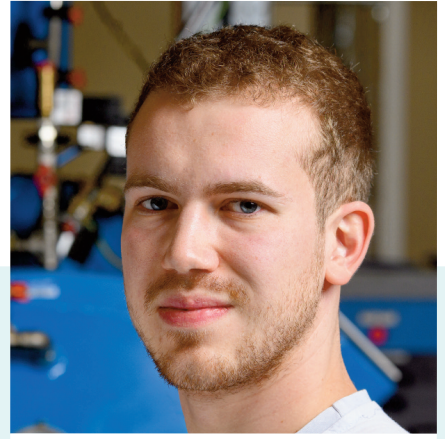




**University of
Sheffield**

Poster 9

Assessing the environmental impact of recovery, retention and scrap sorting strategies in steelmaking



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ABSTRACT:

Increasing the use of steel scrap in steel production has become a strategic decision for the UK steel industry as part of the move towards decarbonisation and the pivot from BOS to EAF steelmaking. Impurities in scrap can strongly influence the processing and properties of products, however. There are mechanisms for removal or recovery of these residuals, but the environmental impact of these is uncertain. Strategies for improved scrap efficiency exist but potential environmental benefits need to be assessed. In addition, several related issues that involve BOS steelmaking operations exist. These involve recovery of expensive elements from steelmaking slag, and the environmental impact of strategies for retaining critical elements in the loop. Results from a feasibility study into zinc removal/recovery from EAF dust mechanisms will be discussed, along with preliminary LCA/environmental assessment results of the most promising mechanisms for removal/recovery of zinc and recovery of manganese from BOS slag.



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