ISMR SAYS: There are two main future challenges for the western European organic coated sheet industry: the development of new pre-painting technology, which would significantly reduce the cost of production, and the development of new types of products – removing technical and cost-related constraints and leading to new applications.

New markets for coil coaters

ISMR reports from the European Coil Coating Association's last Congress in Brussels, where a variety of coil coating processes, technologies and market forecasts for pre-painted metal were presented

The European Coil Coating Association's 39th Autumn Congress, held from 27-29 November 2005 in Brussels, was the launch platform for various new coil coating process presentations and market forecasts for global pre-painted material demand. ISMR made the trip to Belgium to catch up on the latest developments in European coil coating markets.

Above: Yvonne Barcelona is the new Secretary General of ECCA, following the retirement of Paul J. Franck

Market growth through innovation

The Keynote speech, from Armelle Jouet of Arcelor, examined the theme of market growth through innovation.

"There are currently over seven hundred coil coating lines worldwide," she told the audience. "Western European consumption of coil coating was growing by an average of 5.5% between 1990 and 2001. Organic coating (OC) markets in eastern Europe, the CIS amd the Baltic States have seen faster growth than western Europe, although from a lower base. Studies show that it is the automotive and construction industries that are the largest drivers of growth in western Europe. In eastern Europe, the CIS and the Baltic States, growth in consumption is dominated by the construction sector which, in 2001, accounted for over 90% of the market for OC sheet."

According to a CRU study, from 2005 onwards new capacity needs to come on stream to keep the European region self-sufficient in its supply of OC sheet. Forecasts suggest that there would be a need for an additional one million tonnes of OC capacity between 2005 and 2010, assuming net exports remain stable at 2001 levels. This implies, Ms Jouet told the audience, room for about five large coating lines, ten small lines or an equivalent combination. She posed the question: where should these lines be built?

It would make sense, she continued, to build additional capacity where it is most needed i.e. in eastern Europe, the CIS and Baltic States. In the years to 2010, forecasts show that most countries in western Europe (except for those without integrated steel mills) will remain self-sufficient in OC sheet.

"This means that if the OC industry wants to expand in western Europe, it should first try to develop new growth markets and/or gain additional market share from substitute products and post-painted products," Armelle Jouet explained. "To achieve these goals, producers should continue to improve product quality and find ways to significantly reduce the cost price of their products."

Jouet believes that there are two main future challenges for the western European OC sheet industry: the development of new pre-painting technology (which would significantly reduce the cost of production) and the development of new types of products (which would remove technical and cost-related constraints for the use of OC sheet and lead to new applications for this product in a variety of end-use sectors.

Paul Manchoulas, of Akzo Nobel Nippon Paint, pointed out that, in North America, the penetration of pre-painted metal in the residential

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roofing market is now at 15% - up from 3% in 1995. In Australia, he told the audience, pre-painted metal is now over 50% of the residential roofing market. In Japan, it remains at between 15-20%. This can be done in Europe, he maintained, if the industry were to study the key market drivers and conditions.

"The focus in the European coil industry has been to reduce cost, not to introduce new coatings with added functionality," he explained. "The concern now is that, with the growing number of coil lines in Asia, Europe will feel more pressure from low cost, but not low quality, imports. One way to counteract this would be to introduce new coating features. Otherwise, Europe could look at new markets for coil coatings."

New processes and technologies

Sixty-two countries are presently involved in coil coating (around twenty seven countries are in

INNOVATIONS FOR THE COIL COATING PROCESS CHAIN

● **Material innovation for pre-coated metal**
New material properties of the substrates, the paints and the combination of both fall into this category. Improved material design (in form and surface appearance) may also be an innovation

● **Process innovation for the coating process**
Advanced substrate treatment, paint application technique, curing technology and measuring/control technique must be considered here.

● **Innovations for the fabricating process**
New properties can improve the state of the art for the handling of pre-coated metals during forming and assembly

● **Innovation for the finished product**
An improvement of the use of a finished object fits this category. However, a new shape or an alternative surface design may also be innovative.

● **Innovations for marketing**
A new product may open the gates into new markets. To convert existing markets to the use of pre-coated metal, instead of post-coated metal, is innovative because this would be a new market for coil coatings. It is also an innovation if a concept of use is already known in other global regions but introduced into a different area for the first time.

From a presentation by Dr Lothar Jandel, of BASF Coatings

Right top: Figure 1. NCCA steel shipment statistics for first half of 2005

National Coil Coating Association — ECCA Autumn Congress 2005

Steel Shipments by Sector, 1st Half 2005

	Square feet	vs. 1st half 2004
Building & Construction	3,225 Million	-13.3%
Transportation	172 Million	-38.5%
Business & Consumer Prod.	1,081 Million	-11.5%
Containers & Packaging	127 Million	+41.9%
Other	221 Million	-10.6%

Right middle: Figure 2. ECCA's steel shipment figures to Europe

STEEL SHIPMENTS S1-2005
(in 1,000 square meters)

Shipments to Western Europe	S1-2005	Evolution S1-2004/S1-2003		Evolution S1-2005/S1-2004	
BUILDING	256 947	↗	9.2%	↘	-20.2%
AUTOMOTIVE	40 166	↘	-12.5%	↘	-7.8%
APPLIANCE	33 835	↗	23.0%	↘	-28.7%
FURNITURE	5 594	↗	34.7%	↘	-32.8%
PACKAGING	742	↘	-53.8%	↗	8.5%
MISCELLANEOUS	22 377	↗	102.2%	↗	4.6%
STOCKISTS	45 489	↗	12.3%	↗	2.0%

Shipments to Central & Eastern Europe	S1-2005	Evolution S1-2004/S1-2003		Evolution S1-2005/S1-2004	
BUILDING	93 153	↗	20.3%	↘	-2.0%
AUTOMOTIVE	1 387	↗	140.9%	↘	-5.1%
APPLIANCE	8 557	↗	42.9%	↘	-13.2%
FURNITURE	1 277	↘	-54%	↗	323%
PACKAGING	64	↘	-100.0%	↗	
MISCELLANEOUS	1 898	↗	178.0%	↗	124.6%
STOCKISTS	5 525	↘	-53.8%	↗	93.0%

Right bottom: Figure 3. ECCA's summarised world statistics for 2004

WORLD STATISTICS 2004

3) Summarized Quantitative Data:

	TOTAL TONNES ('000)	NCCA	ECCA (in %)	ROW
STEEL 04	17,379	23.9	31.7	44.4
STEEL 03	[15,737]	[25.3]	[31.7]	[43.0]
ALUMINIUM 04	1,075	52.0	33.6	14.4
ALUMINIUM 03	[1,097]	[57.4]	[35.4]	[7.2]
TOTAL 04	(18,454)	(25.5)	(31.9)	(42.6)
TOTAL 03	[16,834]	[27.4]	[32.0]	[40.6]

Europe). There are a number of new coil coaters in Syria and Kazakhstan and booming markets in China and India.

Adphos (Germany) introduced a new concept of combined organic coating curing as well as thermal solvent treatment. The new concept is applicable for new lines but also for the replacement of old oven systems.

A new book in German, reviewing the current status of coil coating, was launched at the Congress. The book is called 'Coil Coating – Processes, Products and Markets' and includes a listing of relevant standards and contact details for related organisations.

ECCA itself is launching a European education programme to raise levels of awareness of coil coating products. For more details, e-mail nico.noort@corusgroup.com.

James Maxted of Becker UK had further suggestions on the acceptance of coil coating technologies in different markets, noting that the development of added-value products was key for the future growth and sustainability of coil coating.

"It is very important that we tell our market what can and cannot be done with the radiative properties of our coatings," he told the audience. "Clear explanations, the use of international standards and protocols as well as the use of easy-to-understand demonstrations and real-life examples are vital for the acceptance of the technology in construction and architectural markets."

Dr Lothar Jandel, of BASF Coatings, went one step further and identified different fields of innovation for the coil coating process chain (see the table on page 32).

Global coil coating market statistics

John Mitchell, president of the National Coil Coating Association (USA), presented NCCA statistics for the first half of 2005 at ECCA's Congress. These relate to US, Canada and Mexico.

A total of 1,954,347 tonnes of steel was shipped in the first half of 2005 (-17% on first half of 2004). Approximately 332,052 tonnes of aluminium was shipped in first half of 2005 (+5.9% on the first half of 2004).

For corresponding market sector figures, please see Figure 1, on page 32.

Françoise Carrara presented ECCA's steel shipment statistics for the first half of 2005. The figures can be found in Figure 2 on page 32.

"In the first semester of 2005, coil coating production registered a decline of 11.5%," she told the audience. "This is confirmed by the paint shipments which decreased by 8.5%. The only positive trends were that steel and aluminium shipments to Non-Europe showed a rise of 60% and steel shipments to central and eastern Europe increased by 4%.

ECCA will be holding its next General meeting in Maastricht on 21-23 May 2006, with a theme of 'The Future of Coil Coating'. E-mail the ECCA Secretariat at laurence.bockourt@eccacoil.com for further details. **ISMR**