



## 13<sup>th</sup> International Automobile Recycling Congress IARC 2013

March 13 – 15, 2013, Brussels, Belgium







#### Patronage:

Alliance of Automobile Manufacturers Association of European Automotive and Industrial Battery Manufacturers (EUROBAT) Automotive Recyclers Association (ARA) Confederation of European Waste-to-Energy Plants (CEWEP) European Association of Automotive Suppliers (CLEPA) European Automobile Manufacturers' Association (ACEA) European Group of Automotive Recycling Associations (EGARA) Japan Automobile Manufacturers Association (JAMA) Japan Automotive Recyclers Association (JARA) PlasticsEurope





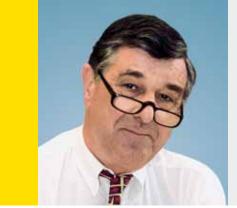












## FOREWORD

#### PROFESSOR Welcome to Brussels! WIJNAND DALMIJN

Chairman of the Steering Committee International Automobile Recycling Congress

In Brussels the recycling targets for automobiles, E-scrap, batteries and other consumer product goods were defined and the targets to be met for 2015 set. The day the recycling quotas have to be realized is approaching fast. On the way to 2015 to meet the auotas set a combination of legislation, economy and technology is needed. Since the EC legislation has been adopted there have been large changes in the automobile cycle with an impact on the export of ELVs to Asia, Eastern Europe, Africa and other countries and this has steadily increased since 2000. Also the export of car scrap to Asia for hand sorting has been growing steadily since the end of the nineties. At the moment large shredder plants are built in China and automated sensor sorting of the nonferrous metals on a large scale with Chinese equipment is the next step. In Europe the total export of old cars and ELVs has reached in some countries a level of about 70% from which most ELVs go East and to Africa. In Germany and the Netherlands the depolluted ELV feed to the shredders has been reduced to about 20% to 25% ELVs seriously affecting the economy of the shredder operations, the dismantling and spare parts industry. Also the nonferrous smelters in Europe and in the USA are having problems with scrap volume and profitability because large amounts of scrap have changed destination. Per year the changes have not been dramatic but the trend over the last decade is indicating that drastic changes are needed for a sustainable global automobile cycle business model. During the implementation of the EC recycling legislation the recycling quota is slowly approaching in some countries the 95% but at the same time however the volume has dropped from almost a 100% to 25%. The 95% recycling rate might be a political success but the 25% is a disaster for the business, maybe the focus has to be adapted by the legislators in Brussels.

During the congress the following topics will be addressed:

- How do car manufacturers and the industry close the recycling loop?
- New cars and new recycling technologies
- Best available recycling technologies
- Reports about illegal export of wrecks
- European ELV Directive towards 2015
- E-mobility influence on car recycling and dismantling

- Rare earth recycling what does it mean for the car industry
- CO<sub>2</sub> reductions and emissions trading potential of car recycling activities
- Implementing new laws and regulation
- Design for recycling failing or a success?

During the congress commercial presentations will be held in the exhibition area with a focus on the recycling industry and those interested in the technology and facts for the automobile cycle.

I am looking forward to welcoming you at IARC 2013!



## **KEYNOTE SPEAKERS**



#### KARL FALKENBERG

European Commission DG Environment Director General Belgium

"EU COMMISSION ENVIRONMENTAL POLICY – THE WAY FORWARD / LEADING THE WORLD"

#### MATTHEW LYNCH

World Business Council for Sustainable Development (WBCSD) Urban Infrastructure Initiative Project Director Switzerland



"WBCSD: VISION 2050"



#### DR LUIGI PELAGGI

Ministry of the Environment, Land and Sea Counselor of Minister President of the ELV public agreement Italy

"END OF LIFE VEHICLES PUBLIC

AGREEMENT IN ITALY"

#### CHRISTINA MESKERS

Umicore Precious Metals Refining Marketing and Business Development Manager Belgium



"RECOVERY OF SCARCE METALS FROM ELV – A BUMPY ROAD AHEAD?"

## INTERNATIONAL STEERING COMMITTEE



PROFESSOR WIJNAND DALMIJN Chairman Emeritus Professor Delft University of Technology Netherlands



MANFRED BECK Vice-Chairman Recycling International Editor Netherlands



JULIEN VAN DAMME Chairman of the Scientific Committee Honda Motor Europe Ltd. Recycling Manager Belgium



DR RUGGERO ALOCCI Alocci Rappresentanze Industriali President Italy



DR MICHAEL BIDDLE MBA Polymers, Inc. President and Founder USA



JAN BOLLEN ArcelorMittal Technology Environment Product Manager Belgium

DR FRANCESCO BONINO FIAT Research Center Materials and Process Technologies Head of Interiors Materials & Technologies Unit



Italy



President Switzerland



ARIE DE JONG ARN Holding B.V. CEO Netherlands



OLIVIER FRANÇOIS Group GALLOO Recycling Market Development Officer France



WOLFGANG HANG BMW Group Department Manager Recycling Germany



JOSEPH M. HOLSTEN LKQ Corporation CEO USA

STEVE HOPE

General Manager

Switzerland





Belgium FEDE KARRER Foundation Auto Recycling Switzerland Delegate of the Board

Toyota Motor Europe NV/SA

Environmental Affairs and

Corporate Citizenship



FERDINAND KLEPPMANN CEWEP President ITAD Chairman Germany



PETER KUNZE ACEA Director Environmental Policy Belgium



RICHARD PAUL Environmental Management Consultant USA



WILLY TOMBOY RECHARGE Chairman of the Industrial Battery Working Group Belgium

## LOCATION OF THE CONGRESS



The 13<sup>th</sup> International Automobile Recycling Congress will be held from **March 13 – 15, 2013** in the hotel Dolce La Hulpe near charming Brussels.

The hotel Dolce La Hulpe, Brussels is located in the heart of the ancient Sonain forest only 15 km away from Brussels center and Brussels International Airport Zaventem and 40 km away from Charleroi Airport. The hotel offers a premier on-site conference location with a lot of benefits: The hotel can easily be reached by car and there are enough parking spaces available at no charges. High speed WiFi is provided free of charge in the whole property.



Hotel Dolce La Hulpe Brussels\*\*\*\* 135, Chaussée de Bruxelles 1310 La Hulpe, Belgium

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 www.dolcelahulpe.com



Today the name Brussels stands for an agglomeration of 19 communes forming one of the three Regions of the federal Belgian state; the capital of the Kingdom of Belgium; the headquarters of the French and Flemish Communities.

The metropolitan area has a population of over 1.8 million, making it the largest in Belgium. Both French and Dutch are the official languages of the city. Street names and traffic signs are always in these two languages.

Since the end of the Second World War, Brussels has been a main center for international politics. As the European capital the city is home to the European Commission and to the Council of ministers of the European Union (EU).

www.visitbrussels.be

Notable culinary specialities include Brussels waffles (gaufres) and mussels (usually as "moules frites", served with fries). The city is a stronghold of chocolate and pralines manufacturers with renowned companies like Godiva, Neuhaus and Leonidas.

The heart of Brussels and the place to start getting to know the city is the Grand Place (Grote Markt). This historic market square with its splendid guild houses and the impressive Gothic beauty of the Town Hall, is widely considered to be one of the most beautiful town squares in Europe.





## CHARMING BRUSSELS

ACCOMMODATION





For the participants of the congress a number of rooms are held at a special rate if you register **before January 31, 2013.** If you wish, you may also extend your stay at this lovely hotel at the same special rate.

Dorce

# Prius Plug-in Hybrid Test Drive at the IARC March 13-14, 2013



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## CONGRESS PROGRAM IARC 2013

TUESDAY, MARCH 12, 2013           17.00 – 19.00         Registration		
<b>WEDNESDAY</b> 08.00 - 09.30	r, MARCH 13, 2013 Registration and welcome coffee in the exhibition area	
Session 1:	OPENING AND KEYNOTE SPEAKERS	
09.30 - 09.45	"Welcome and Introduction" Prof. Wijnand Dalmijn, Chairman of the Steering Committee	
09.45 – 11.00	"EU Commission Environmental Policy – The way forward / leading the world" Karl Falkenberg, European Commission, Belgium "End of Life vehicles public agreement in Italy" Dr Luigi Pelaggi, Ministry of the Environment, Italy	
11.00 - 11.30	Coffee break in the exhibition area	
11.30 – 12.30	Panel Discussion: "Phasing out criminal export" Moderator: Arie de Jong, ARN, Netherlands Participants: Karl Falkenberg, European Commission, Belgium Paul Fox, EGARA, United Kingdom David Higgins, INTERPOL Environmental Crime Programme, France Representative of IMPEL, Belgium Hans van der Bruggen, Association of European Vehicle and Driver Registration Authorities (EReg), Netherlands	

Session 2: Session Chairman:	Country reports I Corine Buffoni, Ecore, Luxembourg			
14.00 - 14.30	"Toyota Tsusho role in car recycling and material management" Kazutaka Kitazume, Toyota Tsusho Corporation, Japan			
14.30 - 15.00	"Shredder results in France" Eric Lecointre, ADEME, France			
15.00 – 15.30	"The benefits and importance of ELV Recycling: A case study from Iran" Hosein Kazemi, Tarbiat Modares University, Iran			
15.30 - 16.00	Coffee break in the exhibition area			
Session 3: Session Chairman:	<u>Country reports II</u> Julien Van Damme, Honda Motor Europe Ltd., Belgium			
Session Chairman:	Julien Van Damme, Honda Motor Europe Ltd., Belgium "End-of-Life vehicles management in Italy"			
Session Chairman: 16.00 – 16.30	Julien Van Damme, Honda Motor Europe Ltd., Belgium "End-of-Life vehicles management in Italy" Dr Alessandro Santini, Gruppo Fiori, Italy "Nigeria: Vehicle recycling plant set to take off in Abuja"			

12.30 – 14.00 Lunch in the exhibition area



## CONGRESS PROGRAM IARC 2013

#### THURSDAY, MARCH 14, 2013

08.00 - 09.00	Welcome coffee in the exhibition area		
Session 4: Session Chairman:	<u>KEYNOTE SPEAKERS</u> Manfred Beck, Recycling International, Netherlands		
09.00 – 09.30	"WBCSD: Vision 2050" Matthew Lynch, World Business Council for Sustainable Development (WBCSD), Switzerland		
09.30 - 10.00	"Recovery of scarce metals from ELV – A bumpy road ahead?" Christina Meskers, Umicore Precious Metals Refining, Belgium		
10.00 - 10.30	Coffee break in the exhibition area		
Session 5:	Best available recycling technologies		
Session Chairman:	Richard Paul, Environmental Management Consultant, USA		
Session Chairman: 10.30 – 11.00	Richard Paul, Environmental Management Consultant, USA "Rare earth containing components of e-mobility" Peter Willis, Oakdene Hollins, United Kingdom		
	"Rare earth containing components of e-mobility"		
10.30 – 11.00	"Rare earth containing components of e-mobility" Peter Willis, Oakdene Hollins, United Kingdom "Sorting plastics from shredder residue"		

Session 6: Session Chairman:	Implementing new laws and regulations Steve Hope, Toyota Motor Europe NV/SA, Belgium	
13.30 - 14.00	"The new guidance document of the EC on how to perform a shredder campaign" Knut Sander, Ökopol GmbH, Germany	
14.00 - 14.30	"Reaching 95% recycling and recovery at acceptable chain cost by industrialization of post-shredding processes" Hans van de Greef, ARN, Netherlands	
14.30 - 15.00	"The Commission's ongoing ex post evaluation of waste stream directives – The case of ELV" Julius Langendorff, European Commission, Belgium	
15.00 - 15.30	Coffee break in the exhibition area	
Session 7: Session Chairman:	<u>E-mobility</u> Willy Tomboy, RECHARGE, Belgium	
Session Chairman:	Willy Tomboy, RECHARGE, Belgium "Recycling efficiencies for E-mobility batteries"	
Session Chairman: 15.30 – 16.00	Willy Tomboy, RECHARGE, Belgium "Recycling efficiencies for E-mobility batteries" Alain Vassart, EBRA, Belgium "Traceability of batteries from collection point to the recycling certificate into an European recycling company"	

## TOOL BOX TALKS SCHEDULE

#### THESE PRESENTATIONS ARE HELD IN THE EXHIBITION AREA

#### WEDNESDAY, MARCH 13, 2013

14.00 - 15.30	Technology solutions & equipment providers I
<b>S</b> tarlinger	"Recycling for the automobile recycling – Real life examples" Elfriede Hell, Starlinger & Co. Gesellschaft m.b.H., Austria
SOFTING SOLUTIONS RECYCLING	"Sensor-based sorting of Zorba" Tom Jansen, TOMRA Sorting GmbH, Germany
STEINERT	"Next generation of sensor sorting technology – Application in ELV shredder plants" Karl Hoffmann, Steinert Elektromagnetbau GmbH, Germany
RECUPYL	"Breakthrough technology for recycling automotive shredder residue (ASR) using Eutectic Conditions" <b>Prof. Farouk Tedjar, RECUPYL SAS, France</b>

#### THURSDAY, MARCH 14, 2013

10.30 - 12.00	Technology solutions & equipment providers II	
	"Recovery of metals from automobile spent catalysts using DC plasma arc technology" Dr Tim Johnson, Tetronics International, United Kingdom	
	"20 years pioneering ELV de-pollution equipment" Andreas Rieser, SEDA-Umwelttechnik GmbH, Austria	
ERIEZ	"Clean stream process" Carlton Hicks, Eriez Magnetics Europe Ltd., United Kingdom	
SotVin The Partner in Vinyts	"Recycling of composite plastics from ELV's: Innovation and achievements in recycling of PVC & Polyamides" Christian Thamm, SolVin SA, Belgium Richard Bourdon, Solvay SA, France	

NEW! TOOL BOX TALKS

## PLANT TOURS IARC 2013

FRIDAY, MARCH 15, 2013



#### ARN, TIEL (NETHERLANDS)

#### Visit of the post shredder technology plant

08.45	Departure by bus to ARN, Tiel, Netherlands	
11.30	Arrival at ARN, Tiel, Netherlands	
11.30 - 14.00	Visit of the post shredder technology plant	
16.30*	Arrival at the Brussels International Airport (Zaventem), Belgium	
17.45	Arrival at the hotel Dolce La Hulpe Brussels, Belgium	

In 2015, 95% of End-of-Life vehicles must be recycled, in line with the EU directive 2000/53/ EG. How can countries comply with this guideline? **ARN**'s answer to the question includes the post shredder technology (PST) plant in Tiel, which should make an important contribution towards achieving 95%. ARN received financial contribution through Life+ for this solution, the intention is that ARN should be a role model for other countries.

The Life+ financing programme is intended to promote the development and execution of European nature and environmental policy. The application for financing this extensive project was successful since the PST plant can make a real contribution to achieve the end-of-life vehicle recycling guideline.

In April 2011, ARN opened a new PST facility in Tiel, aiming at 95% recycling. The facility processes shredder residue to a further stage. Since February 2012, the latest module of the production line was put into operation.

Shredder waste is transformed into useful material flows, using PST. By the end of 2012 the annual production of the facility was increased from an annual production of 30'000 tons to 60'000 tons. Additional employees were hired in order to facilitate a two-shift operation.

www.arn.nl

\* No guarantee on arrival due to traffic conditions.















## PLANT TOURS IARC 2013

FRIDAY, MARCH 15, 2013

#### AUDI BRUSSELS



#### Visit of the car manufacturing plant

Departure by bus to Audi Brussels, Belgium	
Arrival at Audi Brussels, Belgium	
Visit of the car manufacturing plant	
Arrival at the Brussels International Airport (Zaventem), Belgium	
Arrival at the hotel Dolce La Hulpe Brussels, Belgium	

Audi Brussels - In June 2007, AUDI AG took over the former Volkswagen site in Brussels. Since then, nearly 410 Mio. € have been invested in new infrastructure, production systems, practical education and training. For the first time in its 60-year history, the plant has been entrusted with the exclusive production of a single model, the Audi A1. Audi Brussels is the most urban site of AUDI AG and it is not by hazard that the most urban model with its multiple customizing possibilities is produced in Brussels. In this plant we create mobility for cities all over the world. The next generation - With the Audi A1, AUDI AG enlarges its range of products; thereby a new target group gets attracted by the Audi experience. Audi Brussels is not only the newest member in the Audi family, it also invests in the next generation of employees. In November 2012 the pilot training project "Dual Track" starts in cooperation with two Belgian schools. The students get the possibility to attend classes in automation and laser techniques inside the factory. Moreover, they will get practical training in the halls of the bodyshop. Environmental protection at the Brussels site – At Audi, protection of the environment is an objective that ranks alongside quality and productivity, and therefore forms part of the corporate strategy. The same applies to technology and production processes. The Audi site in Brussels upholds the strictest of environmental protection standards. For example, the region of Brussels once again recognized the plant as an "Ecodynamic Company," a regional environmental certificate awarded every three years. Audi Brussels obtained the certificate with three stars, the highest

rating possible. Since 2001, the Brussels site has furthermore been certificate with three stars, the highest ance with the Eco-Management and Audit Scheme (EMAS) run by the European Commission.

www.audibrussels.com

\* No guarantee on arrival due to traffic conditions.



## PLANT TOURS IARC 2013

FRIDAY, MARCH 15, 2013



#### GALLOO, MENEN

Visit to the ELV depollution plant, shredder, ASR (automotive shredder residue) treatment and the Galloo Plastics recycling plant

08.15	Departure by bus to GALLOO, Menen, Belgium	
10.30	Arrival at GALLOO, Menen, Belgium	
10.30 - 15.00	Visit to the ELV depollution plant, shredder, ASR (automotive shredder	
	residue) treatment and the Galloo Plastics recycling plant	
17.15*	Arrival at the Brussels International Airport (Zaventem), Belgium	
18.30	Arrival at the hotel Dolce La Hulpe Brussels, Belgium	

"No access for competitors"

**Galloo** was first established over 70 years ago. Since then, it has grown to become one of Europe's leading ferrous and non-ferrous metal recycling companies. Currently, the company has 19 divisions in Belgium, 32 in France and 2 in the Netherlands. Galloo has several plants that specialize in the collection, depollution and processing of end-of-lifevehicles, in compliance with the strictest European regulations.

Over the years, Galloo has developed an industrial process, which is used to recycle scrap from consumer goods, cars and factories in an environment-friendly way. This enables us to guarantee to car manufacturers that end-of-life-vehicles are processed while respecting the environment. By converting waste products into secondary raw materials, we contribute to a cleaner environment.

Every year, Galloo recycles 1'700'000 tonnes of ferrous metals, 80'000 tonnes of non-ferrous metals, 25'000 tonnes of plastics and 200'000 tonnes of shredder residue. By continuously investing in new technologies, the group strives to achieve its goal of 100% recycling.

www.galloo.com

\* No guarantee on arrival due to traffic conditions.



Galloo is one of Europe's leading recycling firms of ferrous and non-ferrous metals. The group recycles over 150,000 end-of-lifevehicles per year. In addition, Galloo recycles 1,700,000 tonnes of ferrous metals, 80,000 tonnes of non-ferrous metals, 25,000 tonnes of plastics and 200,000 tonnes of shredder residue every year. By continuously investing in new technologies, the group strives to achieve its goal of 100% recycling.











Wervikstraat 320 B 8930 Menen - Belgium Tel. +32 (0)56 52 13 00 Fax +32 (0)56 52 13 10 info@galloo.com www.galloo.com

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## PLANT TOURS IARC 2013

FRIDAY, MARCH 15, 2013

# UMICORE PRECIOUS METALS REFINING, HOBOKEN

#### Visit of Umicore Precious Metals Refining

09.15	Departure by bus to Umicore Precious Metals Refining, Hoboken, Belgium
10.30	Arrival at Umicore Precious Metals Refining, Hoboken, Belgium
10.30 - 13.30	Visit of Umicore Precious Metals Refining
15.15*	Arrival at the Brussels International Airport (Zaventem), Belgium
16.30	Arrival at the hotel Dolce La Hulpe Brussels, Belgium

**Umicore** is a global materials technology group. It focuses on application areas where its expertise in materials science, chemistry and metallurgy makes a real difference. Its activities are centred on four business areas: Catalysis, Energy Materials, Performance Materials and Recycling. Each business area is divided into market focused business units offering materials and solutions that are at the cutting edge of new technological developments and essential to everyday life.

Umicore's overriding goal of sustainable value creation is based on an ambition to develop, produce and recycle materials in a way that fulfils its mission: materials for a better life.

Umicore Precious Metals Refining offers eco-efficient recycling and refining services for precious metal bearing materials like (automotive) catalysts, electronic scrap and by-products from non-ferrous industries.

www.autocatalyst-recycling.umicore.com





## **NETWORKING DINNER**

## **SPONSORS**



On Wednesday, March 13, 2013 a memorable networking dinner in the famous automobile museum AUTOWORLD Brussels will be organized.

Do not miss this perfect possibility to meet your friends and business partners in a nice atmosphere and register to this evening now! Space is limited!









ΤΟΥΟΤΑ

















AIR MERCURY Recycling & Metal Trading









## **EXHIBITION AND POSTER PRESENTATIONS**

**EXHIBITION** AS PER NOVEMBER 30, 2012







A special exhibition area will be organized for companies wishing to display their products or advertising materials.

The fee for an exhibition stand (2 m x 3 m) throughout the whole conference is € 3'500.- and for a poster presentation € 350.-.

Space is limited, so take the chance and book your exhibition booth or your poster presentation today!

















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- BASF

duesmann & hensel recycling

**ELDAN** RECYCLING

makes me feel safe!





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progress through diversity

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) тітесн







RECYCLING







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**ORGANIZER OF IARC 2013** 

JEANETTE

DUTTLINGER

Congress Organizer

Registration for the congress should be made by means of the registration form or online. Participants registering and paying before January 31, 2013 will benefit from a reduced registration fee. The registration fee includes congress, entrance to the exhibition, proceedings and luncheons.

## **REGISTRATION FEES**

Congress Fee	before January 31, 2013	after January 31, 2013
Fee for participants	€ 1'490	€ 1'590
Fee for speakers	€ 890	€ 990
Fee for students	€ 590	€ 690
Networking dinner (March 13, 2013)	€ 100	€ 120
Networking dinner spouse (March 13, 2013)	€ 120	€ 140
Plant tours (March 15, 2013): – ARN (Netherlands) – Audi Brussels – GALLOO – Umicore Precious Metals Refining	<ul> <li>€ 40</li> <li>€ 40</li> <li>€ 40</li> <li>€ 40</li> </ul>	€ 60 € 60 € 60 € 60

Congress registration on site € 100.- surcharge

Online registration **NEW!** You may also register online at: www.icm.ch/iarc-2013

#### Additional Proceedings

If it is not possible for you to attend the congress, you may purchase the complete proceedings at € 350.–. Participants will get the proceedings free of charge.

#### Payment

Bank:

IBAN:

Payment should be made in EUR by bank transfer or by credit card. Wire payment to:

Beneficiary: ICM AG Neue Aargauer Bank, 5400 Baden, Switzerland CH41 0588 1044 7941 7200 0 Swift code: AHHBCH22XXX

#### Automobile manufacturers

WHO SHOULD ATTEND?

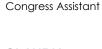
- Automotive parts and materials suppliers
- Automobile importers and dealers
- Recycling and dismantling companies
- Shredding companies
- Ferrous and non ferrous metal traders
- Plastics industry
- Non ferrous metal industry
- Ferrous and stainless steel industry
- Collection and transportation companies
- Financing organizations for ELV recycling
- Environmental authorities
- Universities and research institutes
- Laboratories for material science





NADINE MÜLLER Congress Assistant





SABRINA

BOLLIGER

CLAUDIA GERSTENDÖRFER Congress Assistant



SCHMID

Congress Assistant





## You and us: Collection and recycling for portable and industrial batteries

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www.grs-batterien.de