

ABHYAS



Aerial targets assume an important place in the defence eco-system of the country. ABHYAS, a High-speed Expendable Aerial Target (HEAT), designed and developed by Aeronautical Development Establishment (ADE), DRDO, Bengaluru has completed ten successful flight trials with all

objectives of project met. The recent flight trials have demonstrated the reliability of the system with speed of 0.5 Mach, maximum altitude of 6 km, minimum altitude of 10m, 2 'g' manoeuvrability, range of 100 km and endurance of more than 45 minutes with repeatability. These specifications of ABHYAS are at par with equivalent expendable aerial targets realized worldwide. Various ABHYAS configurations with different payloads towards RCS, IR and visual augmentation required for efficient training of tracking and targeting the flying objects have been successfully flight tested. Two of these launches were successfully conducted back to back within a gap of 30 minutes which exhibit the efficacy of design leading to minimum time required for clearance of system between launches. Thus, the ease of operation and requirement of minimum logistics towards flight trials have been demonstrated as important features of ABHYAS.

As part of indigenization, ADE designed systems with miniature cutting edge technologies, autonomous flying with an autopilot and compact laptop based Ground Control System (GCS) have been integrated in ABHYAS. The GCS is capable of carrying out aircraft integration, pre-flight checks as well as autonomous flight and has feature for recording data during flight for post flight analysis. ABHYAS is launched by the booster designed by Advanced Systems Laboratory (ASL), Hyderabad and is flown with a small gas turbine engine. It uses the navigation system designed by Research Center Imarat (RCI), Hyderabad.

With this, ABHYAS is capable of artillery, air-to –air combat, battleship target practices by Tri-services and evaluating newly developed missiles by DRDO. Its configuration can be further tailored with minor modifications for conducting various missions such as Kamakazi drone, loitering munitions, Manned Unmanned Teaming, decoy etc.

Two identified Production Agencies (PAs), M/s L & T and M/s HAL, have been involved in manufacturing, system integration and flight trials. With these identified Production Agencies, ABHYAS is realized as a cost effective system ready for production with export potential.

**Source : Director
Aeronautical Development Establishment, DRDO**