Sambhram Academy of Management Studies
Training Program for Aviation Students

The Report

Industrial visit to Yelahanka Air force, Military flying base was carried out on 17th August, 2022 for Sixth and Fourth Semester BBA Aviation students. The main objective was to make students aware about how various activities related to maintainance, operations and human resource are carried out in Air Force and give them professional touch enabling start career after Graduation. As soon as we reached there, we were guided by Mr. Patel to Air field of Mi-17 (Mikhail Mil**)** military/transport helicopter is designed to carry personnel, cargo and equipment inside the cargo cabin or on an external sling, drop tactical air assault forces and reconnaissance and sabotage groups, destroy ground targets and carry the wounded. Additional versions of the helicopter are available: search & rescue, fire-fighting, ambulance, and corporate. The helicopter is equipped with a modern avionics suite providing round-the-clock employment of the helicopter and weapons. Its armament system includes unguided rockets (up to 80 S-8 80mm unguided aerial rockets), cannons (suspended pods with 23mm cannons and 250 rounds each) and small arms. The helicopter is fitted with a self-defense system against heat seeker missiles, heavily-armored cockpit, vital systems and components, and features enhanced survivability.

Main advantages areoperability in any geographical and climatic conditions, day and night, in adverse weather, operability in high-altitude and hot conditions, versatility (capability to effectively perform assault/transport and combat tasks during one mission sortie),capability to land on unprepared sites at night and in limited adverse weather conditions, heavy armor protection, high target approach accuracy through the use of a satellite navigation system, high safety and single-engine flight and landing capability and efficient loading/unloading of cargo and paratroopers through the presence of two doors on the sides of the helicopter and a powered ramp.

Later we reached Air Force hangar where maintenance of (Antonov) AN-32 was continuing. The AN-32 has been the workhorse of the Indian Air Force (IAF). Hundreds of crew operates these aircraft and thousands are involved in maintaining this fleet today and we owe it to them. The AN-32 was a brand-new design when it entered the service in 1986, with the IAF as the 'launch customer'. It proved reliable and its powerful engines gave high safety margins, especially while operating over the Himalayas. However, the aircraft aged quickly in service, requiring repairs and increased maintenance. Cumulatively, these contributed to AN-32's early ageing. An 'upgrade' was proposed in 2009 to improve the structural integrity, avionics and communication suits. It is reported that some 46 aircraft out of over a hundred in the AN-32 fleet have been upgraded so far. A slow pace indeed! The necessity to upgrade the aircraft arose out of obsolescence and wear and tear. However, considering the delays and further ageing, spares would become more expensive and difficult to acquire. The IAF is the only major operator of the AN-32 in the world today. Operationally, the powerful engines of the AN-32 have high vibration levels and are 'noisy' to fly over long durations, which could get tiring and induce fatigue. While it would be sensible to upgrade to get more mileage out of the fleet, a better utilization would be to restrict the aircraft's use only for training and communication purposes. In that case, we could, depending on the contract, cut down on upgrading the remaining aircraft in the fleet. We urgently need a new induction that can carry a better payload, is quieter, and flies longer range with modern avionics, sensors, navigation and related equipment.

While military management and progression of 'modernization' have been routinely criticized, nothing much has come off them. There may have been a few revised Defense Procurement Procedures – the Bible to follow for procurement process – but the complexity and time taken for the process to reach a productive conclusion have not changed. The progress of cases moves into various 'silos', but the accountability rests on the shoulders of the service headquarters.

Later we approached DORNIER, the aircraft which is a highly versatile multi-purpose light transport aircraft. It has been developed specifically to meet the

manifold requirements of utility and commuter transport, third level services and air-taxi operations, coast guard duties and maritime surveillance. It has Turboprop engine and also can be used as Air-Ambulance when necessary. We also saw a Micro-lightAircraft; its passenger capacity is two which is use for surveillance.

After MI-17, AN-32, D-228 Dornier and Micro-light Aircraft, our team with Air Force personnel Mr. Manoj reached to Air Traffic Control. Wing Cdr Cha (SATCO) welcomed us to his office for briefing on ATC functioning. He also explained how ATC is carried out in normal weather condition and with serviceable Radio Telephony and other provisions are provided to re-enroot the aircraft in bad weather condition and in case of right engine failure. How visual aids are displayed on ground and interpreted to pilot for emergency recovery of airplanes was also explained. We divided students group into three batches. Ten each moved to ATC tower and witnessed full flying provisions/environment. Various ways of means for controlling the ATC using SATCO was illustrated. The traffic from KIAL approach radar in monitored from Yelahanka ATC, procedure of identification of Aircraft on radar scope, there direction, altitude, speed was shown and discussed. Students experienced practical activities on Runway, Taxiway, Terminals, Take-off and landing. Overall it was such a practical visit ever seen before. We left Military Flying Base at twelve thirty and reached back to college by one thirty respectively.