

Submissions

Improvement Incoloy Alloy 800 Weldability After 10 Years of Service through Solution Annealing and Normalizing Method

Amir Arifin, Gunawan, Jaya Rizki Sa...

Submission

Review

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Round 1

Round 1 Status

Submission accepted.

Notifications

[\[JER\] Editor Decision # 1677...](#)


2022-03-06 10:35 PM

[\[JER\] Editor Decision # 1677...](#)

2022-03-21 11:48 PM

Reviewer's Attachments

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Revisions


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 84719-1 Revised Manuscript, JER
Plain text Amir REVISION Clean

March
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Manuscript

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Referees needed	athomas	amirarifin 2021-12-25 10:20 PM	1	<input type="checkbox"/>
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Notifications

**[JER] Editor Decision # 16773 - Revision Required**

2022-03-06 10:35 PM

Dear Dr. Amir Arifin, Gunawan,

We have reached a decision regarding your submission # 16773 to Journal of Engineering Research, "Improvement Incoloy Alloy 800 Weldability After 10 Years of Service through Solution Annealing and Normalizing Method".

Your manuscript needs: Major/Minor Revision

I hope you will kindly carry out all necessary corrections/modifications as suggested by the referees.

Please note the following marked remarks:

If there is any modifications or changes in the title of the manuscript, please acknowledge us either by email or in the author response to referee comments file.

() Read the referees reports carefully and carry out the required major corrections/modifications.

() Once you prepare the revised MS, your revision should include a covering letter detailing point by point your response to the referees in the revision

Papers accepted for publication will be limited to a minimum of 10 pages and a maximum of 15 pages only including abstract, references, tables, and figures.

Details are included in the instructions to author.

() Tables and figures should be included within the text.

() Use * (stars) to denote the affiliations of authors instead of numbers or alphabets. For more clarification please refer to our previously published item.

() The revised version MUST be typed double-spaced throughout.

() References list should be stated properly within text & in the final list:

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**[JER] Editor Decision # 16773 - Accept**

2022-03-21 11:48 PM

Dear Amir Arifin, Gunawan,

I am pleased to inform you that your paper entitled "Improvement Incoloy Alloy 800 Weldability After 10 Years of Service through Solution Annealing and Normalizing Method" has been accepted for publication in the Journal of Engineering Research (JER).

The DOI number for this paper will be : 10.36909/jer.16773*

The editorial board would appreciate it if you cite some papers related to your field in previous issues of our journal(JER).

JER looks forward to more distinguished submissions from you and your colleagues.

Tentatively your paper will be published in the (March/June/September/December 2023) issue.

Please write back to JER to confirm and acknowledge receipt of this mail.

With best wishes.

Prof. Ameer Al Haddad

Editor-in-Chief

** DOI will be activated only after online publication.*

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OJS / PKP

Reviewer's comments:

Article Review Request # 16773

Title: Improvement Incoloy Alloy 800 Weldability After 10 Years of Service through Solution Annealing and Normalizing Method

Comments	Response
Reviewer A:	
<p>1. Requires extensive proof reading (especially spelling and grammar). English need to polish, so, it highly recommended that the paper language - edited by English language professionals.</p> <p>2. The authors should explain in manuscript about each figures and tables that what's the figures and tables about.</p>	Text on the manuscript has been improve
<p>Abstract</p> <p>1. The abstract should be rewrite. The abstract is typically writing introduction, purpose, design/methodology/approach and findings, respectively.</p>	Abstract has been improved
<p>Introduction</p> <p>1. M23C6 is correct.</p> <p>2. Kg/cm2 is correct.</p> <p>3. The Objective and problem statement of this study is unclear and it suggest to clearly explain.</p> <p>4. The authors should more describe and explain the metallurgical problem of OMBH when is subjected to high-temperature heat during long time operation. Such as variation in microstructure, mechanical properties and etc.</p>	<p>1.The typo of " M23C6 " has been corrected.</p> <p>2.The typo of " Kg/cm2 " has been corrected.</p> <p>3 The Objective and problem statement have been improved</p>
<p>Methodology</p> <p>1. The mention of paraphrase "Figure 1" is not correct in parenthesis.</p> <p>2. The sentences of "Hardness test was conducted on the welding position to investigate hardness profile, X-Ray Diffraction" is unclear and should re-write.</p> <p>3. The horizontal and vertical axis of figure 2 (a) and (b) should mention Temperature (°C) and Time (h).</p> <p>4. Method of hardness measurement such as Vickers or Rockwell and the amount of loading and dwell time should mention. How many hardness points was measured?</p> <p>5. Method of metallography and preparation of sample should explain in details such as Metallographic Etchants and etc.</p> <p>6. Filler rod analysis and welding method and parameters must mention.</p>	<p>1. The typo of " Figure 2" has been corrected</p> <p>2. "Hardness test was conducted on the welding position to investigate hardness profile, X-Ray Diffraction" is unclear and should re-write" the sentence have been improved.</p> <p>3. The labels (Temperature (°C) and Time (h)) have been added .</p> <p>4. Explanation detail has been added on the manuscript</p> <p>5. Detail experiment has been added</p> <p>6. Filler type and welding method have been added into manuscript.</p> <p>7. Table 1 made simpler than before</p>
<p>Results and Discussion</p> <p>1. The sentences of " The hardness test uses the Vickers test apparatus with a diamond-shaped pyramid indenter. " should move to Methodology section.</p> <p>2. It seems paraphrase "Figure 10" must change to "Figure 5" in sentences of "The hardness test results shown in Figure 10 states that the base metal represented by zone 1,2,6 and 7 has decreased hardness from the technical data standard of the alloy 800. "</p> <p>3. The explanation of Figure 5 (a) and (b) is not seen in the text. It should be referred to these figures in text.</p> <p>4. It seen some wrong typo in text as "Error! Reference source not found". These must be amended.</p> <p>5. Cr23C6 is correct.</p> <p>6. The sentences of "the microcrack attacks the grain boundaries because there are voids that have fused and are connected [6]. " must re-write in correct reference formatting.</p>	<p>1. The sentence " the hardness test... have been remove</p> <p>2. Type error for Figure 10 have been change to Figure 10</p> <p>3. The explanation have been added on manuscript.</p> <p>4. error has been fixed</p> <p>5. The typo of " Cr23C6 " has been corrected.</p> <p>6. error has been fixed</p>
Reviewer B:	
<p>English of manuscript should be improved:</p> <p>Abbreviation OMBH should be given either as with capital first letters or with all small letter, not with just first letter is capital.</p>	<ul style="list-style-type: none"> • The typo of " Outlet Manifold Bottom Header (OMBH) " has been corrected.

<p>In abstract: "OMBH was serviced at high temperatures and pressures along ten years in this working conditions"</p> <p>No first capital letter in text is required unless it is at beginning of sentence (there are many mistakes throughout the text)</p> <p>In abstract: "weldability of Incoloy Alloy 800 is increased"</p> <p>In introduction: "Because chromium diffuses considerably more slowly than carbon and there is not enough time for it to diffuse into the carbide from across the grain"</p> <p>In introduction: "kg/cm2" small "k" and superscript "2"</p> <p>In methodology: "cracks appearing with the dye penetrant test process carried out after the welding process"</p> <p>In results and discussion: "Consequently, the additional residual stress due to the welding process can cause defects or cracks when the penetrant test is carried out." should be rewritten.</p> <p>In results and discussion: "Hardness testing is intended to determine the resistance of the material to deformation due to the penetration applied to the material's surface" should be rewritten.</p> <p>In results and discussion paragraph under figure 5:"The hardness test results are shown in Figure 10 states that the base metal represented by zone 1,2,6 and 7 has decreased hardness from the standard technical data of the alloy 800." in this sentence why reference to figure 10 is given so early before figure 4-9 is not understood. Figures and their references should be given in order</p> <p>In text it is mentioned that the normalizing sample was machined and polished for preparing the hardness sample test. So, how the results will be accurate as these process will also cause heat especially for such a hard metal. This should be explained.</p> <p>In results and discussion: "Compared to solution annealing and non-treated samples, the base metal hardness value is increased after normalizing treatment"</p> <p>In results and discussion: "The hardness value of the entire welding area is increased compared to the hardness value of the base metal"</p> <p>I think "Error! Reference source not found" terms appear in text because of mistype reference to figure 6</p> <p>"(b) shows the XRD test results of the Incoloy alloy 800 heat treated with the solution annealing method"</p> <p>Why the reference "(Dehmolaeei, Shamanian et al. 2008, Shah Hosseini, Shamanian et al. 2011)" is given is not understood. How a result of study could be given by someone else?</p> <p>Why the reference "[6]" is given in different style than others. a standard should be used: numbers or names and dates.</p> <p>"The standard set by Manoir Industries states that if microcracks appears after the weldability test process, it means that the performance of the material has been decreased"</p>	<ul style="list-style-type: none"> • The Text on the Abstract section has been improved. • The Text on the Introduction section has been improved. • The Text on the methodology section has been improved. • The Text on the Result and discussion section has been improved • The measurement of the hardness value in the weld area was carried out using the Vickers method with a diamond indenter to get better accuracy. The explanation have been added to the methodology section. • "Compared to solution annealing and non-treated sample,.. the sentence have been improved • The sentence "The hardness value of the entire welding area is increased compared to the hardness value of the base metal" has been removed. • Figure 6 label on the text has been corrected. • Discussion for XRD result has been corrected • new reference has been added
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There are only 3 references to recent (last decade) studies. There could be more.	