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Press Information Bureau
Government of India

Ministry of Defence

Tue, 28 Nov 2023

Ministry of Defence Inks Contract with Bharat Heavy Electricals Limited to Procure 16 Upgraded Super Rapid Gun Mount & Accessories worth ₹2956.89 Cr for Indian Navy

The Ministry of Defence has signed a contract with M/s Bharat Heavy Electricals Limited (BHEL), Haridwar on 28th November, 2023, for procurement of 16 Upgraded Super Rapid Gun Mount (SRGM) along with associated equipment/ accessories for Indian Navy under Buy (Indian) category at a total cost of ₹2956.89 Cr.

The upgraded SRGM, which will be manufactured by M/s BHEL at its Haridwar Plant, is a medium caliber anti-missile/anti aircraft point defence weapon system which provides a sustained rate of fire and high accuracy. The weapon system is capable of multiple engagements in multi-threat scenarios and has a proven record of very good performance against missiles and highly maneuverable fast attack crafts.

Upgraded SRGMs will be installed onboard Indian Navy's in-service and newly built ships by M/s Mazagaon Dock and Shipbuilders Ltd., Mumbai, and Garden Reach Shipbuilders & Engineers, Kolkata. The project will generate an employment of two and half lakh mandays over a period of five years and encourage active participation of various Indian industries including MSME, thus significantly contributing to the Government's efforts to achieve 'Atmanirbharta' in defence.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1980502>



Press Information Bureau
Government of India

Ministry of Defence

Tue, 28 Nov 2023

Raksha Mantri Shri Rajnath Singh Unveils Crest of Project 15B Stealth Guided Missile Destroyer Yard 12706 (Imphal)

The crest of Yard 12706 (Imphal), the third amongst the four Project 15B stealth guided missile destroyers, was unveiled by Raksha Mantri Shri Rajnath Singh, in the presence of Manipur Chief

Minister Shri N Biren Singh, in New Delhi on November 28, 2023. The unveiling of Imphal's crest, adorned with the Kangla Palace and 'Kangla-Sa' is a befitting tribute to the sacrifice made by the people of Manipur towards India's independence, sovereignty and security.

The crest design depicts the Kangla Palace on the left and 'Kangla-Sa' on the right. The Kangla Palace is an important historical and archaeological site of Manipur, and was the traditional seat of the past kingdom. With a dragon's head and lion's body, the 'Kangla-Sa' is a mythical being from Manipur history, and is symbolic as the guardian/protector of its people. 'Kangla-Sa' is also the state emblem of Manipur.

Designed by the Indian Navy's Warship Design Bureau and built by Mazagon Dock Shipbuilders Limited (MDL), Mumbai, this ship is a hallmark of indigenous shipbuilding and is amongst the most technologically advanced warships in the world. The ship was delivered by the MDL to the Indian Navy on October 20, 2023.

A guided missile destroyer with a displacement of 7,400 tons and overall length of 164 meters, Imphal is a potent and versatile platform equipped with state-of-the-art weapons and sensors, including surface-to-air missiles, anti-ship missiles and torpedoes. Powered by Combined Gas and Gas (COGAG) propulsion, she is capable of achieving speeds in excess of 30 knots (56 km/hr).

The ship boasts of a high indigenous content of approximately 75% that includes the following:

Medium Range Surface-to-Air Missiles (BEL, Bangalore)

BrahMos Surface-to-Surface Missiles (BrahMos Aerospace, New Delhi)

Indigenous Torpedo Tube Launchers (Larsen & Toubro, Mumbai)

Anti-Submarine Indigenous Rocket Launchers (Larsen & Toubro, Mumbai)

76mm Super Rapid Gun Mount (BHEL, Haridwar)

Imphal's keel was laid on May 19, 2017 and the ship was launched into water on April 20, 2019. The ship had sailed out for her maiden sea trials on April 28, 2023, and has undergone a comprehensive schedule of trials in harbour and at sea, leading up to its delivery on October 20, 2023 within a record time-frame of six months.

As part of the pre-commissioning trials, the ship recently carried out successful firing of an Extended Range BrahMos missile. The time taken to build Imphal and for her trials is the shortest for any indigenous destroyer. The delivery of the ship is an affirmation of the impetus towards 'Aatmanirbhar Bharat'.

It is a maritime tradition and a naval custom according to which many Indian Naval ships have been named after prominent cities, mountain ranges, rivers, ponds and islands. The Indian Navy is immensely proud of naming its latest and technologically most advanced warship after the historic city of Imphal. This is the first capital warship to be named after a city in the North-Eastern region, the approval for which was accorded by the President on April 16, 2019.

Chief of Defence Staff General Anil Chauhan, Chief of the Naval Staff Admiral R Hari Kumar and other officials of Ministry of Defence and Manipur government were also present on the occasion.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1980365>

Defence Ministry to Discuss India's Biggest ever Fighter Aircraft Projects worth ₹ 1.3 Lakh Crore

The Defence Ministry is scheduled to take up two of India's biggest-ever fighter aircraft projects worth ₹ 1.3 lakh crore for discussion in a crucial meeting this week, including buying 97 new LCA Mark 1A fighter aircraft and indigenously upgrading 84 Su-30 MKI combat planes.

"The projects are scheduled to come up for discussion at the Defence Ministry meeting scheduled on November 30," defence sources told ANI.

Sources said the 97 LCA Mark1A project would help the country build a strong fighter aircraft manufacturing ecosystem across the country and also help the Indian Air Force replace its MiG-21 fleet, which is being phased out. The two projects are listed for discussion at the Defence Acquisition Council meeting planned for November 30.

The Indian Air Force has already ordered 83 LCA Mark 1A fighter planes, and their deliveries are expected to start in February-March 2024.

The value of the 97 aircraft is expected to be around ₹ 65,000 crore, which would be the largest ever fighter aircraft deal in the country. The Su-30 MKI fighter aircraft project upgrade programme is also one of the biggest ever programmes planned to be done completely indigenously, where Indian weapons, sensors, and radars would be fitted on Russian-origin planes. The project is expected to cost around ₹ 64,000 crores.

The Indian firm Hindustan Aeronautics Limited will be doing the complete design and development work on the aircraft, which includes equipping the aircraft with the latest Virupaksha AESA radars. The Su-30 fighter jets are the mainstay of the Indian Air Force, with 260 of them already in service. The jets have been inducted in different batches and have now formed around 50 per cent of the fighter fleet.

The Su-30MKI fleet upgrade plan is also seen by the Indian Air Force as an opportunity for exports, as many countries in Southeast Asia and Africa operate the plane and can use these solutions to provide advanced capabilities to their fleets.

<https://www.ndtv.com/india-news/defence-ministry-to-discuss-indias-biggest-ever-fighter-aircraft-projects-worth-rs-1-3-lakh-crore-4614861>



Defence Procurement Board Clears Indian Navy's Proposal on Second Indigenous Aircraft Carrier

The government is set to positively consider the Indian Navy's proposal for construction of a second aircraft carrier at a cost of around Rs 40,000 crore, in a major move that comes against the backdrop of rising concerns over China's increasing forays into the Indian Ocean region.

Top government sources told PTI that the Defence Procurement Board (DPB), a key body of the defence ministry, has accorded in-principle approval to the ambitious proposal signalling the government's readiness to go for the second indigenous aircraft carrier, to be known as IAC II.

The mega procurement proposal will shortly be placed before the Defence Acquisition Council (DAC), the defence ministry's top body on procurement, they said. The DAC, headed by Defence Minister Rajnath Singh, is likely to meet on Thursday and it is learnt that the proposal for the IAC-II will be examined by it.

The DAC is also likely to consider the Indian Air Force's proposal for procurement of an additional batch of 97 Tejas Mark-1A aircraft at a cost of Rs 1.15 lakh crore, the sources said.

The Navy has been making a strong push for having the IAC-II with a displacement of 45,000 tonnes which is estimated to cost close to Rs 40,000 with the envisaged specifications.

India's first indigenously-built aircraft carrier INS Vikrant (IAC I) was commissioned in September by Prime Minister Narendra Modi. Built at a cost of around Rs 23,000 crore, INS Vikrant has a sophisticated air defence network and anti-ship missile systems.

It has the capacity to hold 30 fighter jets and helicopters. At the commissioning ceremony of the vessel, Modi called it a "floating city" and that it is a reflection of India becoming self-reliant in defence. The sources said the IAC II will be kind of a repeat order of the IAC I. According to the plan, the IAC II will be built by state-run Cochin Shipyard. The Navy has been pitching for three aircraft carriers to deal with China's growing naval prowess and its growing influence over the Indian Ocean region.

At present, India has two aircraft carriers — INS Vikramaditya and INS Vikrant. INS Vikramaditya is a Russian origin platform. The INS Vikrant has over 2,300 compartments, designed for a crew of around 1700 people, including specialised cabins to accommodate women officers. Vikrant has a top speed of around 28 knots and a cruising speed of 18 knots with an endurance of about 7,500 nautical miles.

The IAC is 262 metres long, 62 metres wide and has a height of 59 metres. On the procurement of additional 97 Tejas Mark 1A aircraft, the sources said the DAC is set to clear it. With the additional fleet, the number of indigenously-developed Tejas aircraft being procured by the IAF would go up to 180.

In February 2021, the defence ministry sealed a Rs 48,000 crore deal with state-run aerospace major Hindustan Aeronautics Ltd for procurement of 83 Tejas MK-1A jets for the IAF.

<https://www.financialexpress.com/business/defence-defence-procurement-board-clears-indian-navys-proposal-on-second-indigenous-aircraft-carrier-3319891/>

THE ECONOMIC TIMES

Wed, 29 Nov 2023

India-Sri Lanka Joint Military Exercise Culminates at Southern Command in Pune

A joint India-Sri Lanka military exercise, Mitrashakti 2023, culminated on Tuesday at Pune's southern command foreign training node after 12 days. The forces, including troops from the Indian Army and the Air Force, learnt about each other's operational drills and tactics during this exercise, a defence release said.

Brigadier S Taluja, Commander, Aundh Military Station, and Major General PGPS Rathnayaka, Sri Lankan Army, addressed the contingents during the closing ceremony.

"Joint exercises between armies are a facet of military diplomacy between nations across the world. It is increasingly becoming an important instrument in developing relationships, trust and confidence between the Armies which may eventually prove useful during joint military operations such as UN peacekeeping operations," the release said.

<https://economictimes.indiatimes.com/news/defence/india-sri-lanka-joint-military-exercise-culminates-at-southern-command-in-pune/articleshow/105572104.cms>

THE ECONOMIC TIMES

Tue, 28 Nov 2023

Ready to Consider Integration of Brimstone Missiles onto MQ-9B Predator to be Procured by India, Says MBDA

European defence major MBDA has said it is open to considering the possibility of integrating its high-precision strike missile Brimstone onto the MQ-9B Predator armed drones that India is procuring from the US, provided it receives such a proposal.

MBDA's Brimstone missiles are known as close air support weapons and are suitable for deployment on a wide range of unmanned aerial vehicles as well as land and surface platforms.

India is in the process of procuring 31 MQ-9B Predator high-altitude long-endurance drones from the US at a cost of nearly USD 3 billion to crank up the surveillance apparatus of the armed forces, especially along the contested frontier with China.

"We are open to looking into any proposal for integration of Brimstone missiles onto the MQ-9B Predator drones being procured by India," MBDA officials said in reply to a question.

The United Kingdom has already decided to load up Brimstone missiles onto the Royal Air Force's (RAF) fleet of US-manufactured MQ-9B drones to enhance their overall capabilities.

The air dominance missile was operationally deployed in Afghanistan and Libya and it has proven to be a weapon of choice with its ability to perform surgical strikes in day and night environments, the officials said. "Brimstone is being integrated on MQ-9B and available to provide the best anti-surface strike capabilities against moving, static, maritime and armoured targets," an MBDA spokesperson told a select group of journalists here.

Combat aircraft armed with the Brimstone weapon offer reach, speed, flexibility, precision and the ability to engage multiple targets with a single mission load, said another official.

Sources in the Indian defence and military establishment said various details relating to the procurement of the 31 MQ-9B Predator drones from the US including the cost and weapons package would be decided once the US Congress clears the deal.

It is learnt that both sides are looking at sealing the deal by March 2024.

Though the cost of the drones will be finalised in the negotiation process, it is estimated that the price of the procurement would be around USD 3 billion.

MBDA has played a key role in the integration of weapons packages onto two squadrons of Rafale fighter jets being operated by the Indian Air Force.

MBDA's Meteor beyond visual range air-to-air missile, Scalp cruise missile and MICA weapons system are the mainstays of the weapons package of Rafale jets.

Over the last 50 years, MBDA has provided various weapons systems to the Indian armed forces including the eponymous Milan anti-tank guided missiles. It was also responsible for supplying the Magic II and Super 530 air-to-air missiles which after many years of service was replaced by MICA on the IAF's fleet of Mirage 2000 combat jets.

The Indian Navy's fleet of Scorpene submarines is also equipped with the world-renowned Exocet anti-ship missiles supplied by MBDA. In 2017, MBDA entered into a joint venture with India's Larsen & Toubro with an aim to develop, manufacture and supply highly advanced missiles and missile systems to the Indian armed forces.

<https://economictimes.indiatimes.com/news/defence/ready-to-consider-integration-of-brimstone-missiles-onto-mq-9b-predator-to-be-procured-by-india-says-mbda/articleshow/105554298.cms>



Tue, 28 Nov 2023

Norway, Germany to Pursue Joint Development of Supersonic Strike Missile

Norway has disclosed plans to jointly develop a new long-range, high-speed naval strike weapon with Germany.

Announcing the move on 24 November, Norwegian Defence Minister Bjørn Arild Gram said the projected SuperSonic Strike Missile (3SM) – given the name Tyrfing (a magic sword in Norse mythology) – was entering preliminary development pending a more substantive investment decision next year. Kongsberg Defence & Aerospace, which has previously developed the Naval Strike Missile (NSM), will lead the 3SM development programme, with the aim to have the new weapon ready for delivery in 2035.

Previously known as the Future Naval Strike Missile (Project 1081), the 3SM programme stems from study work undertaken to define requirements for a common missile development to meet the long-term naval strike needs of both Norway and Germany. “Germany is our most important European partner for co-operation on defence equipment and a majorly important ally in NATO,” said Gram in a statement. “The government is now proposing that a decision will be made to initiate the first initial design phase of the project.”

He added, “Germany plans to consider a decision on commissioning in 2024. The government will return to the Norwegian parliament with a recommendation for the continuation of the project once the design phase has been completed.”

While no technical or performance details of the 3SM have been released, a concept render released by the Norwegian Ministry of Defence (MoD) and Kongsberg indicates that the missile will leverage advanced solid-fuel ramjet propulsion demonstrated under the joint Norwegian/US Tactical High-speed Offensive Ramjet for Extended Range (THOR-ER) programme. Norwegian rocket motor specialist Nammo is the industry lead for THOR-ER.

<https://www.janes.com/defence-news/news-detail/norway-germany-to-pursue-joint-development-of-supersonic-strike-missile>

Huge Increase in UK Defence Exports, Hitting £11.2bn in 2022

The UK's defence exports have increased significantly over the last complete year, rising from £6.6bn (\$8.3bn) in 2021 to £11.2bn in 2022, an approximate 70% increase in nominal prices, according to information released by the country's Department for Business and Trade.

Outlined in its 17 November publication of the UK's military exports, the information was obtained by surveys carried out by UK Defence and Security Export (UKDSE), combining contact data from the US, Canada, Australia, and Nato member states, with available market intelligence and media coverage.

In its executive summary, the UKDSE stated that the increase in 2022 was "due primarily to new contracts in the Middle East and Europe", as well as export of helicopters to Canada. Over a five-year period 2018-2022, annual UK defence orders averaged £10bn.

However, the 2022 figures were down from a high of £14bn recorded in 2018, at the start of the five-year reporting period.

Regional breakdown of UK defence exports

According to the analysis carried out by the UKDSE, the Middle East was on average the largest market for UK defence export orders over the five years from 2018 to 2022, accounting for an average of 43% of the total value of orders across that period.

However, five-year moving average exports in the Middle East have shown a decline since 2019, reflecting a drop in in-year orders following large contracts in 2018 of Typhoon fighters and Brimstone missiles to Qatar, the report stated.

Five-year average exports to Europe increased from £0.8bn in 2018 to £2.2bn in 2022, overtaking those to North America in 2020. Most exports to Ukraine in 2022 are not counted as they have mostly been committed as part of a military assistance package following Russia's invasion in February 2022.

Further UKDSE analysis found that over the five years from 2018 to 2022, on average the aerospace sector was estimated to have accounted for 68% of the value of UK defence exports and was the largest sector by value for the period 2013-2022.

Bumper deals for sales to Middle East countries will have contributed to this trend, with new aerospace projects such as the Future Combat Aircraft Systems, also known as FCAS, integrating defence primes in Europe and Japan with a view to the production of a sixth-generation fighter.

US still market leader for military exports

The US has been the largest defence exporter globally from 2013 to 2022, with the five-year average annual value for the country increased markedly in 2020, due in large part to high value aircraft orders to multiple countries in that year, UKDSE found.

The next largest exporters continue to trend lower than the US, although France's five-year average has increased since 2020 due to winning aircraft contracts with various countries in 2021 and with

Indonesia in 2022, as well as a contract for frigates to Greece, while South Korea saw a substantial increase in 2022 due to major deals with Poland, the UAE and Egypt.

Russian defence exports are less understood, with the UKDSE admitting that it did not have information on Moscow's defence contracts in 2022. Knowledge of China's defence exports was even more opaque, although the UKDSE stated that open-source information suggested that it was "a significant defence exporter".

Poland stands out as key importer of defence equipment

UKDSE analysis revealed that over the five years from 2018 to 2022, the average annual Rest of World (non-UK) defence exports to Saudi Arabia exceeded those to all other countries, while the UAE saw a large increase in its five-year average orders in 2021, in large part due to an order of aircraft from France in that year.

In addition, Poland also saw a large increase in defence imports in 2022, with exports to the country exceeding those to all other national markets. South Korea accounted for most exports to Poland in 2022, including K239 Chunmoo Multiple-Rocket Launcher Systems, FA-50 aircraft and other military equipment.

<https://www.army-technology.com/news/huge-increase-in-uk-defence-exports-in-2022/?cf-view>

Science & Technology News



Press Information Bureau
Government of India

Ministry of Science & Technology

Tue, 28 Nov 2023

Investment, Collaboration and Robust R&D-translation Ecosystem can Create Impact at National Level in CCUS towards India's Net Zero Target by 2070: Experts

Experts from research and academia highlighted the need for investment both from the government and industry in Carbon Capture, Utilisation and Storage (CCUS) and the importance of leading experts in the field to work collaboratively towards India's net zero targets through CCUS.

"Investment and funding are needed for cost effective tech deployment at scale and all leading experts in the country should come together to work towards it," DST Secretary Prof. Abay Karandikar said at the Consultative Brainstorming Session on DST's Roadmap towards India's net zero targets through CCUS.

He pointed out that the status of the technology needs to be mapped and it can form the base for developing a robust R&D ecosystem where collaborative efforts can lead to translation. "There can be joint funding from industry for commercialising some technologies. A concrete action plan should include creating and funding focused incubation programmes," Prof Karandikar added at the brainstorming session organised by the Department of Science and Technology (DST).

He stressed that DST would work towards formulation of a programme that would create an impact at the National level within the next couple of years.

The meeting focused on the opportunities and challenges related to CCUS, with an emphasis on the role of government in accelerating the development and deployment of CCUS technologies.

Senior Advisor DST and Secretary SERB, Dr Akhilesh Gupta highlighted the importance of CCUS in the scenario where the IPCC reports in the last few years have shown that global temperatures have risen by an average of around 1.2 degrees above pre-industrial levels and the catastrophe that stares at us as this is projected to rise by around 0.2 degrees per decade.

“We need several well documented pilots, detailed study of their viability, significant funding to focus on potential winners in the field to develop technologies that can actually work when deployed. Global collaborative technology development can go a long way towards success,” said Professor Rangan Banerjee, Director IIT Delhi.

Dr Anita Gupta, Head C3E Division of DST briefed about the CCUS activities of DST.

The brainstorming had active participation by senior CCUS Experts from research and academia and from difficult to decarbonise sectors such as thermal, Oil, Steel and Cement like NTPC, BHEL, ONGC, Reliance, Tata Steel, Aditya Birla Cement, UltraTech etc.

The Prime Minister Shri Narendra Modi showed the path of a sustainable future for tackling climate change by elucidating “India’s Panchamrit Amrit tattva” at COP-26, Glasgow, Scotland. To achieve the mandate, the Indian government has set a goal to achieve a carbon-neutral economy by 2070. In this context, Carbon Capture, Utilization and Storage (CCUS) has gained significant relevance both in national and global contexts. Keeping the National and International Net Zero priorities in perspective, the Department of Science and Technology (DST) has been committed towards building a robust ecosystem for CCUS. It has been consistently contributing towards the development of the CCUS value chain and roadmap for potential RD&D directions for national capacity building and multilateral/bilateral linkages.

The Consultative Brainstorming Meeting was organized with experts/representatives from relevant Industries, PSUs, Research groups, Academia, Government, and policymakers with the aim of further strengthening the CCUS value chain along its TRL trajectory and for ensuring the crucial last mile connectivity of Technology towards real field and market.

It helped boost the dialogue between relevant industry, academia, research groups, and policymakers and highlight national CCUS efforts, assess national status, and explore potential public private partnership areas.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1980528>



Tue, 28 Nov 2023

NASA Ready to Work with ISRO to Help India Build Space Station

The National Aeronautics and Space Administration (NASA) chief Bill Nelson on Tuesday said the joint Indo-USA NISER satellite would be “one of the great observatories” to look at the changes happening on the Earth, besides noting that the USA was willing to collaborate with India on building an Indian Space Station.

Nelson, who will be in Bengaluru on Wednesday said he would not only be interacting with the ISRO officials but also meet the lone Indian astronomer Rakesh Sharma, whom the NASA Administrator – himself an astronomer - met for the first time in April 1991.

“Rakesh and I hit off immediately. We have not met after that, but we spoke over the phone,” he recalled at a media interaction here.

Nelson met Union Science and Technology Minister Jitendra Singh to take forward the discussions on space cooperation as outlined by Prime Minister Narendra Modi and President Joe Biden in their joint statement earlier this year.

NASA and ISRO have formed a joint working group on the human space flight programme. The two countries are also exploring cooperation in radiation impact studies, micro meteorite and orbital debris shield studies.

There are also discussions with prominent US industries like Boeing, Blue Origin and Voyager on specific items of cooperation and also to explore joint collaborations with Indian commercial entities, says a government official.

Asked whether the US will collaborate with India on the ‘Bharatiya Antariksha Station’ (Indian Space Station) project, Nelson said the US would be ready to collaborate with India in building the space station if it so desires.

NASA plans to deorbit the International Space Station by 2031 and take the space observatory to a graveyard in the southern Pacific.

"We expect to have a commercial space station by that time. I think India wants to have a space station. If India wants us to collaborate with them, of course, we will be available. But that's up to India," said Nelson, who was an astronaut and flew with the crew of the 24th Space Shuttle flight onboard ‘Columbia’ in 1986.

Last month Prime Minister Modi asked ISRO to establish a ‘Bharatiya Antariksha Station’ (Indian Space Station) by 2035 and send the first Indian to the Moon five years later.

Nelson said the USA would help train an Indian astronaut for a trip to the International Space Station in late 2024, but the astronaut will be selected by the ISRO.

On the NISER satellite that will be launched in the first quarter of 2024, the NASA chief said it would be one of the great observatories and four-five such observatories in combination with 25 other spacecraft looking at the earth would be able to determine what is happening on the earth’s surface and with the climate.

Costing \$ 1.5 billion, the NASA-ISRO Synthetic Aperture Radar (NISER) is one of the most expensive payloads in space research, which was conceptualised more than 15 years ago when New Delhi and Washington decided to enter into a strategic partnership following the historic nuclear deal.

<https://www.deccanherald.com/science/space/nasa-ready-to-work-with-isro-to-help-india-build-space-station-2788016>

