2nd CARL LOPER
CAST IRON SYMPOSIUM

Latest advances and applications of cast iron

SEPTEMBER 30th - OCTOBER 1st, 2019
Bilbao (Spain)
Honoring Dr. Carl R. Loper Jr., professor of many professors, the focus of this conference is to review the fundamentals of cast iron solidification and highlight the latest research, technology and developments in metallurgy, production and applications of the material.

Taking advantage of the 10th anniversary of the 1st Carl Loper Symposium held at Madison, Wisconsin (USA), the 2nd Carl Loper Symposium is being organized by IK4-Azterlan Metallurgy Research Centre, SPAIN, and includes Key Note invited and contributed papers from leading academic and industrial community.

This event will be held every three years with the scope to disseminate the latest advances and applications of cast iron.

Congress Theme: “LATEST ADVANCES AND APPLICATIONS OF CAST IRON”

The 2nd Carl Loper Symposium on Cast Iron Technologies will gather 40 scientific and industrial papers on the following fields of knowledge:

- Cast Iron (spheroidal, lamellar and compacted graphite cast iron, ADI and alloyed irons).
- Corrosion, environment and sustainability.
- Foundry technologies, equipment, manufacturing, tools, robotics and automation.
- Energy.
- Advanced engineering: design, calculation and simulation tools.
- Heat, cryogenic and surface treatments.
- Molding, core making and rapid prototyping technologies.
- Pattern and tool making.

Conference Board Members

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SYMPOSIUM FEES*

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<tr>
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<th>Regular fee</th>
<th>Late fee</th>
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<tr>
<td>Full fee (Professionals)</td>
<td>415€</td>
<td>470€</td>
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<tr>
<td>Students</td>
<td>225€</td>
<td>265€</td>
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<td>Reduced fee (Scientific Committee, sponsors)</td>
<td>320€</td>
<td>375€</td>
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<td>Conference dinner for accompanying person</td>
<td>100€</td>
<td>120€</td>
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(*) Applicants from Spain should add V.A.T. (21%) in all cases.

Included in the Registration fees: Conference dinner (Sept. 30th), coffee break snacks and luncheon. Not included in the Registration fees: Accommodation, transport and trip to San Sebastián (Sept. 29th).

Social events

- Optional pre-tour to San Sebastian on Sunday, September 29th, 2019
- Conference dinner on Monday evening, September 30th, 2019

Conference venue: EUSKALDUNA JAUREGIA BILBAO

Located in the center of Bilbao, near the Guggenheim Bilbao museum, it is easy access to many wonderful hotels allowing attendees to come on foot, Tran, Metro and less than 20 minutes away from Bilbao (BIO) airport.

TELEPHONE. (+34) 94 6215470 · EMAIL. CarlLoperSymposium@azterlan.es
SYMPOSIUM SECRETARY. Olatz Garro.
TUESDAY, OCTOBER 1

8:00-8:30 Registration

**Hall 1**

08:30-09:00 KNL: What will be the role of cast iron in the automobile in 15-20 years? M. Alberts & L. Vassilev (Krenov)

09:00-09:30 A user-centric approach to tender design for cast iron parts. T. V. N. Hobbs

09:30-09:55 Process improvements of tectonic ductile iron to achieve higher impact properties at sub-zero temperatures. K. Magaza, P. Canel, S. Mavhungu, C. Banganyai

10:00-10:30 The relation between the damping capacity and tensile strength of nodular cast iron for braking system components. L. Perelitz, G. Abreu, V. Anjos, L. F. Mafrares, R. Sudrez

10:20-10:45 Light-weighting technologies for high performance ductile iron sand castings. J. Shah


11:30-12:00 Effect of magnesium on the solid-state nucleation and growth of graphite during annealing of white iron. G. Arroya, D. M. Stephanovic, R. Gonzalez, R. Sudrez

11:55-12:15 Effect of antimony on graphite growth in ductile iron. L. Dekker, B. Torn, Gerhard Lidenkamp


Lunch

14:00-14:35 KNL: Automotive powertrain trends and the market opportunity for cast iron. S. Dawson (SinferCast)

14:40-15:00 Influence of the high-power thermal plasma heating (HPPH) in the properties of the ductile iron foundry components. A. Kubo, K. Takada, J. M. Lopez

15:05-15:30 Discriminating between sound and defective ductile iron through tactile data analysis. G. Angelita, C. Moro, G. Bertiini, F. Zannardi

15:30-16:00 Thermal fatigue testing of spherical graphite cast iron for HPDC: P. Mrowa, S. Kajitako, M. Takagi, M. Podbiel, B. Bauer, D. Matarola

Coffee break

16:10-16:30 Ductile iron front-end ultrasonic nodularity determination using standard coupons. J. Crei, M. Kobais Jr., A. Hoover, N. Thomberry, S. Beckley

16:35-16:45 Velocity measurement and verification with modeling of naturally pressurized galling systems. K. Halbert, K. Magaza, S. Sekojiang

17:00-17:30 The effect of thermal processing and chemical composition on secondary carbide precipitation and hardenability in high chromium cast iron. M. A. Guiter, U. P. Niyazi, D. Dijkstra, P. Meczkowski

17:35-17:45 New casting technologies: Ablation technology for iron casting. J. Garay

(*) KNL: Keynote Lecturer