Pressemitteilung - 06/12/2024

2024 EDITION OF THE FEDIL INNOVATION AWARD

Luxembourg, 5 December 2024 – On 5 December 2024, the FEDIL Innovation Award ceremony was held in the presence of Lex Delles, Minister for the Economy, SMEs, Energy and Tourism, numerous guests, members of the jury and the winners of the 2024 edition.

For this 26e edition of the FEDIL Innovation Awards, no fewer than 33 projects were submitted, from which the jury, made up of experts from the public and private sectors, awarded four prizes:

INNOVATION AWARD 2024 IN THE „PRODUCT" CATEGORY

IEE S.A. FOR ITS „LAMINATED BUSBAR CONNECTOR" PROJECT

IEE S.A., a world leader in smart sensing solutions for automotive and other markets, has developed a breakthrough innovation: the „Laminated Busbar Connector" for electric vehicle (EV) batteries. This compact, lightweight busbar connector is a hybrid solution of printed electronics combined with conventional electronic assembly and interconnection elements, integrating multiple functionalities such as voltage monitoring, cell balancing, temperature sensing, electrical isolation and busbar connection into a single component. Given the simplicity of the system, it allows for a higher level of automation in manufacturing, increasing production efficiency and reducing manufacturing costs. With the overall battery production costs being reduced, it ultimately makes electric vehicles more affordable.

Compared to traditional cabling in EV batteries, the IEE product takes up less space, leaving more room in the battery pack for the electricity charging cells, thereby increasing the EVs' driving range. Customisable for various applications, it also extends its benefits to energy storage and industrial battery systems, contributing to a more sustainable future.

INNOVATION AWARD 2024 IN THE „PROCESS" CATEGORY

HUSKY TECHNOLOGIES FOR ITS „PLATE LINE AUTOMATION" PROJECT

Husky Technologies, a leading global technology provider of injection molding systems and services for the food and beverage, consumer goods and medical device industries, has implemented an innovative Plate Line Automation project, enhancing operational efficiency, product quality, and employee productivity. This Industry 4.0 initiative integrates three advanced technologies into one single automated system: a 5-tonne Automated Guided Vehicle (AGV) for pallet delivery directly to the milling centres; fully automated tool loading and unloading for deep-hole drilling; and the use of digital twin technology and tool analysis software for real-time simulation and quality control. This holistic approach to transforming a manufacturing process demonstrates the potential of Industry 4.0, using advanced robotics and cutting-edge software. The successful "Plate Line Automation" project reduces production times, improves precision, ensures safety and frees operators from repetitive tasks. Husky plans to expand this concept to other facilities worldwide.

INNOVATION AWARD 2024 IN THE „DIGITAL / AI" CATEGORY

CREOS LUXEMBOURG S.A. / DATATHINGS S.A FOR THEIR PROJECT „KOPR: THE AI TWIN OF THE SMART GRID"

Kopr Twin is a pioneering Al-driven digital twin solution designed to revolutionise the management and optimisation of electricity grids. The initial project, known under the name ALVA, was led by CREOS Luxembourg and developed in collaboration with DataThings, who now commercializes the product under the Kopr Twin brand. Kopr leverages advanced machine learning algorithms, real-time data analytics and integration of pre-existing data sources to provide grid operators with precise, actionable insights into the operational status and future performance of the grid. Based on preliminary research projects, CREOS defined the requirements for the ALVA project, tested the beta versions of the system, and managed the rollout of the final product. Kopr relies on the proprietary technology of the Luxembourg startup DataThings, which consists of a new type of database – a programmable temporal graph ("GreyCat technology") that enables to process massive amounts of data on small local IT infrastructures, while offering a user-friendly interface. Kopr was developed from scratch in Luxembourg, making it a 100% "Made in Luxembourg" project. Beyond the initial success with CREOS, Kopr Twin is currently being promoted through several pilot projects with various Distribution System Operators (DSOs) across Europe.

INNOVATION AWARD 2024 IN THE „ENGINEERING EXCELLENCE" CATEGORY

CTI SYSTEMS S.À R.L / GRADEL S.À R.L. FOR THEIR PROJECT „ON BOARD CARGO LOADER"

Material handling specialist CTI Systems and ultra-light structures specialist Gradel have jointly developed a ground-breaking "On Board Cargo Loader" (OBCL) for the Airbus Beluga freighter. This mobile loading equipment addresses the challenge of loading and unloading oversized cargo at airports without specialised stationary loading infrastructure. Designed to travel with the cargo on the same aircraft, the OBCL can unload autonomously, adjust to the ground and the aircraft with high precision and load up to 23 tonnes, while its own weight does not exceed 9 tonnes. The highly complex engineering of this ultra-lightweight construction, using high-strength materials (stainless steel, aluminium and carbon steel) and CFRP (carbon fibre reinforced polymer), takes into account statics in many different load cases, stability, weather resistance, temperature expansion, fire resistance, etc. In addition, high-precision positioning to the aircraft in the harshest weather conditions requires the most accurate measurement technology and permanent and simultaneous control of up to 12 drive units. In addition, the entire process and equipment was found to be subject to EASA certification requirements, as the OBCL is considered flight hardware. The complexity of this development makes this project a technological milestone for both companies.

The four winning projects fully meet the criteria set out in the Innovation Award rules, i.e. they stand out for their innovative and original nature, while being of interest to the Luxembourg economy.

In his welcome address, FEDIL Chairman Georges Rassel stressed that innovation is the industry's greatest asset for anticipating, adapting to and overcoming the present global challenges. Innovation is the lever that enables our companies to remain competitive on the international stage and to successfully meet the challenges of digital transformation and transformation through artificial intelligence, of the energy transition and decarbonization, bringing about opportunities for growth and resilience in the future. Companies, especially SMEs, need to be supported in their efforts to innovate.

In his speech, Georges Rassel praised the high quality of the projects submitted for the competition, which provided an impressive illustration of the industry's strength in innovation, with entries from companies of all sizes, from start-ups to multinationals, and from a wide range of sectors.

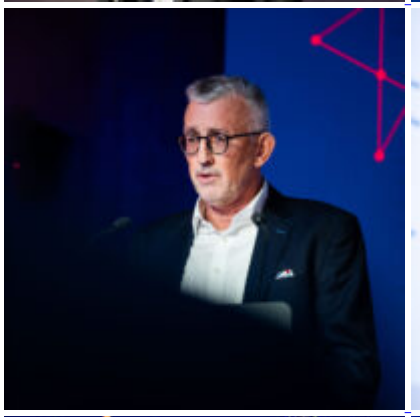
The ceremony also included a speech by Professor Dr Cornelius Herstatt on „Sustainable, frugal innovation: the way out of the dilemma between growth and environmental protection?"

In his closing speech, Lex Delles, Minister for the Economy, SMEs, Energy and Tourism, emphasised the importance of innovation and research for the development and diversification of the country's economy, and underlined FEDIL's long-standing commitment to innovation. He in turn congratulated the winners, who were presented with their diplomas, a trophy and films made especially for the occasion to illustrate their respective projects.

PHOTOS


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INNOVATION AWARD
WINNERS 2024


S.A.


Creos Luxembourg S.A. / DataThings S.A.


Category ENGINEERING EXCELLENCE
CTI Systems S.à r.l / GRADEL S.à r.l.


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ABOUT

The Innovation Award was created by FEDIL in 1982 to encourage creativity, innovation and research in companies. The prize rewards innovators and researchers working for companies, as well as independent innovators and young researchers. The projects submitted must stand out for their innovative and original nature, while being of interest to the Luxembourg economy. The Innovation Award is attributed alternately each year with the FEDIL Environment Award.

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