

»Whitepaper«
for partners und referents of the
ANNUAL LIGHTWEIGHT SYMPOSIUM

»WINNING STRATEGIES IN INNOVATIVE LIGHTWEIGHT DESIGN«



**Friday, 7th of February 2020
in Mondorf-les-Bains, Domaine Thermal,
Luxembourg**

1. The LIGHTWEIGHT SYMPOSIUM in Luxembourg

- The LIGHTWEIGHT SYMPOSIUM 2020 in LUXEMBOURG brings highly reputed and renowned lightweight construction experts together. The lightweight pioneers will be sharing their knowledge in an inspiring environment far away from industrial imprint. ART and Lightweight are in the framework of this LIGHTWEIGHT SYMPOSIUM consciously combined.
- The one-day event will take place on February 07, 2020 in Mondorf-les-Bains, LUXEMBOURG. Mondorf-les-Bains is the spa town. It is well known beyond the borders for its expert mix of wellness, health and culture.
- The language of the event will be English.
- Participants from middle and upper management from the space, automotive, aviation and other mobility sectors will be invited personally. The invitations will be issued by GRADEL (and AMC, if applicable) within the framework of individual "speeches".
- All speakers can attend the LIGHTWEIGHT SYMPOSIUM free of charge. A trade exhibition with a tour of the exhibitors, a vernissage as well as an evening event with a moderated wine tasting will accompany the event.

- The lightweight construction event is a balanced mixture of lectures, discussions, collegial "Networking (Value)" and an attractive supporting programme (with various lightweight construction exhibits on defined exhibition areas).
- The "highlight" of this year's LIGHTWEIGHT SYMPOSIUM is the first presentation of the elaborate market and technology study "SPACE 2020 - Winning strategies in innovative lightweight design", which AMC and GRADEL performed in 2019.
- There will be media marketing and reporting on the Lightweight Construction Symposium via various media brands. Additionally, three press releases in German- and English-language specialist and consumer media and "Special Interest(s)".



2. Organizers AMC und GRADEL

- **AUTOMOTIVE MANAGEMENT CONSULTING GmbH (AMC)** was founded in 2001 and is a highly qualified technology, consulting and training company for (ultra) lightweight construction, based in Penzberg, Germany. The core competence of AMC is the conception, development, marketing and technologization of **lightweight innovations**. AMC supports major manufacturers in the automotive, aviation, space and rail sectors, development service providers and suppliers in the development of unique, innovative and individual lightweight construction solutions in the areas of **fibre composites, hybrid technology**, metallic lightweight construction solutions and is regarded as a specialist for innovative and highly qualified solutions in integrative and multi-material lightweight construction. The AMC was the idea behind the Ultra Lightweight seat, which was awarded with the internationally renowned **ALTAIR ENLIGHTEN AWARD**, two **GERMAN INNOVATION AWARDS** and the Chinese Lightweight Award in 2019. She acted in an advisory role on the topics of winding and tool concepts as well as integrative lightweight construction and managed the value chain for the **xFK in 3D** lightweight construction process. Partners of the Ultra Lightweight seat were CSI Entwicklungstechnik GmbH and Alba tooling & engineering GmbH.
- **GRADEL sàrl**, founded in 1965, started in 2008 to develop **special purpose machines** and tailored made solutions for the **space domain**. Due to our experience in electro-mechanical engineering, automation and dynamic axis control, GRADEL has developed extensive expertise for the realization of ground equipment. Our main product group in space is **Mechanical Ground Support Equipment (MGSE)**, where we have a complete range of equipment for handling S/C or parts of it. Typical examples of products of GRADEL are multipurpose trolleys, hoisting devices, horizontal and vertical lifting devices, integration stands and adapter rings for the assembly integration and test of all types and sizes of satellites, as well as equipment of CATR facilities to test the **antennas of the satellites** and transport containers. GRADEL is providing MGSE elements for the instrumentation of satellites as well. These elements are dominated by special requirements concerning magnetic compatibility, cleanliness and precision. In addition to the ground equipment, GRADEL is developing flight hardware like brackets, interface rings, cable feed through

and small deployable elements for satellites. GRADEL has provided equipment among others for the following space programs:

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|-------------------|-----------------------|-------------------------|-----------------|------------------------|
| ➤ <i>Alphabus</i> | ➤ <i>Esail</i> | ➤ <i>ExoMars</i> | ➤ <i>MTG</i> | ➤ <i>Solar Orbiter</i> |
| ➤ <i>EDRS</i> | ➤ <i>Euclid</i> | ➤ <i>Juice</i> | ➤ <i>Proba3</i> | |
| ➤ <i>Electra</i> | ➤ <i>Eurostar Neo</i> | ➤ <i>Moonmission M4</i> | ➤ <i>SGEO</i> | |

3. Topic Contributions, (»speakerslots«)

- The 30-minute "Speakerslots" will be announced under the symposium title "WINNING STRATEGIES IN INNOVATIVE LIGHTWEIGHT DESIGN", as lightweight construction strategies, processes and structures will be discussed across industry sectors and technologies.
- The aim is to facilitate competent professional exchange and intensive networking within the relevant network of lightweight construction partners from the SPACE segment and beyond.
- The new market and technology study "SPACE 2020" will be at the centre of the LIGHTWEIGHT SYMPOSIUM to reflect the current state of the art with regard to future key topics in lightweight construction - from "material concept and development to process optimisation".
- The impulses, ideas and innovations discussed at the LIGHTWEIGHT SYMPOSIUMS 2020 will make a major contribution to supporting a step change in future lightweight construction, according the "form follows force" mission statement (P. Pirklbauer, AIRBUS).
- In the sense of an inventory, industry-specific and cross-technology requirements, perspectives and challenges are clearly identified. Thus, the LIGHTWEIGHT SYMPOSIUM 2020 not only serves decision-makers responsible for technology from industry and science, but also actors from politics, associations and administration who would like to gain a sound and valuable picture of the current market situation and future challenges in (ultra) lightweight construction.
- The LIGHTWEIGHT SYMPOSIUM 2020 focuses on clear, understandable and comprehensible arguments for identifying opportunities and challenges for (internationally) sustainable and competitive integration of lightweight construction solutions across the entire value chain.
- The development of economic and scientific solution approaches is based on the impulses, ideas, experiences, findings and needs of highly qualified lightweight construction experts, whose knowledge is collected, condensed, analysed, evaluated, systematically structured and finally discussed within the framework of the LIGHTWEIGHT SYMPOSIUM.
- Aspects of concept and material development as well as joining and manufacturing technologies make a significant contribution to strengthening the innovative strength of industrial companies in lightweight construction - the LIGHTWEIGHT SYMPOSIUM provides concrete answers for future lightweight construction.

4. Draft program

- 08:00** - Arrival of participants at the “Orangerie” of the Domaine Thermal
- 08:30** - Moderation: Mr. Olaf Freier, Global Brand Director, Reed Exhibitions (confirmed)
- 08:45** - Welcoming speech: Mr. Mario Grotz, Director General for Research, Intellectual Property and New Technologies, Ministry of Economy, Luxembourg (confirmed)
- 09:00** - Welcoming speech / Q& A: Mr. Werner Loscheider, Head of Division, Lightweight and resource efficiency of the Federal Ministry for Economic Affairs and Energy, Germany (confirmed)
- 09:40** – Pioneer the new Space Frontier: Mr. Marc Serres, CEO, Luxembourg Space Agency (confirmed)
- 10:15** - Keytalk: Constanze von Nell-Breuning, Head of Marketing, AMC / Jeroen Bleekemolen, professional race driver (confirmed)
- 10:50** – PAUSE
- 11:10** - SPACE 2020-Study: Mr. Claude Maack Director General Gradel sàrl / Mr. Dr.-Ing. Claus Bayreuther, Lightweight expert, AMC (confirmed)
- 12:00** - Qualification of Lightweight for Space: LIST (confirmed)
- 12:30** - Walking lunch
- 13:45** - Lightweight in Aeronautics: Mr. Peter Pirklbauer, Head of Emerging Technologies & Concepts, AIRBUS Operations GmbH (confirmed)
- 14:30** - Lightweight in Automotive (tbc)
- 15:15** - PAUSE with moderated EXHIBITOR ROUND
- 15:45** - Lightweight for launchers, (tbc)
- 16:35** - Lightweight from Customer View Constellations, GOMSPACE Luxembourg (confirmed)
- 17:10** - Lightweight from Customer View large & medium SATs, SES (tbc)
- 17:45** - "Lessons learned" (Podium-discussion / Moderation by Mr. Olaf Freier: Mr. Maack, Mr. Bleekemolen, Mr. Pirklbauer, SPACE-Expert (tbd))
- ~18:15** - end of conference
- 19:30** - Common dinner at the “Orangerie”, accompanied by moderated wine tasting from the Dominican winery of Nell-Breuning



5. Partner of the event



Supported by LSA:



View of the "Orangerie" of the Domaine Thermal in Mondorf-les-Bains

6. Accommodation

Hôtel Mondorf Domaine Thermal

Avenue des Bains
L-5601 Mondorf-les-Bains
Mail to : s.jacob@mondorf.lu
www.mondorf.lu
Tel: +352 23 666 256

Mention «Lightweight Symposium»

Single ROOM Fee: 155,00€
Breakfast included
Access to the Wellness & Fitness space

Hôtel-Résidence Am Klouschter Sàrl

8 avenue Marie Adélaïde
L-5635 Mondorf-les-Bains
Mail to : info@amklouschter.lu
www.amklouschter.lu
Tel : +352 27 99 1000

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Single ROOM Fee: 94,00€
Double ROOM Fee: 134,50€
Double/Twin ROOM Fee: 148,00€