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Defence minister Arun Jaitley interacts with a pilot during the launch of production of HAL-designed LCH and dedicate the Hawk-i to the nation at HAL airport in Bengaluru on Saturday.

— PTI



Jaitley for desi defence equipment to face any threats from outside

It has been said that no country can win battles by being dependent on other countries and being buyer of defence equipment — Arun Jaitley

As India is facing a standoff with China at Dokalam, Defence Minister Arun Jaitley called for manufacturing of desi defence equipment to face any threats from outside.

In his address at Hindustan Aeronautics in Bengaluru on Saturday he said “In the present geopolitical situation, India has been located sensitively. We've had multiple threats in the past. Therefore, preparedness is something India can never compromise on”.

Defence Minister visited HAL, BEL and BEML, the three defence PSUs in Bengaluru on Saturday.

Giving an edge to Indian defence forces, Hindustan Aeronautics Limited (HAL) designed Light Combat Helicopter (LCH) is ready and begins its production. As Indian defence forces need more copters the production of desi LCH under make in India programme adds teeth to the forces. Defence Minister Arun Jaitley inaugurated the production facility at HAL and also dedicated HAL's role changer design upgrade program of Hawk-i to the nation.

The Defence Acquisitions Council has given its approval for the procurement of 15 LCH. These will be used by the Indian Air Force (IAF) and the Indian Army. HAL designed 5.8 ton category Light Combat Helicopter

was designed by HAL's Rotary Wing R&D Centre and Mission & Combat System R&D Centre (MCSRDC) designed the Hawk-I in association with the Aircraft Division.

The basic version of LCH has been cleared by CEMILAC. The DAC has accorded approval for procurement of 15 LCH from HAL under IDDM category.

“Traditionally even though we had young DPSUs and ordinance factory, we've been heavily dependent on the rest of the world for buying, both in terms of equipment and technology. This has been ironic because Indians have taken to technology. R&D centres have been shifting to India. Our ability to throw out people efficient in technology is second to none. Therefore it was necessary for us to come out of this mindset that India is a buyer of defence equipment to manufacturer and seller of defence equipment” Jaitley said.

He said “ Two launches, the LCH and Hawk i. With this kind of competitive environment our DPSUs are coming to the fore. We need to put our entirely behind the defence forces. The nature of this business is such that there are very few suppliers and only one buyer, the government”.

“We've made important changes in DPP A where some platforms are being thrown open to the private sector, from whom our government can buy. Considering the size of our requirement I'm glad so many have shown interest.

It is important that DPSUs, entrepreneurs coupled with the size of our market so that India becomes a supplier to other countries, from being a net buyer” he added.

HAL designed the twin engine Light Combat Helicopter (LCH) of 5.8 Ton class featuring narrow fuselage and tandem configuration for pilot and co-pilot/ weapon system operator. The helicopter has indigenous state of the art technologies like integrated dynamic system, bearing less Tail Rotor, anti-resonance vibration isolation system, crash worthy landing gear, smart glass cockpit, hinge less main rotor, Armour Protection and stealth features from visual, aural, radar and IR signatures. The helicopter is equipped with 20mm Turret gun, 70 mm Rocket, Air to Air Missile, EO-Pod and Helmet pointing system. The helicopter can carry out operational roles under extreme weather conditions at different altitudes from sea level, hot weather desert, cold weather and Himalayan altitudes. The LCH has demonstrated capability to land and take off from Siachen Range with considerable load, fuel and weapons that are beyond any other combat helicopter.

HAL produced its 100th Hawk jet trainer aircraft with designation as Hawk-i; (Hawk-India). HAL took up the indigenous role change development program to convert the jet trainer into a Combat-Ready platform.

T. Suvarna Raju, CMD, HAL said the Light Combat Helicopter and Hawk-i would provide the country extra potential to have additional combat resource and the programs are truly 'Make in India', capable of generating employment opportunities in the country including MSME & Service sectors. These programs ensure public-private industry participation. There will be a significant spin-off in the form of development of an eco-system for manufacture and in meeting the objectives of “Skill India” initiative in Aerospace and Defence in the country.

Business Standard

Sun, 27 Aug, 2017

Arun Jaitley inaugurates manufacture of light combat helicopter at HAL

By Ajai Shukla

Also, launches upgrade of Hawk jet trainers into combat aircraft

On Saturday in Bengaluru, Defence Minister Arun Jaitley underlined the growing capabilities of Hindustan Aeronautics (HAL) by inaugurating the production of the indigenous design Light Combat Helicopter (LCH), which HAL has designed, developed and will now manufacture.

On November 7, 2016, the defence ministry had cleared a Rs 2,911-crore procurement of 15 LCHs as a “limited series production” (LSP) order – a little under Rs 200 crore per helicopter. But top HAL sources tell *Business Standard* the final cost would work out to Rs 231 crore per LCH at 2017-18 prices.

This is less than half the cost of the AH-64E Apache attack helicopters the Indian Air Force (IAF) has bought from Boeing, US. The Apache is more heavily armed and armoured and has the sophisticated Longbow fire control radar. The LCH does not yet have radar, but HAL intends to develop one before mass production begins.

HAL is building the 15 LSP choppers at its Bengaluru helicopter complex. However, the army has committed to ordering 114 LCHs, and the air force another 65, which could be built at an upcoming helicopter production facility in Tumkur.

HAL has custom-designed the 5.8-tonne LCH to provide fire support to the army at mountainous deployment areas on the northern borders, which can be as high as 6,000 metres (almost 20,000 feet).

At these rarefied altitudes, where the shortage of oxygen prevents troops from carrying heavy weapons into battle, the LCH will provide crucial fire support with its 20-millimetre turret gun, 70-millimetre rockets and, to be incorporated later, a guided missile.

“The LCH has demonstrated [the] capability to land and take off from Siachen Range (sic) with considerable load, fuel and weapons that are beyond any other combat helicopter,” stated HAL on Saturday.

Highlighting the LCH’s versatility, HAL stated: “The helicopter can carry out operational roles under extreme weather conditions at different altitudes from sea level, hot weather desert, cold weather and Himalayan altitudes.”

The superb high-altitude performance of the LCH, like that of its precursor in service, the Dhruv advanced light helicopter (ALH), stems from twin Shakti engines, designed for HAL by French helicopter engine maker Turbomeca (now Safran Helicopter Engines), and built in Bengaluru. While the Shakti’s performance at low altitudes is comparable to other engines of its size, it outperforms them significantly at altitudes above 5,000 feet.

The LCH has a narrow fuselage, in which two pilots sit one-behind-the-other in an armoured cockpit that can protect them from small arms firing. Like the Dhruv ALH, on which many of the LCH’s flying technologies were tested, the new attack helicopter has a hinge-less main rotor, a bearing-less tail rotor, integrated dynamic system, crashworthy landing gear and a smart all-glass cockpit.

The LCH’s weapons and sensors were developed and tested on an armed variant of the Dhruv, called the Rudra. HAL’s chairman, T Suvarna Raju, says this evolutionary approach drastically cut down on the LCH’s development time.

The current order does not include a provision for “performance based logistics” (PBL), which constitute an HAL guarantee that a specified percentage of the fleet is available at all times.

As *Business Standard* reported on March 30 (In a first, HAL assures 75% availability of Dhruv fleet) HAL signed its first PBL contract for the Dhruv, requiring it to position maintenance teams in up to 40 army aviation bases and two maintenance, repair and overhaul (MRO) hubs in the north and east, from where repair teams could respond to maintenance requests from aviation bases.

Hawk trainer upgrade

Jaitley also inaugurated an HAL-BAE Systems development programme that aims to enhance the Hawk trainer aircraft from an advanced jet trainer (AJT) into a combat-capable platform that “is capable of delivering precise munitions, including air to ground and close combat weapons”, according to HAL.

Unlike most fighter aircraft, including the Tejas, the Hawk cannot fly at supersonic speeds. Yet, there is a need for lower-performance combat aircraft that can fly and manoeuvre in valleys to support army soldiers in an environment where there is no major enemy air threat.

While the IAF has not yet committed to buying the so-called “combatised Hawk”, the presence of Jaitley at the dedication ceremony is significant.



Sun, 27 Aug, 2017

Russian tanker completes Arctic passage without icebreakers

By Russell Goldman

Rapid changes to the climate have altered the region’s ice making the trip possible, says ship’s owner Sovcomflot

A Russian-owned tanker, built to traverse the frozen waters of the Arctic, completed a journey from Europe to Asia in record time this month, auguring the future of shipping as global warming melts sea ice.

The Christophe de Margerie, a 984-foot tanker built specifically for the journey, became the first ship to complete the Northern Sea Route without the aid of specialised ice-breaking vessels, the ship’s owner, Sovcomflot, said in a statement.

Navigational dream

The journey was the culmination of a centuries-old navigational dream and of a decade-long plan by President Vladimir Putin of Russia, whose government has indicated it plans to take political and economic advantage of changes to the Arctic’s climate.

“This is a big event in the opening up of the Arctic,” Mr. Putin said of the tanker’s maiden voyage this year.

The ship, transporting liquefied natural gas, completed the trip from Norway to South Korea on August 17 in 19 days, 30% less time than the regular route through the Suez Canal requires, the company said.

Shorter route

Sailors have for centuries sought a navigable Northwest Passage: a shorter, faster route between the Atlantic and Pacific oceans that crosses the Arctic.

Historically, thick ice made the journey impossible. In the last century, specialised ice-breaking vessels made the trip plausible, but prohibitively expensive, and then only during the summer, when the ice was thinnest.

But rapid changes to the climate have altered the region’s ice, and Sovcomflot said in a statement it believed the ship could make the journey “year-round in the difficult ice conditions”.

The ship is named for Christophe de Margerie, former chief executive of the French energy company Total who was killed in a plane crash in Moscow in 2014.

Expensive journey

The first of a planned fleet of 15 similar tankers, the ship has a reinforced steel hull that allows it to break ice up to 4 feet thick.

Fewer than 500 ships have made the journey since the route was first completed in 1906.

The route remains expensive. A report last year by the Copenhagen Business School concluded that trans-Arctic shipping would not become economically viable before 2040. NYT

N. Korea tests ballistic missiles

Seoul/Washington, Aug. 26: North Korea fired several short-range missiles into the sea off its east coast early on Saturday, South Korea and the US military said, as the two allies conducted annual joint military drills that the North denounces as preparation for war.

The US military's pacific command said it had detected three short-range ballistic missiles, fired over a 20 minute period. All of the missiles failed, with one blowing up almost immediately after launch, while two others failed in flight, it added.

The South Korean office of the joint chiefs of staff said the projectiles were launched from the North's eastern Kangwon province and flew in a northeasterly direction

about 250 km (155 miles) into the sea.

Later on Saturday, the South Korean Presidential Blue House said the North may have fired an upgraded 300-mm calibre multiple rocket launcher but the military was still analyzing the precise details of the projectiles.

Pacific command said that the missiles did not pose a threat to the US mainland or to the Pacific territory of Guam, which North Korea had threatened earlier this month to surround in a "sea of fire".

Tensions had eased somewhat since a harsh exchange of words between Pyongyang and Washington after U.S. President Donald Trump had warned North Korean

leader Kim Jong Un he would face "fire and fury" if he threatened the United States.

North Korea's last missile test on July 28 was for an intercontinental ballistic missile designed to fly 10,000 km (6,200 miles). That would put parts of the US mainland within reach and prompted heated exchanges that raised fears of a new conflict on the peninsula.

Japan's chief cabinet secretary Yoshihide Suga said the missiles did not reach its territory or exclusive economic zone and did not pose a threat to Japan's safety.

The South Korean and US militaries are in the midst of the annual Ulchi Freedom Guardian drills, which the North routinely

describes as preparation for invasion, that involve computer simulations of a war to test readiness and run until the date, August 31. The region where the missiles were launched, is known for military test site.

— Reuters

▶ North Korea's last missile test on July 28 was for an intercontinental ballistic missile designed to fly 10,000 km

▶ The region where the missiles were launched, Kittaeryong, is a known military test site frequently used for missile drills

'Pyongyang working on new N-reactor'

Vienna, Aug. 26: North Korea has increased its efforts to produce parts for a new nuclear reactor it is building while continuing to operate the main existing one that provides fuel for its atom bombs, the United Nations nuclear watchdog has said in an annual report on Friday.

It has conducted two nuclear tests and dozens of missile tests since last year, defying world powers and raising fears of a con-

flict breaking out on the heavily militarised Korean peninsula.

A missile test last month put the mainland United States in range. Pyongyang later said it had a plan to fire missiles at the US Pacific territory of Guam, while US President Donald Trump said any threats would be met with "fire and fury".

US Ambassador to the United Nations Nikki Haley said on Friday, "It's a concern, it shows that

North Korea hasn't backed down, they haven't stopped what they are doing and it is the reason why we continue to have our guard up when it comes to North Korea."

— Reuters