- Mill sites engineers and technicians.

Why attend?
- Get the latest overview of Recycling from collecting and sorting to new process concepts to expand your recycling line capacities,
- Which EU regulations that recycled paper board may face,
- Excellent opportunity for networking with experts from research as well as from industry,
- Learning from speakers’ experience and establish new business relationships.

Recycling Course Experts:
Alain Cochaux & Thierry Delagouette

A must-attend Training for Professionals looking to keep abreast of the latest technologies, and developments on paper industry trends

www.webCTP.com
CONFERENCE PROGRAMME

VENUE
The programme is planned for an international audience. It covers topics of interest for both people working in research and development, specialists working in the pulp and paper industry, but also in allied industries. International level experts from CTP (France), PTS (Germany) and from other research institutes as well as pulp and paper professionals will disseminate their knowledge of fundamental techniques and technologies and also the most recent research results. Managers, engineers, technicians, scientists and technical staff from the paper industry, chemical suppliers, machine construction and engineering sectors are welcome to these courses.

Official language of the training courses: English.

OBJECTIVES
The conference provides an overview of the state of the art and recent national and international developments on the various areas of paper, board, deinking and recycling. The main objective of this event is to get the maximum possible benefit for delegates, speakers and sponsors and a valuable return on their time and investment. You will benefit from an atmosphere of knowledge exchange and experience for your future business.

SPONSORS
This event is sponsored by Kadant, Kemira and Techpap

LOCATION
Centre Technique du Papier - Domaine Universitaire - 341, rue de la Papeterie
38400 Saint Martin d'Hères - France

COURSE SUPPORTS
Participants will received at their arrival at CTP a proceeding book including conference presentations, completed by a Memory Stick Support with the complete course conferences (manuscripts).

If you want to remain up-to-date with current research and best practices and obtain all this information in only three days, join us at CTP - Grenoble - France
## DAY 1

**Tuesday, June 2nd, 2015**

(Common session Deinking & Recycling)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.30 - 14.00</td>
<td><strong>Registration and Welcoming</strong></td>
</tr>
<tr>
<td>14.00-14.30</td>
<td><strong>Keynote address</strong> / Gilles Lenon (CTP General Director)</td>
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<tr>
<td></td>
<td><strong>Introduction to recycling, recovered papers &amp; recycled fibres</strong></td>
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<tr>
<td></td>
<td>Chairman: Bruno Carré</td>
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<tr>
<td></td>
<td><strong>European recycling - deinking industry - perspectives - facts and figures</strong></td>
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<tr>
<td></td>
<td>U. Leberle (Cepi)</td>
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<tr>
<td></td>
<td><strong>Trends in recovered paper collection, utilization and pricing</strong></td>
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<tr>
<td></td>
<td>M. Korpivaara (Pöyry Management Consulting)</td>
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<tr>
<td>14.00-14.30</td>
<td><strong>Optical sorting of paper: Update on best available technologies</strong></td>
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<td>A. Bourely (Pellenc ST)</td>
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<tr>
<td>16.00 - 16.30</td>
<td><strong>Afternoon Refreshments</strong></td>
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<tr>
<td></td>
<td><strong>Opportunities and risks of current and future use of fiber cascades</strong></td>
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<td></td>
<td>C. Seideman (PTS)</td>
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<td></td>
<td><strong>Specific sensors for automatic controls in recycling and deinking mills</strong></td>
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<td></td>
<td>P. Borel (CTP)</td>
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<td><strong>End of Day 1: 17.15</strong></td>
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<td></td>
<td><strong>17.30 - 18.20</strong></td>
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<td></td>
<td><strong>CTP PILOT PLANT VISIT (optional on registration)</strong></td>
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</tbody>
</table>

## DAY 2

**Wednesday, June 3rd, 2015**

Opening: 9.00 (for each session Deinking & Recycling)

### DEINKING SESSION

- **Inks & Deinking**
  - Chairman: Benjamin Fabry & Bruno Carré
  - **Enlarged producer responsibility for graphic papers, French innovative tool for paper recycling development**
    - J.F. Robert (EcoFolio)
  - **Overview of deinking technology**
    - B. Carré (CTP)
  - **Pulping in deinking lines**
    - B. Fabry (CTP)

### RECYCLING SESSION

- **Packaging Directive**
  - Chairman: Thierry Delagoutte
  - **Eco-Emballages at the heart of industrial household packaging recycling process - Missions and challenges - role through the CEREC**
    - M. Pailleux (Eco-Emballages)
  - **European packaging directive (part 1) Essential requirements**
    - A. Cochaux (CTP)
  - **European packaging directive: Organic recovery - EN13432**
    - S. Prasse (CTP) - Followed by a visit of the Laboratory

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.30-11.00</td>
<td><strong>Morning Refreshments</strong></td>
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<tr>
<td></td>
<td><strong>Inks &amp; Deinking</strong></td>
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<tr>
<td></td>
<td>Chairman: Benjamin Fabry &amp; Bruno Carré</td>
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<tr>
<td></td>
<td><strong>Ink removal: technological aspects</strong></td>
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<td>D. Beneventi (LG2-UMR5518-CNRS) &amp; F. Julien St Amand (CTP)</td>
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<td><strong>Food contact &amp; Nanoparticles</strong></td>
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<td>Chairman: Alain Cochaux</td>
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<td></td>
<td><strong>Food contact paper &amp; board: Current regulation</strong></td>
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<td>D. Ottenio (CTP)</td>
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</tbody>
</table>
### DAY 2 / End

<table>
<thead>
<tr>
<th>Deinkability</th>
<th>Quality control &amp; Recycling technology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chairmen:</strong> Bruno Carré &amp; Benjamin Fabry</td>
<td><strong>Chairman:</strong> Thierry Delagoutte</td>
</tr>
<tr>
<td><strong>Ink removal:</strong> physico chemical aspects</td>
<td><strong>Use of NIR for quality control of raw materials</strong></td>
</tr>
<tr>
<td>D. Beneventi (LGP2-UMR5518-CNRS) &amp; F. Julien St Amand (CTP)</td>
<td>P. Borel (CTP)</td>
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<tr>
<td><strong>Possibilities in mineral oil reduction during processing of paper for recycling</strong></td>
<td><strong>Recycling technologies</strong></td>
</tr>
<tr>
<td>Ch. Ewald, Saskia Runte, Antje Kersten, H-J. Putz and S. Schabel (PMV)</td>
<td>A. Cochaux (CTP)</td>
</tr>
<tr>
<td><strong>Industrial application of deinking aids in flotation-deinking processes</strong></td>
<td><strong>Pulping in recycling lines</strong></td>
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<tr>
<td>J.F. D’Allest (Kemira)</td>
<td>B. Fabry (CTP)</td>
</tr>
<tr>
<td><strong>Nanoparticules in papermaking: Safety &amp; regulation</strong></td>
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<tr>
<td>A. Cochaux (CTP)</td>
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**12.30-14.00 Lunch Break at CTP**

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**DAY 3**

**Thursday June 4th, 2015**

(Common session Deinking & Recycling)

**Opening:** 9.00

<table>
<thead>
<tr>
<th>Contaminant removal &amp; dispersion</th>
<th>Chairmen: Lutz Hamann / PTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principles &amp; technology of screening - fractionation</strong></td>
<td>S. Kumar (CTP)</td>
</tr>
<tr>
<td><strong>Principles &amp; technology of cleaning - fractionation</strong></td>
<td>S. Kumar (CTP)</td>
</tr>
<tr>
<td><strong>Dispersing in recycling lines</strong></td>
<td>B. Fabry (CTP)</td>
</tr>
</tbody>
</table>

**10.30-11.00 Morning Refreshments**

<table>
<thead>
<tr>
<th>Energy &amp; Biorefinery</th>
<th>Chairmen: Frédéric Guillet / CTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of most productive use of paper recycling rejects</td>
<td>M. Krouit (CTP)</td>
</tr>
<tr>
<td>Energy reduction in recycling lines and energy production from by-products</td>
<td>E. Griffon (CTP)</td>
</tr>
<tr>
<td>Treatment and utilization of deinking sludges</td>
<td>E. Hanecker (PTS)</td>
</tr>
</tbody>
</table>

**12.30-14.00 Lunch Break at CTP**

<table>
<thead>
<tr>
<th>Stickies &amp; Contaminants</th>
<th>Chairmen: Elisabeth Hanecker / PTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stickies : définition, origin and characterization</strong></td>
<td>L. Hamann (PTS)</td>
</tr>
<tr>
<td><strong>Impact and management of contaminants in recycled pulps</strong></td>
<td>T. Delagoutte (CTP)</td>
</tr>
<tr>
<td><strong>Reduced water consumption in deinking &amp; recycling mills</strong></td>
<td>P. Huber (CTP)</td>
</tr>
<tr>
<td><strong>Recycled pulp &amp; wet end chemistry</strong></td>
<td>E. Zeno (CTP)</td>
</tr>
</tbody>
</table>

End of the training course sessions : 16.00
CTP will renew this practical training just after the conferences days. To be efficient, the number of participants is limited to 12.

Scheduled on Friday, June 5th 2015 (9:00 AM to 4:30 PM).

The assessment of deinkability and recyclability as well as some control of the recycled pulps properties require a detailed know-how.

This know-how will be explained by theoretical documentation given during the Advanced Training Course, however a demonstration of the methodologies in the CTP Recycled Fibres laboratories will help you to transfer more easily this knowledge in your mill.

**Assessment of deinkability at laboratory scale**
Experiments aiming to study the deinking ability of a mixture of recovered papers will be performed. It will include the pulping and flotation stage, the hyperwashing treatment as well as a demonstration on how to manufacture pulp pads on which controls will be performed.

**Quantification of the different macro-stickies contamination at laboratory scale**
The macro stickies contamination of an industrial pulp will be characterised. This will include the pre-enzymation of the pulp, the screening stage to recover the contaminants and the methodology aiming at distinguishing the various macro stickies, including the distinction between hot melt and pressure sensitive adhesive, as well as the mini stickies.

**Assessment of bleachability at laboratory scale**
Experiments aiming at evaluating the bleaching response of a deinked pulp will be performed. Bleaching treatments tested will be: hydrogen peroxide and sodium hydrosulfite. As far as dosage of bleaching chemicals is concerned, the dosage of the added and remaining peroxide, as well the added hydrosulfite will be performed. As bleaching reactions can take some times, description of how to prepare and start the various bleaching will be done, as well as how to finish and control it.

**Food contact: Participation to the sensorial test as a jury**
Are you able to qualify nuisances caused by the odour of the paper or board packaging even if the food taste is not affected? Can you describe an alteration of the food taste due to the migration of fragrant molecules? Be a jury of the sensorial analysis to understand how tests are performed and require trained people.

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### PRACTICAL TRAINING AT CTP LABORATORIES / Friday, June 5th, 2015

<table>
<thead>
<tr>
<th><strong>DEINKING SESSION</strong></th>
<th><strong>RECYCLING SESSION</strong></th>
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<tbody>
<tr>
<td>9.00-13.00</td>
<td>9.00-13.00</td>
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<tr>
<td>PT 1 - Deinking evaluation</td>
<td>PT 2 - Stickies quantification</td>
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<tr>
<td>PT 2 - Stickies quantification</td>
<td>PT 4 - Food contact &amp; off-flavour - Odour tests: you instead of qualified assessors</td>
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<tr>
<td>13.00-14.15 Lunch at CTP</td>
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<tr>
<td>14.15-16.15</td>
<td>PT 3 - Bleaching deinking pulp</td>
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</table>

**IMPORTANT: the number of participants is limited**

for this Practical Training at CTP Laboratories, don’t wait to register!
CONFERENCE INFORMATION

Venue
This Training course session will be held at CTP Grenoble, every two years. In 2015, it is organized on June 2-3-4, 2015. This training has become appointment for Papermakers, Scientists, Customers, Suppliers, Manufacturers, Technical & R&D Management. CTP / Centre Technique du Papier is located in Grenoble University Campus, green area of the valley surrounded by mountains. From Grenoble City center, by tram or by car, you can reach CTP in 20 minutes.

Hotel details and accommodations
Participants are responsible for organizing their own travel and accommodations. A limited number of rooms have been reserved by conference delegates in several hotels in Grenoble City. To take advantage of special rate for accommodations, please contact directly the hotel by phone no later than the date indicated in the list (joined in the technical programme) and quote “CTP Meeting” as your reference.

Conference fees
The conference fees include the entry to the conference sessions during the 3 days, full documentation (slides & manuscript), lunches & coffee breaks & refreshments and invitation to the friendship dinner proposed on June 3rd, 2015. Practical training fees (Friday 5th June) are not included in the conference fees. You have to register separately on the registration form. Note that fees do not include delegate travel and accommodation.

Cancellation
Cancellation with full refund is possible if CTP receives written notification at least 15 days before the event. No refunds can be made for any delegate cancelling for any reason after this limit.

Visa
Participants requiring visa should request a visa invitation letter from CTP at the time of booking: ensuring sufficient time for sending invitation letters and visas to be processed. Participants are then responsible for contacting the appropriate embassy, themselves. CTP can do nothing further to assist in this process.

Organization
CTP (France) in collaboration with PTS (Germany), both industrial research institutes have acquired outstanding expertise at the interface between research, industrial practice and dissemination of know-how. Organisation contact: Malou.Caillat@webCTP.com Direct line: +33 (0) 4 76 15 40 69

Language
Conferences & Proceedings are in English language.

Anniversary Friendship Dinner
Attendees and speakers are invited to attend this 40th Anniversary Friendship Dinner planned on June 3rd near Grenoble. Additional information will be given at registration. Please don’t forget to click your participation in the registration form.

Technical Visit to CTP Pilot Plant Facilities
On the first day (June 2nd) after conference session, attendees may visit the Pilot Plant Facilities with CTP Scientists. A registration is recommended on your registration form.

Practical Training on June 5th, 2015
A practical training is organized on Friday, June 5th (9.00 to 16.30) at the CTP Recycled Fibres Laboratories. A demonstration of the methodologies will help you to transfer more easily this knowledge in your mill. Attending this training requires separate registration and payment (see registration form). Participant number limited to 12.

Website
To find more information, please visit: www.webCTP.com

CTP Event Team
Deinking Course Experts: Bruno Carré & Benjamin Fabry
Recycling Course Experts: Alain Cochaux & Thierry Delagoutte
In charge of Conference and Organization: Malou Caillat

CENTRE TECHNIQUE DU PAPIER (CTP)
Domaine Universitaire - 341 rue de la Papeterie
38400 Saint Martin d’Hères – FRANCE
Tél: 33 4 76 15 40 15 - Fax: 33 4 76 15 40 60
www.webCTP.com

PAPIER TECHNISCHE STIFTUNG (PTS)
HeBstrasse 134 - DE-80797 Munchen - GERMANY
Tél 49 89.12.14.60 - Fax 49 89.12.14.636
www.ptspaper.de

Travel directions
CTP is located in Grenoble University Campus (Domaine Universitaire). You can reach CTP from Grenoble Railway Station by tram (Line B or C) or by taxi. By car, take Rocade Sud from Lyon or Geneve Airports. GPS access: Place / Gières / at Latitude North 45°11,84’ / at Longitude East 5°46.49’

Airports:
From Lyon Saint Exupéry Airport (one hour)
www.lyonaeroports.com/
From Geneve Airport (one hour and half)
www.gav.ch/fr/
From Grenoble Saint-Geoirs Airport (one hour)
www.grenoble-airport.com

For additional information on the access:
www.webCTP.com

For further information on the conference & organization, please contact Conference Organizer: Malou CAILLAT
Direct line: +33(0)4 76 15 40 69 Fax: +33(0) 4 76 15 40 60
E-mail: Malou.caillat@webCTP.com
REGISTRATION FORM | ADVANCED TRAINING COURSE on “DEINKING & RECYCLING”

Date: 2 3 4 June 2015
Venue: Centre Technique du Papier – Grenoble – France
Course: 12th CTP/PTS Advanced training course on Deinking technology
Course: 7th CTP/PTS Advanced training course on Paper & Board Recycling technology.

Step 1 FILL IN PERSONAL INFORMATION

Mr/Mrs - FirstName: .......................................................... Surname: ..........................................................
Position: ..................................................................................................................................................
Company: .............................................................................................................................................
Address: ..................................................................................................................................................
Postal Code: .......................................................... Country: ......................................................................
Phone: .............................................................. Fax: ........................................................................
E-mail: ....................................................................................................................................................
Principal business / activity: ....................................................................................................................

Step 2 CHOOSE YOUR EVENT OPTION (please tick the appropriate box)

<table>
<thead>
<tr>
<th>Event</th>
<th>Fees</th>
<th>Description</th>
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<tbody>
<tr>
<td>12th Deinking Course / 2 3 4 June 2015</td>
<td>€ 2300</td>
<td>(vat included)</td>
</tr>
<tr>
<td>7th Recycling Course / 2 3 4 June 2015</td>
<td>€ 2300</td>
<td>(vat included)</td>
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<tr>
<td>CTP, CTPi, PTS Members (Special prices – please contact us)</td>
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<tr>
<td>Technical visit of CTP Pilot Plan Facilities on June 2nd (17.15-18.00)</td>
<td>Yes □</td>
<td>No □</td>
</tr>
<tr>
<td>Friendship Dinner on Wednesday 3rd (included in registration fees)</td>
<td>Yes □</td>
<td>No □</td>
</tr>
<tr>
<td>Practical training course / Friday 5th June – Deinking attendees 9.00-16.30</td>
<td>Fees: € 800</td>
<td>(vat included)</td>
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<tr>
<td>Practical training course / Friday 5th June – Recycling attendees 9.00-13.00</td>
<td>Fees: € 600</td>
<td>(vat included)</td>
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<tr>
<td>TOTAL REGISTRATION FEES (course &amp; practical training)</td>
<td>€ .................</td>
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</tbody>
</table>

Step 3 ALL REGISTRATIONS MUST BE PRE-PAID
(all fees must be paid in euros and must accompany registration forms)

- Please bill my credit card
  - Visa card □ Master card □ Other card (No payment by AMEX card available)
  - Card Number: .......................................................... Expiry date: .......................................................... Card holder name: ..........................................................
- I will pay by check (made payable in euro to CTP)
- I will pay by wire transfer (see bank transfer details)
  - Account Name: CENTRE TECHNIQUE DU PAPIER
  - Bank Address: CL Grenoble CAE Bank code: 30002
  - Counter code: 02625
  - Account n° 0000060580X Key: 16
  - IBAN: FR74 3000 2026 2500 0006 0580 X 16
  - Invoice address (if different from above) ..........................................................
- Vat Number (required for EU Countries) ..........................................................

Late registration: participant who will register too late for payment to be received prior to the event, are requested to pay at the registration desk by cheque or in cash, or to present a copy of their bank transfer payment

Step 4 SEND US YOUR BOOKING FORM

Fax to: + 33 (0) 4 76 15 40 60
Post to: Mrs Malou Caillat
e-mail: Malou.Caillat@webCTP.com