

Autumn 2008 issue

COOL TIMES

The Quarterly News Letter of the Cool Chain Association



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Message from the Board

On behalf of the board of directors of the Cool Chain Association it is my pleasure to announce and present the upcoming CCA workshop "Cool Pharma". We prepared some very interesting subjects on our agenda for the Workshop. The panel discussion with the panel speaker Mr Ocklenburg, Bayer HealthCare, Mr Peter Claessens, Panalpina and Mr Michael Vorwerk, LifeConEx will inform the attendees about "Temperature controlled transportation of pharmaceuticals" and shall give answers to the questions about the difference between pharmaceuticals and perishables/food. Furthermore Mr Eric Raemdonck, IATA, Mr Sébastien Wins, GSK Biologics, and many more will make this conference a unique pool of experts for cool chain suppliers. You will find a Special about the workshop "Cool Pharma" with further info and preview at the end of this issue of the Cool Times.



Enjoy reading!

Your Chairman Robert Arendal



News

Ambient Systems' intelligent RFID reduces fruit and vegetables spoilage



A fifth of all fruit and vegetables go off before they reach supermarket shelves. A shelf life model created by the University of Bremen aims to reduce this in the future. Ambient Systems is providing the implementation technology with its third-generation active RFID solution. As a first step in this cooperation, a research team recently programmed the first RFID tags for real-life testing. These so-called Shelf-Life SmartPoints measure the temperature during transportation and storage and calculate the quality and shelf life of the goods. The result is used to optimise logistics processes based on the "First Expire – First Out" principle and is available from September as part of the

Ambient Product Series 3000. According to the US Food and Drug Association (FDA), which has its headquarters in Rockville, 20% of all perishable food is wasted during transport. Ambient's active RFID tags with incorporated shelf life model, where every type of fruit and vegetable is assigned an individual model, aim to reduce this loss. "The self-monitoring of logistic processes is one of our main areas of work," says Dipl. Ing. Reiner Jedermann, Research Associate at Microsystems Center Bremen (MCB). "The shelf life model was developed as part of the 'Intelligent Container' research project.

Until now, transferring the findings to practical applications has failed due to the price and performance of standard RFID technologies." As members of the Cool Chain Association, the project partners are working in close collaboration with the Chairman, Robert Arendal: "The Shelf-Life SmartPoint perfectly meets the requirements of our members, who transport food using temperature-controlled methods, and paves the way for entirely new approaches in the logistics chain." As part of the cooperation, pilot projects with temperature-controlled transport of perishable goods will be carried out later this year.

Published at www.coolchain.org

AB Aircontainer certifies for CE mark

AB Aircontainer A.C. reported that their RKN Container has been certified by EASA (European Aviation Safety Agency). This allows Aircontainer to start production and sales. SAS Cargo is the first customer of this state of the art RKN.

Additionally, Aircontainer received the certificate of registration from the Swedish Medical Products Agency, which is valid for their package system - i.e. the small boxes and containers. Aircontainer now can put the CE mark on their products provided for the cold chain.



Keep your cool

Robert Arendal, Chairman of the Cool Chain Association explains the potential environmental benefits of an efficient supply chain.



During the last few years, the international media has continuously directed our attention towards global warming. Although man-made contribution to the climate change is only a small part of the total negative impact on the world's climate, we have been alerted to the importance of finding solutions in order to reverse the global temperature increase.

Consequently, we need to change our way of life and find ways to cut both the CO₂ emission, greenhouse gas (GHG) footprint and the pollution that we inflict on our world.

There is no doubt that we must take serious action to combat global warming while at the same time raise the quality of life for a large part of the world's underprivileged population. The action in both categories is necessary to bring reasonable fast results within affordable economic and socially acceptable terms. But as certain food supplies are in abundance, others are becoming scarce and food prices rise.

As a consequence, we need to develop new ways to meet the ever-increasing demand for food, but first of all we have to make use of our present food resources, learn to manage them better and cut the waste of food. In the developed world we waste up to 30 percent of food, maybe even more. A good part of that waste is in the supply chain.

We have grown, produced and harvested the food, but we have wasted it in transporting and delivering it to consumers. Needless to say that we have today new and improved methods on how to handle and transport fresh, frozen, canned and dried food; much better handling and transporting than we ever had before. But if the records prove that we waste up to 30 percent in handling and transportation, we clearly have a challenge to improve the end results – and reduce the waste. To do so, we need to manage the food supply chain in a better way; for fresh products that includes the 'unbroken cool chain'. To achieve such improvements is far from an impossible task, but it is necessary that we set our mind to achieve the improvements we require.

In the long-term perspective, the CCA objective is to make the CCQI's a global standard that aims to cut waste in the food supply chain, and reduce the CO₂ emission from the PTSP industry and improve the quality of distribution as well as the supply of fresh food.

Full Article has been published in the magazine "Food Solutions", September 2008

To learn more and discuss the raised problems and solutions visit the CCA workshop Session on 16th October 2008 at the CCA Workshop "Cool Pharma" 15th -16th October 2008 in Brussels.

Spotlight on: “White Cover” Keeps Cargo Cool

by Therese Puetz, Emirates SkyCargo

Emirates SkyCargo has teamed up with a leading US research institute to develop a ground breaking new product for the shipment of temperature sensitive cargo. It is a low-cost, light weight and reusable protective 'White Cover' designed to shield shipments from heat during door to door transport. One of the 'White Cover's' distinct properties is its gas permeability – it allows oxygen to reach produce and flowers to avoid suffocation and irreversible damages. It resists air and water penetration while enabling trapped moisture to escape – making it ideal for 'living' food and flower products.

This is the first time this unique type of protection which completely encloses the shipment has been used for the air freight of temperature sensitive goods.

As well as being environmentally friendly – the cover is 100 percent recyclable – its application is straightforward, taking two people a maximum of eight minutes for application on a pallet.

‘White Cover’ application in 6 easy steps



1. Prepare the pallet and lay the cover ready for loading.



2. Put cargo on top and fold the bottom part up onto the load.



3. Fix using Velcro attachments,



4. Place the hood on the top and fasten the loops.



5. The pallet with top and bottom pieces fastened.



6. Apply the pallet net and restrain the load as normal.

The White Cover limits the temperature increase of ‘living products’, such as fruits and vegetables and plants, to only a few degrees Celsius throughout the whole journey. Product temperatures on an unprotected pallet or with a regular plastic wrapping would have increased by about 20 degrees Celsius when exposed to extreme heat.

It works on the principle of solar radiation and offers significant thermal protection. It also allows cooling of the shipment during transport and cold storage operations.

Emirates SkyCargo, together with perishables and pharmaceutical shippers trading throughout its worldwide network, is conducting a pilot program during the northern hemisphere's hot summer months. The 'White Cover' is for the exclusive use on Emirates SkyCargo flights. A patent for the application is pending. This innovation has also generated high interest in the pharmaceutical industry, as additional protection for 2-8 degree shipments in insulated packaging as well as a solution for room temperature goods – a field with growing attention. With its weight being no more than 3kg, it is around one tenth of the weight of other insulated covers available in the market today, making the additional shipping cost negligible and avoiding additional fuel consumption.

Emirates SkyCargo has always had to pay special attention to its temperature sensitive traffic, with its hub in the hot climes of the Middle East. It has made continual improvements to its Cool Chain processes and infrastructure including the door to door use of temperature controlled containers; the introduction of Cool Dollies (aluminum insulated containers on steel trailers) to protect perishable cargo during ramp handling at its Dubai hub; dedicated handling teams; and a major investment into 7,000 square meter refrigerated area in the new Cargo Mega Terminal. The 'White Cover' is another innovative addition, although at a fraction of cost.

The following case study gives a conservative indication for cost savings from reduced wastage and improvement in shelf life:

SHELF LIFE BENEFITS			
Roses 140 cases of roses loaded on a PMC			
Assumption for Exposure based on:-			
1) Origin: Precooled and stored at 5°C			
2) Origin: Ramp transfer, 2h, Ambient Temp = 25°C			
3) Origin to Stop1 : Flight, 5h, Ambient Temp = 10°C			
4) Stop 1: Ramp transfer, 4h, Ambient Temp = 40°C			
5) Stop 1 to Destination Flight, 6h, Ambient Temp = 10°C			
6) Destination: Ramp transfer, 2-3h, Ambient Temp = 25°C			
7) Storage assumption for rest of the distribution chain 0-5°C			
Vase lfe (days)	No Cover:	With Cover:	
20 cases	3days remaining	8days remaining	
98 cases	6days remaining	9days remaining	
22 cases	10days remaining	10days remaining	
COST BENEFITS DEPENDING ON ABOVE SHRINKAGE BASED ON AN ESTIMATED WHOLE SALE PRICE OF EUR0.19/- PER STEM			
Approx no. of stems in each box		300	600
Wholesale value of each stem (EUR) based on a <i>conservative assumption</i>		0.19	0.19
Therefore value of each box (EUR)		56	111
Total market value of 140boxes (EUR)		7,792	15,584
Loss for shipment without cover			
Total loss for boxes with 3days shelf life	20	1,113	2,226
Reduced quality - assume 15% loss for 98 boxes	14.7	818	1,636
		1,931	3,863
Loss for shipment withcover			
Reduced quality - assume 15% loss for top 20 boxes	2.8	156	312
COST BENEFIT PER PMC (EUR)		1,776	3,551

Members Update

The CCA is pleased to present the companies who have decided to become our newest members. Let's give them a Cool Chain Association welcome!

DUS Cargo Logistics

Flughafen Düsseldorf Cargo GmbH



Lufthansa Cargo

LifeConEx
A Matter of Degree



Coming Events/Conferences with CCA Participation

24-25 September 2008

Temperature Controlled Pharmaceutical Distribution

Okura Hotel, Amsterdam, The Netherlands

CCA is sponsoring the event.

30 September - 2 October 2008

CPhI Worldwide

Messe/Fair Frankfurt, Germany

CCA members are exhibiting

08-09 October 2008

Fruit&Vegetable Show

ExCeL, London, UK

CCA members are present



COOLCHAINASSOCIATION

www.coolchain.org

Cool Chain Association

Contrescarpe 52

28195 Bremen, Germany

T: +49 421 460 470-12

F: +49 421 460 470-10

Disclaimer: The views expressed in this news letter are the views of the editors and not necessarily those of the members of the CCA. The CCA makes every effort that the material contained in this news letter is current, complete and correct. Please find our [Disclaimer](#) on the website.

à SPECIAL ß



Cool Chain Association

“Cool Pharma”

15th – 16th October 2008

HUSA President Park, Brussels, Belgium

The CCA recognized that the pharmaceutical industry is facing the same problems regarding the temperature controlled transport as the food industry. Consequently the CCA would like to ally with the pharma industry in order to learn from each other and discuss the problems in the cool chain openly and as partner. In particular our members, being the supply chain provider would like to learn about the differences, the way to measure, the internal and official regulations and the consequences.

The IATA formed a Task Force for the temperature controlled transportation of pharmaceuticals, in order to verify where the differences are in comparison to the Food industry, if there are any. Furthermore the needs of the pharma industry for the transports are more restricted, stricter in general so that it is not easy for everybody involved in the cool supply chain to understand what the guidelines are and where the regulations begin. The CCA aims to clear these questions at the workshop and to discuss openly the partnership and possibilities.

Additionally, the current working committees such as CO₂ project, Technology/Cargo2000 and PPECB project will come together to exchange the newest developments and to share their results.

Mr Sébastien Wins of GlaxoSmithKline Biologicals will present the view of the manufacturer on how to handle the cool chain management. GlaxoSmithKline Biologicals is a global leader in the production of vaccines and is situated at Rixensart in Belgium, where the majority of activities concerning research, development and production of vaccines are realized. Every year, GSK Biologicals distributes more than 1, 2 billion doses of vaccines in 165 countries.

The CCA is proud to announce that Mr Ingo Ocklenburg, Global Sourcing Manager Distribution and Logistics und Corporate Global Lead Buyer for Airfreight and Express Services of Bayer HealthCare, was gained as speaker and presenter. Mr Ocklenburg will inform the attendees about “Temperature controlled transportation of pharmaceuticals” and shall give answers to the questions about the differences between pharmaceuticals and perishables/food and his company’s approach controlling the temperature. Furthermore Mr Eric Raemdonck, IATA, Mr Patrick Gueth, Panalpina, Mr Michael Vorwerk, LifeConEx and many more will make this conference a unique pool of experts for cool chain suppliers.

Mark your calendar for the challenging and stimulating debate with industry experts and the excellent opportunity for networking!

Find the agenda and more info about the event at www.coolchain.org

à SPECIAL B

Who should attend?

Airlines	Packaging Manufacturer	Government Agencies
Shipping Lines	Pharmaceutical companies	Industry Consultants
Airports	Warehouses	Trucking companies
Airport Operators	Pharmaceutical Distribution companies	Food retailers
Seaport Operators	Reefer Truck Operators	Exporter and Importer
Freight Forwarder	Cool Terminal Operators	Carrier

Working sessions at the “Cool Pharma” workshop

Working Session 1: Cooperation CCA and the pharmaceutical industry

Hosted by Stavros Evangelakakis, Cargolux and CCA Board Member

The CCA would like to ally with the pharma industry in order to learn from each other and discuss the problems in the cool chain openly and as partner. In particular CCA members, being the supply chain provider, would like to learn about the differences, the way to measure, the internal and official regulations and the consequences. The workshop shall unite the Pharma Industry representatives with the CCA members and find similarities.

Workshop 2: CO2-emissions:

Hosted by Robert Arendal, Chairman of the CCA



The PTSP industry cannot afford to ignore the changes in consumer concern over carbon emissions & food miles. Businesses that move early to review their distribution process and offset or reduce their carbon emissions may have a competitive edge over those that don't. The workshop will continue the discussion about the CO₂ emissions and the way to show that this industry has a positive voice and message to deliver and that we are sensitive to environmental issues.

Workshop 3: PPECB-pilot project: Improving the shelf life

Hosted by Christian Helms, CCG and Secretary General of the CCA



The Perishable Products Export Control Board (PPECB) is a statutory organisation, which today conducts its business in terms of the Perishable Products Export Control Act and also operates as an assignee for the Department of Agriculture under the requirements of the Agricultural Product Standards. Together with the exporter CCG, the provider of temperature recording equipment Green Marketing, LogTag, and the South African retailer Woolworths, PPECB intends to become involved in a project to determine the value of establishing an auditable system approach to the cold chain, which will include the audit, verification and monitoring processes of the cold chain controls in South Africa.

Workshop 4: Technology/Cargo2000:

Hosted by Arnaud De Bakker, WFS and CCA Board Member

The CCA has worked with C2K for the past year in order to evaluate and define the integration of the CCQI into the C2K process, including temperature control checks and points. The purpose of this workshop is to finalize the actions to be taken and identify pilot projects where the CCQI/Temperature Checks can be incorporated and tested.

à SPECIAL B

Speakers List

Eric Raemdonck, IATA

Eric Raemdonck joined the International Air Transport Association (IATA) in 2000 as Officer, Special Cargo. In his current capacity as Manager Cargo Standards he is responsible for the Association program for Perishables and Live Animals and as such authors the Perishable Cargo Regulations and Live Animals Regulations manuals. He was instrumental in the creation of the Time and Temperature Task Force (TTTF) and in obtaining recognition for the Perishable Cargo Regulations. Mr. Raemdonck is the Secretary of the IATA Live Animals and Perishables Board and Time and Temperature Task Force. He represents the Association at the Convention in International Trade of Endangered Species (CITES) and the World Animal Health Organization (OIE). Before joining IATA, Mr. Raemdonck worked in the private sector. He has more than 20 years of combined experience in maritime and airfreight business and he hopes to enjoy many more to come. Mr Raemdonck will hold a presentation concerning the subject "IATA's Time and Temperature Task Force". The Time and Temperature Task Force aims to liaise with the health care industry to establish common standards that work in both industries.

Michael Vorwerk, LifeConEx

Mr Michael G. Vorwerk began his career with Lufthansa in 1979 in the Cargo Sales department (Berlin, Germany), where he held various responsibilities. Mr Vorwerk was the Assistant to the Cargo Director Germany. During this time, he completed a management trainee program that rotated him through central departments and projects with Lufthansa. He became Manager of Lufthansa Cargo Sales at the Regional Headquarters in France and was put in charge of the new Regional Directorate Cargo in France in 1992. He transferred to the American Headquarters in Atlanta as Vice President of North America (USA, Canada & Mexico). In January 2000, Mr Vorwerk returned to Corporate Headquarters in Frankfurt, reporting to the Chairman of the Executive Board, where he was responsible for a strategic project to realign Lufthansa Cargo AG. After successfully completing the project, the Managing Board appointed Mr Michael G. Vorwerk to the position of Vice President Global Key Account Management in June 2001. In April 2005, Mr Michael G. Vorwerk was appointed COO and Managing Director of LifeConEx, a joint venture of Lufthansa Cargo and DHL Global Forwarding based in Plantation, Florida.

Mr Vorwerk is panel speaker at the panel discussion about **"Temperature controlled transportation of pharmaceuticals"**.

Ingo Ocklenburg, Bayer HealthCare



He joined Bayer in 1997 for the position of Logistic Procurement Airfreight and Express Services. Mr Ocklenburg is a logistic expert and has a broad experience within the Aircargo Industry for more than 25 years. In his previous positions he worked for Airfreight Forwarding Agents, for a Canadian Airline and for a Aircargo Broker Company in various management positions for marketing and sales. In his function as a Global Sourcing Manager Distribution & Logistics, he is responsible for all global logistics spends of Bayer HealthCare for Airfreight and Express Services. He is also Lead Buyer for the Procurement Synergy Areas Airfreight and Express Services for the

Bayer Group globally.

Mr Ocklenburg is Panel Speaker of the above mentioned discussion as well. Headquartered in Leverkusen, Bayer HealthCare researches, develops, manufactures and markets innovative products for the prevention, diagnosis and treatment of diseases.

à SPECIAL B

Peter Claessens, Panalpina



Education: Bachelor at College of Antwerp, Master in Sciences

Panalpina: 15 professional years with Panalpina

Panalpina: Commercial & Operational Management Functions in Belgium, Benelux, Europe Region and Corporate.

Professional: Licensed Forwarding Agent, 29 years of experience in the industry with Airfreight, Ocean Freight, Road Freight & Logistics + Special Transports & Supply Chain Management.

Professional: Starting in 1979 with a local Antwerp-based forwarding agent called Atramef, then with the Nedlloyd Group until 2003, followed by

Panalpina since 2003

Mr Peter Claessens is also Panel Speaker about “**Temperature controlled transportation of pharmaceuticals**” as well as main sponsor of the event and he will discuss with the audience and his speaker colleagues where the differences between pharmaceuticals and perishables/food are and what they have in common. Furthermore the question of how to control the temperature and where to control shall be clarified.

Patrick A. Güth, Panalpina



Education: Degree in Logistics and Forwarding from the German Chamber of Commerce, General Management degree from the European Business School.

Patrick A. Güth joined 2004 the Panalpina organization, and he is based in Frankfurt. Since 2008, he is responsible for the Life science industry in Europe. Before that he was in charge for a strategic account portfolio as Global Sales Manager inside the Panalpina Germany entity. Mr Güth is in the logistics industry since 1996 and has worked in several Commercial & Operational Management functions.

Sébastien Wins, GlaxoSmithKline Biologicals

GlaxoSmithKline Biologicals, Brussels is a well-known pharmaceutical manufacturer of vaccines. GlaxoSmithKline Biologicals is a global leader in the production of vaccines and is situated at Rixensart in Belgium, where the majority of activities concerning research, development and production of vaccines are realized. Every year, GSK Biologicals distributes more than 1, 2 billion doses of vaccines in 165 countries.

Mr Wins will present the topic “**Cold Chain Management of Vaccine Manufacturer**”.

Margriet Franke, Germanischer Lloyd

The Germanischer Lloyd is the exclusive body of the CCA for the certification of the Cool Chain Quality Indicator (CCQI) – a standard established by CCA and Germanischer Lloyd in 2003. The Presentation “Guidelines/Standards for transportation of pharmaceuticals” will discuss the following:

What are regulations, what is recommendation? What is the scope? Consequences for manufacturers, Consequences for supply chain providers.

à SPECIAL B

Sponsors List



The Panalpina Group (www.panalpina.com) is one of the world's leading suppliers of forwarding and logistics services, specializing in intercontinental air freight and ocean freight shipments and associated supply chain management solutions. The healthcare industry with its increasing requirements needs special care and dedicated transport solutions to guarantee product integrity from door to door. The Panalpina Group established the Industry Vertical Healthcare in order to identify those needs and develop specific services. Proven procedures and processes are integrated in their global quality management system and described in SOPs (standard operating procedures) for daily business. The offer contains specially designed and developed solutions such as own controlled capacity services, emergency charter shipments, on-board courier services as well as sea/air- and rail/air services. In the field of supply chain management Panalpina develops worldwide tailor-made solutions. Panalpina follows an asset-light-strategy and cooperates with best-in-class partners around the world. The Panalpina Group operates a close-knit network with some 500 branches in 90 countries. In a further 60 countries, it cooperates closely with selected partner companies. Panalpina employs more than 15,000 people worldwide.

Envirotainer^o

Pioneer and market leader Envirotainer offers flexible leasing (rental) of advanced transport solutions for worldwide air cargo shipments of temperature-sensitive products. Customers within the healthcare, life sciences and high-tech industries, benefit from the combination of advanced container technology, extensive cold chain management services and a global network of service partners, airlines and forwarders – providing a unique one-way leasing service.

Envirotainer secures the safety and integrity of product cold chains by providing an active temperature-control system, training all parties along the cold chain and supporting customers in transport validations and risk management. With sales representation in 17 countries, the company has its R&D, Manufacturing and Quality Assurance departments at the headquarter premises in Lagga Marma near Stockholm, Sweden.

à SPECIAL ß

Location – About Brussels

Brussels is the capital of Belgium and the administrative centre of the European Union. This has earned the city the title of the Capital of Europe. Brussels has been given its character by the coexistence of French and Flemish culture, and it is nowadays home to nationalities from around the world, adding a cosmopolitan flavor to its atmosphere. The vibrant atmosphere of Brussels is further enhanced by picturesque medieval streets, lively squares, beautiful boulevards, impressive monuments, spacious parks, cozy cafés, interesting restaurants and an active cultural life.

Brussels has grown from a 10th-century fortress town founded by Charlemagne's grandson into a metropolis of more than one million inhabitants. After the end of World War II, Brussels has been an important centre for international politics. It hosts the main institutions of the European Union, and the headquarters of the North Atlantic Treaty Organization (NATO). Thus, Brussels is the polyglot home of many international organizations, diplomats and civil servants. Brussels is the EU's third-richest city in terms of per capita income. Although historically Dutch-speaking; Brussels has become increasingly francophone. Today most inhabitants are native French-speakers, although both languages share official language status. This process has led to a longstanding conflict between the French and Dutch speaking community, reflecting the situation in Belgium at large. Brussels is the capital of Flanders and of the French Community of Belgium.

The architecture in Brussels is diverse, and spans from the mediaeval constructions on the Grand Place to the postmodern buildings of the EU institutions. Main attractions include the Grand Place, since 1988 a UNESCO World Heritage Site, with the Gothic town hall in the old centre, the St. Michael and Gudula Cathedral and the Laken Castle with its large greenhouses. Another famous landmark is the Royal Palace.



The Atomium is a symbolic 103-metre (338 ft) tall structure that was built for the 1958 World's Fair. It consists of nine steel spheres connected by tubes, and forms a model of an iron crystal (specifically, a unit cell). The architect A. Waterkeyn devoted the building to science. Next to the Atomium is the Mini-Europe park with 1:25 scale maquettes of famous buildings from across Europe. The Manneken Pis, a bronze fountain of a small peeing boy is a famous tourist attraction and symbol of the city.

Other landmarks include the Cinquantenaire park with its triumphal arch and nearby museums, the Basilica of the Sacred Heart, Brussels Stock Exchange, the Palace of Justice and the buildings of EU institutions in the European Quarter.

