

In Thrust, We Trust!

India's race against time to develop an indigenous high thrust class engine for AMCA



The Indian Air Force is gearing up for the next generation, ever evolving, multi-domain collaborative combat environment. And for that, many highly ambitious programmes have been initiated to meet critical requirements. Of all these, undoubtedly, an initiative for a high thrust class engine for the next generation combat platforms is the most pivotal. The engine is the only thing that can make the customer at the mercy of the provider. So, for independence and self-reliance in the true sense, an indigenous engine with required capabilities is a must. Currently, only a few countries have successfully mastered the required technologies and are now thrusting towards the next generation one. But for India, it's the stepping stone, as the Kaveri programme didn't yield the necessary result.

Who is at fault for the failure of the Kaveri programme? It's not easy to give a simple one line answer. But yes, four points must be mentioned, which can be attributed as key reasons. One, discontinuity at a point of arguably good progress; two, minuscule funding compared to the investment by other nations; three, lack of critical technologies in metallurgy; and four, lack of critical infrastructure and test beds. But thankfully, a measure of course correction has been initiated.

For the AMCA and TEDBF, India will need a new generation advanced engine with high thrust. So, India has initiated the Advanced High Thrust Class Engine (AHTCE) programme, aiming to bridge the crucial gap with other countries leading in this front. It will be led

by the Gas Turbine Research Establishment (GTRE). But the biggest hindrance is India's limited prowess in some necessary leading edge technologies. And for the development of those crucial technologies, India is looking for a foreign partner for co-design and development. The idea is, with the help of the partner, India will be able to have a leap in the highly complex technologies in a comparatively shorter time than it would have taken in a solo journey. As India acquires proficiency through 100% transfer of technology, it will hold the intellectual property rights, or IPR, which will allow India to make further improvements when necessary and have a seamless export of indigenous platforms powered by indigenous engines without any restriction.

Meanwhile, GTRE has invited an Expressions of Interest (EoI) from Indian defence and aerospace companies to partner as Development cum Production Partner (DcPP) for the AHTCE programme. The selected partner will support

