



Fig. 11 Distribution curve of velocity after improvement

Some conclusions can be obtained from Fig. 11 as follows:

1) The velocity of flow field after improvement is greater than the velocity in the original project;

2) With regard to the project of reducing size to 2.34mm shown in Fig. 8, the velocity of the improvement method depicted in (a) is a little larger than the velocity of the improvement method depicted in (b) in the corresponding position. The method depicted in (a) is more superior;

3) About the project of reducing size to 1.34mm shown in Fig. 9, the velocity of the improvement method depicted in (a) is a little larger than the velocity of the improvement method depicted in (b) and (c) in the corresponding position. The method depicted in (a) is more superior;

4) The velocity of the improvement method depicted in Fig. 9(a) is a little larger than the velocity of the improvement method depicted in Fig. 8 and Fig. 10. The method depicted in Fig. 9(a) is more superior.

Therefore, in order to improve the flow field velocity in the domain of work of turbine, the method to improve the shape of the submunition is effective. The method depicted in Fig. 9(a) is more superior than the other methods. The reduction in width of the top size of step can improve the flow field velocity in the domain of work of turbine effectively.

V. CONCLUSION

This paper provides a kind of MEMS suitable for submunition fuze and analyses the flow field in the domain of work of turbine with simulation. The simulation result demonstrates that the flow field velocity in the domain of work of turbine is small under the current outline dimension of submunition, which can't meet the power requirement. This paper improves the outline dimension to increase the velocity, especially in the step near the turbine work area. The simulation result proves that the reduction in width of the top size of step can improve the flow field velocity in the domain of work of turbine effectively. This method is an effective measure to improve the flow field in the domain of work of turbine, which has a value of further research.

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