

COVER LETTER

Haris Wahyudi

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29th August 2022

Dear,

I/We wish to submit an original research article entitled "***The influence of heat rate and austenitization temperature on microstructural and hardness of Hadfield steel***" for consideration by SINERGI.

I/We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

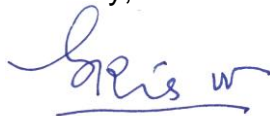
In this paper, I/we report on / show that:

Field	:	Mechanical engineering, material engineering
Topic	:	Solution treatment of Hadfield steel
Brief Background	:	Hadfield steel is manufactured by casting process and slow solidification. Thus, the carbide segregate along grain boundary, make its properties decline due to toughness and ductility.
Research Problem	:	Carbide in the grain boundary is present
Overview of Method	:	Solution treatment using tube furnace, heating at austenitization of 1000, 1100, 1150 and 1200 the quench in water. Grinding, polishing and etching was used for sample preparation. Optical and SEM-EDS is used to characterized microstructural change. Vicker hardness test is utilized to determine the change in hardness.
Significant finding	:	Austenitization temperature in dissolving carbide. The higher the Cr the higher the austenitization temperature.

We have no conflicts of interest to disclose.

Thank you for your consideration of this manuscript.

Sincerely,



Haris Wahyudi

AUTHORSHIP STATEMENT

I/We wish to submit an original research article entitled ***The influence of heat rate and austenitization temperature on microstructural and hardness of Hadfield steel*** for consideration by SINERGI.

All persons who meet authorship criteria are listed as authors, and all authors certify that they have participated sufficiently in work to take public responsibility for the content, including participation in the concept, design, analysis, writing, or revision of the manuscript.

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POTENTIAL REVIEWERS

Please submit 3 (three) potential reviewers (*that have not listed in SINERGI*) to speed up the review process that competent for the topic and has a good reputation in that area.

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