The authors could not validate their work with any numerical or experimental one which means we could not trust to their solution procedure accuracy.

Response to reviewers:

We consider that we have satisfactorily answered to the questions of all reviewers, particularly to reviewer 2. Here are the main questions of reviewer 2:

1) The details of "mesh-independence analysis" should to be added to the manuscript. It means that at least 1-2 graph or figure should be added to the present manuscript to show the mesh-independence analysis.

Answer:
A mesh-independence analysis was carried out, and the corresponding Section was added to the manuscript. Several meshes with different number of elements were tested in order to achieve consistent results. Computer simulations showed that beyond 56 000 elements no significant changes in the numerical results were exhibited by the system variables, so this number of elements was employed in the subsequent numerical runs.

We consider that the above explanation justifies the number of elements employed in the computer simulations. Besides, we don´t have at hand intermediate results.

2) At least 1-2 "Numerical Procedure Validation" should be added to the manuscript. It means this work should be compared with other works now, not in the future! Without this validation, the reliability of the present numerical procedure is not clear.

Answer:
A Validation Section was added to the manuscript. Validation is defined as the process of determining the degree to which a model is an accurate representation of the real world from the perspective of the intended uses of the model \cite{Aiaa98}. The process for validation assessment of a CFD simulation encompasses, among other factors, mesh-independence, temporal convergence and comparison of CFD results to experimental data \cite{Aiaa98}. Mesh-independence is considered in Section \ref{sec:mesh}. Temporal convergence is obtained by considering a time step of 1x10^{-4} s, which yielded residuals under 0.01. However, a direct comparison of CFD results to experimental or published ones is not possible given that no data are available.

It is well known that, given a lack of experimental or published results, a proper mathematical model with spatial and temporal convergence guarantee some soundness and reliability of computer simulations. The contrary constitutes a XIX century positivist argument! No theoretical advances of science would be possible if every result is going to be immediately confronted with experimental results. The comparison can be made later by the same or by different researchers.