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Process for the Target-Related Correction of A Ballistic Trajectory

Abstract

In order to perceptibly reduce the inevitable trajectory scatter or spread of ballistically fired projectiles in the target area without the technological expenditure involved in automatic target-seeking control, and in order thereby substantially to improve the level of target hit accuracy, the minimum trajectory path is laid through the previously ascertained target position, having regard to the error budget of the weapon and the external influencing parameters to be expected so that all real trajectories up to the maximum trajectory of that overall error budget are behind the target position. The descent of the projectile into the target area is then shortened from the real trajectory to the minimum trajectory, that is to say towards the target position. For that purpose, attainment of the optimum initialisation point, which is dependent on the theoretical remaining flight time, for the aerodynamic braking device on the projectile is determined on the real trajectory by a procedure whereby the real trajectory is continuously measured by means of satellite navigation, and the approach to the point of intersection with the triggering curve, that is to say the sequence of optimum initialisation points for the array of real trajectories, is established in dependence on interference, from which a transitional trajectory is adjusted to match the minimum trajectory through the target position.

Figure 1



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