



Aston Martin selects UK caster for high performance engine parts

Aston Martin has confirmed Grainger & Worrall (GW) as its preferred engine castings partner for the new DB11 - which has at its heart a new 5.2 litre twin turbocharged V12. The engine sets high performance standards for the latest DB model, which is the cleanest, most fuel efficient, powerful and fastest accelerating car in Aston Martin's history.

Using skills and technology pioneered by GW in its work with F1 teams and other high performance marques, GW has worked closely with Aston Martin's engineering design team to enable the evolution of a lighter, more powerful power plant.

The engine blocks and heads are produced in a dedicated production environment at GW's UK facility. Exploiting the potential of the casting facility's precision sand casting process all castings are manufactured from a high grade, high



integrity and recyclable aluminium alloy.

Edward Grainger, managing director of prototypes at GW, said: "GW's precision sand casting process, developed specifically for the engine's manufacture, delivers accurate, high integrity parts with increased design freedom. Utilising the latest real time x-ray and CT scanning capabilities in parallel ensures exacting and reliable quality in the

development process." Assembled at Aston Martin's engine plant in Cologne, Germany, the new twin turbo, 48 valve, V12 unit is able to meet stringent emission and fuel consumption requirements, whilst producing increased performance.

As part of the extensive engine development process, GW created intricate sand cores and structures using the latest 3D sand printing technology. This supported the complex CAD outputs of the design team, which was responsible for the production and validation of the development parts prior to production. In addition to the ongoing supply of engine castings, GW provides rigorous in-process inspection together with unique part identity, ensuring full product traceability.

Guangdong Hongtu plans to acquire 60% stake in Baolong Auto

Guangdong Hongtu Technology (Holdings) Co., Ltd., a industry leading manufacturer for the aluminum die castings, announced its plan to purchase 60% stock equity of Guangdong Baolong Automobile Co., Ltd. (Baolong Auto) with 240 million RMB, in order to realise its expansion strategy to the whole automobile and new energy automobile sectors.

Guangdong Hongtu plans to sign the stock equity transfer agreement with Baolong Auto and its shareholder. The appraised total value of Baolong Auto is valued at 400 million RMB by all parties, in which Guangdong Hongtu will offer a bid of 240 million RMB to acquire 60% of the total equity. After acquisition, Baolong Auto will be a subsidiary of Guangdong Hongtu.

Baolong Auto, the former Guangzhou Oriental Baolong Automobile Industry Co., Ltd., has been founded in April 2015 with a registered capital of 21 million RMB in Guangdong Zhaoqing High-tech Zone.

The revenue of Guangdong Hongtu has reached 225.9 million RMB and its net revenue reached 129 million RMB in 2015. Recently, the company has accelerated its expansion strategy to the automobile industry chain. In early July, the company has announced to fully acquire a plastic parts producer in Ningbo.

JVM Castings completes new lightweight casting for building market

Known for its automotive solutions, the largest aluminium pressure diecasting manufacturer in the UK, JVM Castings, has recently completed a new lightweight casting for the building market.

Located at the gateway to the Queen Elizabeth Olympic Park, International Quarter London (IQL) is a new project that will deliver over four million square feet of Grade 'A' office accommodation, including 333 new residential units and associated community facilities within a 22-hectare site.

JVM Castings was commissioned to supply several structural spurs that are a key architectural element of the formed ventilation and lighting beam carriers of the project for TROX UK, a heating ventilation and air con (HVAC) and building services solutions provider.

Working with designers at architectural company Rogers Stirk Harbour Partners, TROX UK, developed an innovative multi-service chilled beam to meet the HVAC requirements of the office space and support their vision of a vibrant working environment.

JVM's brief was to design an aluminium pressure diecasting of 1.5m in length with a



tight visual surface finish that could not weigh more than 2kg. They were also tasked with manufacturing tooling for a 2,000 tonnediecasting machine, supplying production parts and delivering a lower total cost solution than sand and gravity casting processes - all within 16 weeks.

In conjunction with a partner toolmaker, JVM was able to design and manufacture the tooling with two weeks to spare, thus satisfying the tight programme timing demands.

The aluminium high-pressure diecasting offers a more superior finish than gravity and sand diecasting processes, exceeding TROX UK's requirements as well as those of their architect customers. The pressure diecast process also eliminated the cost of the finishing operation that both the gravity and sand processes would have needed to achieve the aesthetic requirements of the part.