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Regeneration with Laser and Wire - resource-saving and innovative

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The laser wire deposition process is increasingly gaining application in industry due to its process-specific advantages. In addition to the wide availability due to the already long-standing use of the wires in the classic welding processes and the relatively simple handling (storage, health protection), above all the existing certifications of numerous wire alloys are positive arguments for the application in the industrial environment.

Compared to the already more established powder process, however, the wire process requires more comprehensive process control. There is a small process window, which must be kept stable by control mechanisms. In the lecture, various solutions on the way to a controlled and automated wire process will be presented and examples from the repair of large components in opencast mining will be explained, which offer an interesting solution approach from the point of view of sustainability.