



**Steel industry in Germany with
a new record**

Prof. Dr.-Ing. Dieter Ameling
President German Steel Federation
Chairman Steel Institute VDEh

**Press lunch on October 7, 2007
IISI-41 Berlin**

Steel use in Germany is rising. The steel industry's customers report good capacity utilisation. For this reason it is possible that the steel companies in Germany will set a new post-reunification record – crude steel production of 48.6 million tonnes is predicted (**Fig. 1**). This would correspond to an increase of 3 per cent over the current record year of 2006, when 47.2 million tonnes were produced.

We expect steel **demand** to increase further during the coming year, and to be about 1.5 per cent higher than the already very great growth of this year. The steel industry's boom will therefore continue, though less dynamically than this year. If this forecast is correct, the steel market in Germany will have grown by an average of just over 4 per cent a year during the last five years. The German steel market has not experienced such strong growth for 35 years (**Fig. 2**).

What is the reason for this positive development? Firstly, the steel industry in Germany profits from the extraordinarily good position of the steel-processing sectors, which are currently making major contributions towards Germany's economic recovery. Mechanical engineering, the automotive industry and its suppliers, and the producers of metal goods have – thanks, too, to the innovative power of the steel companies – greatly increased their competitiveness and are steadily gaining market share, particularly in exports. Close co-operation with the steel industry's customers within the value-creation chains, combined with Germany's dense network of research institutes, forms the basis for the high level of competitiveness of the steel location of Germany.

In addition to the good economic development, there are also structural reasons for feeling positive about the future of our steel industry:

- The steel industry is **efficient**. It contributes towards the politically mandated and ecologically necessary improvement in resource efficiency in two ways: it optimises companies' own steel production, while assisting their customers by making their products more environmentally friendly.

- Thus, for example, CO₂ emissions during steel production in Germany have been almost halved during the last 40 years, from 2.4 tonnes per tonne of crude steel to 1.3 tonnes. Specific dust emissions were cut by 95 per cent between 1960 and 2006. The use of fresh water has been reduced by 70 per cent during the last 20 years, due to the preparation and recycling of water fit for industrial use. All steel originating from products that have had their day, and that are collected and prepared, are 100 per cent exploited in the material circulatory system – because, unlike other materials, steel can be recycled ad infinitum without any loss of quality. The specific primary energy consumption for crude steel production fell 40.7 per cent between 1960 and 2006.

Products made of steel contribute towards lessening the burdening of the environment and climate with greenhouse gases: the light construction of automobiles with high-tensile steels and modern production processes leads to lighter chassis. Although 120 millimetres longer and 50 millimetres wider, the chassis of the new Audi A4 is about 10 per cent lighter than the previous model. This has been made possible by new high- and advanced high-strength steels. Steel in catalytic converters and particle filters are efficient at cleaning exhaust gases. Power station construction is another example. The use of new high temperature-resistant steels improves power station efficiency by more than 25 per cent, and allows efficiency levels of over 43 per cent. Slender steel constructions, such as bridges, reduce material consumption and thus the use of resources. The exploitation of renewable energies would also be impossible without steel. In short: steel is the solution that offers climatic protection.

- The material steel is **innovative**. Half of the more than 2,000 steel sorts are less than five years old. Steel is therefore constantly being reinvented and adapted to the demands that are made of it. One example of this is a

new “intelligent” steel grade for the bodywork of cars, invented by the Düsseldorf based Max Planck Institute for Iron Research. Its name: TWIP steel (for twinning-induced plasticity). If there is an impact, it activates its expansion reserve and starts to deform. This distributes the stress of the impact across a greater area. TWIP steel will be built into the first chassis in just a few years.

Beside many positive news there are some clouds in the sky.

- Germany has some of the world’s highest **electricity and gas prices**. Then there are burdens such as the emission trading system, which does not effect non-European steel companies. New integrated steelworks are not being built in Germany but in nations without an emission trading system (Brazil, for example). The German government’s strategy of expanding, to 25 per cent, the share of renewable energies in the total electricity generation mix, while simultaneously getting out of nuclear energy, will burden the German economy, if international projects are included, to the tune of EUR 175 billion by 2030. And if, as is the case for the German government, exclusively national measures are planned, the sum actually rises to EUR 276 billion. This is the amount recently calculated in a study by the Energy Environment Forecast Analysis research institute. According to the McKinsey study commissioned by the BDI (the Federation of German Industries) in late September, cost-efficiency measures could reduce greenhouse gas emissions by up to 26 per cent by 2020 compared to 1990 levels. In contrast, the German government’s aim of a 40 per cent reduction by 2020 is economically unrealistic. Thus nuclear energy must remain an important option.
- **Raw material costs** represent a major burden. Negotiations with ore suppliers have not even begun yet, but double-digit price increases have already been announced. The fact is that fine ore and coking coal prices

have more than doubled since 2003. In the case of scrap, prices have risen by about 30 per cent. Freight costs for iron ore have actually increased by about 175 per cent.

- The high exchange rate for the dollar could be another burden. The high value of the euro encourages imports to the EU. Moreover, they make our steel processors' exports to the dollar area more difficult. Present developments on the foreign exchange markets certainly represent a risk for the current good steel economy; though this is not likely to have a dampening effect.
- How is the EU's steel industry reacting to the challenge posed by **imports from China**? Last year, the Chinese, with an export surplus of just over 32 million tonnes, developed into an important net exporter for the first time, having previously imported more than it exported (**Fig. 3**). Seventeen per cent of Chinese exports are destined for the EU (**Fig. 4**). Thus the EU is China's second most important market, after Asia. This year, China will export an estimated 10 million tonnes to the EU alone, twice as much as last year. The one million tonne mark was only exceeded for the first time in 2005. European steel producers are currently preparing anti-dumping cases. Trade defense instruments are always a last resort when all political initiatives have been exhausted, to protect the EU industry against unfair trade practices. Some companies in China deliver steel products at dumping prices, that means in many cases even under production cost.

Most Chinese steel companies are very far from having market economy structures. About 95 per cent are state-owned and are frequently drip-fed by subsidies. Furthermore, they often produce without any regard to environmental protection. Instead of exporting steel resulting from environmentally damaging production in China, the Chinese would do

better to take their uneconomical and polluting capacities off the market. Otherwise, the current frictions will become a lasting trade conflict.

Back to the blue sky: The foundations for a lasting, robust steel economy are intact: these include the high worldwide demand for steel in the up-and-coming economies, particularly in the areas of infrastructure and energy. The investment demand in Germany remains strong and the development of the steel-intensive commercial construction and civil engineering sectors, in particular, is lively. In addition, most steel-processing sectors continue to have a large backlog of orders. Production by steel processors will rise by about 65 per cent this year and is forecast to increase by almost 3 per cent in 2008 (**Fig. 5**). Against this background, we therefore expect a solid steel economy in 2008 too, with demand rising further.