Supporters and sponsors of the 9<sup>th</sup> International Automobile Recycling Congress:



<image>





# Foreword of IARC 2009

#### Welcome to Munich!

On behalf of the International Steering Committee and the supporting organization I welcome you to the 9<sup>th</sup> International Automobile Recycling Congress IARC in Munich.

Bavaria has a large automotive industry supplied by the German iron and steel and component industry. It also has many activities in the field of end of life vehicles (ELV) recycling and not to forget its famous beer, historical sites, musea and many cozy restaurants. Visits to the recycling plants for ELVs and shredder residue have been organized. Since the last IARC congress the ELV Directive has been revised as announced and the definitions for recycling quota have been changed. These changes and their impact are a very interesting subject to discuss during the different plant tours.

The revision will have an impact on the technologies to be applied or to be developed and it will change optimal PST design of plants. As the changes are from June 2008 the interpretation of the revised ELV Directive by the Member States of the EC are still underway and technological impact of the revised Directive cannot be assessed yet. This means new delays in the development of technology, processes and markets to be adapted to the changed products.

The dream of a level playing field for technology processes and markets is still underway and more pressure by the recycling industry is still needed to accomplish this. Europe will make the road to 95% recycling of an ELV more challenging but might add to the recycling cost and thus making export via different ways to economical more attractive regions an ever increasing option.

Stability is needed for technological developments, mature markets and an economical approach to ELV recycling. Continuously changing the rules for ELV recycling in combination with a poorly defined playing field are very difficult matters to deal with for the ELV recycling industry in general.

Looking forward to discussing the new challenges and opportunities in charming Munich.

**Prof. Wijnand Dalmijn** Chairman of the Steering Committee International Automobile Recycling Congress



# **Keynote Speakers**



#### **Karl-Heinz Florenz**

Member of the European Parliament Rapporteur of the Temporary Committee on Climate Change Member of the Committee on the Environment, Public Health and Food Safety Germany

> "Climate change will change consumers, markets and the automobile industry"



Andy Wahl Newell Recycling, LLC Vice President Nonferrous Division/Media Recovery Plant USA

"A view of the car shredder recycling industry road map towards 2020"



## Willy Tomboy

Toyota Motor Europe Environmental Affairs Group Director / Environment Officer Belgium

"Environmental aspects of vehicles and vehicle recycling towards 2020"



# Munich – an ideal and professional congress place

The 9<sup>th</sup> International Automobile Recycling Congress (IARC 2009) will be held at:

#### ArabellaSheraton Grand Hotel\*\*\*\*\*

Arabellastrasse 6 81925 Munich, Germany Phone: + 49 89 926 40 Fax: + 49 89 926 486 99 www.sheraton.com/grandmuenchen





ArabellaSheraton Grand Hotel is located in the prestigious Munich district of Bogenhausen, the Bavarian capital city's publishing quarter. The city centre and central station are 10 minutes away by underground train.

## International Steering Committee



















Prof. Wijnand L. Dalmijn Chairman Delft University of Technology Netherlands

Manfred Beck Vice-Chairman **Recycling International** Magazine, Editor Netherlands

Julien Van Damme Chairman of the Scientific Committee Honda Motor Europe Ltd. Recycling Manager, Belgium



Genkichi Ando Seinan Corporation Director Japan







**Environment Expert** Italy Roger Burri





**Olivier François** Group GALLOO Recycling Market Development Officer France



Department Manager Recvclina Germany Joseph M. Holsten

BMW Group



LKQ Corporation



Fede Karrer Foundation Auto Recycling Switzerland Delegate of the Board Switzerland



**Ferdinand Kleppmann CEWEP** President ITAD Chairman Germany

**Richard Paul** Automotiv Recycling Consultant USA



Willy Tomboy Toyota Motor Europe Director, Environmental Affairs Group Belgium



Rolf Willeke Association of German Steel **Recycling Companies Executive Board Member** Germany





# Congress Program IARC 2009

### Wednesday, 11<sup>th</sup> March 2009

Session 1:	Keynote Speakers from industry and government			
09.30 - 09.45	"Welcome and Introduction" Prof. Wijnand Dalmijn, Chairman of the Steering Committee			
09.45 - 11.00	"Climate change will change consumers, markets and the automobile industry"			
	Karl-Heinz Florenz, Member of the European Parliament, Germany			
	"A view of the car shredder recycling industry road map towards 2020" Andy Wahl, Newell Recycling, LLC, USA			
	"Environmental aspects of vehicles and vehicle recycling towards 2020" Willy Tomboy, Toyota Motor Europe, Belgium			
11.00 – 11.30	Coffee break			
11.30 – 12.30	PANEL DISCUSSION: "Climate change – What do the car and recycling industry look like in 2020?"			
	Participants: Karl-Heinz Florenz, Member of the European Parliament, Germany Andy Wahl, Newell Recycling, LLC, USA Willy Tomboy, Toyota Motor Europe, Belgium Olivier François, FEDEREC / BIR Joseph Holsten, LKQ Corporation, USA Robert Walker, SMMT Ltd., United Kingdom			
12.30 – 14.00 Lunch in the exhibition hall				
Session 2: Session Chairman:	How do car manufacturers close the recycling loop? Julien Van Damme, Honda Motor Europe Ltd., Belgium			
14.00 - 14.30	"The Italian ELV situation made by FGA" Dr Salvatore Di Carlo, Fiat Group Automobiles S.p.A., Italy			
14.30 - 15.00	"European ELV-Directive: Lessons learned, and way forward" Dr Roman Meininghaus, ACEA, Belgium			
15.00 – 15.30	"Use of plastic recyclates for automotive parts: Status and perspectives" Klemens Graser, BMW Group, Germany			
15.30 - 16.00	Coffee break			
Session 3: Session Chairman:	<u>Country reports</u> Ferdinand Kleppmann, CEWEP, Germany			
16.00 - 16.30	"Management of end-of-life vehicles - The Portuguese approach" Ana Cristina Carrola, Portuguese Environment Agency, Portugal			
16.30 - 17.00	"The Belgian calculation model for recycling percentages on ELV by shredders"			
	Marc Bosmans, RDC-Environment, Belgium			
19.30	Networking dinner			

# Thursday, 12<sup>th</sup> March 2009

Session 4:	How does the recycling industry close the recycling loop 1? Willy Tomboy, Toyota Motor Europe, Belgium		
09.00 – 09.30	"The magic money carousel - Beware of tricks in autocat recycling"		
	Dr Christian Hagelüken, Umicore AG & Co. KG, Germany		
09.30 – 10.00	"A new scrap grade for the steel industry: Steel wires recycling from the treatment of end of life tires" Benoît Husson-Tissier, ArcelorMittal, France		
10.00 - 10.30	"PVC in automotive waste, issues and perspectives" Dr Arjen Sevenster, European Council of Vinyl Manufacturers (ECVM), Belgium		
10.30 – 11.00 Coffee break			
Session 5: Session Chairman:	How does the recycling industry close the recycling loop II? Richard Paul, Automotive Recycling Consultant, USA		
11.00 - 11.30	"Reuse of fibers derived from shredder light fraction" Dr Andreas Bartl, Vienna University of Technology, Austria		
11.30 – 12.00	"The industry has closed the recycling loop for ELVs – An example for BAT in shredder residues treatment from Austria" Harald Mitterbauer, TBS GmbH, Austria Thomas Buergler, voestalpine Stahl GmbH, Austria		
12.00 - 13.30	Lunch in the exhibition hall		
13.30 - 15.00	Workshop on REACH / Q & A		
	Introduction: Dr Beate Kummer, Kummer: Umweltkommunikation, Germany		
	Moderator: Roger Burri, Air Mercury AG, Switzerland		
	<ul> <li>Current update of the REACH legislation</li> <li>How to register chemicals and products</li> <li>Consequences of REACH to the car and recycling industry</li> <li>Impact of REACH on import and export of waste</li> </ul>		
15.00 – 15.30	Coffee break		
Session 6: Session Chairman:	<u>Reports and news from North America</u> Manfred Beck, Recycling International, Netherlands		
15.30 - 16.00	"USA ELV approach & Al-Jon's ELV system" David Little, Al-Jon Manufacturing, USA		
16.00 - 16.30	"Aspects of sustainability in automotive recycling" Joseph Holsten, LKQ Corporation, USA		
16.30 - 17.00	"Analysis of Northern American End-of-Life Vehicle (ELV) dismantling and shredding practices using Life Cycle Assessment (LCA)" Susan Sawyer-Beaulieu, University of Windsor, Canada		
17.00	Cocktail reception in the exhibition hall		

#### Plant tours on Friday, 13th March 2009

#### Leaving in front of the ArabellaSheraton Grand Hotel Munich

Plant tour 1:	Car manufacturing plant of BMW, BMW Museum, Recycling and Dismantling Centre (RDC) of BMW
08.00	Departure by bus to BMW
08.30	Arrival at BMW
08.30 - 11.00	Visit of the car manufacturing plant
11.00 - 12.30	Visit of the BMW Museum
12.30	Travel by bus to the recycling and dismantling centre (RDC) of BMW
13.00	Arrival at the RDC of BMW
13.00 - 15.00	Visit of the RDC of BMW
15.30*	Arrival at Munich airport
16.00	Arrival at the ArabellaSheraton Grand Hotel Munich
Plant tour 2:	Car manufacturing plant of BMW, BMW Museum
08.30	Departure by bus to BMW
09.00	Arrival at BMW
09.00 - 11.30	Visit of the car manufacturing plant

11.30 - 13.00 Visit of the BMW Museum

14.00\* Arrival at Munich airport

14.30 Arrival at the ArabellaSheraton Grand Hotel Munich

With its brands BMW, MINI and Rolls-Royce, the BMW Group concentrates exclusively on the premium segments of the international automobile and motorcycle markets. Founded in 1916 as "Bayerische Flugzeugwerke AG" and later changed to "Bayerische Motoren Werke AG", the company is now one of the world's leading premium manufacturer in the automotive industry. Under the BMW brand the company currently offers eight model series. It has a presence with its own sales subsidiaries in 41 countries around the world. With 23 production sites, the BMW Group is active in 12 countries. 100,000 employees all over the world enable customers to experience the benefits of the company's premium claim.

In order not only to ensure continual improvement of the vehicle recycling process in terms of economy and environmental compatibility, but also to achieve the highest degree of new vehicle recyclability, the BMW Group established one of the world's leading facilities in this field: the Recycling and Dismantling Centre (RDC). The RDC is both a certified waste treatment facility and a laboratory for basic research, development work and specialised basic and advanced training. The integration of a recycling centre like RDC in the new vehicle development process sets a standard for the automotive industry worldwide. New material combinations or components for new BMW Group models are evaluated here for recyclability before series development even begins.

More information at: www.bmwgroup.com and www.bmw.com

# Plant tour 3: Shredder plant of Loacker Recycling GmbH (Austria)

08.00	Departure by bus to Loacker Recycling GmbH
11.00	

11.00 Arrival at Loacker Recycling GmbH 11.00 – 14.00 Visit of the shredder plant

- 17.30\* Arrival at Munich airport
- 18.00 Arrival at the ArabellaSheraton Grand Hotel Munich

LOACKER Recycling is a waste disposal company with a family tradition reaching back over 120 years. The headquarters of the vigorously-growing facility is in Götzis, in the Western Austrian province of Vorarlberg. The LOACKER Group collects some 9,000 tonnes of metal and 60,000 tonnes of scrap iron monthly – the equivalent of 1,500 fully-loaded railway wagons. The company processes up to 80 old cars per hour and breaks these down into high-grade secondary raw materials. Thanks to its large volumes and the certified mode of practice, LOACKER directly supplies melting shops. Several modern shredders, scrap shears, scrap presses and plants for chip briquetting are available for the processing technology. LOACKER's 2,000 hp shredder plant is the most powerful and up-to-date in Austria. The company is ISO 9001 and ISO 14001 registered as well as being certified in Austria and Germany as a specialist waste disposal operation.

The LOACKER Group is a key player in the recycling of scrap iron and metal throughout Europe. In addition to a second facility in Vorarlberg, the group has a further fifteen companies in Europe. Fichtler Recycling GmbH in Wonfurt, Germany, was acquired in 2007: this company specialises in the reprocessing of waste electrical and electronic equipment, cables, plastic and metal composite materials, producing granulates of copper, aluminium and other metals as well as plastics. The LOACKER Group has a total workforce of 514, and achieved a turnover of EUR 461.6 million in 2007.

#### More information at: www.loacker.at

<u>Plant tour 4:</u>	Copper smelter plant of MONTANWERKE Brixlegg AG (Austria) MONTANWERKE I//	
08.00	Departure by bus to Montanwerke Brixlegg AG	
10.00	Arrival at Montanwerke Brixlegg AG	
10.00 - 12.00	Visit of the copper smelter plant	
14.30*	Arrival at Munich airport	
15.00	Arrival at the ArabellaSheraton Grand Hotel Munich	

Montanwerke Brixlegg AG is Austria's only copper producer, and has a history stretching back more than 500 years. Today Montanwerke is one of the leading secondary smelters in Europe. Core business is recycling copper and other precious metals from scrap and in further steps process it into cathodes and billets. For these two highly pure copper products the total output is over 200,000 tons per year.

#### More information at: www.montanwerke-brixlegg.com



#### Plant tour 5: SLF recycling plant of TBS GmbH (Austria) Steel plant of voestalpine Stahl GmbH (Austria)

07.30	Departure by bus to TBS GmbH	
11.00	Arrival at TBS GmbH	Bernegger
11.00 - 13.00	Visit of the SLF recycling plant	un natalaina
13.00	Departure to voestalpine Stahl GmbH	voestalpine
13.30	Arrival at voestalpine Stahl GmbH	
13.30 - 14.30	Visit of the plastic injection into the blast furnace	
18.30*	Arrival at Munich airport	
19.00	Arrival at the ArabellaSheraton Grand Hotel Muni	ch

The Technische Behandlungssysteme GmbH (TBS) is a subsidiary company of the Bernegger group which is seated in Gradau 15, A-4591 Molln. The TBS operates in Rheinstraße 1, A-4470 Enns a waste treatment plant, treating shredder residue, like Shredder light fraction, Shredder heavy fraction, 3-D plastic wastes and 2-D plastic wastes. The waste is treated and used to a high portion.

TBS

ONE STOP AREAD

The treatment plant was built in October 2005 with an Invest of € 26,000,000.- and started up in February 2006.

The plant is authorized for the treatment of not dangerous wastes to an extent of 95,000 t/a in the multi-shift operation. Now the production takes place in a two-shift operation with a staff of 24 persons. The treatment plant is designed for recovering shredder residue.

#### More information at: www.bernegger.at

The voestalpine Group is the industry leader in customized high-quality and hightech steel products and solutions. The new company dimensions are included: annual sales of 10.5 billion Euros, 88% thereof in export; operative result of 1.5 billion Euros; 41,490 employees, the majority employed at locations outside Austria. The voestalpine Group has been represented worldwide by more than 360 production and sales companies in more than 60 countries throughout the world.

The voestalpine Group is the number one in switch technology and special steel (such as tool steel), the leading partner in the energy sector with high-quality heavy plates and seamless tubes, the number one in Europe in high-quality steel strip, rails, special tubes and high-quality wire & the leading European supplier of high-quality automotive components.

The voestalpine Group is one of the most innovative companies in the industry with research and development expenses amounting more than 100 million Euros per year.

More information at: www.voestalpine.com

# "Meet your clients" **Networking Dinner**

On Wednesday, March 11, a special networking dinner will be organized. For participants, the networking dinner is included in the registration fee.

Don't miss this perfect possibility to meet your business partners and enjoy a lovely evening.









# **Hotel Accommodation**

For the participants of the congress a number of rooms are held **until February 10, 2009 at a special rate** in ArabellaSheraton Grand Hotel and Sheraton Munich (formerly ArabellaSheraton Bogenhausen Hotel). Reservation after this date will be subject to space and rate availability. If you wish, you may also extend your stay at the same rate.



#### ArabellaSheraton Grand Hotel Munich\*\*\*\*\*

Arabellastrasse 6 81925 Munich Phone: +49 89 926 40 Fax: +49 89 926 486 99 www.sheraton.com/grandmuenchen

Congress place

# **Registration Fees**

Registration for the congress should be made by means of the registration form. Participants registering and paying **before January 30, 2009** will benefit from a reduced registration fee. The registration fee includes congress, entrance to the exhibition, networking dinner, luncheons and proceedings.

Congress Fee	before January 30, 2009	after January 30, 2009
Fee for participants	€ 1'450	€ 1'550
Fee for speakers	€ 850	€ 890
Fee for students	€ 550	€ 590
Plant tours on March 13:		
No. 1: BMW, Museum & RDC	€ 30	€ 50
No. 2: BMW & Museum	€ 30	€ 50
No. 3: Loacker Recycling GmbH	€ 30	€ 50
No. 4: Montanwerke Brixlegg AG	€ 30	€ 50
No. 5: TBS GmbH & voestalpine Stahl GmbH	€ 30	€ 50

The fee for the plant tours is only for transportation and organization.

Networking dinner for accompanying				
persons (March 11)	€	110	€	120

Registration on site € 100.- surcharge



#### Sheraton Munich, Arabellapark\*\*\*\* (formally ArabellaSheraton Bogenhausen Hotel)

Arabellastrasse 5 81925 Munich Phone: +49 89 923 20 Fax: +49 89 923 244 49 www.sheraton.com/bogenhausen

Next to the congress place

#### **Additional Proceedings**

If it is not possible for you to attend the congress, you can 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:

Bank:Neue Aargauer Bank, 5400 Baden, SwitzerlandBeneficiary:ICM AGAccount number:447941-72IBAN:CH41 0588 1044 7941 7200 0Clearing number:5881Swift code:AHHBCH22XXX





# Exhibition

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

The fee for a standard exhibition stand 6 m<sup>2</sup> (2 m x 3 m) is EUR 3'000.– for the full time of the congress.

Space is limited, so please take your chance now and book your exhibition stand within today!



# Layout Exhibition



#### Exhibitiors per December 1, 2008

- Al-Jon Manufacturing, USA
- AutoDrain, United Kingdom
- Auto Recycling Nederland (ARN), Netherlands
- BHS-Sonthofen GmbH, Germany
- Euromec S.r.l., Italy
- Invemet S.r.I., Italy
- MHG Maschinenfabrik Hombak GmbH, Germany
- Niton Europe GmbH, Germany
- SEDA, Austria
- SGM Gantry, Belgium
- Steinert Elektro Magnetbau GmbH, Germany
- TiTech GmbH, Germany
- Umicore Precious Metals Refining, Germany
- Ventilatorenfabrik Oelde GmbH, Germany
- ZB Shredder, Spain

# Who should attend?

- Automobile manufacturers
- Automotive parts and materials suppliers
- Automobile importers and dealers
- Recycling and dismantling companies
- Shredding companies
- Steel industry
- Collectors of FLV
- Financing organizations for ELV recycling
- Environmental authorities
- Universities and research institutes
- Laboratories for material science
- Consultants

# Organizer of the IARC

#### ICM AG

International Congress & Marketing Schwaderhof 524 5708 Birrwil, Switzerland

Phone: +41 62 785 10 00 +41 62 785 10 05 Fax: E-Mail: info@icm.ch Internet: www.icm.ch





Ying Liu Congress Assistant



Claudia Gerstendörfer Congress Assistant



**Yvonne Steiner** Congress Assistant

Susann Schmid Congress Assistant

# Beautiful Munich









Munich, which means "Home of the Monks," was originally established as a Benedictine Monastery.

Today, it's the flourishing capital of Bavaria, known worldwide for its dining, culture, and entertainment. But Munich may be best known for its annual Oktoberfest celebration, a 16-day festival attracting some six million people. Visitors should check out Residenz, a 14<sup>th</sup> century royal palace; Frauenkirche, a 15<sup>th</sup> century church sporting onion-domed towers; Alte Pinakothek, one of the world's finest art galleries; and Schloss Nymphenburg, a Bavarian palace that houses Munich's Botanical Gardens. Be sure to visit some of Munich's many beer halls, especially Hofbräuhaus, which is arguably the most famous pub in the world.



# **The BMW Munich Plant**

The fascination of production



The BMW Munich Plant is the original BMW Group Plant, combining the highest level of engineering and human innovation with genuine passion for the brand.



Forming Part of the BMW Group's global production network, BMW Munich Plant builds more than 900 cars and more than 1,400 engines per day. BMW Munich Plant employs some 9,000 associates from more than 50 countries the world over, among them approximately 700 apprentices.

Last but certainly not least, BMW Munich Plant incorporates all technologies in automobile production: Press Shop, Body Shop, Paintshop, Engine Production and Assembly, as well as a Tool Shop, Interior Fittings Manufacture and a Laboratory. BMW Munich Plant serves as a "window to the world of BMW production", individualised guided tours offering a unique and authentic insight into automobile production.

## **Recycling and Dismantling Centre**

**Research lab and recycling facility** 



#### Ecological responsibility: The BMW Group Recycling and Dismantling Centre.

In its mission statement, the BMW Group is committed to reduce the environmental effects of its vehicles across the entire lifecycle. As early as



1990, BMW was the first automobile manufacturer to open up its own pilot dismantling facility and it was developed on an ongoing basis. This finally led to the development of the Recycling and Dismantling Centre which was opened in Unterschleißheim in 1994. Next to the implementation of the dismantling process and the development of BMW recycling technologies, test and concept vehicles are also being recycled to derive their maximum added value.

#### "Design for Recycling": After all saving resources starts with the process of vehicle development.

Thinking ahead and process improvements – this is also part of the responsibilities of the staff at the Recycling and Dismantling Centre. Design for Recycling is even a significant part of the product development process and results in environmentally compatible product design. Continuously improving the resource-saving design of BMW Group vehicles throughout their entire lifecycle will also continue to be the Centre Recycling and Dismantling Centre's task in the future.

# We are pleased to welcome you at LOACKER Recycling Götzis!







# LOACKER Recycling GmbH

Lustenauerstraße 33, 6840 Götzis, Austria Phone: +43(0)5523-502 - Fax +43(0)5523-502-33 recycling@loacker.at - www.loacker.at

# **99,99%** COPPER CONTENT

Each year, the Montanwerke Brixlegg AG processes approximately 130,000 tons of copper containing secondary materials. The recovered highly pure copper has a copper content of 99,99 %. This excellent quality and a wide range of application possibilities have made the brand "BRX" well known worldwide.

More information about recycling and the production you can find underer www.montanwerke-brixlegg.com





a company of A-TEC INDUSTRIES AG

1115

# For other people this is a tree.

For us the result of our engagement in environmental protection.

Like the ripple effect of a stone thrown in a lake, our actions invariably have wider impact. When a company has made keeping an eye on the future part of its corporate philosophy, the result is exacting environmental standards against which others measure themselves. We are quite proud of that.

# d treatm esidue Shredder

NDL

ECHNISCH



voestalpine