

## Anonymous letter threatens vital Tejas 1A project

By Ajai Shukla

*Letter says national resources being wasted in importing AESA radar, though DRDO had developed one*

Not for the first time, an anonymous letter to the ministry of defence (MoD) threatens to delay, if not derail, a vital defence programme: in this case, the Rs 20,000 crore project to develop and build 83 Tejas Mark 1A light combat aircraft, which the MoD sanctioned in November.

On Tuesday, MoD officials, led by Additional Secretary Surina Rajan, met to discuss an unsigned petition the MoD had received against the decision to import a radar for the Tejas Mark 1A fighter. This alleged that national resources were being frittered away in importing an airborne active electronically scanned array (AESA) radar, even though the Defence R&D Organisation (DRDO) had developed indigenous AESA radar.

The anonymous complaint follows a DRDO letter, dated January 5, informing the MoD that it was “working on development of AESA radar” that fully complied with the Tejas Mark 1A requirements. The DRDO requested that it also be given the tender that HAL had issued to global manufacturers of AESA radars.

The letter, which Business Standard has reviewed, makes it clear that the DRDO AESA radar is still far from ready. It notes that two Tejas prototypes are being allotted for “installation and flight evaluation” of its AESA radar. This essential testing process is typically an extended one.

The MoD’s cognizance of the anonymous complaint is already delaying the fast-track development of the Tejas Mark 1A by Hindustan Aeronautics Ltd (HAL); and, thereby, the entry of four Tejas Mark 1A squadrons into the Indian Air Force (IAF) fleet.

As Business Standard first reported (August 13, 2015 “With Tejas Mark II years away, HAL asks air force to buy Tejas Mark 1A”), the Tejas Mark 1A was conceived as an upgraded Tejas Mark 1, with four specific improvements to meet the IAF’s requirements as an operationally capable fighter.

Four key stakeholders – MoD, IAF, HAL and DRDO – agreed together that HAL would enjoy a free hand, including resorting to global purchases, in expeditiously making those four improvements to the Tejas Mark 1. After demonstrating the upgraded fighter to the IAF’s satisfaction by 2018-19, HAL would quickly build 83 fighters (four squadrons) of Tejas Mark 1A.

Of the four upgrades, the most operationally crucial involved equipping the Tejas with AESA radar, in place of the Tejas’ manually scanned Israeli Elta EL/M 2032 radar; and a “self-protection jammer” (SPJ) carried in an external pod under the Tejas’ wing.

Two other upgrades – improving the “maintainability” of the fighter, and fitting it with external refuelling capability are already well in hand.

AESA radar enjoys battle-winning advantages over traditional “manually steered” radar. In the latter, the antenna moves manually to let its radar beam scan the sky for enemy targets. In AESA radar, the beam moves electronically, switching rapidly between many different objects, in effect scanning multiple targets simultaneously. Thus, the “multi-tasking” AESA radar can simultaneously track different enemy aircraft, guide missiles to those, and even radiate electro-magnetic pulses to jam enemy radios and radars. The IAF has concluded that AESA radar would add enormously to the Tejas’ combat capability.

With the DRDO still struggling to miniaturise the AESA enough to fit it in the Tejas fighter’s nose cone, HAL issued a global tender for AESA radars to vendors that included Raytheon (USA), Thales (France), Saab (Sweden) and Israel Aerospace Industries. HAL is currently evaluating the bids that were submitted.

“We must place our order within a couple of months. If we start exploring the DRDO route, we can never meet the deadline of 2018-19”, says a senior HAL executive, speaking off the record.

For now, however, it remains unclear whether the MoD will ignore the anonymous letter, or whether yet another lengthy investigation will ensue.

Disruption of the Tejas Mark 1A time line would also result in the HAL production facility lying unemployed after 2019, when the current order of 20 Tejas Mark 1 fighters would have been delivered.

HAL, which will produce eight Tejas fighters this year, is also implementing a Rs 1,231 crore project to upgrade its production line capacity to 16 Tejas fighters per year. At that production rate, it would complete delivery of 83 Tejas Mark 1A fighters by 2023-24.