A TYPICAL PURSUIT COURSE FOLLOWED BY A MISSILE: THE

INCLINATION OF THE TRAJECTORY IS TWICE THE

LEAD ANGLE AT ALL TIME INSTANTS

S. N. MAITRA

Retired Head of Mathematics Department, National Defence Academy, Khadakwasla, Pune, India

ABSTRACT

In this paper is investigated a typical pursuit course wherein a missile is guided in order that the angle made by the missile velocity vector with the line of sight from the missile to the target is always twice the angle between the target velocity and the latter. For the sake of simplicity, the motion considered here is two-dimensional. Both the missile and the target move with constant velocities. For this typical pursuit, case is determined the pursuit trajectory, ie, an equation of path of the missile relative to the target and also the time of flight defined by the total elapsed- a time of the missile from launch to impact. Three numerical examples have been worked out.

KEYWORDS: Missile, Trajectory & Two-Dimensional

Original Article