

Interview

Im November 2016 übernahm Coherent Rofin-Sinar Technologies, einen Hersteller industrieller Laser und Systemlösungen. Sri Venkat, Senior Vice President von Coherent, wurde vor kurzem mit der Leitung der ehemaligen Rofin-Sinar-Gruppe mit Sitz in Hamburg betraut. Ein Interview im Originalton.

With the Rofin-Sinar acquisition, what is your current position in the market?

The Rofin-Sinar acquisition adds substantially to Coherent's capabilities in high power lasers, where our market share has been low. Rofin brings us over three decades of experience in servicing high power, industrial laser applications with products ranging from sources through turnkey tools. These products emphasize high performance and reliability, which is a perfect match with Coherent's overall philosophy. Plus, Rofin themselves had acquired several other companies over the past decades, bringing design and fabrication capabilities in core technologies ranging from active fibers, to diodes, to beam delivery subsystems.

Together with Coherent's expertise in laser components and high-performance lasers, this makes Coherent a uniquely vertically integrated organization in our industry. Finally, with their deep applications knowledge and installed product base, Rofin has brought Coherent immediate credibility in high power laser applications.

What are the key applications and markets you're best positioned to service?

Our high power products service all the established markets you would expect, including automotive, aerospace, appliances, energy (oil & gas, mining) and general fabrication. And, we will be introducing even higher power lasers and more pulsed

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Unternehmen:

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products at Laser World of Photonics to further expand our potential markets.

But, Coherent's entire materials processing portfolio now goes well beyond this. This is because manufacturers across virtually every manufacturing sector, from heavy equipment to microelectronics, are pursuing the same overarching goal of reducing production costs while simultaneously improving yield and final product quality. The highly precise, non-contact nature of laser processing makes them an ideal match for these targets. So, in addition to high power cutting and welding, we're also involved in a very wide range of micro or high precision processing applications, including additive manufacturing. These utilize lower power CO2 and fiber lasers, and increasingly, nanosecond pulsewidth diode-pumped, solid-state lasers and industrial ultrafast (picosecond pulsewidth regime) sources, as well as excimer lasers. We now support applications spanning precision marking, ablation and microstructuring in industries such as microelectronics fabrication, display production, medical device manufacturing, solar cell production and many others.

What do you see as your key advantages over your competition in these areas?

Superior products backed by outstanding support! Let's look at fiber lasers, which is a very competitive area. Here we have a design that is fundamentally insensitive to back reflections. This gives us an advantage when processing materials that are highly reflective in the near infrared, such as aluminum, copper and brass.

These materials are increasingly important as automotive manufacturers use more aluminum to save weight and improve fuel efficiency, and in the production of electrical vehicles, which use copper in their batteries.

Another advantage of our fiber lasers is a modular and field serviceable architecture. This avoids the need to return a laser to the factory for service; instead, a new module can simply be spliced in, right there in the field. This is particularly beneficial for customers in China, or other locations where it may be expensive or problematic to ship units in and out of the country for maintenance.

Coherent also offers valuable advantages as a supplier. For example, we have a fully equipped applications laboratory here in Hamburg, staffed by a group that is extremely knowledgeable in laser processing. This group can identify the optimum source for a particular application and research the specific process parameters required to deliver best results. Then, Coherent can supply anything from a source through a custom solution, integrating beam delivery, part handling and more, to satisfy customers' needs.

Plus, it's worth noting that Coherent offers virtually every type of industrial laser, including fibers, direct diodes, solid state, excimer and CO₂. This incredible breadth enables us to explore a very wide parameter space when developing an application, and to recommend the best solution for any given problem, rather than simply the best fiber laser, or the best CO₂ laser which a technologically narrow competitor might advocate.

What future trends do you predict in these markets?

Two major trends I see in materials processing are higher efficiency and lower total cost of ownership. We're positioned to make advances in both of these because our extensive vertical integration gives us tremendous control over the precise operating characteristics of our lasers. For example, we can customize a pump diode laser to deliver the exact output specifications that will optimize fiber laser output. Or, we can make a custom fiber that supports higher order transverse modes or non-

standard intensity distributions, such as a flat top profile. The former can be useful for cutting thick materials, whereas the latter is more ideal for thin materials. Look to see demonstrations of these capabilities at our display in Laser World of Photonics!

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