Vietz Introduces X70 Pipeline Steel Welding System Using IPG Fiber Laser

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Vietz GmbH, a leading worldwide supplier of pipeline welding equipment, announced the introduction of its VPL System for deep penetration laser welding. The VPL system utilizes a 10 kW fiber laser from IPG Laser GmbH, and will be used by the oil and gas industries to weld pipeline steel that exceeds a thickness of 10mm. The Vietz VPL System operates using a newly developed orbital welding head, which produces high processing speeds to weld dense X70 / X90 materials in one welding pass.

This process was developed in cooperation with BIAS GmbH, a leading research institute focusing on the development of laser processing systems. The fiber laser can be integrated into a complete functioning system that will be offered on the market in 2005.

Mr. Eginhard Vietz, Owner and Managing Director of Vietz GmbH, stated that IPG's high power fiber laser technology gives Vietz the opportunity to consider such solutions for the first time, because of the lasers' small footprint and the high efficiency of fiber laser systems.

"The low electrical and water consumption of the fiber laser permits its use under field conditions. Eighty to eighty-five percent of our business consists of welding 12mm thick X70 steel, which can be handled by the 10kW fiber laser. The potential of the commercial fiber laser gives us the opportunity to process onshore applications, with the ability to upgrade the laser power in the same cabinet in order to handle thicker pipe sections."

Mr. Vietz added, "The field welding process can be performed much more economically as compared to the MAG-orbital welding. This technology is 50% faster compared to present technology. We plan to sell turnkey systems, including the ARCOTRAC with fiber laser, to our worldwide customers in the pipeline industry in 2005."

Dr. Kohn from BIAS GmbH in Bremen, Germany who did the basic research in this field explained, "We have begun to understand the production capability of the power levels of IPG's multi-kilowatt lasers in a short time. The world is excited about the performance and the achievement of this new IPG technology." Mr. Thomy of BIAS also worked on this project, along with Prof. Vollertsen , Director of BIAS.

Pipeline Steel X70, 12 mm
Laser Power: 10.2 kW
Fiber Core: 200 µm
Fiber Length: 80 m
Beam Parameter
Product: 11.5 mm x mrad
Welding Speed: 2.2 m/min
Welding Position: PA
Source: BIAS GmbH
VPL System (Vietz Pipeline Laser System) including equipment device ARCOTRAC with integrated laser unit fulfills all the requirements of modern pipeline construction under extreme environmental conditions.

About IPG Photonics Corporation

IPG Photonics Corporation is the global leader in high performance fiber lasers and fiber amplifiers for materials processing, telecommunications, biomedical, airborne, test, research, and other commercial applications. Its proprietary technology, materials science expertise and vertically integrated manufacturing operations enable IPG to produce the world's largest variety of cost-effective, high and low power fiber lasers and amplifiers with superior optical performance, power efficiency and reliability. The company has its world headquarters in Oxford, Massachusetts and manufacturing facilities and sales operations in Massachusetts, Germany, Russia, Italy, Japan, India and the United Kingdom. For more information, visit http://www.ipgphotonics.com/ . IPGP-G

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