AluMag[®]

Asia 2015 6th - 8th of Jul

AUTOMOTIVE LIGHTWEIGHT

PROCUREMENT SYMPOSIUM

Jumeirah Himalayas Hotel in Shanghai, China



HIGHLIGHTS

INTERNATIONAL SPEAKERS

AUDI - MAGNA - DGS - GEELY - NOVELIS - JSC - VOESTALPINE, ...

LIGHTWEIGHT TECHNOLOGY EXHIBITION

DGS - StrikoWestofen - Kurtz - Novelis - Idra

SIMULTANEOUS INTERPRETING

Chinese - English / English - Chinese

ATTENDING COMPANIES













































































MEDIA & ORGANIZATION PARTNERS











Automotive News China









Brings together the procurement and supply side of lightweight materials and their advanced processes in accompany with cost balance or reduction....



AluMag is "The Market Developer" that successfully penetrates new markets, creates business and localize leading supplier for your company. AluMag access any provider markets and open doors for your business - regardless of region, market, application, material, process or product. AluMag makes you successful - worldwide!

AluMag® offers the four following services - worldwide:



- ■Aluminium Extrusion **Customer Database**
- ■Foundry & Tool Maker **Database**
- Automotive Application, Material & Process Analyses ■ Various Industrial Application Research & Analyses

AluMag as your provider of automotive research and forecasting studies, offers you and your business. the market intelligence you need to realize the best strategic decisions



Large variety of market accesss, local & global:

- business database with 6,970+ companies and 18.700+ contacts
- 150+ satisfied customers world-
- Arranged 20+ roadshows/events since 2008



Your Benefits:

- Learn about your [potential] clients and competitors
- Obtain an inside view of the
- Identify opportunities and threats
- Minimize risk and optimize prof-
- Position your company successfully
- Based on data off the shelf, secondary re-search and inter-views, AluMag generates vali-dated researches



- Analysis & Development of **Market Opportunities**
- **Accelerate Market** Penetration
- Manage New Product Launches
- Establish a Sales Force Sales on Demand

AluMag guides and supports your organization globally through the different market development phaswe have successfully launched, implemented or executed your project.



Manage and integrate each aspect of your organization by initiating, planning, con-trolling, executing and closing out a new project. AluMag offers liaison mana-gement services as an addition to our customer's staff by bringing in the resources



Your Benefits

- Analysis and development of Markets
- Realize opportunities
- Accelerate market penetration
- Establish a sales force
- Provide warehousing and distribution services
- Manage new product launches
- Sales on demand



- Organization of Technical & Commercial Roadshows
- Oversea Commercial & **Technical Events**
- Host In-House Events & Presentation
- **Common Technology Booth** at Leading Exhibitions

AluMag roadshows, tech-meetings and symposia are the first class events used by exhibitors and guest as a unique benchmark platform



The AluMag think tank events are bringing in decision makers and executives in EUROPE, ASIA and NAFTA.



Upcoming Events:

- 2015 Jul: Automotive Lightweight Procurement Symposium in Shanghai, China
- 2015 Nov: Automotive Lightweight Procurement Symposium in Detroit, USA
- 2016 April Common tech- booth at the SAE World Congress in Detroit, USA
- 2016 Jul: Automotive Lightweight Procurement Symposium in Shanghai, China



- Warehousing & Distribution Service
- Supplier & Tie-up Localization
- Identification & Trade-off of new Technology
- Foreign Market Business Cases and whose Realization

AluMag has the global expertise to search, identify, evaluate and vali-date potential strategic business opportunities for expansions and partnerships that will assist your business growth plans regionally and globally



Services for:

- Search, develop and present potential acquisition candidates for regional and global business expansions
- Localization of new manufacturing / service sites for business expansions
- Identification of new technology supplier development related to products, processes and materi-
- develop and present potential business partners suppliers to support regional and/or global supply programs
- Evaluate potential competitor profiles for new or existing business in non-presence geogra-
- Evaluate new emerging technologies and processes business expansions

Are you:

- looking for specific data, information and outlook about product, material, customer, supplier, technologies, ...
- want to discuss your project, increase sales, access new markets, ...
- interested to participate in one of our roadshows / events or organize your customized showcase ...
- looking to localize, expand into new markets, countries, tie-up targets, ...

please contact your AluMag Team to receive a quote or proposal

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Asia Automotive Lightweight Procurement Symposium 6th – 8th of July 2015

Jumeirah Himalayas Hotel in Shanghai, China.



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Agenda

Agenda: (Is Continuously Being Updated)

Monday The 6th Of July – Jumeirah Himalayas Hotel, Shanghai – 6th Floor

06:00pm - 10:00pm

Pre-registration and Welcome Reception

<u>Tuesday The 7th Of July – Jumeirah Himalayas Hotel,</u> <u>Shanghai – 6th Floor</u>

08:30am - 09:15am

Registration & Morning Coffee / Tea

09:15am - 09:30am

Welcome:

Mr. Jost GAERTNER, Managing Partner at ALUMAG Automotive GmbH

09:30am - 10:25am

Opening Keynote:

Mr. Frank VENIER, Strategy and Innovation; Lightweight Design Centre at AUDI AG

Lightweighting SUV - The New Audi Q7 In Multimaterial Car Body Design

10:25am - 11:00am

Break for Refreshments/Coffee/Tea, Snacks, Networking, Tech Exhibition

11:00am - 12:00am

Paper 1 – Part 1:

Mr. Gerhard KRACHLER, Director Advanced Development & Product Strategy at MAGNA STEYR Engineering AG & Co.KG

Paper 1 - Part 2:

Mr. Christian JURICEK, Manager R&D Europe at COSMA MAGNA International

Magna's Global Advanced Lightweight Competences

12:00pm - 01:45pm

Break for Refreshments/Coffee/Tea, Lunch, Networking, Tech Exhibition

01:45pm - 02:25pm

Paper 2:

Mr. Andreas MUELLER, CEO at DGS Druckguss Systeme AG

Localization And Industrialization Of Cast Aluminium Structural Applications

02:30pm - 03:10pm

Paper 3:

Mr. Li WAN, Vice President at Guangdong Hongtu Technology (Holdings) Co Ltd

Aluminum Alloy High Vacuum Die Casting Technology And It's Application On Automotive Structural Parts 03:15pm - 03:45pm

Paper 4:

Mr. Lothar HARTMANN – Managing Director Foundry Machines & Trimming Presses at Kurtz GmbH

Mr. Michael BARTEL – Asia Sales Manager Foundry Machines & Trimming Presses – Kurtz GmbH

Low Pressure Casting

A traditional casting technology helping to step ahead for light weight solutions in engine block manufacturing

03:45pm - 04:15pm

Break for Refreshments/Coffee/Tea, Snacks, Networking, Tech Exhibition

04:15pm - 04:55pm

Paper 5:

Mr. Peter BERNSCHER, Member Of The Board & Director Automotive Body Parts at Voestalpine Metal Forming GmbH

Lightweight Solutions In The Automotive Industry By Voestalpine

05:00pm - 05:55pm

Closing Keynote:

Mr. Jochen SIEBERT, Managing Partner at JSC Automotive Consulting Co. Ltd.

Outlook And Hurdles Of The Chinese Economy And Automotive Industry

05:55pm - 06:00pm

Summary:

Ms. Ying ZHOU, Project Coordinator China – Japan at ALUMAG Automotive GmbH

06:00pm - 10:00pm

Reception Sponsored By StrikoWestofen

Dinner Speech - Part 1:

Mr. Rudolf RIEDEL – Group Managing Director at StrikoWestofen GmbH

Dinner Speech - Part 2:

Mr. Rainer ERDMANN – Managing Director Asia Operations at StrikoWestofen Thermal Equipment Co.Ltd

Profits With Light Metal Castings Start In The Melt Shop

Agenda

Agenda: (Is Continuously Being Updated)

Wednesday The 8th Of July

08:15am - 08:55am

Opening Keynote:

Prof. Fei XIONG Chief Engineer & Director of Auto Lightweight Department at GEELY

Automotive Lightweight Promoting The Application Of Aluminium

09:00am - 09:40am

Paper 1:

Mr. James LIU, Managing Director and Vice President of Asia Auto at NOVELIS China

High Volume Aluminum Solutions For Lightweighting

09:45am - 10:25am

Paper 2:

Dr. Jin HOU – General Manager – Sapa Technology Asia

High Performance Aluminium Alloys For Automotive Light-Weighting

10:25am - 11:00am

Break for Refreshments/Coffee/Tea, Snacks, Networking, Tech Exhibition

11:00am - 11:40am

Paper 3:

Mr. Yoshikazu MUKAI, Executive Vice President & Technical Specialist at Kobelco Automotive Aluminium Rolled Products (China) Co, Ltd – Shanghai Branch

Kobe's R&D Activities For Automobile Lightweighting

11:45am - 12:25pm

Closing Keynote:

Mr. Martin SHI, Chief Editor at GASGOO International And Senior Analyst at GASGOO Research Institute

The Status And Development Trends Of China Automobile Lightweight

12:30pm - 12:35pm

Summary:

Mr. Jost GAERTNER, Managing Partner at ALUMAG Automotive GmbH

12:45pm - 01:00pm

Walk To The SNIEC Shanghai New International Expo Centre

<u>01:00pm – 01:40pm</u>

Reception With Snacks & Finger Food at the SNIEC

01:40pm - 05:30pm

Individual Or Guided Visit At The 2015 "Aluminium China " And "China Diecasting" Exhibitions

Backup Speech

Mr. Jost GAERTNER, Managing Parter at AluMag Automotive GmbH

Top 16 Global Ranking Of Aluminium And Magnesium Foundries By Revenue

EXHIBITOR

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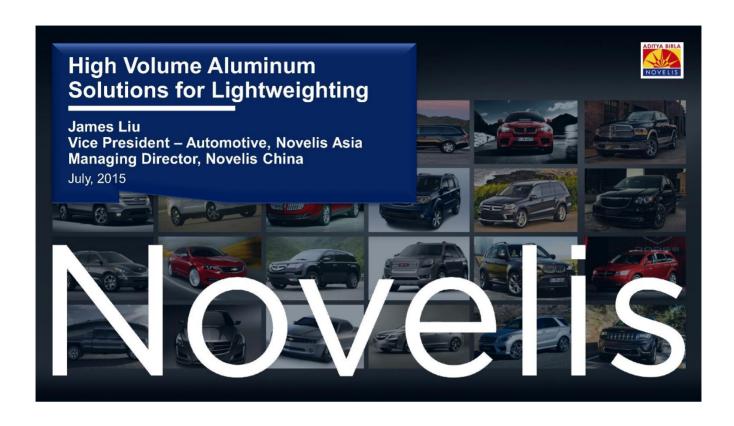
TITLE

Novelis Aluminum BIW Solution

ABSTRACT

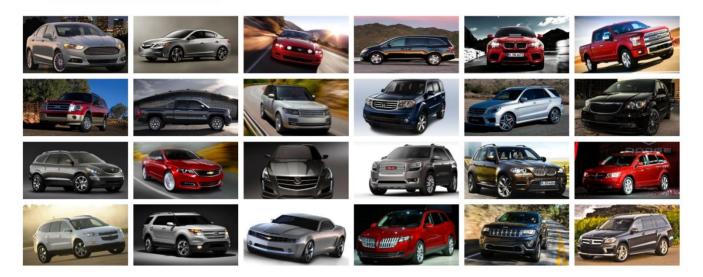
Topic:

- High Volume Aluminum Solutions for Lightweighting
- Solutions for Forming & High Speed Joining
- Tailored Solutions for Material Utilization
- Alloys for Strength and Crash Energy
- Closed Loop Recycling
- Adhesive Bonding Technology Innovation



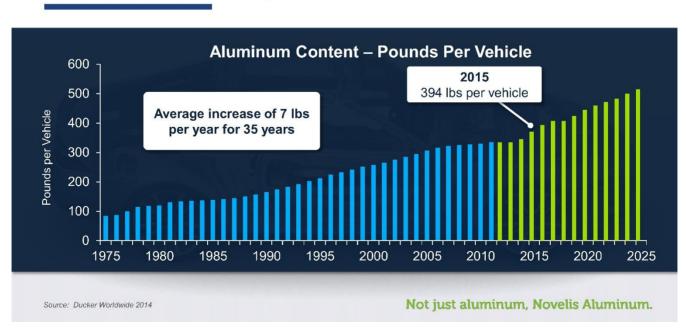


Where Do You Find Novelis Aluminum Today?



Not just aluminum, Novelis Aluminum.

40 Years of Uninterrupted Growth



Key Factors for Mass and Cost Efficiency



Not just aluminum, Novelis Aluminum.

Attention to These Key Factors Pays Off



Weight Aerodynamics Fuel Efficiency Performance & Driveability Durability & Robustness NVH & Sound level Hours per Car Part Count Reduction 0% 20% 40% Improvement

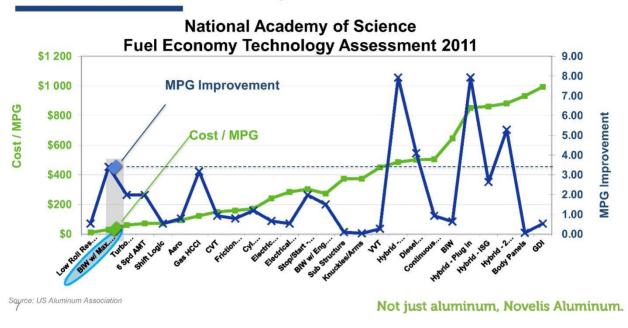
All - Aluminum Range Rover

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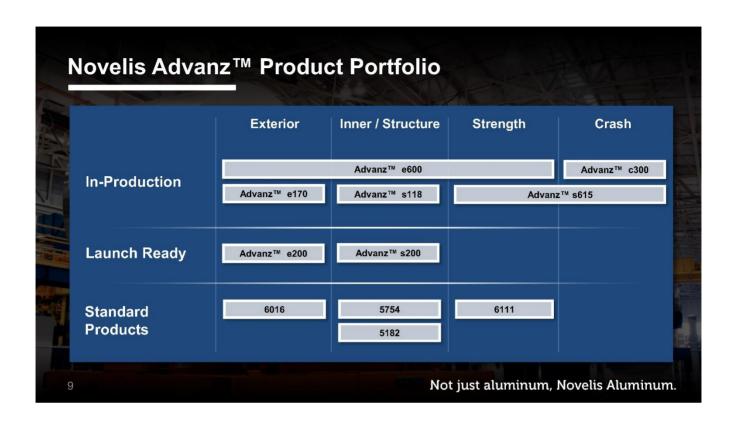
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Aluminum-based Mass Reduction Provides Cost Effective Fuel Economy









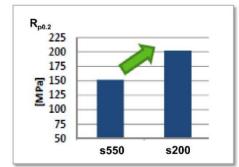


Advanz™ s200 for Advanced Formability

Benefits for door inners

- Down-gauging due to high strengthening in paint bake
- Uni-Alloy (6xxx series) approach for improved recycling
- Deep draw capability



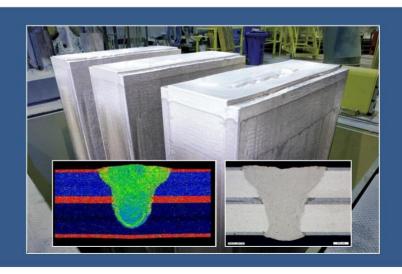






Advanz™ s200 is a key enabler for Remote Laser Welding

- Advanz™ s200 is weldable without filler metal
- Maintains the benefits of 6xxx monolithic products
- Approvals in progress with multiple automakers for several applications

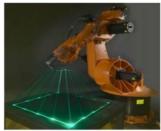


Joining Productivity with Remote Laser Welding

- Much faster than conventional technique with filler metal
- Allows more complex welds
- Better weld sequence optimization

The Challenge:

 6xxx series alloys crack without a filler wire







Not just aluminum, Novelis Aluminum.

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Opportunities for Advanz™ s200 and Remote Laser Welding

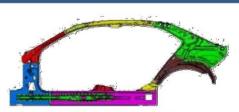
- One-side Assembly for many modules
- Potential reduction of adhesive bonding due to stiffness increase



Tailgate (110 welds/car)



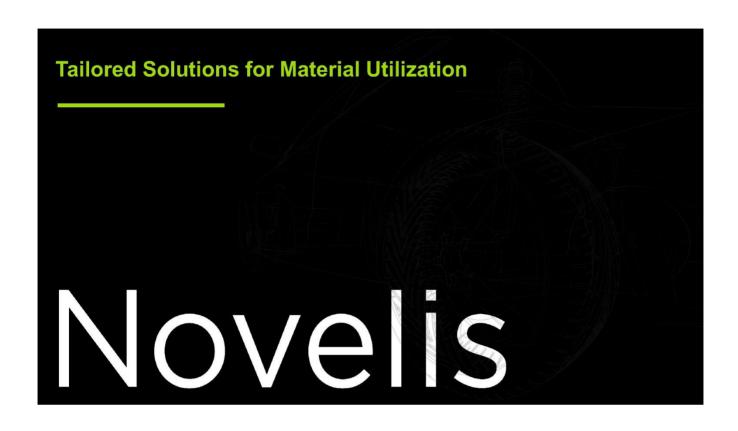
Doors FD/RD (4 x 90 welds/car)



Sidewall inner (120 welds/car)

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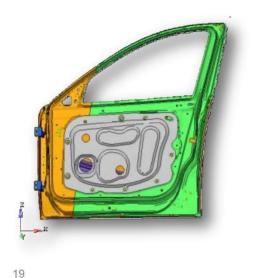
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Aluminum Tailored Blanks

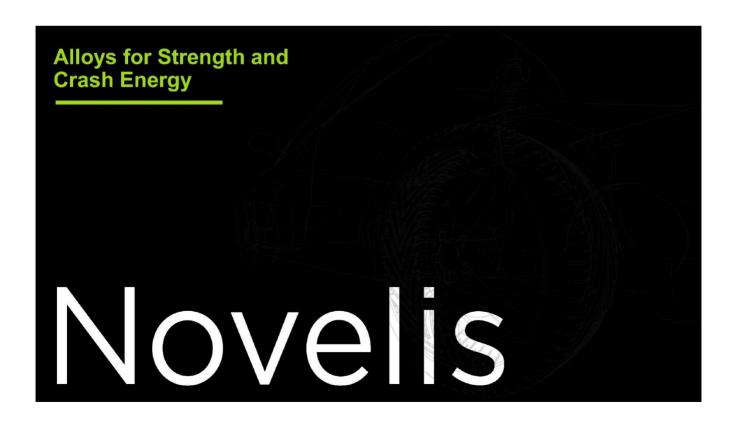


Tailored Aluminum Blanks - Door Structure Study



Cost Comparison Aluminum Assy vs. TAB®		
TAB®		
△ NET WEIGHT	- 5%	
△ GROSS WEIGHT	- 15 %	
△ VARIABLE COST	- 5%	
Δ INVESTMENT - 39 %		
WEIGHT ♥ COST ♥	PERFORMANCE ✓	

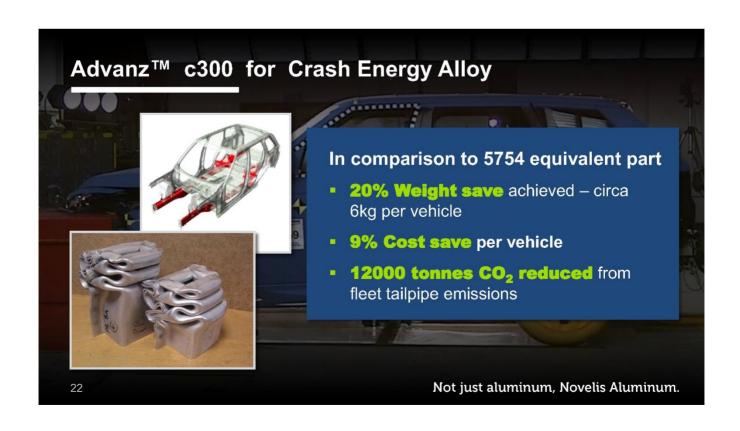
Not just aluminum, Novelis Aluminum.



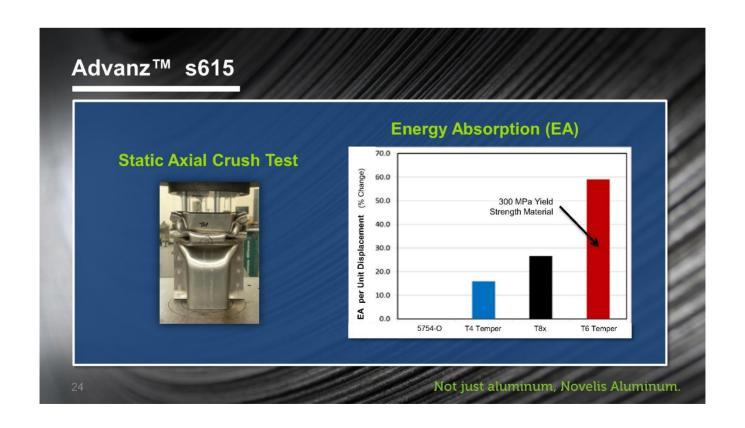
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High Strength Roadmap 50 40 30 20 AdvanzTM s615 6xHs 330 7xHs PII 7xHs 500 Specific Ultimate Tensile Strength [Mpa / kg/m³]









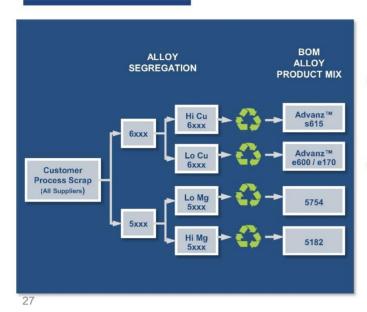
Closed-Loop System Drives Cost & CO₂ Efficiency



- Synchronize alloy selection with the stamping strategy and the closed-loop system strategy
 - Espec. 5xxx 6xxx alloy mix



Closed-Loop System Drives Cost & CO₂ Efficiency



- Early BOM visibility enables comprehensive trade studies and decisions
- We continue to enhance alloys for recycle content and breadth of application

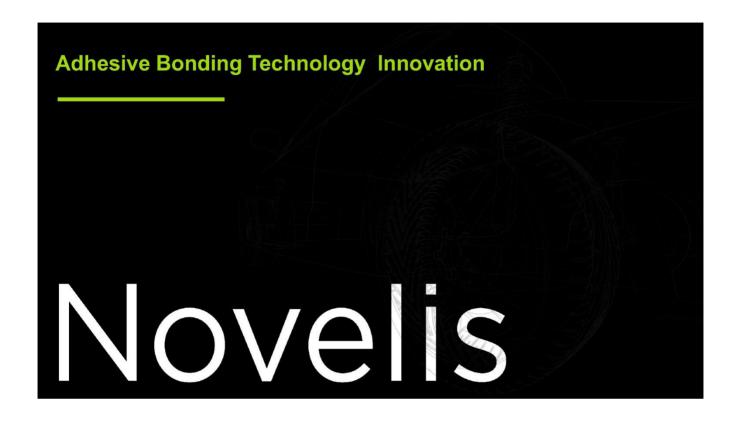
Not just aluminum, Novelis Aluminum.

Recycled Content Alloys



RC5754

- Developing higher recycled content auto alloys as part of company's sustainability commitment
- Jaguar XE is first all new car in the world to use this new, high recycled content aluminum alloy designed jointly by Novelis and Jaguar Land Rover for the automotive industry
- Launched in Europe this fall and arriving in North America in 2016





Bonderite M-NT 8453

Ti, Zr fluorides and Henkel's proprietary polymer formulation provides industry-leading adhesion and corrosion resistance

Fracture toughness results met OEM requirement **Tests Passed to Production Automaker Approvals Date** Versatility Cohesive failure Already approved by The most severe **Spray** a global automaker Stress Durability Roll-on-dry-in-place testing in industry Undergoing approval Neutral Salt Spray -Immersion coating testing with multiple 20 weeks global automakers Impact peel test SEM Micrographs of Zn-P structure **Resistance Spot** Weld E-coat/Paint and Corrosion

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Not just aluminum, Novelis Aluminum.

Key Factors for Mass and Cost Efficiency



We Welcome You To Our Next Event

AluMag[®]

North America 2015 9th - 11th of Nov

AUTOMOTIVE LIGHTWEIGHT

PROCUREMENT SYMPOSIUM

Westin Hotel in Detroit, USA



AluMag[®]

AluMag SAE 2016 12th - 14th April

Light Weighting - Emission Reduction - Car Comfort Technology Center, Booth # 763 - Detroit - Cobo Center, MI USA



AluMag®

Europe 2016 27th - 29th of Nov

AUTOMOTIVE LIGHTWEIGHT

PROCUREMENT SYMPOSIUM

Hilton Hotel in Duesseldorf, Germany



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