



**Machine Tools and
Manufacturing
Systems**

**German laser industry resolutely believes in worldwide resurgence
in the demand for investment goods;
economic crisis does not diminish growth opportunities;
Germany remains “PRO” manufacturing and investment location
for optical technologies**

**Annual Press Conference
of the Working Committee “Laser and Laser Systems” on the occasion of LASYS, the
international trade fair for system solutions in the field of laser material processing**

on 8 June 2010 in Stuttgart

Landesmesse Stuttgart, ICS Congress Centre, Conference Room C 9.2

The discussion participants are:

**Günther Braun
CEO / President, Rofin-Sinar Technologies
Chairman of the Working Committee**

**Jens Bleher
Managing Director, Trumpf Laser- und Systemtechnik GmbH
Vice Chairman of the Working Committee**

**Gerhard Hein
Managing Director of the Working Committee**

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What’s more important than looking back on the most difficult year in the history of the industry is the clearly more optimistic outlook for 2010 and the period thereafter. Resilient early indicators include, on the one hand, the robust two-digit rise in demand in the components area – in the context of processing optics, for example, where the reversal in the inventory cycle also naturally plays a role. The laser industry and maintenance operations among major users are setting the stage for the recovery. In addition, capacity utilisation is increasing across all customer segments: This is borne out unmistakably by the sales figures for services in the laser sector.

Following the success of the previous year, 2009 was marked by a massive worldwide economic downturn. Near the end of the 2008 calendar year, the laser industry experienced a sudden paralysis of investment activity in almost all industries and regions around the globe. This was particularly true of highly consumption-dependent user segments such as the electronics and semiconductor industry, automotive construction and, as a special field, jewellery manufacturing, where companies “froze” their equipment procurement plans outright.

The main focus was on the implementation of very rapid measures for the worldwide optimisation of cost structures. In the face of the severe downturn in demand – one of altogether historic proportions – reduced working hour labour arrangements also proved to be a highly effective tool. Workforces were adjusted in a relatively “soft” manner in order to be ready for the period following the crisis.

Rapid adaptation to the changed market conditions, i.e. through shorter lead times and accelerated reaction to customer requests along with the invigoration of the service and spare parts business, served to stabilise the situation significantly again by the end of the 2009 business year. Increasing investment pressure among customers and their need for the latest products and state-of-the-art manufacturing technology also played an important role. Keywords here include “cost-effectiveness”, “more energy-efficient production” and “further enhanced manufacturing quality”.

Growth potential still evident

The opening up of the markets, which had already occurred some time ago for fibre laser technology, is only now occurring for ultra-short pulsed lasers.

The key markets of China and India, which are relying on rapid and intensive industrialisation, represent huge demand and very significant sales potential for modern production technology. But there is also a backlog of demand for high-tech and energy-efficient manufacturing solutions in the established industrial countries. In that regard, one highlight concerns “GREEN TECHNOLOGIES” where lasers will become important, for example, in the area of energy storage – in other words, battery production. In the traditionally high share of exports, the current exchange rate advantage of the US dollar versus the euro is supporting German export activities.

Thanks to its excellent funding policies and its well-staffed institutional landscape and universities, Germany remains an outstanding investment location for optical technologies. It

is essential that research institutions and industry continue to have access to adequate funding – for pertinent basic research on the one hand, and for application-oriented R&D on the other. The focus here is on broadly effective funding measures in combination with the extremely important relationship of projects to funding activities.

Employment of some 110,000 people in the field of optical technologies in Germany in 2008, which was reduced by less than 7% during the crisis of 2009 (2005-2008: +27%) – that should offer a powerful argument!

Optical technologies are taking the form of an independent industry

Optical technologies are forming a strong new industry in and for Germany. Industrial associations, research institutions, medium-size companies and major corporations are bundling their efforts in the field of photonics.

Within the framework of the “Photonics 2020” initiative, nearly 300 experts from across the full spectrum of the technology agreed to come to Berlin in March of this year in order to define the most important topics for the future and develop initial proposals, thereby laying the broad outlines for research activities over the next ten to fifteen years.

This initiative and the anticipated funding policies for laser technology will benefit Germany as a centre of excellence in a number of respects:

The laser sector can maintain and expand its worldwide leading technological role and market position:

- There is a very promising future in store for laser.
- About one fifth of the conceivable applications have been developed so far.
- Laser will replace numerous conventional processes.
- Laser is “enabling technology” – offering a plethora of possibilities from new applications or materials not previously processed by laser technology that have by no means been exhausted.
- Many new types of products cannot be produced in large quantities at reasonable cost without the use of laser.
- Laser-based design is opening up new opportunities in terms of functionality, lightweight construction and material minimisation.

As a manufacturing location, Germany needs this effort to result in more than just the development of new products. Rather, these efforts should focus on finding a way for these products to be produced right here in this country.

As a cautionary example, take the LCD television screen: developed in Germany, it is manufactured throughout Asia.

The basic requirement for success in this regard is the availability of suitable manufacturing technicians!

Laser is an ideal tool for preserving the quality of the manufacturing location

Laser makes it possible to carry out production operations that conserve resources particularly well through high process efficiency and low consumption of energy and materials.

It is flexibly applied and easy to operate, unites high processing speed without compromising on process reliability, and offers nearly unsurpassed precision with minimal post-production finishing requirements.

The right laser source is available for every application:

- Laser is the answer to mega-trends of the future such as energy efficiency and e-mobility!
- The resulting products, such as electric-powered vehicles, high performance batteries, fuel cells and solar panels, can be manufactured in Germany thanks to laser!
- The German laser industry is creating the requisite technology platforms in the form of multi-kilowatt solid-state lasers and lasers for fine processing, configured with rod, fibre, disc, diode, CO₂ or as microprocessing lasers. New products require the right tool to go along with them!

**Summary of business development in 2009;
capacity utilisation increasing in all customer segments;
growth predicted for 2010**

In the German machine tool construction sector, order backlogs aligned to customer-specific special machinery and the project business with long lead times had a supporting effect on the production volume of the industry and served to maintain output at roughly the level of 2005. In the crisis year of 2009, the 30% drop in production volume turned out to be less alarming than many would have expected given the 55% collapse in orders.

The manufacturers of **laser systems for material processing** faced a different situation: Here, the significantly shorter delay between the receipt of an order and relevant sales revenue, which is so beneficial during strong economic cycles, had the opposite effect during the sudden massive downturn in the worldwide demand for investment goods. The 47% drop in order activity caused the production volume to fall by half, both in Germany (EUR 343 million) and also after worldwide consolidation (nearly EUR 400 million). The same was true for the all laser-related sales (EUR 541 million), a figure that includes accessories, spare parts, services and outside revenues earned through subsidiaries abroad. Disproportionately weak demand within Germany (54% below the previous year) contrasted with orders from abroad (totalling three times the value of domestic orders) which fell by 44%.

Exports fell by a full 48%, while the share of the total production value exported remained at a traditionally high level (71%).

Development for the laser source business (without machinery) changed only moderately. A 40% drop in incoming orders in 2009, which were nonetheless stabilised to some degree by a disproportionately mild drop in orders from abroad (-24%), contributed to a 44% lower production value in Germany (EUR 235 million) and a 41% drop in the worldwide consolidated volume (EUR 335 million).

Exports decreased by 36% while exports as a share of the total production value increased substantially by 46% (2008: 40%). It is well known that German manufacturers integrate a significant percentage of their lasers at domestic production facilities in their own machinery.

For further details, especially with regard to the distribution of export volumes as a share of the total laser-related foreign trade value by geographical region, please refer to the presentation contained in the press kit handout.

Signs of improvement in all directions

German laser and laser system manufacturers have been receiving clearly positive market signals since October 2009. In December 2009, incoming orders were moderately “in the black” again, with a two-digit growth rate for the first time in twelve months. The increasing demand accelerated at the start of 2010 and reached a high water mark in March of this year: The volume of incoming orders in the area of sheet metal processing technology was nearly four times higher than the crisis-related weak value of the reference month. And April has apparently been good as well.

While the automotive industry saw planned investments in body-welding applications mostly in 2009, with production starts up in 2010 or later, in the automotive supplier sector laser systems are being planned for increased deployment once again after some preceding procurement delays or even stops.

And the turnaround is also evident among manufacturers of electronic components, where supply bottlenecks are already beginning to occur in some cases.

Asia’s machinery sector is standing up to the global economic crisis remarkably well. Quote: “China is the reason for certain companies in the laser industry to terminate their reduced working hour labour arrangements.”

The prospects for the energy business are also good, even if the solar sector is outsourcing production to Asia, which is an indication of price pressure.

Overall, the worldwide market volume for laser systems used in material processing applications is expected to show moderate two-digit growth – provided the current demand situation continues and new external shocks are avoided. Unfortunately, this time those external shocks might arise directly from the EU25 zone.

One problem is that the order pool is far too lean; the customer demands extremely short lead times. There is intense discussion about the shift in demand toward Asia Pacific as already mentioned – especially in China, India and Korea. The associated challenges for medium-sized companies are obvious: They range from the development of regionally adapted models and the establishment of the relevant distribution channels to increased value creation and production on a local basis.

Decisively better planning reliability and stabilised growth are expected beginning in 2011. The premise of manageable large-scale contractive influences on the global financial system and the worldwide real economy holds true again.

Stuttgart, 8 June 2010