 interchange of tools from one vehicle to another, which is not possible with vehicles dedicated to one function. This advantage reduces the number of vehicles circulating in the casting centre.

**Productivity**

In a casting centre, there are a multitude of operations to accomplish during the normal batch preparation cycle. When these operations are carried out quickly, the operating costs decrease and the production volume increases. As production efficiency is based on reduced operating times while maintaining the quality of the cast metal, the availability of optimised tools in the casting centre is essential.

The various tools can be connected to the vehicle in a few seconds. The hydraulic power on some tools allows grasping, rotating the forks, charging alloy materials and positioning the forks, while increasing the safety of the operator, who is comfortably seated in an ergonomic, air-conditioned cabin.

Smelters using the QuickConnect technology system have enjoyed a return on investment that has been rapid while improving the safety of the workers. Significant savings are achieved with furnace refractories, the number of vehicles required and mechanical maintenance. Increased productivity is ensured by the careful selection of the appropriate tools, reducing the operating time during the batch preparation cycle. As the furnace cleaning operation is simplified, the cleaning schedules are more frequently respected.

Safety, productivity and ergonomics were the major factors considered in the design of the multifunctional vehicle with its semi-automatic connecting system. With the hydraulic power on the modular tool, a range of possibilities opened up for the development of tools better adapted to the activities of a casting centre. A variety of tools are available: charging clamps, fork rotators, fork positioners, tilting buckets, furnace scrapers, stirring rakes and skimming tools. This technology allows casters to reduce the number of vehicles and increases the general safety in the casting centre.

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**Fast and accurate hydrogen measurement for aluminium casthouses**

MQP have recently initiated a programme to introduce the Alspek H hydrogen measuring equipment into wrought aluminium casthouses.

The Alspek H hydrogen analyser was developed by EMC Ltd in the UK and introduced by Foseco into the aluminium foundry industry where many units are now operating successfully worldwide. MQP is acting in partnership with EMC to introduce the Alspek H into the wrought aluminium casthouse sector.

MQP are a leading supplier of metallographic analysis systems and solutions, with over 30 years experience in the industry. They are well placed to offer advice on the installation, operation and maintenance of the Alspek H analyser, ensuring that the system meets the specific requirements of each customer.

The Alspek H hydrogen analyser is robust, portable and easy to use, giving fast accurate measurement in real time.

- Spot or continuous measurement
- Continuous display of hydrogen level
- Graphic display of hydrogen level and temperature
- Automatic data logging for subsequent download

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**References**


(1. EMC Ltd, Stafford; 2. Foseco, Tamworth ; 3. Metallurgy Department, University of Cambridge.)

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