



## Press release

For large castings and highly productive serial applications

### ASK Chemicals stages its latest developments at Metef 2017

**Hilden, April 18, 2017 – Visitors to Metef 2017 can expect to find a competent team of foundry experts and presentations of innovative foundry consumables for both highly productive serial casting foundries and large casting manufacturers. ASK Chemicals (Hall 6 / Booth A21) will display its portfolio with a clear focus on its solutions for the core shop and molding line.**

#### **Productivity and low emissions are key factors**

Certainly one of the most productive systems for aluminum die casting applications is ASK Chemicals' leading INOTEC™ system. Not only does it allow emissions to be eliminated, but it also has a positive effect on the material properties of the casting. In addition, INOTEC™ offers process-related advantages over conventional processes. Particularly notable among these are the significant increase of productivity in the casting process and a drastic reduction in the consumption of resources for maintenance and servicing work (Fig. 1). The modular system of the INOTEC™ technology enables a high degree of on-site flexibility and makes it very convenient for foundries to work with. It is perfectly suitable for the adjustment of sand core characteristics depending on the type and geometry of the core. For this purpose, different INOTEC™ binder system components with specific properties are used in a defined mixing ratio in order to meet the specific requirements of the respective sand cores with a moderate material consumption.

#### **New ECOCURE™ BLUE**

With the development of ECOCURE™ BLUE, ASK Chemicals made an important leap in the field of cold box technology. All cold box systems available on the market, except for ECOCURE™ BLUE, are classified as dangerous goods on the safety data sheet. ECOCURE™ BLUE is the world's first cold box part 1 that does not contain any hazardous ingredients according to CLP regulation. There are basically two phenomena that cause emissions in the foundry: evaporations in the core shop and decomposition processes during pouring, cooling, and decoring. ECOCURE™ BLUE has the lowest level of volatile organic compounds and can be considered as VOC-free according to European regulations. Additionally, the new technology contains less than 1% free phenol and non-detectable free formaldehyde, which makes it the cold box system with the least emissions in the core shop.

#### **Next step in ALPHASET technology**

At the Metef trade show, ASK Chemicals will also be staging its ALPHASET technology with its latest development ALPHASET LFS. The low formaldehyde solution developed by ASK Chemicals allows formaldehyde emission during the mixing and stripping phases to be reduced by more than 90%, using the appropriate ratio of an LFS binder and an LFS hardener. This consequently even further reduces the impact on the environment and on employees of this water-based and sulfur-free ALPHASET technology.

#### **Coatings tailored to local needs**

ASK Chemicals is launching a new set of both water-based and alcohol-based coatings on the Italian market. VELVACOAT alcohol-based coatings have been developed especially for large and thick-walled iron and steel castings with the intention of solving typical problems in this area such as penetration and burn-in (e.g. with VELVACOAT HI 602). All recommended VELVACOAT coatings provide sulfur-stop properties for efficiently avoiding metallurgical defects such as graphite degeneration in the rim zone (e.g. with VELVACOAT HI 703).

Water-based coatings for large casting applications are very fast drying and thus are the choice for those foundries who place exceptional importance on environmental, health, and safety aspects.



SOLITEC WP 401 is an all-round coating for brush-on, flooding, and dipping application, suitable for cores and molds made with no-bake processes. The high-solid coating with thermo-flexible properties reduces veining tendencies as compared to merely zirconium-based coatings. Cost comparisons with zirconium-based coatings show that the all-round SOLITEC coating is some 70% cheaper compared to the conventional zirconium-based coating.

**Maximized yield with EXACTCAST™ KMV mini-riser technology**

Frequently, fiber sleeves are used in steel casting applications. These conventional sleeves contain, in addition to the fibers, rice husks that may lead to casting defects. Moreover, these slurry sleeves do not utilize their full volume for counteracting shrinkage defects, so that the effective yield is only 30%. The remaining 70% of the volume is used to maintain the heat in the 30% of the molten metal needed for feeding. This is exactly where the cold-box-bonded EXACTCAST™ KMV mini-risers come in, offering a fiber-free solution for steel casting. The volume of the riser can be reduced without sacrifice to the feeding performance. The exothermic compound replaces the non-feeding material and maintains the metal in its molten state. The KMV mini-risers therefore present an efficient and reliable alternative to conventional slurry sleeves. Thanks to this saving, the foundry can now produce more cast parts with a single furnace batch or even serve entirely new markets without investing in expanding the furnace capacity. The lower riser residue on the cast piece means that the reworking costs per cast piece are also lowered (Fig. 2).

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**Images for the press release**

	Cold Box	INOTEC™	
Solidification time in minutes	6	5.5	
Casts without cleaning/availability of permanent molds	15	257	
Cleaning time required within 24 hours in minutes	320	20	
Cast part output in units/hour	7.8	10.8	39%↑

Fig.1: INOTEC™ significantly increases the productivity in the casting process and reduces the consumption of resources for maintenance and servicing work.



Fig.2: The volume of the EXACTCAST™ KMV has been reduced without sacrifice to the feeding performance.



## **About ASK Chemicals**

ASK Chemicals is one of the world's largest suppliers of foundry chemicals and aids, with a comprehensive product and service portfolio of binders, coatings, feeders, filters, and release agents, as well as metallurgical products including inoculants, Mg-treatment, and inoculation wires and master alloys for iron casting. Core manufacturing and development of prototypes as well as a broad offer of simulation services complete the range of supply.

ASK Chemicals is represented in 25 countries with 30 sites, 20 of which operate their own production, and it employs approx. 1,500 people worldwide. With research and development in Europe, America, and Asia, ASK Chemicals sees itself as the driving force behind industry-specific innovations and is committed to offering customers a consistently high level of quality. Flexibility, quickness, quality, and sustainability, as well as cost-effective products and services, are of key importance.

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