Dear reviewer,

thank you for your comments and suggestions for improving our manuscript. Based on your recommendations, we've edited the manuscript as follows:

The authors in the work assessed the dilatation of new progressive hybrid sand and its effect on surface structure, roughness and veining creation within grey cast iron. The aim of the experiment was to compare the quality of the cast surface of grey cast iron castings, which is influenced by the degree of thermal expansion of the sand core. Hybrid mixtures consisting of silica sand and Cerabeads artificial sand were created to reduce the linear dilation and thus reduce the risk of stress defects such as veining and surface roughness. The authors have made an analysis of the granulometric composition of the hybrid mixtures as well as the initial samples, determination of the dilatation behavior and point bending strength of the fabricated cores, the causes of the formation of veining and increased roughness on the cast surface of the fabricated castings during the casting test were determined.

The article is very interesting, it raises a number of problems resulting from the casting production processes. As a reviewer of this work, however, I believe that the reviewed work requires many corrections, which will undoubtedly improve its quality. There is chaos in the work, the discussion is not a discussion but an analysis of the results (no comparisons to other works). There are a lot of errors:

- *Discussion has been improved with references as suggested.*

1. Line 135 - title in English;

   - *The title has been corrected*

2. Lines 226-228 - this is probably a mistake;

   - *Thank you for mentioning. It was a mistake. The text has been removed.*

3. Line 281- table 3. What is Sx?

   - *Sx is standard deviation. The standard deviations were accidently deleted during formatting of the text without noticing. The missing values were added into the Table 3. We very regret this mistake.*

We hope that you will find our edits to be a step towards improving the submitted paper.

Kind regards

Martina Bašistová