



FOUNDRY INSIGHT

Improving Performance in Production

February 2009

Volume 3, Issue 1

Pyrotek.info

TURKEY'S FOUNDRY SECTOR IN GROWTH PHASE

The fortunes of a national foundry sector often reflect that country's general economic situation. Turkey is no exception and its cast metal industry is currently enjoying a growth phase, particularly for areas of automotive application. Turkey's aluminium and foundry sectors are important major markets for Pyrotek materials, equipment and services, and the industry growth and development were highlighted at the company's Metal Quality Workshop, staged in Istanbul in May 2008.

A summary is presented here of an article on the present status of the foundry industry recently published in Foundry Trade Journal*, compiled from information supplied by industry trade organisations, CAEF and TUDOKSAD.

In 2007, Turkey's economy progressed in positive terms, despite the downturn in the world financial circuits. Their overall growth is expected to top 4.7%. GNP per capita reached USD\$6,998, triggered by the lower value of the dollar and overvalued Turkish lira.

The main issues that influenced the economy included the following.

- An overvalued YTL, 82% as of January 2008 based on 1905 being 100.
- A current account deficit of 7.7% of the GNP.
- Political unrest in the domestic arena and the southeast of Turkey.

Industrial production is still climbing despite overvalued YTL and increased costs. Even given the increasing value of the currency, the industry is trying to close this gap by boosting productivity in manufacturing and the final cost to the customer. This is one of the reasons for the increase in exports by 22% in 2007, despite an overvalued currency.

The 2008 figure is confidently expected to show at least a 4-5% increase.

The Foundry Sector Situation

There are approximately 1,400 foundries in Turkey directly employing some 34,500 people, although only 250 to 300 could be considered as general industrial plants. The Turkish Foundrymen's Association (TUDOKSAD) has approximately 250 members. Producing around 1.3 million t/yr and generating USD\$3 billion, the country ranks 5th in the European casting production league, behind Germany, Italy, France and Spain, and 14th in world terms (world market share is 1.4%). Steel castings at 132,000 t place it second behind Germany, although at 82,500 t of aluminium castings, Turkey ranks 10th within Europe according to 2006 figures.

Much has changed in the past decade as most foundries now tend to specialise within certain sectors and, largely because of this, most are working at high capacity as they offer specific expertise.

Foundries include those supplying to the automotive sector, those who supply heavier parts for machine tools and others who supply pipe castings, etc. Diecasters provide parts, including for pumps, wheels and white goods.

Some 85% of TUDOKSAD members export, the average direct and indirect figure for the industry as a whole is slightly lower at approximately 66%. Direct exports currently represent EUR€1.5 billion, a figure that has almost doubled in three years. This figure increases to EUR€2.5 billion when indirect exports are included.

These relatively high numbers are in no small part due to the fact that Turkey is an automotive assembling area. Whilst engines are imported, other cast parts are required and many of the European assembly plants purchase castings made in Turkey. Because of this, the country's ranking in the European aluminium producers league should improve in the near future.

The 2007 figures highlight a growth of 9% compared with 2006.

All of the foundries are reported to have been very busy in 2007, with order books exceeding over six months. Capacity usage rate was over 90% throughout the industry, and a growth of 8-9% is expected in 2008.

But it is not all good news as major problems were experienced in 2007, some remaining unresolved. The disposal of foundry sand, filter fines and slag remains a major issue especially in big municipality areas. EU environmental laws have been in force with one-to-one translation, but without the interpretations and tolerances applied to all EU foundries.

Without the presence of official storage areas, some foundries had to cease production as they could not dump their used sand. Therefore, many foundries will have to invest in sand reclamation equipment or re-use the sand by different methods.

Light-alloy Castings

Apart from iron & steel castings there was a major increase in aluminium casting production in 2007, up by 27%. There is also considerable investment in both high-pressure and gravity diecasting machines; some of this equipment is new and some is refurbished. There are some foreign foundry companies

buying small aluminium foundries in Turkey as a basis for expanding their own international production reach.

Investments are mainly in preparation for the growth of domestic vehicle production, expected to be 2.5 million units in the coming five years. Aluminium foundries are investing more than the ferrous foundries in value-added processes of design, machining and assembly, and are working more closely with OEMs for new projects. Simulation and complete component design from concept is also growing.

Expansion and modernisation investments are evidenced in both small and larger foundries, with capacity utilisation reaching levels above 90% for the past three years.

Pyrotek has seen a growth in areas such as auto piston casting and supplies a wide range of plant and materials to support Turkey's foundry sector.

It is generally thought that Turkish casters should target the higher added-value market currently enjoyed by some European foundries rather than competing with producers, such as in Poland, India, China and other developing countries.

** Published with acknowledgement to Foundry Trade Journal, September 2008*

CAEF – www.caef.org
TUDOKSAD – www.tudoksad.org.tr



A variety of Pyrotek equipment and materials is available to Turkey's growing foundry sector, including for example, bonded particle filters for improving quality in molten aluminium processing.