

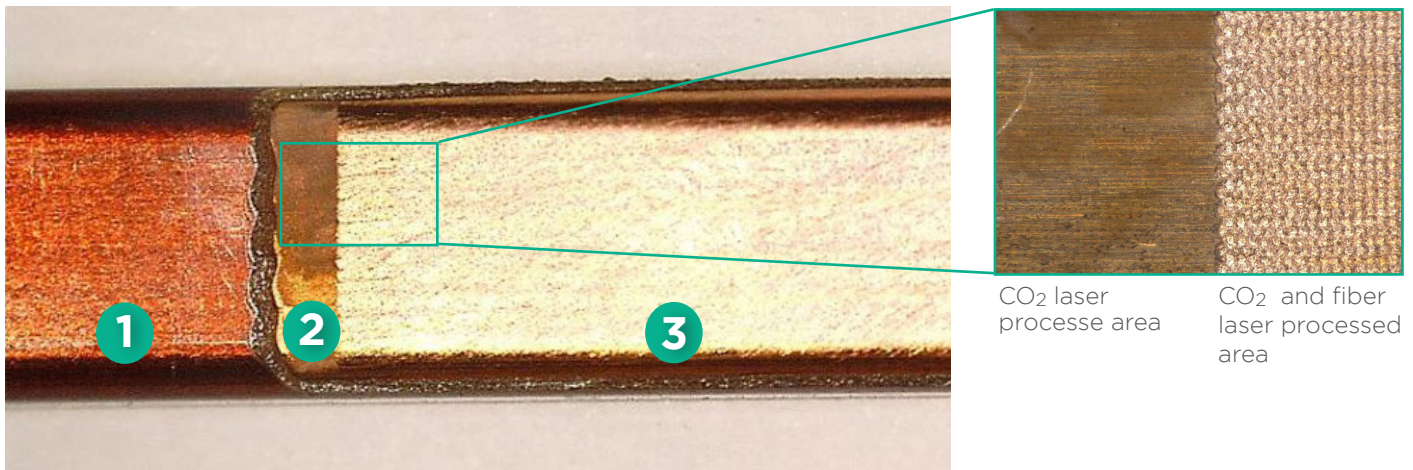
Success Story



Dual Wavelength Ablation Automates Hairpin Stripping

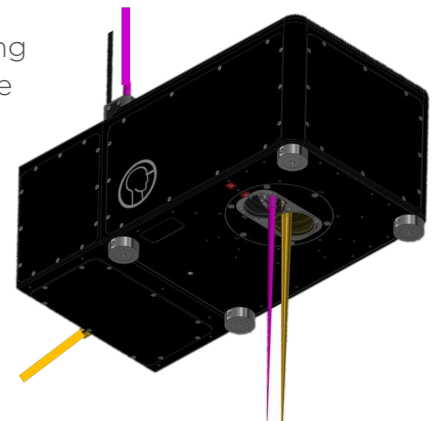
One of the most important processes in the manufacture of stators is the contacting of individual hairpins. The overall efficiency of the system is dependent upon conductivity and ultimately on the quality of the contact. A residual-free removal of the insulation layer is an essential precondition for successful laser welding.

Analysis of the PAI and PEEK insulation found on non-round hairpins show strong 10.6 μm wavelength absorption. CO₂ laser processing leaves a < 2 μm thick residual layer which can be removed using a pulsed fiber laser.



1 Insulated area 2 CO₂ laser processed area 3 CO₂ and fiber laser processed area

Novanta's new dual-wavelength scan head allows parallel processing using both the CO₂ and fiber laser sources to completely ablate the insulation in the shortest cycle time with throughput increases of more than 40% realized!



Interested in speaking to one of our knowledgeable representatives?

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