



2/2014

# CASTING

## Plant and Technology International

Turkey  
Special inside!

### High-quality castings from Turkey



#### Interview

"The next step in simulation could be the topological optimization," says ESI's Ole Köser

#### Materials

Exciting new high-strength spheroidal graphite casting materials

#### Investment Casting

Cost-effective and rapid investment casting with 3-D printing



Atik Metal CEO Mehmet Atik (left) with his cousin Murat Atik in their foundry in Aliaga (Photos: Atik Metal)

## “Turkey as a low-cost country – that’s no longer true!”

Atik Metal operates a foundry in Aliaga on the Aegean Sea. The family-run company has been pioneering new foundry technologies and materials in Turkey for decades now. With 460 employees the firm produces, among other things, components made of cast iron with spheroidal graphite for trucks and tractors. CP+T International spoke with CEO Mehmet Atik about the family-run firm’s history and its latest investments, as well as the advantages and disadvantages of Turkey as an industrial location

**Mr. Atik, we published an article on Atik Metal in CP+T International a few years ago. At the time it was expected that your new foundry in Aliaga would produce 70,000 tonnes of castings per year. Have you achieved your target?**  
In capacity terms yes, we planned it in phases. A new molding plant from

Heinrich Wagner Sinto (HWS) was installed during an initial phase and an existing one was transferred from the foundry in Izmir. We started full production with two plants in early 2011. We then wanted to order another plant at the last GIFA, but this went quicker than we thought so we commissioned

the third plant in October 2012 instead of in 2013, as intended. This investment also included a third furnace system, as well as core-shooting machines and robots. We had full capacity available by late 2012/early 2013. But we currently only cast about 35,000 tonnes and we only want to develop very slow-



In total the melting shop of Atik Metal consists of three furnaces, each one with two crucibles. Particular capacity: 10 t/h

ly because we are not yet fully manned and we are not, for example, appropriately set up for model casting. We don't want to overreach ourselves, preferring to grow further healthily with existing customers. Of course, this involves participating in new projects, getting certain target customers on board every year, and thus slowly increasing our capacity utilization.

**What are your main products and where are most of your customers located?**

We have three main pillars. Firstly, diesel engines for tractors and trucks: our automotive department represents about 50 % of our production. Then there are fittings and pumps, about 30 %. And finally we also produce gears and motor housings for general machine construction. We supply 98 % of our production to Europe.

**Your family has been operating a foundry in Izmir since the 1950s. Some of your relatives have studied foundry technology, molding technol-**

**ogy and mechanical engineering in Germany. How did this come about?**

I am the company's CEO and a shareholder. We are the second generation. Our fathers, three brothers, founded the company during the 1950s. I joined in 1982, one cousin in 1987 and another in the mid-1990s. We now run the company with four cousins. After school in Turkey I studied mechanical engineering at the Technical University in Gießen, one cousin, Murad Atik, studied foundry and material technology in Friedberg, and another cousin, Sinan Atik, studied financial management in the USA. We thus gradually entered our fathers' business, which at the time produced considerably less. Then we enlarged the works again and again until we were bursting at the seams. In 2008 we decided that we could not continue this way. And there were the stricter environmental laws that are now just as stringent as in Germany. Converting the foundry in Izmir so that it was environmentally compatible and operated productively was no longer possible,

also because of the plant's design. We therefore considered building a new foundry on a green-field site. We started work on it in 2009 and production was fully operational in 2011. We have now invested between 70 and 80 million Euro. Though in addition to the new foundry we also invested the money in a processing plant, because 40% of our castings are finished and ready for installation. In early 2013 we started a third wave of investment. The money was used to build a warehouse that was inaugurated in April. The finished parts that we have to store a bit longer should not be allowed to get in the way. We have also started operating another blasting plant from AGTOS, Emsdetten, Germany, in order to expand our blasting capacity.

**Is it common for Turkish specialists who studied in Germany to exploit their expertise in Turkey?**

I wouldn't necessarily say that. Turkey has had successful foundries for 40 to 60 years. In the case of Atik Metal it is a tradition to study in Germany



Foundry building of Atik Metal in Aliaga, 50 km north of Izmir

because we have been purchasing our machinery, plants, furnaces and processing machines there since the early 1960s. And so we say that if we are buying so much from Germany we also need to master the language – so that we purchase the right thing. Moreover, I have been a member of the Association of German Foundrymen (VDG) for 25 years. We have always maintained very good contacts with foundries from Germany or German-speaking countries. The doors were always open for us there, and the same applied the other way round. For example, we have had visits from Georg Fischer, Walter Hundthausen and many others. The export trade in Turkey, however, has only really got going since 2000. Before that, growth in Turkey was so great that the foundries' production could not keep up. There were therefore no free capacities available for exports. Then the world became more global and Turkey adapted to European standards. Europe's industry has also been keener to purchase from Turkey since then.

**How would you assess the advantages of Turkey as an industrial location?**

There are not many advantages. The world has become so globalized that we purchase the same materials from the same suppliers at the same prices. When, for example, we purchase materials that we need for a kilogram casting they now cost the same worldwide.

This also applies for machinery, plants and devices of all sorts – it is all at the same price level. Turkey as a low-cost country – that's no longer true!

**Do you see deficits in Turkey's foundry market?**

We have difficulty finding new well-qualified personnel, and in Turkey we are still grappling with adaptations to the new environmental standards. The environmental rules here were originally very relaxed. Then the Turkish state suddenly introduced the European standards in this sector. As a result, investments in foundries flowed in this direction only – which cost the Turkish foundry industry several years because it was impossible to invest in quality and expansions during this period. There are still a certain number of foundries that are struggling to implement the environmental rules, but I think that the adaptations will be completed by the end of the coming year.

**The Turkish foundry industry is in fourth place in Europe after Germany, Italy and France. What course will Turkey's foundries will take in the future?**

I can't judge the French market because it is a largely closed market. In my opinion, however, Turkey will overtake Italy one day! Most Italian foundries have not carried out any investments for years and are therefore not state-of-the-art.

**Your foundry has been successful for decades. What is the secret of your success?**

We maintain the best of contacts with our customers, in other words we see our customers as partners and try to collaborate with them in all areas, whether quality, new developments or flexible delivery times. But the world is now globalized – any company that cannot keep up with this is anyway out of the game. Our recipe for success is that we do not want to be bigger, but better. To explain: Atik Metal was the first producer of cast iron with spheroidal graphite in Turkey. We are, so to speak, responsible, for example, that in Turkey malleable iron is no longer used for the wheel hubs of tractors but spheroidal graphite cast iron. This came about because there were insufficient capacities for producing malleable iron in Turkey in the late 1960s, but demand from the truck and tractor industry was constantly rising. We then suggested cast iron with spheroidal graphite as an alternative material and produced it ourselves. At that time, the material had not even been standardized. We had a license from England, the material got a positive response from the industry, and from then on we could deliver more of it. We were, however, also the first company to introduce CNC machines or punch-card programmable machines for serial production. We have always been pioneers and want to remain so. We will certainly not become the largest foundry, but we also do not want to. Our ambition, however, is to be the number one for quality and flexibility – to the benefit of our customers.

**Will you be exhibiting new developments at the Ankiros trade fair from 11-13 September in Istanbul?**

Ankiros is a mini-GIFA. We will be present on this important trade fair and one can expect a number of complex parts from us there. We are currently interested in the trend towards increasingly thin-walled parts for trucks. Foundries are having difficulty responding to this trend.

[www.atikmetal.com.tr/](http://www.atikmetal.com.tr/)