# Article information:

Research on Nozzle Design and Application of Single‐Flow Postcombustion Oxygen Lance in a 120 t Top‐Blown Converter - Dong - 2021 - steel research international - Wiley Online Library
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# Article summary:

1. Postcombustion (PC) technology is used to increase the scrap ratio of the converter and reduce the consumption of hot metal.

2. The PC oxygen lance can be divided into a single-flow design and a dual-flow design, with the single-flow design being more easily retrofitted to existing converters.

3. This article proposes design criteria for a single-flow PC oxygen lance and studies its effects on jet coalescence, postcombustion behavior, and industrial application in a 120 t top-blown converter.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

This article provides an overview of research on nozzle design and application of single‐flow postcombustion oxygen lance in a 120 t top‐blown converter. The authors present their findings from numerical simulations combined with industrial tests conducted with the PC oxygen lance to investigate its heating effect (the capacity to melt scrap) and its influence on the gas recovery and total fe (T.Fe) content in the final slag. The article is well written, providing clear explanations of the concepts discussed as well as detailed descriptions of the methods used in their research.

The authors provide evidence for their claims by citing relevant literature throughout the article, which adds credibility to their work. Additionally, they provide sufficient detail about their experiments so that readers can understand how they arrived at their conclusions. However, there are some potential biases that should be noted when considering this article's trustworthiness and reliability. For example, while they cite relevant literature throughout the article, it is possible that some sources may have been overlooked or not given enough attention due to time constraints or other factors. Additionally, since this research was conducted in a specific steel enterprise, it may not be applicable to other contexts or settings without further testing or modifications.

In conclusion, this article provides an informative overview of research on nozzle design and application of single‐flow postcombustion oxygen lance in a 120 t top‐blown converter that is supported by evidence from relevant literature cited throughout the text. However, potential biases should be taken into consideration when assessing its trustworthiness and reliability due to possible omissions or oversights in sources cited as well as limited applicability outside of specific contexts or settings without further testing or modifications.

# Topics for further research:

* Postcombustion oxygen lance design
* Postcombustion oxygen lance application
* Heating effect of postcombustion oxygen lance
* Gas recovery in postcombustion oxygen lance
* Total Fe content in postcombustion oxygen lance
* Numerical simulations of postcombustion oxygen lance

# Report location:

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