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The European Foundry Industry 2005 and beyond

Ladies and Gentlemen!
The Europe I am reporting about comprises the foundry industries of 20 countries, which form the membership of the European Foundry Association. This association is growing. As new members CAEF welcomed Turkey and Slovenia very recently. Russia, Ukraine and Balkan states still stay apart from the alliance.

The CAEF Europe represents 4000 ferrous and non ferrous foundries, 30 billions Euros turnover and 290,000 people employed.

At present, the European foundry industry is world-wide likely to rank second in ferrous castings behind China and first in non-ferrous castings followed by the USA.

I could imagine that within a medium term period China will occupy the first place in non-ferrous castings as well. The enlarged Europe could take the second and the USA or Russia will claim the third place.

Ladies and Gentlemen,
from a first speculation back to the facts and figures of the present.

Currently, the total volume of iron, steel, and malleable castings produced by the foundries in the CAEF member states ranges around 13,4 million tons per annum. As you see, Production is dominated by Germany, France, and Italy, which share almost 60% of the total output between them.

This rank list has remained relatively stable throughout the last decade, with only Poland and Great Britain sustaining disproportionate production-volume losses in the course of the '90s, while Spain and Turkey are climbing up in the ranking steadily and nowadays belong to the "big six" in Europe.

These "big six" showed a remarkable dynamism in expanding their castings production. The 2005 figures compared to 2003 record a tap growth rate of 14.9% for Spain, neck to neck with Turkey (14.5%). Germany follows suit with 9.1%. Italy already under performs with a 5.3% growth, while the UK is the lame duck on the field (+2.3%). France is the exemption to the rule with a production loss by - 7.5%.

The next structural change in the rank list of the "big six" is imminent. I am quite sure that Turkey will level out or more probable surpass the Spanish production in 2006. Within the next five years the Turkish foundry industry will belong to the "big three" in ferrous castings, that's pretty sure.

Another indicator for a sound structural basis of the European foundry industry could be the structure of casting materials which is on a forward looking path of change.

Despite the ongoing process of material substitution, iron castings still rank first among ferrous casting materials at an average output share of around 55%.

In 2005 the average share of ductile iron in the ferrous castings production in Europe amounted to 38%. This meaning a total production volume of around 5 million tons. 60% of the total have been produced by three countries only. The nodular big three are led by Germany, followed by France and Spain. Turkey is no rivalling the UK for rank 5.

Growth dynamism is widespread in the ductile castings segment. Since 2005 - compared with 2003 again – the Turkish ductile iron production expanded by 73.6%, that of Spain by 35.5%. Market leader Germany accelerated

by 11.5% while France lost a production volume on the same scale (-12.5%). Sorry to say, the UK is a lame duck another time with a growth of 2.0% only.

There is no doubt that nodular-graphite iron is the ferrous casting material that will develop most dynamically within the next few years. In the medium term, it is to be expected that the market share of nodular iron will level off to 45%. Furthermore, I expect that modifications of the material will create new applications and open new markets. It has already started with austempered ductile iron and vermicular iron and other varieties will follow. ADI already today substitutes cast steel, while CGI rivals with aluminium in automotive applications and is growing rapidly in volume.

Productivity will be - among others - a key issue in the struggle for market shares. Therefore, let us have a look at the European standards in this field.

An analysis of volume structures and productivity figures in the various European producer countries gives us an outline of the scope of adaptation measures that will be confronting most casting producers in the medium term. This overview shows that in terms of output per capita of the workforce, Germany, France, Italy and Spain range at the top of the list at above 80 to 100 tons. Others perform at markedly inferior levels. Especially Poland, and

Hungary, and also the Czech Republic belong to a category of foundry industries in which workforces are considerably larger than in the rest of Europe - resulting a low productivity.

Turkey – strong in production volumes and market activities – lags behind considerably in terms of productivity. Small scale foundries form the majority in this country, while some handfuls of big companies are absolutely competitive on a European scale. One must not be a prophet to foresee that painful employment-streamlining measures must be reckoned with in many European countries in the near future.

Ladies and Gentlemen,
the future of the European foundries will be determined by the development of the castings markets. And here we have every reason to be optimistic as foundries supply into the mobility and industrialisation markets. Both markets are growing steadily as a consequence of globalisation. What is more – automotive and mechanical engineering absorb even today between at least 80% of our production volumes.

Ladies and Gentlemen,
a long term growing section of the foundry industry with continued positive future prospects are the non ferrous castings, mainly aluminium and to a limited extend

magnesium. Copper and zinc alloys on the other hand are loosing ground in Europe.

Currently, around 3.5 million tons of light and heavy-metal castings are produced annually in the CAEF member states. Similar to ferrous-metal castings, this market is once again subdivided into three producer groups. Italy and Germany together claim well above 55% of the total market volume between them.

The dynamism of what has been happening in the sector of NF-metal castings emerges clearly if we look back on the last decade. All producers succeeded in materially expanding their capacities within the last ten years, but Italy clearly leads the pack.

The short term comparison of non-ferrous casting production figures however shows a performance which 2005 against 2003 is inferior to that of ferrous castings. The total European production expanded by 5.7% only. Market leader Italy underperformed which a 2.5% growth, while Germany as number two did better and achieved a 4% plus. It is a pleasure for me to say that the UK performed best among the greater producers (+ 7.5%), while the French NF production lost by 4.3% during the said period.

Despite the unusual moderate expansion of the European NF production it is highly likely that the output of light-metal castings will grow steadily in the years to come. It is interesting to note that the main substitution going for aluminium is expected to take place in the automobile chassis but not in the power train. As the share of diesel engines will increase and new generations of engines with direct gasoline injection require a higher combustion pressure and operating temperature, this will induce a technical renaissance of cast iron, especially modified cast iron materials and spheroidal cast irons like compacted graphite iron, not to speak of economic advantages.

Ladies and Gentlemen,
The European foundry industry will be undergoing manifold changes. Our materials, our production processes, our markets, the needs of our customers, and our way of managing our enterprises are in a constant state of flux.

While it is true that foundries are responding to this in a variety of ways, I can see three points of fundamental importance on which the future success of the leading foundries will depend.

1) We will have to understand and master the casting process even better. This is all the more difficult as

our materials are growing more diverse, and we are increasingly challenged to reconcile apparently-contradictory properties in one and the same product, a concept I call custom made castings – cmc. A good case in point is the development of austempered ductile iron (ADI) and other specialized materials.

2) Casting skills alone will no longer be enough to secure lasting success on the market. Even today, our traditional production process, i.e. melting, pattern making and casting, is becoming nothing more than a bridge connecting product design, development, engineering, and virtual performance testing on the one hand and machining, assembly, logistics, and customer service on the other. I call this the “casting-plus” concept, meaning that castings and service together create that benefit to the customer that ultimately decides things.

3) We will have to prepare our enterprises for the market changes that are now emerging, and we will have to manage them dynamically and proactively. We will have to shape things actively instead of merely administering them. To my mind, the key figures that characterize dynamic corporate management are a growth rate of 5%, an investment rate of 5% of the turnover, and a productivity gain

of 5%, all on an annual basis. I call this the 'triple-5 concept'.

I feel certain that many European foundries have mastered these three fields of action, so that Europe will remain one of the world's two major foundry centres. The other centre lies in China and India, while the US trails along in third position.

No question - our opportunities lie in the unity of Europe and the global presence of our enterprises.

Thank you.