LIGHT WEIGHT INTEGRATED AIRCREW HELMET

(Su-30 HELMET)

The use of specific Protective Equipment and Flying Clothing by a Fighter Pilot is mission oriented and the importance of providing light weight solutions to enhance long endurance missions is widely acknowledged. Light Weight Integrated Helmet is one of the flying clothing products which are undertaken under ALSP Program (DEB-116) to meet specific requirements of the User's operating Fighter Aircrafts and Helicopters. Helmet as a head gear is essentially a life saving device and hence the item has to be retained around wearer's head when subjected to the effects of air friction during the process of ejection. Thus, the retention of the Helmet-Mask is of paramount importance to ensure the safety and survival of the Pilot.

DEBEL has designed and developed state of art light weight integrated internally retractable Polycarbonate Visor based Aircrew Helmet equipped with Helmet mounted Sight and Display mount, Preamplifier for Su30, MiG series and has met various MiL standards including the wind blast test at 600 KEAS by simulating crash scenario in 6 different profiles. The date obtained in the wind blast test was analysed for Neck load limits by Institute of Aerospace medicine Specialist and found to be well within the limits.

Salient Features

a. Impact Attenuation and Penetration Resistance (As per MIL-DTL-87174A) achieved by using hybrid aramid fabrics and Epoxy Resin.
b. Optical and Ballistic Grade PC Visors for protection of eyes and face from Wind Blast, sun Glare, UV light, Bird Hit, etc. (As per MIL-DTL-43511D& MIL-V-29591/1 (AS) respectively)
c. Noise attenuation covering low (125 Hz) to high frequency (8KHz) [As per MIL-DTL-83425A].
d. Equipped with Preamplifier (EMI/EMC complied) to enhance signal output of Microphone
e. Effective mechanisms to Anchor Pressure Breathing Oxygen Mask with flexibility in adjustments as per individual's requirement.
f. Provision to Mount HMSD on the outer surface of the shell to provide situational awareness to the pilot
g. Ventilation holes to prevent heat stress and allow air circulation.
h. Microencapsulated Phase Change Materials (MPCM) adjustment pads provided in different thickness for effective fitment and thermal management.
i. Visor movements/ Selection of visor for day and night sorties

Su-30 Helmet