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Title: The Study on Aerodynamics Evaluation of Winged Guided Bullet

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摘要: 为研究某种大口径可折叠尾翼式修正枪弹的飞行气动特性,建立了该枪弹的计算模型。对该计算模型在不同攻角、不同飞行马赫数下的气动力进行了仿真计算,分析比较了工程计算软件Missile Datcom和数值计算软件FLUENT二者计算结果的差异。结果表明该计算模型具有良好的气动特性,导弹计算程序Missile Datcom适用于枪弹模型的仿真计算。根据两种程序的不同特点,可以在不同的设计阶段加以运用。

Abstract: In order to research flight aerodynamic characteristics of a large-caliber guided bullet with folded wings, a bullet model was established.The aerodynamic force of the guided bullet was calculated and simulated at different attack angle and different Mach. The results of engineering algorithm software Missile Datcom and the numerical algorithm software FLUENT were compared. The results show that the guided bullet model has good aerodynamic characteristics. The software Missile Datcom has the applicability to calculate aerodynamic parameters of the bullet model. Based on the differences between these two softwares, they can be used in different stage of design.

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