



**SDI Review Form 1.6**

Journal Name:	<a href="#">Journal of Engineering Research and Reports</a>
Manuscript Number:	<b>Ms_ JERR_46172</b>
Title of the Manuscript:	<b>EVALUATION OF THE IMPACT OF CORROSION ATTACK IN CAST STEEL C-1040 MARINE PIPING SYSTEM IN TWO MEDIA</b>
Type of the Article	

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



SDI Review Form 1.6

**PART 1: Review Comments**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p><b>Compulsory</b> REVISION comments</p>	<p>Corrosion is certainly a major engineering concern for many engineering applications. This is well stated in the introduction. However, the main contribution of the manuscript is not clearly described. I believe its main weakness is that it does not bring new information to the reader based on the state-of-the-art. This should be more deeply explored by the authors. The approach is technically suitable if you just want to measure the corrosion rate of the carbon steel plates in the two different environments and compare them based on the salt concentration. But this is not sufficient for the article to gain scientific interest. You should go further. It could be more interesting if you provided further characterization of the corrosion products formed in each environment by employing techniques such as X-ray diffraction or Raman spectroscopy.</p> <p>Additional comments are given below:</p> <ol style="list-style-type: none"> <li>1. Figure 2: The nominal chemical composition should be presented in a table and not as a print of the supplier's website. This is not a suitable manner of presenting your data.</li> <li>2. Just one coupon for each environment is not an acceptable manner of acquiring your data with statistical significance.</li> <li>3. You should describe in detail the surface finishing of your coupons in section 2.2.1.</li> <li>4. Section 2.3: "...starting from the P800 till the P220 to ensure the surface smoothness". The finer grit is P800. So, you start with P220 and go the higher grits to ensure surface smoothness.</li> <li>5. Your etching procedure seems to be equivocally described: "<b>Etching:</b> Different etching reagents were used on the different specimens. The steel is immersed in a solution containing 2% nitride for at least 30seconds and then rinsed with another solution containing 98% alcohol."</li> </ol> <p>Please, verify. What "nitride" did you use as an etchant?</p> <ol style="list-style-type: none"> <li>6. Figures 7 and 8 must have scale bars. Figure 8 has very poor quality. The corrosion products layer is not evident to the reader.</li> <li>7. Written language must be carefully revised.</li> <li>8. Section 3.3: Surface analysis When you mention "surface analysis" this should mean that you would provide the composition of the surface layer by any analytical technique. This is not the case. It is just a visual inspection. You should reconsider this title.</li> </ol>	



**SDI Review Form 1.6**

<b>Minor</b> REVISION comments		
<b>Optional/General</b> comments		

**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details:**

Name:	<b>Renato Altobelli Antunes</b>
Department, University & Country	<b>Universidade Federal do ABC (UFABC), Brazil</b>