

*Fri, 18 Nov, 2016
(Online)*

Make in India' exhibition - Manohar Parrikar

New Delhi: Union Minister for Defence Manohar Parrikar being briefed about the working of NACSâ “Near-field Acoustic Characterisation System, developed by DRDO, by the Chief of Naval Staff, Admiral Sunil Lanba and the Secretary, R&D and Chairman DRDO, Dr. S Christopher at the 'Make in India' exhibition, put up by DRDO in New Delhi on Nov 18, 2016.



The Indian Awaaz
The real voice of India

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DRDO achieved many success in last 2 years: Manohar Parrikar

Defence Minister Manohar Parrikar said, DRDO have achieved many success in last two years. He was addressing a function for Induction of DRDO developed equipment into the Indian Navy in New Delhi. He said, Tejas, Rustom 2 and up gradation of Pinaka are the latest achievement of DRDO.

Mr Parrikar formally handed overs four Naval sonar systems to the Chief of the Naval Staff Admiral Sunil Lanba.

On the occasion, Mr Parrikar and Minister of skill development and entrepreneurship Rajiv Pratap Rudy presented skill certification to retiring Navy Personnel.

Mr Rudy said, the biggest challenge for the government is to find skill trainers . He said, large pool of trainer can be found from retiring Personnels.

Taking to media DG (Naval Systems and Materials) DRDO Subhash Chandra Sati said the indigenously developed sonars will boost the force's underwater surveillance capability.

The systems inducted include Abhay – compact hull mounted sonar for shallow water crafts, Humsa UG – upgrade for the Humsa sonar system, NACS – Near-field Acoustic Characterisation System, and AIDSS – Advanced Indigenous Distress Sonar System for submarines. The systems have been designed and developed by NPOL, a Kochi based laboratory of DRDO.

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Make in India in defence: Navy inducts 4 indigenous sonars

The systems have been designed and developed by Naval Physical and Oceanographic Laboratory

The Indian Navy on Friday formally inducted four types of indigenously developed sonars that will boost its underwater surveillance capability.

The systems included Abhay, which is a compact hull mounted sonar for shallow water crafts; Humsa UG, which is an upgrade for the Humsa sonar system; NACS, or the Near-field Acoustic Characterisation System; and AIDSS, or the Advanced Indigenous Distress sonar system for submarines.

Defence Minister Manohar Parrikar, who on Friday handed over the sonars to the Navy, praised the force along with the Defence Research and Development Organisation (DRDO) and said he expects more synergy in the coming days. The systems have been designed and developed by Naval Physical and Oceanographic Laboratory, a Kochi-based laboratory of DRDO.

With the induction of these four systems, the underwater surveillance capability of the Indian Navy will get a boost, besides providing a fillip to the quest for self-reliance in this critical area of technology.

Abhay is an advanced active-cum-passive integrated sonar system designed and developed for the smaller platforms such as shallow water crafts and coastal surveillance/patrol vessels.

It is capable of detecting, localising, classifying and tracking sub-surface and surface targets in both its active and passive modes of operation. The prototype of this compact sonar installed on board a nominated naval platform has successfully completed all user evaluation trials to demonstrate the features as per the Naval Staff Qualification Requirements. Indian Navy has proposed to induct this sonar on three of its Abhay class ships.

Intensifying the command over the high seas is the Humsa-UG, which is designed for upgrading the existing Humsa sonar system.

This system is proposed to be installed on seven ships of three different classes. AIDSS, a distress sonar, is an Emergency Sound Signalling Device which is used to indicate that a submarine is in distress and enable quick rescue and salvage. It is a life-saving alarm system designed to transmit sonar signals of a pre-designated frequency and pulse shape in an emergency situation from a submarine for a long period, so as to attract the attention of passive sonars of ships or submarines in the vicinity and all types of standard rescue vessels in operation. It is also provided with a transponder capability.

Navy inducts four types of indigenously developed sonars

New Delhi: Navy on Friday formally inducted four types of indigenously developed sonars that will boost its underwater surveillance capability.

The systems included Abhay ? compact hull mounted sonar for shallow water crafts, Humsa UG ? upgrade for the Humsa sonar system, NACS ? Near-field Acoustic Characterisation System, and AIDSS ? Advanced Indigenous Distress sonar system for submarines.

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Indian Navy to induct 4 Naval Physical and Oceanographic Laboratory systems

Kochi: In a rare achievement, Indian Navy will induct four different sonar systems developed by the Kochi-based Defence Research and Development Organization (DRDO) institution, Naval Physical and Oceanographic Laboratory (NPOL). The systems will be handed over by defence minister Manohar Parrikar to chief of naval staff Admiral Sunil Lamba at an induction ceremony to be held in Delhi on Friday.

The four systems due for induction include ABHAY, which is a compact hull mounted sonar for shallow water crafts, HUMSA UG, NACS (near-field acoustic characterisation system) and AIDSS (advanced indigenous distress sonar system for submarines). Sonar (sound, navigation and ranging) are called the eyes and ears of ships and submarines underwater.

The vessels use Sonar to navigate, communicate with or detect objects on or under the surface of the water, such as other vessels. Official sources at NPOL said that for the last two years, these systems had been undergoing trials and have met all the specifications as required by its users. ABHAY is capable of detecting, localizing, classifying and tracking subsurface and surface targets any time at sea, be it war or peace.

Indian Navy proposes to induct this sonar on three of the Abhay class ships. NPOL has also developed a distress sonar, AIDSS. This is an emergency sound signaling device, which is used to indicate if a submarine is in distress and enable quick rescue and salvage.



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Navy inducts four types of indigenously developed sonars

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Kochi based DRDO lab NPOL develops indigenous sonar systems for Navy

New Delhi: Navy on Friday formally inducted four types of indigenously developed sonars that will boost its underwater surveillance capability. The systems included Abhay – compact hull mounted sonar for shallow water crafts, Humsa UG – upgrade for the Humsa sonar system, NACS – Near-field Acoustic Characterisation System, and AIDSS – Advanced Indigenous Distress sonar system for submarines.

Defence Minister Manohar Parrikar, who handed over the sonars to the Navy, praised the force along with DRDO and said he expects more synergy in the coming days. The systems have been designed and developed by NPOL, a Kochi based laboratory of DRDO. The Director of NPOL, Dr. Kedarnath Shenoy, was instrumental in development of the existing HUMSA sonar system.

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Indian Navy inducts four underwater sensor systems developed by the DRDO

They are expected to help boost the force's surveillance capability.

The Indian Navy on Friday inducted four types of indigenously developed sonar systems to boost its underwater surveillance capabilities, PTI reported. Sonar is a technique that uses sound to detect objects under water. Defence Minister Manohar Parrikar handed over the four sensors to the Navy.

They include Abhay, which can be mounted on the hulls of smaller vessels, Humsa UG, an upgraded version of the older Humsa sonar system, one named NACS (Near-field Acoustic Characterisation System), and the last one called AIDSS (Advanced Indigenous Distress Sonar System for Submarines).

Defence Research and Development Organisation's Naval Physical and Oceanographic Laboratory, which is based out of Kochi, have designed the systems. Parrikar said he expected more such projects to be undertaken between the organisations in the future.



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DRDO to deliver four naval systems to Indian Navy

New Delhi: In a major fillip towards indigenization, defence research agency DRDO will deliver four naval systems to navy today.

Four systems include Abhay – Compact Hull Mounted SONAR for Shallow Water Crafts, Humsa UG – Upgrade for the Humsa SONAR System, NACS – Near-field Acoustic Characterisation System, and AIDSS – Advanced Indigenous Distress SONAR System for submarines, will be handed over to the navy in presence of the defence minister Manohar Parrikar.

Kochi-based Naval Physical and Oceanographic Laboratory (NPOL) of DRDO has designed and developed the naval system.

According to officials that Abhay is an advanced Active-cum-Passive integrated SONAR system designed and developed for the smaller platforms such as shallow water crafts and coastal surveillance/patrol vessels. Designed using the latest technology in hardware architecture and advanced signal processing algorithms, the SONAR is capable of detecting, localizing, classifying and tracking sub-surface and surface targets in both its active and passive modes of operation.

The prototype of this compact SONAR Abhay installed onboard a nominated naval platform has successfully completed all user evaluation trials to demonstrate the features as per the Naval Staff Qualification Requirements.

Indian Navy has proposed to induct this SONAR on three of the Abhay class ships. Intensifying the command over the high seas is the Humsa-UG that is designed for upgrading the existing Humsa SONAR system of the Indian Naval platforms. The hardware architecture is based on the state-of-the-art open architecture processor technologies that will enable smooth upgrade of the system capabilities. This system is proposed to be installed on seven ships of three different classes of ships, according to officials.

NACS determines the in-situ performance of the SONAR systems which are used to find the frequency-dependent 3-D transmission and reception characteristics of the SONAR. It is also used to measure the magnitude and phase characteristics of the SONAR transmission and reception electronics and the transducers. The NACS has been integrated with the HUMSA-NG SONAR array and proved onboard Naval platforms and this will be fitted on all frontline ships.

NPOL has also developed AIDSS, a distress SONAR that is an Emergency Sound Signaling Device which is used to indicate that a submarine is in distress and enable quick rescue and salvage. It is a life-saving alarm system designed to transmit SONAR signals of a pre-designated frequency and pulse shape in an emergency situation from a submarine for long period, so as to attract the attention of Passive SONARS of Ships or Submarines in the vicinity and all types of standard rescue vessels in operation.

“It is also provided with a transponder capability. With the induction of these four systems, the underwater surveillance capability of the Indian Navy will get a boost, besides providing a fillip to the quest for self-reliance in this critical area of technology,” said an official.



Fri, 18 Nov, 2016

(Online)

SR-SAM missiles in final stage, waiting for govt's nod to start production: MBDA

New Delhi: European missile major MBDA on Thursday said that it is waiting for the green light from India's Defence Ministry (MoD) to finalise its negotiation with the DRDO on naval air defence missile.

"SR-SAM is at very final stage, we have addressed all the topics linked to design, work share, future production, content of technology transfer (ToT)... all this has been discussed with customer, DRDO and BDL," Loic Piedevache, country head, India, MBDA group, said on the sidelines of the MBDA organised workshop on missile technologies for Indian armed forces.

"Now we need final green light from MoD to finalise our discussion and negotiation with DRDO," he added.

DRDO is the lead organisation for the design and development of the Short Range Surface to Air Missiles (SR-SAM) for the Indian Navy, while Bharat Dynamics Ltd is the ministry's missile production enterprise.

On the partnership arrangement for the under-development missile, Loic said: "It is a partnership. DRDO is the designer of the complete system, BDL is the production agency and MBDA is a strategic partner bringing its expertise and ToT of crucial items of the SR-SAM."

On how quickly the missile can be delivered, he said: "First deliveries will start in three years after signing the contract and all the deliveries will be completed within five years."

With the MBDA having designed the missile for range longer than the required range of 15 kms, Loic, giving the rationale, said: "We realised that when SR-SAM will be manufactured in India, it will be an Indian missile and there is a very strong export potential.

"So, taking into consideration the operational requirements and export potential because there is no such missile today in the market. The design has been done to go for higher range of 40 plus km."

SR-SAM is very crucial for defence of ship at high sea against the anti-ship missiles and aircraft.



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India Yet to Give a Green Signal for Naval Air Defence Missile: MBDA

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MBDA Waiting for India's Nod to Begin SR-SM Missile Production

European missile manufacturer MBDA is waiting for permission from India's Defense Ministry to finalize its negotiation with the Defense Research and Development Organization (DRDO) on naval air defense missile.

"Short-Range Surface-to-Air Missile (SR-SAM) is at very final stage, we have addressed all the topics linked to design, work share, future production, content of technology transfer (ToT)" Loic Piedevache, country head India of MBDA group, said during workshop organized on missile technologies for Indian armed forces.

"All this has been discussed with customer, DRDO and Bharat Dynamics Limited (BDL)," he said. "Now we need final green light from Ministry of Defense to finalize our discussion and negotiation with DRDO," Loic was quoted as saying by Indo-Asian News Service (IANS) Friday.

DRDO is major organization responsible for the design and development of the SRSAM for the Indian Navy, meanwhile BDL is the ministry's missile production enterprise.

DRDO is the designer of the complete system, BDL is the production agency and MBDA is a strategic partner bringing its expertise and ToT of crucial items of the SR-SAM." Loic said on the partnership arrangement for the under-development missile. First deliveries will start in three years after signing the contract and all the deliveries will be completed within five years, he added. The missile has been designed for range longer than the required range of 15 kms. The design has been done to go for higher range of 40 plus km. SR-SAM is considered crucial for defending ship at high sea against the anti-ship missiles and aircraft.

Fri, 18 Nov, 2016

Desi combat drone Rustom-2 makes first flight

Rustom-2, India's long endurance unmanned combat air vehicle (UCAV), completed its first flight early on Wednesday in Challakere, about 200km from Bengaluru. Sources in the aeronautical development establishment (ADE), which developed the vehicle, said the UCAV "met all expectations" during the flight. The first flight was scheduled for late 2013, but the vehicle's development was delayed. Wednesday's flight tested the vehicle's airworthiness.



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(Online)

First Flight for Rustom II – India's MALE Drone

The Indian Tapas 201 remotely piloted aircraft (RPA) made its first flight on November 16, the Defense Research and Development Organization (DRDO) announced. The aircraft, formerly known as 'Rustom II,' was developed by the DRDO's Aeronautical Development Establishment (ADE). The flight took place at the Aeronautical Test Range in Chitradurga, in the south of India.

Tapas 201 represents the first prototype of the Indian indigenous medium-altitude, long endurance platform designed for missions exceeding 24h. Once ready for operational use, Tapas-201 is expected to join active service with all Indian military services.

India currently uses large numbers of Searcher and Heron I unmanned systems bought from Israel Aerospace Industries. In addition to fielding its indigenous RPAS New Delhi is also seeking to import larger drones, namely the Israeli Heron TP, General Atomics MQ-9 and jet-powered Avenger.



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DRDO's Rustom-2 drone takes flight for the first time

DRDO's Rustom-2 has a wingspan of more than 20m and an endurance of 24-30 hours

Rustom-2, India's long endurance Unmanned Combat Air Vehicle (UCAV) finally took flight on Wednesday. The flight of Rustom-2 comes after a considerable delay. Rustom-2 was scheduled to take flight in late 2013 but the UCAV has finally taken flight after a delay of almost three years.

Rustom-2 falls under the medium-altitude, long endurance (MALE) category of vehicles. Rustom-2 is conceived as India's self reliance when it comes to use of combat drones. India currently relies on Israeli firms for aerial combat vehicles.

While Rustom-2 is unlike any other drone in the market. It has a wingspan of more than 20m and an endurance of 24-30 hours. It is equipped with contemporary technology and needs a runway for takeoff. It also features enhanced aerodynamic configuration, digital flight control and navigation system.

"Besides, it will also have automatic takeoff and landing capabilities, this version of Rustom is comparable to some of the best in the world," sources in Aeronautical Development Establishment (ADE) told The Times of India.

With Rustom-2, ADE hopes to receive orders from army, navy and the air force but reliability will be the key here. DRDO's previous UAVs have faced several crashes and the Indian Army has not inducted anything into its fleet recently.



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(Online)

DRDO successfully tests Made in India drone Rustom 2

If the DRDO is able to stick to the schedule India may be able to use put the drone into service by 2019.

Bengaluru: Heralding a new era in the indigenous development of Unmanned Aerial Vehicle (UAV), DRDO successfully carried out the maiden flight of RUSTOM - II renamed as TAPAS 201, a Medium Altitude Long Endurance (MALE) UAV.

The test flight took place from Aeronautical Test Range (ATR), Chitradurga, 250 km from Bangalore which is a newly developed flight test range for the testing of UAVs and manned aircraft. The wind span of TAPAS 201 is 20 meters.

The flight accomplished the main objectives of proving the flying platform, such as take-off, bank, level flight and landing etc. If the DRDO is able to stick to the schedule India may be able to use put the drone into service by 2019. TAPAS 201, the MALE UAV has been designed and developed by Aeronautical Development Establishment (ADE), the Bangalore-based premier lab of DRDO with HAL-BEL as the production partners.

The UAV weighing two tonnes was put into air by a dedicated team of young scientists of DRDO. The big challenge for the scientists is to bring down the weight from around 2400 kgs to around 1700 kgs. The lighter aircraft will be able to carry all the required sensors. During the test flight the drone was piloted (external and internal) by the pilots from the Armed Forces. It is also the first R&D prototype UAV which has undergone certification and qualification for the first flight from the Center for Military Airworthiness and Certification (CEMILAC) and Directorate General of Aeronautical Quality Assurance (DGAQA). The drone is said to be at par with the US drones in the similar range and capacity.

TAPAS 201, a multi-mission UAV is being developed to carry out the Intelligence, Surveillance and Reconnaissance (ISR) roles for the three Armed Forces with an endurance of 24 hours to 30 hours (which means it can fly nonstop for 24 to 30 hours). It is capable to carry different combinations of payloads to perform missions during day and night.

It is noteworthy that the development of UAV immensely contributes towards the Make-in-India initiative as many critical systems such as airframe, landing gear, flight control and avionics sub-systems are being developed in India with the collaboration of private industries. Defence Electronics Application Laboratory (DEAL) of DRDO has developed the data link for the UAV.

Rustom- II will undergo further trials for validating the design parameters, before going for User Validation Trials.



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(Online)

Born In India, DRDO's LCA Tejas to Be Exported To Other Countries. HAL to Ramp up Production from 8 to 16 Aircrafts by 2019-20: Parrikar

Tejas, the 4th generation fighter aircraft indigenously developed in the country after technology gap of around two decades of HF Marut by the Defence Research and Development Organisation (DRDO) will not just find its way in the Indian Armed Forces but will also be exported to other countries, Defence Minister Manohar Parrikar told the Lok Sabha on November 18, 2016.

Parrikar told the Lower House on Thursday that for exporting LCA Tejas to other countries, preliminary discussions have been held by the government with a few friendly countries. Presently, HAL has established facilities for manufacturing and delivery of 8 LCA per annum.

There is a plan to ramp up the production rate from 8 to 16 Aircraft per annum progressively by 2019-20.

With indigenous technology from DRDO, LCA Tejas –the modern combat aircraft is the smallest and lightest multi-role supersonic fighter aircraft that is being designed and developed by the Aeronautical Development Agency (ADA) and Hindustan Aeronautics Limited (HAL) for the Indian Air Force and Navy.

Tejas, the modern combat aircraft with a glass cockpit, is equipped with state of the art Satellite aided Inertial Navigation System. It has a digital computer based attack system and an autopilot. It can fire Air to Air Missiles, Bombs as well as Precision Guided Munitions.

Conceived as a MiG-21 replacement, the Light Combat Aircraft (LCA) “Tejas” –the first advance Fly-by-wire (FBW) fighter aircraft designed, developed and manufactured in India was inducted into No. 45 Squadron of Indian Air Force (IAF) on 01 Jul 2016. It is to the credit of its designers, manufacturer, technicians and test crew, that LCA has flown more than 3000 sorties / 2000 Hrs till date without any accident.

At the meeting of the Defence Acquisition Council (DAC) on November 7, for the first time two schemes worth Rs 53,000 crore were cleared under the Indigenous Design Development and Manufacturing (IDDM) category. The two proposals included according clearance to an AON (Acceptance of Necessity) for 83 Light Combat Aircrafts (LCAs) Tejas at a cost of Rs 50,025 crore for the Indian Air Force (IAF) and another AON for 15 Light Combat Helicopters (LCHs) including 10 for the IAF and 5 for the Indian Army at a cost of Rs 2911 crores. The DAC is headed by the Defence Minister Manohar Parrikar.

More on LCA Tejas: Its development by LCA (Tejas) team at ADA, an autonomous society of DRDO is unique in the light of the fact that there was no infrastructure base and negligible technological base available in the country for undertaking development of a modern combat aircraft. Full Scale Engineering Development (FSED) programme was actually sanctioned in April 1993. The historic maiden flight of the first Technology Demonstrator (TD1) took place on January 04, 2001. The scope of FSED Phase 1 was to demonstrate the technologies so that a decision could be taken to build operational proto vehicles, at a later stage.

LCA FSED Phase 1 was completed on March 31, 2004 with all objectives of technology development achieved. With efficient management of funds, four aircraft (TD1, TD2, PV1, & PV2) have been built within the funds sanctioned for two aircraft development. While Phase 1 programme was in progress, the Government in November 2001 decided to concurrently go ahead with the build of operational proto vehicles in LCA FSED Phase 2 programme. The scope of FSED Phase 2 programme was to build three prototypes of

operational aircraft including trainers and also to build the infrastructure required for producing eight aircraft per year and build eight Limited Series Production (LSP) aircraft. The Phase 2 programme has been split into two phases namely, Initial Operational Clearance (IOC) and Final Operational Clearance (FOC). Standard of Preparation of operational aircraft was finalized in 2004 with changes in weapons, sensors and avionics to meet IAF requirements and overcome obsolescence.

LCA has accomplished about 3200 flights, testifies the point that it is a reliable aircraft and that the LCA Programme is now racing smoothly toward achieving FOC after attaining IOC in December 2013. Action for induction of Tejas into IAF has been initiated. As of now, IAF has placed order in 2006 for 20 Tejas aircraft in IOC configuration and another 20 aircraft in FOC configuration in 2010. Aircraft build is in progress.

Maiden flight of first Series Production (SP1) Tejas aircraft of IOC configuration took place on September 30, 2014 and handed over to the Indian Air Force by the Defence Minister Shri Manohar Parrikar on January 17, 2015. Maiden flight of Second Series Production (SP2) Tejas aircraft of IOC configuration took place on March 22, 2016. Further SP aircraft will be delivered progressively by HAL to IAF for induction.