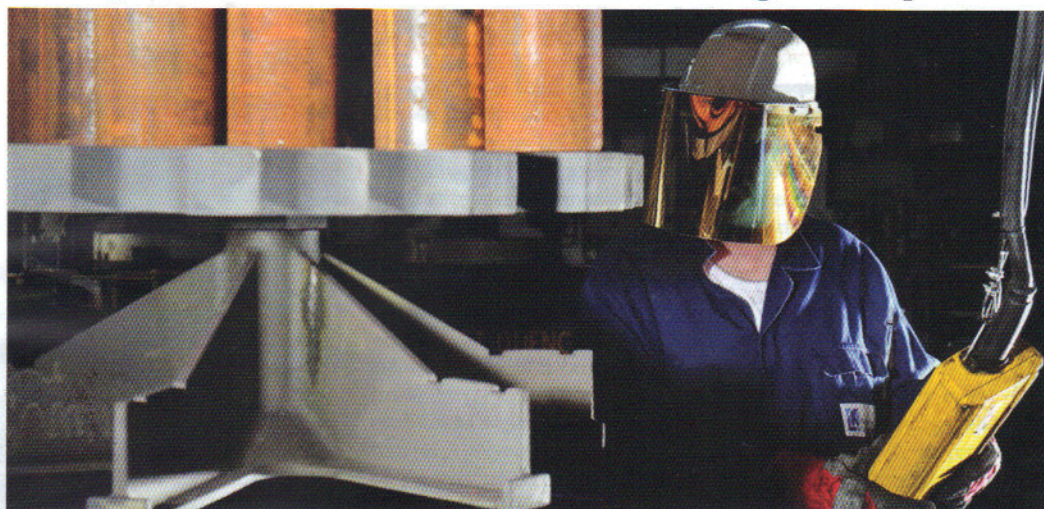


Enlarged pit furnace accommodates larger components



The enlarged pit furnace at Keighley Labs is used for carburising, carbonitriding, hardening and tempering, stress relieving, homogenising and carbon restoration.

In anticipation of growing customer demand for the processing of larger gears, shafts and other components, UK-based sub-contract heat treatment specialist Keighley Laboratories has enlarged one of its largest pit furnaces. This has involved increasing dimensions to 1110mm working diameter and almost 1800mm maximum length, in the process gaining 30% in overall capacity. At the same time, the company has upgraded the lifting capacity of its overhead crane, which services all seven pit furnaces, a salt bath and tempering equipment, to 3.0 tonnes maximum lift.

Enlarging the pit furnace involved fabricating a custom-made inner shell or retort, made from duplex stainless steel but this considerable investment has already been offset by orders for heat

treating 1108mm diameter gear wheels for an offshore application and 1755mm long, one tonne shafts for a renewable energy project. Indeed, the company is already considering upgrading other in-house pit furnaces and its programmable process controllers.

Keighley Labs employs its pit furnaces for carburising, carbonitriding, hardening and tempering, stress relieving, homogenising and carbon restoration, working at temperatures up to 980°C. It handles steel, iron, high chrome iron, cast iron, ADI (austempered ductile iron) and alloy steel materials, for aviation, marine, defence, rail, mobile plant, energy and general engineering companies.

Pit furnaces are vertically-oriented batch furnaces, with the furnace section buried in a pit and extending up

to floor level and a hydraulically-operated sealed cover extending above the surface. Workpieces are held in a jig or charge basket in the furnace, the inner retort protecting them from the direct radiation of heat. This configuration is particularly suitable for treating long parts such as shafts, tubes and rods, although a wide variety of shapes and sizes can be accommodated, singly or in batches.

Apart from offering significant savings in floorspace, with one sealed quench occupying the same floor area as four pit furnaces, this furnace type offers high repeatability, precise thermo-chemical treatment, economic effectiveness, flexibility and the capacity to treat both long components and large rounded parts like gear wheels.

Reader Reply No.14

Relocation for GOM Italia



The GOM Italia offices at Buccinasco (MI).

GOM Italia srl has relocated to modern offices at Buccinasco (MI), just a few hundred metres from its previous location. The company's success in the Italian market has stimulated this move to more comfortable offices, tailored to the needs of customers. This includes an area where members of the GOM technical department can conduct product demonstrations and a dedicated training room.

Reader Reply No.15

Aluminium pressure diecasting competition

The Gesamtverband der Aluminiumindustrie (GDA), based in Düsseldorf, Germany has announced details of the International Aluminium Pressure Die Casting Competition, 2014. Scheduled for presentation at Euroguss 2014 exhibition in Nuremberg (14-16 January 2014), this competition is now organised by the GDA in association with the Federation of the German Foundry Industry (BDI) and the European Aluminium Association (EAA). Previously, the competition was organised by the Association of the Aluminium Recycling Industry (VAR), which disbanded at the end of March 2013.

The aluminium pressure diecasting competition is a proven platform for showing off the high standard of quality in aluminium pressure diecasting. The competition's goal is to strengthen

an interest in aluminium as a versatile working material and to demonstrate more areas of application.

The evaluation criteria for cast pieces submitted to the competition include a proper diecast construction and the use of recycled aluminium. The recycling of aluminium is one of the most important factors demonstrating the resource efficiency and sustainability of the material. Foundries can submit any number of diecast pieces. The cast piece should be made of an aluminium alloy commonly used in diecasting. Pieces that meet the requirements on quality, topicality, innovative approaches to solving problems and technical advancement will receive awards. Submissions to the competition can be made until 31 October 2013.

Reader Reply No.16

In brief . . .

"The robotics industry is looking into a bright future" commented Dr Shinsuke Sakakibara, IFR President, on the occasion of the publication of the study 'World Robotics 2013 - Industrial Robots'. In 2013, global robot sales could increase by about 2% to 162,000 units. The IFR Statistical Department expects worldwide robot sales to increase by about 6% on average per year between 2014 and 2016. By then, the annual supply of industrial robots is predicted to exceed 190,000 units.

Reader Reply No.17

Ceram has released a recording of its webinar, 'Testing More Than Just Numbers'. The webinar was presented by Dr Richard White, Head of Testing, who discussed why testing provides much more than just numbers and examined, through examples and case studies, how it has been used by others in industry to gain a competitive advantage. During the webinar, Dr White also talked about how continual monitoring and detailed testing can help identify problems with materials, products and processes; measuring key performance characteristics can avert potential problems; and surface analysis of the outermost layers provides critical information.

Reader Reply No.18

Among recent contract signings and installations commenced by Synchro ERP Ltd is work for Shakespeare Foundry Ltd in the UK, Emirates Techno Casting (part of the Tyco Group) in Dubai and Glenmar (HK) Ltd, a plant opened last April at Zhejiang, China. In the USA, clients include Cumberland Foundry Co Inc, Blaylock Industries, Texas Aluminium Foundry Inc, SB Mfg LLC and J Lenco, while Melcast and PTC Industries are customers in South Africa and India respectively.

Reader Reply No.19

In the USA, NADCA will be involved in a DoE-funded programme to help sort different grades of aluminium. Energy Research Co (ERCo) will develop an automated manufacturing process that can produce a finished product from mixed metal scrap in a single processing step. Unlike most current approaches, ERCo's process can distinguish and sort multiple grades of aluminium scrap for recycling. If successful, the manufacturing process will enable the efficient and cost-effective sorting and recycling of scrap aluminium.

Reader Reply No.20