

The potential of laser ultrasound for sustainability in metal production and processing

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The metal producing and processing industry has significant energy consumptions and greenhouse gas emissions throughout its process chain. Furthermore, there is also an increasing variation in raw materials due to the required increased addition of scrap. In order to optimize the process steps and manage the demands, the information needed to adaptively intervene in the processes must be determined as early as possible. Laser ultrasound as non-destructive technology can be applied in a wide range starting from metallurgical characterization during the metal design to inline tests in individual process steps to defect detection in semi-finished products. This presentation will give an excerpt of different application possibilities of laser ultrasound and show the positive impact on sustainability.