

15th International Automobile Recycling Congress IARC 2015

March 25 - 27, 2015, Berlin, Germany







Patronage:

Alliance of Automobile Manufacturers
European Automobile Manufacturers' Association (ACEA)
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)

Institute of Scrap Recycling Industries (ISRI)
Japan Automobile Manufacturers Association (JAMA)
Japan Automotive Recyclers Association (JARA)
PlasticsEurope

































FOREWORD

MANFRED BECK

Chairman of the Steering Committee International Automobile Recycling Congress Now in its 15th year, the International Automobile Recyclina Congress (IARC) has firmly established itself as the event for the international automotive recycling industries. IARC 2015 is expected to attract some 250 car recyclers and a host of other interested parties. Attendees will converge on the German capital of Berlin to hear about latest relevant developments from politicians, as well as from experts in the vehicle manufacturing and recycling arenas.

This year's venue, Berlin, advertises itself as "a world city of distinction". What does Berlin have that other world cities don't? Well, the first thing that usually comes to mind is its most famous landmark: The Brandenburg Gate. Highlights in the Western parts of Berlin include the elegant shopping street Kurfürstendamm, the Kaufhaus des Westens department store

(better known as KaDeWe), Unter den Linden boulevard, Alexanderplatz square and Checkpoint Charlie.

We are delighted that the congress will be opened by two excellent keynote speakers. Erik Jonnaert, Secretary General of the European Automobile Manufacturers' Association (ACEA) in Belgium will highlight "The role of the automotive industry in the context of ELV recycling". Wolfram Thomas, Group Chief Officer for Environment, Energy and New Business Areas at Volkswagen. will share his views on the topic of "Environmental protection – Driving innovation".

The European Union's ELV Directive remains an important issue. As of January 1, 2015, this requires 85% reuse and recycling, as well as 95% reuse and recovery. Artemis Hatzi-Hull, Policy Officer of the European Commission's

DG Environment, will shed light on the evaluation of the ELV Directive, addressing key issues and next steps.

Other presentations will address such issues as heavy metals restrictions of the ELV Directive 2000–2015. Several speeches will take a closer look at the 2015 targets, including a report on ELV dismantling and shredding; the recycling of glass from ELVs; and innovative product development from the ELV dismantled light fraction.

Delegates will also learn how ELV recycling is carried out in different countries around the globe. There will be presentations on this subject from the Netherlands, Greece, Mexico, Canada and India.

A special session will be dedicated to car battery recycling, including speeches on: Reuse and second use of rechargeable batteries for electro-mobility; recycling of leadbased batteries; and industrial batteries – Safe handling and transportation of waste lithium traction batteries.

During the three-day event, the following topics will also be addressed:

- ELV dismantling and shredder campaigns;
- Use of the International Dismantling Information System (IDIS) worldwide;
- Separation of components and materials from ELVs aiming at the recovery of critical metals;
- Recycling of complex precious metals materials for the automotive industry;
- Profitably clearing the Chinese "Green Fence";
- Benchmark performances for auto scrap shredding fume treatment.

Also during the congress, commercial presentations (so-called "Tool Box Talks" and "Company Spotlight Talks") with a focus on the recycling industry will be held in the exhibition area. In addition, delegates have the opportunity to make a test drive in a e-Golf and e-up! offered by Volkswagen.

For the day following the congress, the organisers have planned interesting plant tours to: BMW's car manufacturing plant in Leipzig, the post-shredder technology plant of Scholz-Recycling in Espenhain and TSR Recycling's ferrous metal recycling plant in Brandenburg.

And, of course, no congress can succeed without sufficient networking opportunities. For this purpose, IARC 2015 offers an attractive combination of coffee breaks, lunches, cocktail receptions, a free beer bar and a networking dinner.

I look forward to welcoming vou to IARC 2015 in Berlin.

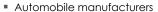
WHO SHOULD ATTEND?

KEYNOTE SPEAKERS





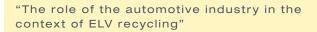




- Automotive parts and materials suppliers
- Automobile importers and dealers
- Recycling and dismantling companies
- Shredding companies
- Ferrous and non ferrous metal traders
- Plastics industry
- Non ferrous metal industry
- Ferrous and stainless steel industry
- Collection and transportation companies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



European Automobile Manufacturers' Association (ACEA) Secretary General Belgium







Volkswagen AG Group Chief Officer for Environment, Energy and New Business Areas Germany

"Environmental protection -Driving innovation"



INTERNATIONAL STEERING COMMITTEE



MANFRED BECK Chairman Recycling International Editor Netherlands



JAN BOLLEN ArcelorMittal Technology **Environment Product Manager** Belgium





PROF. WIJNAND DALMIJN **Emeritus Professor** Delft University of Technology Netherlands



CATHERINE LENAERTS Febelauto Managing Director Belgium



OLIVIER FRANÇOIS Vice-Chairman Group GALLOO Recycling Market Development Officer France



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



ARIE DE JONG ARN Holding B.V. CEO **Netherlands**



RICHARD PAUL **Environmental Management** Consultant USA



JULIEN VAN DAMME Chairman of the Lecture Group Honda Motor Europe Ltd. Recycling Manager Belgium



CORINE BUFFONI Ecore Luxembourg SA Assistant Director Luxembourg



JOSEPH M. HOLSTEN LKQ Corporation CEO USA



WILLY TOMBOY RECHARGE Chairman of the Industrial Battery Working Group Belgium



DR RUGGERO ALOCCI Alocci Rappresentanze Industriali President Italy



ROGER BURRI Air Mercury AG President Switzerland



STEVE HOPE Toyota Motor Europe NV/SA General Manager Environmental Affairs and Corporate Citizenship Belgium



FERDINAND KLEPPMANN **CEWEP President** ITAD Chairman Germany



DR TOBIAS BAHR European Automobile Manufacturers' Association – ACEA **Environmental Policy Director** Belgium



DANIEL CHRISTEN Stiftung Auto Recycling Schweiz Managing Director Switzerland

LOCATION & ACCOMMODATION

For the participants of the congress a number of rooms are held at a discounted rate if you register before February 15, 2015. If you wish, you may also extend your stay at the same rates.

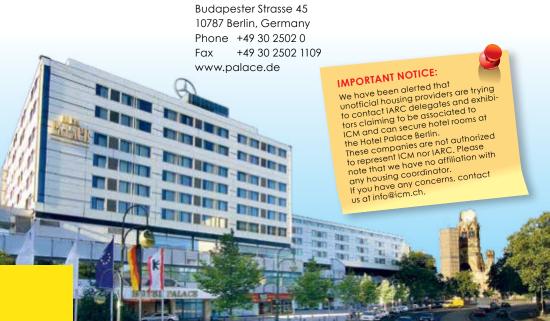




The 15th International Automobile Recycling Congress IARC 2015 will be held from **March 25 – 27, 2015** in the Hotel Palace in beautiful Berlin. The hotel is located in the heart of Berlin between the Gedächtniskirche church and Kurfürstendamm avenue, just a few minutes away from Potsdamer Platz and the Brandenburg Gate.

Berlin has two airports: The airport Tegel (TXL) has excellent road and public transport connections and the city center can be reached within a 20 minutes taxi ride. From the airport Schönenfeld (SXF) the journey to the hotel is 50 minutes.

Hotel Palace Berlin *****



Berlin, located at the heart of Europe, is the third most popular travel destination in Europe. The city's attractiveness lies in its diversity and its inexhaustible potential: Visitors can pick their highlights from the long list of sights such as the Brandenburg Gate or the TV Tower and cultural institutions like the 180 museums and memorials, 440 galleries, and three UNESCO World Heritage sites. And for those who look for relaxation: In Berlin, the fast-paced metropolis and resting areas in nature are not far apart – every district has its green oasis.

Berlin is also a center for fashion and shopping. International exhibitions like the Berlin Fashion Week make guests familiar with the latest trends. The four big shopping complexes – Kurfürstendamm, Potsdamer Platz, Friedrichstrasse and Alexanderplatz – along with smaller trend shops in the "scene" districts of Mitte, Prenzlauer Berg, Kreuzberg and Friedrichshain display anything from chic haute couture to casual street wear

In the culinary scene, all tastes are catered to as well. Few other cities have developed such creativity in their kitchens. Every type of food is ready to be tasted, from Asian delights over oriental food to German classics and Michelin starawarded restaurants – Berlin can do it all.







www.visitberlin.de/en



CONGRESS PROGRAM IARC 2015

TUESDAY, MARCH 24, 2015

17.00 – 19.00 Pre-Registration

WEDNESDAY, MARCH 25, 2015

08.00 – 09.30 Registration and welcome coffee in the exhibition area

09.30 - 11.00 "Welcome and Introduction"

Manfred Beck, Chairman of the Steering Committee

KEYNOTE SPEAKERS

"The role of the automotive industry in the context of ELV recycling" **Erik Jonnaert, ACEA, Belgium**

"Environmental protection – Driving innovation"

Wolfram Thomas, Volkswagen AG, Germany

11.00 - 11.30 Coffee break in the exhibition area

Session 1: The European ELV Directive – Quo Vadis?
Session Chairman: Willy Tomboy, RECHARGE, Belgium

11.30 – 12.00 "The EU Commission's ex-post evaluation of the ELV Directive and the challenges ahead"

Artemis Hatzi-Hull, European Commission, Belgium

12.00 – 12.30 "Heavy metals restrictions of ELV Directive 2000 – 2015"

Reinhard Hoock, BMW AG, Germany

12.30 – 14.00 Lunch in the exhibition area



	Session 2: 2015 recycling targets a how to reach them Session Chairman: Steve Hope, Toyota Motor Europe NV/SA, Belgiu		
14.00 – 14.30	"ELV dismantling and shredder campaigns", Manuel Burnand, Derichebourg Environnement, Fran Philippe Russo, ArcelorMittal Global R&D, France		
14.30 – 15.00	"The recycling of ELV glass: Evidence or nightmare?"		

4.30 – 15.00 "The recycling of ELV glass:
Evidence or nightmare?"
Baudouin Ska, FERVER aisbl, Belgium

15.00 – 15.30 "Innovative product development from ELV dismantled light fraction: A collaborative approach" Elisa Bonaldi, Federal-Mogul Systems Protection SAS, France

TOOL BOX TALKS These presentations are held in the exhibition area

"Optimization of shredding and downstream processes to achieve a total recovery"

Heiner Guschall, SICON GmbH, Germany

"The value of one minute"
Scott Newell, The Shredder Company, LLC, USA

"State of the art clean technology-low energy, low cost, high recovery process"

Sylvain Boulanger, NovX21, Canada

"Utilizing simulation software to design, assess and operate post shredder sorting plants" Robert Leeftink, Decistor BV, Netherlands

15.30 - 16.00 Coffee break in the exhibition area

Session 3: <u>ELV recycling 1</u> Session Chairman: Jan Bollen, ArcelorMittal Technology, Belgium

16.00 – 16.30 "Lessons learnt from the Dutch car recycling model"

Arie de Jong, ARN, Netherlands

16.30 – 17.00 "The effort to reach the 95% recycling target in Greece"

Euripides Paul Korres, ANAMET SA,

COMPANY SPOTLIGHT TALKS These presentations are held in the exhibition area

"An IT solution framework for supporting ELV recycling loop"

Young Tae Sohn, KIST, Korea

"3M, inventing tomorrow"

Dr Andrea Stricker, 3M Deutschland GmbH,
Germany

"Why x-ray fluorescence analysis may present value fluctuations for auto catalysts?" Patrick Sauer, IDO-Lab GmbH, Germany

17.00 – 18.30 "Bierfass" reception in the exhibition area sponsored by

19.00 Departure by bus

Greece

19.30 Networking dinner at the exciting "Wasserwerk Berlin"





CONGRESS PROGRAM IARC 2015

THURSDAY, MARCH 26, 2015

08.00 - 09.00 Welcome coffee in the exhibition area

Session 4: ELV recycling II
Session Chairman: Catherine Lenaerts, Febelauto, Belgium

09.00 – 09.30 "Second hand vehicle imports in Mexico: Repercussions on end of life vehicle recycling"
Dr María Hortensia Lacayo and Dr Jorge Armando Juárez, Universidad Nacional
Autónoma de México-UNAM, Mexico

09.30 – 10.00 "Certified ELV Recycling in Canada's Arctic"
Edward MacDonald, Automotive Recyclers of Canada (ARC), Canada

10.00 – 10.30 "Automobile recycling – Challenges & opportunities in India"
Dr Lakshmi Raghupathy, Former Director, Ministry of Environment & Forests,
Advisor/Consultant Environment & Waste Management, India

10.30 – 11.00 Coffee break in the exhibition area

	Session 5: <u>Processing technologies</u> Session Chairman: Richard Paul, Environmental Management Consultant, USA		
11.00 – 11.30	"The International Dismantling Information System (IDIS) in a global perspective" Johannes Chatzis, tec4U-Ingenieurgesellschaft mbH, Germany		
11.30 – 12.00	"Recovery of platinum group metals from automotive catalysts with a plasma smelter" Dr Friedhelm Schöne, Duesmann & Hensel Recycling GmbH, Germany		
12.00 – 12.30	"Separation of components and materials from ELVs to reclaim critical metals" Knut Sander, Oekopol GmbH, Germany		

12.30 – 14.00 Lunch in the exhibition area

Session 6: <u>Cutting edge technology</u> Session Chairman: Corine Buffoni, Ecore Luxembourg SA, Luxembourg

- 14.00 14.30 "Profitably clearing the Chinese 'Green Fence'"

 Tim Shuttleworth, Eriez Manufacturing Co., USA
- 14.30 15.00 "Metal fines concentration with magnetic fluids"

 Charles Smeeman, Liquisort Recycling B.V., Netherlands
- 15.00 15.30 "Benchmark performances for auto scrap shredding fume treatment"

 Davide Braga, Danieli & C Officine Meccaniche S.p.A., Italy

15.30 – 16.00 Coffee break in the exhibition area

Session 7: <u>Tackling the batteries</u> Session Chairman: Julien Van Damme, Honda Motor Europe Ltd., <u>Belgium</u>

- 16.00 16.30 "Re-use & second use of rechargeable batteries for electro-mobility"

 Willy Tomboy, RECHARGE, Belgium
- 16.30 17.00 "Manufacturing Use End-of-life Closed-loop system for Lead-based batteries in automotive applications"
 - Dr Frank Toubartz, Johnson Controls Power Solutions EMEA, Germany
- 17.00 17.30 "Industrial batteries: Safe handling and transportation of waste lithium traction batteries"

 Tobias Schulze Wettendorf, Stiftung GRS Batterien, Germany

from 17.30 "Bierfass" reception in the exhibition area sponsored by





NETWORKING DINNER



Join us on Wednesday, March 25, 2015 at a memorable networking dinner in the exciting "Wasserwerk Berlin".

Do not miss this perfect opportunity to socialize with your business partners and register for this evening!



Meet friends and business partners in a nice atmosphere!





Der e-Golf. Das e-Auto.

Different shape, same story: The e-Golf is a pioneer within sustainability. The e-up has no critics. Together they lead the future of e-mobility with zero emission and extremely low energy consumption. It's a powertrain without an end station. Test for yourself how easy electric is from now on.



Think Blue.

Power consumption e-Golf in kWh/100 km: 12.7 combined, $\rm CO_2$ emissions in g/km: 0. Power consumption e-up! in kWh/100 km: 11.7 combined, $\rm CO_2$ emissions in g/km: 0. Picture shows optional extras at an additional cost.

PLANT TOUR

FRIDAY, MARCH 27, 2015



BMW, LEIPZIG

08.30 Departure by bus to BMW

11.00 Arrival at BMW

11.15 – 13.45 Visit of the car manufacturing plant

14.30* Arrival at the airport Leipzig (only on request)

16.30* Arrival at the airport Berlin (Tegel)
17.00 Arrival at the Hotel Palace Berlin

The **BMW** Plant Leipzig makes the extraordinary possible. It is one of the most modern and sustainable car plants in the world. In addition to standard car production, the plant focuses on the production of electric cars with CFRP light weight bodies. Since September 2013 the plant in Leipzig has been producing the BMW i3 exclusively. The production of the sportive BMW i8 started in May 2014. The company invested about 400 million Euros for the enlargement of the plant.

The use of carbon fiber reinforced plastics (CFRP) defies the rules of automotive engineering. The first step of building an innovative electric car is the CFRP press shop, where a heating tool gives the flat carbon fiber layers their solid, three-dimensional form. A special press injects viscous resin at high pressure into the hot blanks. This combination of fiber and resin as well as the subsequent hardening process gives the material its outstanding rigidity. In the next step the carbon parts are transported to the Body Shop. There the ultra-light materials are not welded – robots use a state of the art technology to bond these parts in a quiet operation. In the assembly the BMW i models are fitted with their individual interior equipment. Covering the car body with the painted outer shell parts is a special feature in the assembly. In the last step, all cars pass through the joint finish area with the final inspection. This is the moment when "sheer driving pleasure" begins.

www.bmw-plant-leipzig.com



^{*} No guarantee on arrival due to traffic conditions.



PLANT TOUR

FRIDAY, MARCH 27, 2015

SRW METALFLOAT GMBH -SCHOLZ RECYCLING GMBH & CO. KG, ESPENHAIN





08.00 Departure by bus to SRW metalfloat GmbH – Scholz Recycling GmbH & Co. KG

10.30 Arrival at SRW metalfloat GmbH – Scholz Recycling GmbH & Co. KG

10.30 – 14.00 Visit of the post-shredder technology plant

16.45* Arrival at the airport Berlin (Tegel)
17.15 Arrival at the Hotel Palace Berlin

Around 3 million vehicles reach the end of their life in Germany each year. Waste sites must follow special regulations to limit the environmental impact of handling, taking apart and disposing of end-of-life vehicles (ELVs). The ELV Directive (2000/53/EC) set ambitious targets to recycle cars from 2000.

The **Scholz Group** is one of the market leaders in the field of recycling ELVs in Europe. The group runs a lot of dismantling facilities and shredder plants in different EU member states. Since 1990 Scholz Group invested EUR 60 million in one single location and from that in the necessary post-shredder plant around EUR 20 million in Leipzig-Espenhain, Germany, to fulfill the recycling quotas of ELV-Directive.

In different shredder attempts it was proved that the installed post-shredder-technology is able to fulfill a recovery rate of more than 95%. The technology is an excellent example to show state-of-the-art and set also standards for worldwide recycling processes. The recycling location is not only one of the biggest in the EU but also a place with high contributions to resource efficiency and climate protection.

www.scholz-recycling.de













PLANT TOUR

FRIDAY, MARCH 27, 2015



TSR RECYCLING GMBH & CO. KG, BRANDENBURG

08.30 Departure by bus to TSR Recycling GmbH & Co. KG10.30 Arrival at TSR Recycling GmbH & Co. KG

10.30 – 13.30 Visit of the ferrous metal recycling plant

15.45* Arrival at the airport Berlin (Tegel)
16.15 Arrival at the Hotel Palace Berlin

TSR Group is one of the top five ferrous and non-ferrous metal recycling groups in Europe and market leader in Germany. TSR is a service provider organizing recycling processes as well as a raw material supplier providing around 8 million tons of secondary materials p.a. to steel works, foundries and smelters.

With its activities, TSR close economic material cycles for the sustainable relief of industry, the customers and the environment – simply and without detours from finish to start.

The Brandenburg plant is TSR's most important site in East Germany. Since 2007, the company operates a 6000 PS Mega-Shredder at this place and is preparing further investments in post shredder technologies in order to achieve a continuous improvement of recovery rates and qualities.

www.tsr.eu













^{*} No guarantee on arrival due to traffic conditions.



EXHIBITORSAS PER NOVEMBER 28, 2014

EXHIBITION AND POSTER PRESENTATIONS



IRIS MEC





The exhibition area provides your company with the perfect opportunity to reach key industry decision makers. Promote your products to all congress attendees.

The fee for an exhibition booth $(2 \, \text{m} \, \text{x} \, 3 \, \text{m})$ is EUR 3'500.— and for a poster presentation EUR 350.— for the full time of the conference.

Space is limited, so take the chance and book today!













(5) ТІТЕСН











"WE MAKE CAR RECYCLING MORE PROFESSIONAL."















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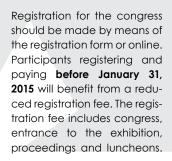
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REGISTRATION FEES

	before		after		
Congress Fee		January 31, 2015		January 31, 2015	
Fee for participants	EUR	1'490	EUR	1'590	
Fee for speakers	EUR	890	EUR	990	
Fee for students	EUR	590	EUR	690.–	
Networking dinner (March 25, 2015)	EUR	100.–	EUR	120	
Networking dinner spouse (March 25, 2015)	EUR	120	EUR	140	
Plant tours (March 27, 2015)					
- BMW	EUR	40	EUR	60	
– SRW metalfloat – Scholz Recycling	EUR	40	EUR	60	
– TSR Recycling	EUR	40	EUR	60	

All prices excl. 19% German VAT

Congress registration on site EUR 100.- surcharge

Online registration

You may also register online at: www.icm.ch/iarc-2015

Additional Proceedings

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

Payment

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

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Upcoming ICM Events:

14th International Electronics Recycling Congress IERC 2015



20th International Congress for Battery Recycling ICBR 2015



Electronics Recycling Asia WRF 2015





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