

Press Release

CEMAFON
Dr Timo Würz
+49 69 6603 1278
info@cemafon.org

Die-casting and low pressure die-casting machinery: world trade and CEMAFON exports increase in 2018

Frankfurt, October 2019: In 2018, exports of die-casting and low-pressure die-casting machinery* increased on average by 6.5% in all reporting countries – from just under EUR 866 million to EUR 922 million – following the decline in international trade in 2016 and 2017. Whereas China, Japan and the USA reported a single-digit decline in exports in 2018, exports from the CEMAFON countries (European Foundry Equipment Suppliers Association) increased on average by 11 percent. Last year, exports from Austria and South Korea enjoyed significant growth with exports of around EUR 27 million and 28.5 million respectively, values roughly equivalent to exports from the USA.

CEMAFON countries maintain market share in 2018

With the exception of exports from Switzerland, CEMAFON die-casting equipment exporters were able to record double-digit growth rates in 2018; Spain was at the forefront with a year-on-year increase of almost 26 percent. Exports from German and Italian companies working in the sector were up by just under 20 respectively 15 percent. In 2018, the value of the equipment exported by CEMAFON die-casting and low-pressure die-casting machinery manufacturers totalled EUR 395.5 million. Compared with 2017, their market share increased slightly by 1.3 percent to around 43 percent of the world market.

As in previous years, the world's largest exporter of die-casting machinery is Italy, followed by Japan, China, Switzerland and Germany.

On the way to intelligent machine-machine communication: die-casting sector gets ready for Industry 4.0

The market requirements imposed on die-casting cells are increasing continually: fast commissioning, detailed process monitoring, optimum productivity, reproducible product quality or complete storage of settings and process data, to name just a few. However, in order to increase productivity further, an efficient manufacturer-independent interoperable exchange of information is required. Up to now, this has only been met to a limited extent. The available fieldbus technologies are only partially standardised, so communication with higher-level MES systems requires

manufacturer-specific solutions. This means that die-casting foundries need to implement diverse communication technologies and protocols in their systems to handle this task alone, resulting in bottlenecks in data communication and increased time and effort for projects.

Collaboration on OPC UA Companion Specification with plug-and-play as the goal

Industry 4.0-capable systems need intelligent data exchange in the die-casting cell and with its peripherals. To achieve this, representatives of the European die-casting sector are collaborating on the development of a standardised open communication interface based on the open interface standard 'Open Platform Communications Unified Architecture (OPC UA)'. This standard offers security functions, is freely accessible and supplies metadata about the data that are available to everyone.

Under the umbrella of CEMAFON and VDMA Metallurgy, more than 60 experts from over 30 European companies are developing manufacturer-independent information models (companion specifications), representing the interfaces between components, machines and systems. These specifications contain device and capability information that allows a machine to be more easily integrated into a plant network regardless of manufacturer. This also means that it can be connected, for example, to a software system for planning and control of production. The standardised information includes a description of manufacturer name, device type and process data such as temperature or pressure, as well as organisational information such as productivity and quality achieved.

The project was officially registered with the OPC Foundation in December 2018. This was followed by a kick-off meeting at the end of January 2019 and an OPC UA introductory week in March. The content of the interfaces is currently being defined and developed and the first release candidate is scheduled for the second quarter of 2020.

About CEMAFON

CEMAFON (The European Foundry Equipment Suppliers Association) was founded in 1972. The members are the national European associations and thus all the major manufacturers of foundry machinery and plant, furnaces and products for the European foundry industry. The association represents the economic and technical interests of its members worldwide, provides information and creates a platform for the exchange of opinions on a European level.

* The following statistical data refer to HS Code 845430 "Casting machines, die-casting machines".