In the manuscript tilted “Analysis and prediction of influence of electron beam process parameters on crack defect of 7050 cladding Ni60 coating”, the authors have investigated the influence of three process parameters on the quality of the Ni60 cladding formed on 7050 Al alloy using electron beam. The authors find that the electron beam current has the greatest influence on the cracking rate followed by scanning speed and focusing current. Through nonlinear fit of the process parameters, they have found a relation that can be used for optimizing the process.

Comments/Questions:

1. The title does not convey the information correctly. It is recommended that the authors revise the title in such a way to accurately reflect their paper.

2. Abstract can be rewritten to present the information in a much more lucid way. There are numerical values mentioned in the abstract that looks like reference. Kindly write to avoid confusion.

3. Please mention in Fig. 1 caption what (a) (b) (c) and (d) denote rather than just a title.

4. Line 121 says, “distribution of cracks is shown in Fig. 2”. This is not right. The authors shown only pictures not a distribution of it.

5. Line 123 says “…use area as statistic”. This is unclear and needs to be written clearly. Please note that this is not a grammatical or usage error. Please explain what is meant by that statement.

6. Line 124 is inside a bracket, though it reads as an independent information

7. Line 125 reads “…the nine inspection points are all taken at 45 mm of the scanning length”. How was this distance arrived at? How will the results change if you have look at a different position?

8. Lines 135 to 136 describing the way crack rate average is calculated is confusing and needs to be rewritten.

9. The very critical parameter: crack rate has not been defined. The authors do not explain how they measured the “rate”.

10. Some figures and some tables have the same number: Example Figure 3 and Table 3

11. What is the error on crack rate in Figure 3?

12. In line 236 it says “ the three process parameters depend on and restrict each other”. The referee is confused – if they are dependent on each other how was orthogonality testing applied. Orthogonality testing assumes that process parameters are orthogonal to each other. The referee thinks the authors are talking about the cracks as process parameter changes and not about the process parameters themselves.

13. line 246 instead of crack rate authors have written crack ratio.

14. Line 254, it says the regression fit is to data in Table 1, which the referee is assuming to be Table 3. There are 4 fitting parameters including the coefficient with 9 data points which makes the model highly specific to the model and cannot be generalized. So, the aim of the manuscript is defeated. The authors should have fit with a much larger data set.