

ARABIAN DEFENCE

Defence, Aerospace, Homeland Security News

EDGE to Showcase Advanced Solutions and Products at Dubai Airshow



Boeing Leads Pathways to Net-Zero Emissions in Aviation

Page 6

Kuljit Ghata-Aura, President, Boeing Middle East, Türkiye and Africa.

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 THE SUPREME COMMANDER OF THE EGYPTIAN ARMED FORCES



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Dubai Airshow prepares for biggest event on record



Increased exhibitor numbers further reflect growth of the aerospace and space industries

Visitors expected to be higher compared to 104,000 at the last edition

The 18th edition of the Dubai Airshow presents an opportunity to welcome many new and returning industry stakeholders to the Emirate, and reflect on the recovery and growth of the aviation and wider aerospace sectors in recent years, particularly in the Middle East where passenger numbers continue to rise.

Dubai Airshow 2023 is set to be the biggest on record, with 1,400+ exhibitors from 95 countries and visitor numbers expected to grow from last year's edition.

According to the International Air Transport Association (IATA), Middle Eastern airlines posted a 27.3 per cent increase in August traffic compared to the previous year, meanwhile globally, traffic now stands at almost 96 per cent of pre-COVID levels. Dubai Airports also announced that it served 41.6 million guests in the first half of 2023, a 49 per cent increase against the same period in 2022, fuelled by a 43 per cent surge in second-quarter passenger traffic.

As the aerospace, space and defence industries continue to play a critical role for

local, regional and international economies, more than 1,400 exhibitors – including 400 first-time exhibitors and 80+ startups across sectors including commercial aviation, advanced aerial mobility, space, defence and military, business aviation, air traffic management, emerging technology and more will unveil innovations and trailblazing solutions at the industry mega event.

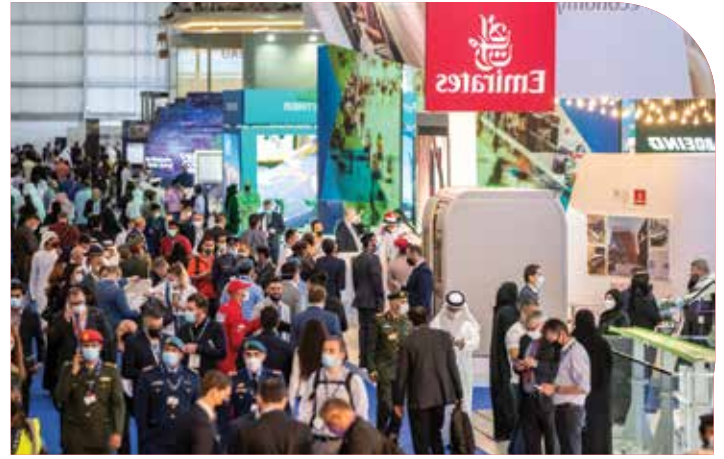
An expanded space pavilion, in partnership with the UAE Space Agency, will also be a key feature at this year's edition. It will see first-time and prominent players including the Mohammed Bin Rashid Space Centre (MBRSC), the Technology Innovation Institute (TII), Dubai Electricity & Water Authority (DEWA) and several others demonstrate how the collaboration of the space and aviation industries are shaping the future of travel.

Dubai Airshow 2023 will also host a comprehensive conference agenda that will welcome more than 300 international speakers and feature more than 80 hours of insightful content to drive conversations

on the most important industry topics such as sustainability, space, advanced aerial mobility, air traffic management, passenger experience, diversity, and much more. Countless networking opportunities will also support the Airshow's position as a leading international platform for valuable business opportunities that will play a significant role in the future of the industry.

As one of the most anticipated aspects of the Dubai Airshow, the famous static and flying displays will return, with an impressive line-up of the world's most advanced aircraft. The flying display will maintain its status as one of the most impressive ways for manufacturers to demonstrate their aircraft abilities to the global aerospace industry, while providing a breath-taking spectacle for visitors each day, and this year's static display will set a new benchmark, showcasing more than 180 commercial and military aircraft.

Attendance from regional and international airlines will also reflect the strong growth and transformation being witnessed across the industry. Earlier this



year, Emirates released its 2022-23 Annual Report, announcing its most profitable year ever with a profit of AED 10.6 billion (US\$ 2.9 billion) compared with AED 3.9 billion (US\$ 1.1 billion) loss in the previous year. Meanwhile, Etihad Airways announced a record-breaking core operating profit of US\$ 296 million in the first half of 2022, compared to a US\$ 392 million loss during the same period the previous year, and the world's first premium leisure airline, Beond, announced its launch this year, further reflecting the return of the luxury leisure market.

Tero Taskila, CEO & Chairman of Beond, said: "Beond is thrilled to have this opportunity to showcase our beautiful, specially-fitted aircraft at the upcoming Dubai Airshow. Embodied in this aircraft is our vision for a ground-breaking approach to premium leisure travel, and promise of a pioneering flight experience for our guests. This marks the beginning of our journey as the world's first premium leisure airline, and we could not be more pleased to be able to celebrate with industry partners at the

Airshow."

The same growth is being seen across the region. Qatar Airways Group published its annual report for 2022/23 highlighting an extraordinary year with profits reaching US\$ 21.0 billion, up 45 per cent compared to the previous year, and Saudia Group just recently unveiled its new brand identity, part of its comprehensive strategy to support the advancement of the aviation sector, not only in the Kingdom but in the MENA region as well, to accommodate the growing demand.

Speaking of its transformation, His Excellency Ibrahim Al Omar, Director General of Saudia Group, said: "This is an exciting time in the Group's history. The new brand offers much more than an evolution of our visual identity, but rather a celebration of all that we have achieved. We are implementing a fully integrated program that will enable us to play a driving role in advancing Vision 2030, in line with the targets of the Saudi Aviation Strategy. We are committed to expanding the fleet of the group to 318 aircraft and serve 175 destinations. We are entering a new era, and

we believe that we now have everything in place to deliver on our promise to bring the world to Saudi Arabia and demonstrate what the Kingdom has to offer from a tourism and business perspective."

The phenomenal growth and innovation will take centre stage at the Dubai Airshow, not only showcasing the progress being made across the industries, but also serving as a platform to drive collaboration, technological advancement and push the boundaries of innovation for the future.

To be held under the patronage of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President, Prime Minister of the UAE, Ruler of Dubai and UAE Minister of Defence, the 18th edition of Dubai Airshow is set to take place from 13-17 November 2023 at Dubai World Central (DWC), Dubai Airshow Site. The event is supported by key aviation industry stakeholders including Dubai Airports, the Dubai Civil Aviation Authority (DCAA), the UAE Ministry of Defence, Dubai Aviation Engineering Projects (DAEP) and the UAE Space Agency.

BEL pays Rs.224.28 crore final dividend

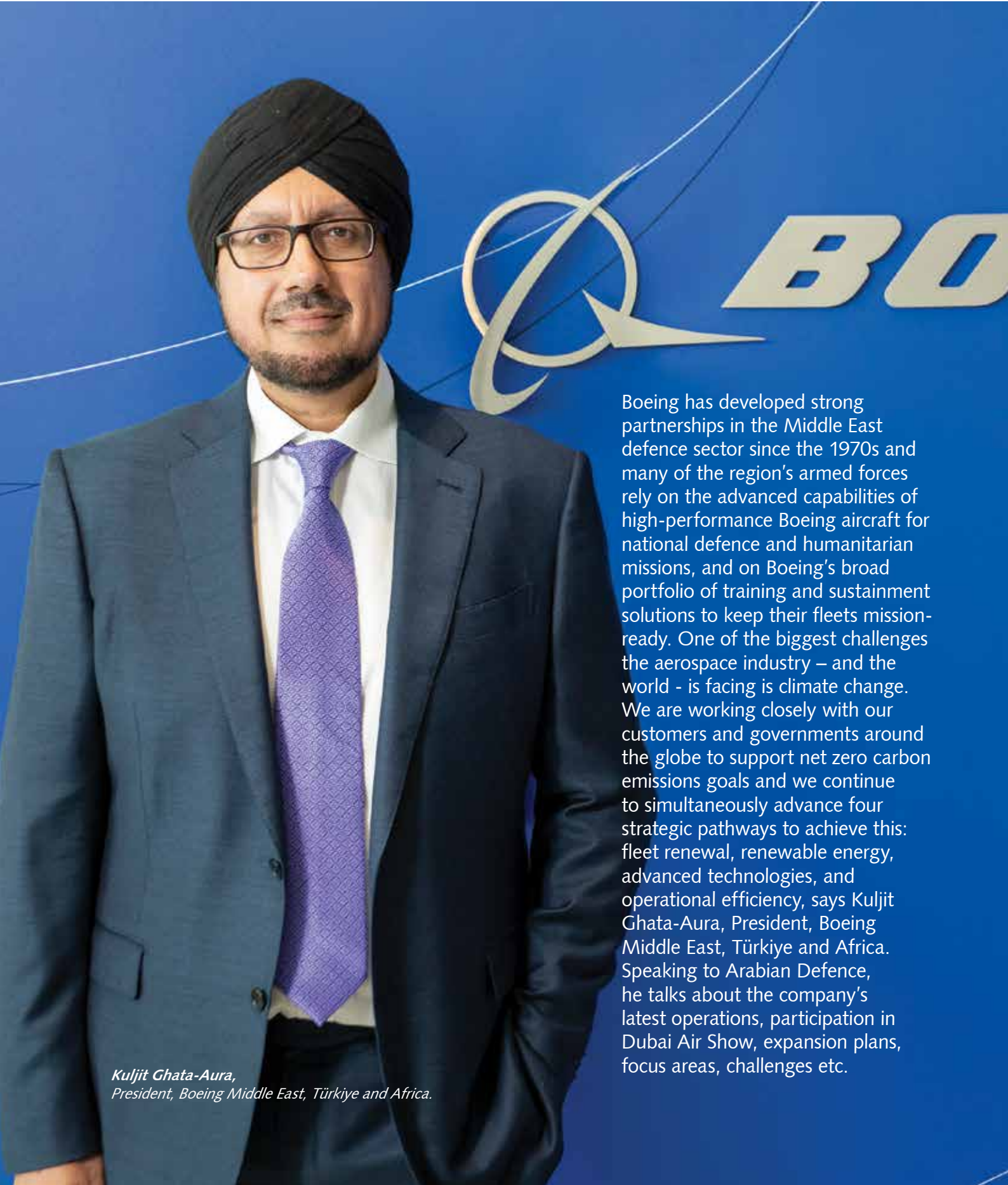
Bhanu Prakash Srivastava, Chairman & Managing Director (Additional Charge), Bharat Electronics Limited, presented the 60% final dividend cheque of Rs.224,27,53,160.40/- payable on the shares held by the President of India, to the Defence Minister, Rajnath Singh, at New Delhi.

The Company had paid the First Interim Dividend of 60% (on face value of Rs. 1 per equity share) in February 2023 and the Second Interim Dividend of 60% (on face value of Rs. 1 per equity share) in March 2023. The Company has thus paid a total dividend of 180% on its paid up capital for the year 2022-23.



Bhanu Prakash Srivastava, CMD, BEL presenting the final dividend cheque to the Defence Minister, Rajnath Singh. (from left) Damodar Bhattad, Director (Finance), BEL, Manoj Jain, Director (R&D), BEL, Giridhar Aramane, Defence Secretary, Shalabh Tyagi, JS (P&C), T Natarajan, Additional Secretary, Dept. of Defence Production and Manoj Kumar, ED (NM & IM) also seen.

Boeing Leads Pathways to Net-Zero Emissions in Aviation



Boeing has developed strong partnerships in the Middle East defence sector since the 1970s and many of the region's armed forces rely on the advanced capabilities of high-performance Boeing aircraft for national defence and humanitarian missions, and on Boeing's broad portfolio of training and sustainment solutions to keep their fleets mission-ready. One of the biggest challenges the aerospace industry – and the world - is facing is climate change. We are working closely with our customers and governments around the globe to support net zero carbon emissions goals and we continue to simultaneously advance four strategic pathways to achieve this: fleet renewal, renewable energy, advanced technologies, and operational efficiency, says Kuljit Ghata-Aura, President, Boeing Middle East, Türkiye and Africa. Speaking to Arabian Defence, he talks about the company's latest operations, participation in Dubai Air Show, expansion plans, focus areas, challenges etc.

*Kuljit Ghata-Aura,
President, Boeing Middle East, Türkiye and Africa.*



Boeing's relationship with the Middle East extends back to 1945. How strong is Boeing's presence in the Middle East now in the commercial plane sector? Could you share the latest focus areas in the region?

More than 11,000 Boeing-built commercial jetliners are in service worldwide, which is almost half of the world's fleet. Among these, approximately 700 Boeing commercial airplanes are actively serving the Middle East, with more than 600 in backlog. Boeing partners with most of the major airlines in the Middle East, and today our airline partners are operating some of our most modern, reliable, and fuel-efficient airplanes to meet the needs of the flying public.

In Saudi Arabia, we further reinforced our strong partnerships in March 2023 with two orders for a total of up to 121 Dreamliners from two of the leading commercial operators in the Kingdom. SAUDIA ordered up to 49 Boeing 787 Dreamliners; and the Kingdom's new airline, Riyadh Air, will launch with a fleet of up to 72 787-9 Dreamliners.

During the Paris Airshow in June, Boeing and Air Algérie confirmed an order for eight fuel-efficient 737-9 jets. This demonstrates the continued interest in our aircraft and their fuel efficiency. Additionally, Air Algérie signed a Memorandum of Understanding (MoU) for two 737-800 Boeing Converted Freighters (BCF) to meet the growing cargo demands in the region.

Another significant milestone was reached when Iraqi Airways celebrated the arrival of its inaugural Boeing 787 Dreamliner in Baghdad earlier this year. This marks the first of 10 787s on order for Iraqi Airways, enabling them to expand their long-haul network and connect to more international destinations.

Boeing Defense, Space & Security (BDS) offers a robust portfolio of products,

systems, services, and solutions to its Middle East customers, partners, and suppliers, including products from Boeing Military Aircraft, Network and Space Systems, and Global Services and Support. Could you talk more about BDS' operations in the region?

Boeing has developed strong partnerships in the Middle East defence sector since the 1970s and many of the region's armed forces rely on the advanced capabilities of high-performance Boeing aircraft for national defence and humanitarian missions, and on Boeing's broad portfolio of training and sustainment solutions to keep their fleets mission-ready.

Boeing's defence platforms operated by the Middle East countries and sustained by Boeing, include the F-15 EX, the T-7A Advanced Pilot Training System, the CH-47F Chinook advanced heavy-lift helicopter, the AH-64 Apache attack helicopter, and the KC-46A aerial refueling tanker. Our autonomous systems portfolio includes the Integrator ER and ScanEagle and our sustainment and training solutions.

The F-15 has a proven track record in the Middle East, with several regional countries operating this advanced fighter. Boeing is building and delivering the most advanced F-15 configurations ever in the F-15 EX Eagle II for the U.S. Air Force, and that has gained interest from customers globally.

Joramco will be the first MRO supplier in the Middle East supporting future Boeing freighter conversions of both domestic and foreign aircraft. Could you talk more about the association?

The Boeing freighter conversion line established by Joramco reflects the growing potential of the Middle East's growing Maintenance, Repair, and Overhaul (MRO) capacity. Out of Amman, Joramco will be able to support 737-800BCF customers across the Middle East, Europe, North Africa,

and the Commonwealth of Independent States (CIS).

Long-term, the global freighter fleet will grow by 65% to more than 3,700 in 2042, according to Boeing's Commercial Market Outlook. This growth will require more than 2,800 production and converted freighter deliveries over the next two decades, including around 1,300 standard-body freighter conversions, such as the 737-800BCF.

How do you look at Boeing's participation at the Dubai Airshow? What can we expect from Boeing at the expo?

Dubai Airshow is one of the biggest aerospace events globally and we are very excited about the 2023 edition. The airshow is always a terrific opportunity to meet with customers, partners, suppliers, and other stakeholders from the region and beyond. Last show we had the international debut of our all-new 777X which was a huge hit with the crowds.

We're especially happy to sponsor the Aerospace 2050 conference again and showcase to the world that the future of aviation will be more sustainable. Especially ahead of COP28, the airshow is the perfect occasion for further collaborations that advance sustainable travel.

As at the previous airshow, we will be heavily involved in the Vista startup hub. We have our Aerospace Xelerated team – Boeing's start-up accelerator program – showcasing and supporting its portfolio companies at the show, with their current cohort being supported by Tawazun Economic Council.

Could you shed more light on Boeing's industrial and academic partnerships in the Middle East?

To foster the growth of an indigenous aerospace industry in the region, we have



actively engaged in building partnerships that enhance industrial capacity, drive innovation, and promote advanced technology.

In the UAE, Boeing is an integral industrial partner in enabling advanced materials manufacturing. Our partnership of more than a decade with the Tawazun Economic Council has enabled key industrial initiatives, most notably, our collaboration with Strata Manufacturing for the production of the 787-vertical fin.

Tawazun has also empowered our partnership with Edge Precision Industries (EPI) for the production of complex metallic machined parts, and the opening of the EPI Surface Treatment facility in Abu Dhabi. During this year's edition of IDEX, Boeing and Tawazun announced the establishment of the Unmanned Systems Center of Excellence, a wholly-owned Boeing subsidiary at Tawazun Industrial Park, further establishing Boeing's commitment to the development of UAE's industry, economy, and talent.

University relations are a critical component of Boeing's operations in the Middle East. We support a broad range of leading universities across the region, including Khalifa University, Qatar University, Kuwait University, Cairo University, and many others. Boeing's partnerships with academia are focused on research and development, new technologies like uncrewed aerial vehicles and robotics, and vast support to students majoring in aerospace engineering.

Boeing has been increasing its sourcing

from India in recent years and the latest development being a team from Boeing visited Kochi-based Compaero India to explore sourcing of critical components for its aircraft from the local company. How do you look at the Indian market for your business?

Boeing is currently working with a significant number of Indian supplier partners, including a substantial number of Micro, Small, and Medium Enterprises (MSMEs). As the largest foreign Original Equipment Manufacturer (OEM) in terms of sourcing from India, we contribute over \$1 billion annually, with 60% stemming from manufacturing activities.

Our extensive network consists of 300+ supplier partners in India, who hold a crucial role in our global supply chain. These Indian companies actively engage in the production and export of cutting-edge systems and components for some of Boeing's most advanced products, allowing us to cater to markets worldwide. We are always looking for opportunities to collaborate and support the growth of indigenous manufacturers, including MSMEs, into our global supply chain network.

What is Boeing's roadmap ahead in the Middle East? Could you share the main objectives and challenges in the region?

Serving the needs of our regional customers will always be our top priority. Our specific focus areas are centered on innovation, sustainability, and developing partnerships that benefit our customers, stakeholders, and local economies.

One of the biggest challenges the aerospace

industry – and the world - is facing is climate change. We are working closely with our customers and governments around the globe to support net zero carbon emissions goals and we continue to simultaneously advance four strategic pathways to achieve this: fleet renewal, renewable energy, advanced technologies, and operational efficiency.

We have partnered with key Middle Eastern stakeholders to drive a range of sustainability initiatives across the region. Etihad has been our partner on the ecoDemonstrator since 2019. The partnership focuses on innovation, continuous improvement of operational efficiency, and sustainable aviation fuels (SAF).

In January 2023, Emirates in partnership with Boeing, GE, and other partners operated the first demonstration flight in the region powered by 100% SAF in one of two engines on a Boeing 777-300ER.

In addition, Boeing has established a Sustainable Bioenergy Research Consortium in the UAE with Etihad and other partners; and has partnered with the UAE Ministry of Energy and the World Economic Forum on a roadmap to decarbonize aviation with Power-to-Liquid SAF.

In October, we announced that we have joined forces with Masdar, the UAE's clean energy powerhouse, to explore ways to advance the development of SAF, including collaboration on exploring SAF accounting mechanisms.



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New IL-96-400M Wide-Body Long-Range Aircraft Made its Maiden Flight



A prototype of the upgraded Russian wide-body long-range aircraft IL-96-400M, manufactured by UAC, took off for the first time. During the flight, the stability and controllability of the aircraft, the operability of systems, the power plant and radio equipment for landing were checked. The test program was successful, stable operation of Russian systems and equipment, most of which were manufactured by enterprises of the Rostec State Corporation, was confirmed.

The aircraft was piloted by the crew: Chief Pilot of the Ilyushin Design Bureau, Honored Test Pilot of the Russian Federation Sergei Sukhar, Honored Test Pilot of the Russian Federation Igor Zinov, Honored Test Navigator of the Russian Federation Sergei Goremykin, 1st Class Test Flight Engineer Pavel Litvyakov, on-board electrician - tester Dmitry Semenov. The flight took place at altitudes up to 2000 meters, speeds up to 390 km/h and lasted 26 minutes.

"The first and successful flight of the modernized IL-96-400M is a demonstration of the highest level of competence of domestic aircraft manufacturers. The aircraft not only retained the high performance of the IL-96-300, but also received new operational and transportation capabilities. Due to new modern flight navigation and radio communications equipment using

Russian components, flight safety and reliability are increased, and solutions used in the aerodynamic layout, structures and systems of the aircraft ensure operational efficiency. In the future, the new aircraft will allow us to develop and improve our competencies in creating wide-body long-haul aircraft," said Deputy Prime Minister of the Russian Federation - Minister of Industry and Trade of the Russian Federation Denis Manturov.

The aircraft is a modernized version of the IL-96-300, features a fuselage extended by 9.35 meters, more powerful PS-90A1 engines and can accommodate up to 370 passengers.

The IL-96-400M received new operational and transport capabilities due to the modernization of flight, navigation and radio communication equipment, which meets the current and future requirements of Russian and international aviation regulators. In terms of reliability and flight safety, the IL-96-400M is fully consistent with its famous predecessors - the IL-86 and IL-96 aircraft, as well as with the best world models due to the redundancy of the aircraft's systems and its aerodynamic configuration.

"The new modernized version of the IL-96 will complement UAC's civil aircraft

lineup in the wide-body passenger segment and will allow us to offer the market, along with the MC-21-310, SJ-100 and Tu-214, aircraft of various sizes and ranges that are capable of providing route network throughout the country and replace foreign analogues," said Yuri Slyusar, UAC General Director after the first flight.

The passenger cabin of the IL-96-400M can have a one-, two-, or three-class layout and is equipped with a modern infotainment system that provides access to the Internet, television and satellite communications, and modern kitchen equipment.

The use of an improved navigation system will improve flight safety and simplify the landing approach process for crews. The development meets the latest requirements for navigation equipment of wide-body airliners flying in the European Common Aviation Area, as well as over terrain with no landmarks - oceans, deserts, and extensive forests. Such routes are the most difficult to navigate, since pilots cannot determine the location of the aircraft visually and navigate only using instruments. The new navigation system was created using Russian components taking into account current international requirements for navigation systems.

The new airliner is painted in the new UAC's corporate livery.

Elbit Systems Awarded Contract for Artillery Ammunition Factory

Elbit Systems announced that it was awarded a \$135 million contract to establish an artillery ammunition factory for an international customer. The contract will be performed over a period of two years.

This contract will leverage the significant technical and operational knowledge that Elbit Systems has accumulated, as well

as decades of ammunition production experience. Elbit Systems builds and operates ammunition factories and production lines in multiple sites. The Company's experience covers the entire product cycle, from design to production as well as maintenance and after sales support.

Yehuda (Udi) Vered, General Manager of Elbit Systems Land: "There is growing

demand from governments around the world who are interested in enhancing their sovereign ammunition production capabilities.

Supporting our customers and sharing our expertise with international partners is a key element of our multi domestic global growth strategy in addition to our ongoing investments to expand our own manufacturing capabilities."

ROSOBORONEXPORT to roll out major Systems at Dubai Airshow

JSC ROSOBORONEXPORT (part of Rostec State Corporation) will present a new Russian automated system for countermeasures against small-sized remotely piloted vehicles (RPV) at the Dubai Airshow 2023:

"Latest military conflicts showed a tremendous role of the remotely piloted vehicles of all classes in the reconnaissance, surveillance of the situation and destruction of manpower, materiel, installations. On the tactical level, small-sized vehicles are mainly used on a massive scale. These are cheap, but capable of inflicting serious damage," - said Alexander Mikheev, General Director of JSC ROSOBORONEXPORT. "JSC ROSOBORONEXPORT will unveil in Dubai an advanced system with a high degree of automation; a product able to detect, neutralize or destroy on the battlefield popular modern small-sized FPV-drones, quadcopters, unmanned aerial vehicles of the aircraft type. Its characteristics and high effectiveness were confirmed under the battlefield conditions."

The new export product is designed for outfitting specialized units in order to counter RPVs.

The eyes of the system are a portable small-sized radar 1L122-1E made by KRET (Concern Radio-Electronic Technologies, part of Rostec State Corporation), which



makes it possible to detect a RPV at a range sufficient for its interception or destruction.

The radar transmits air situation data via a radio channel to the portable automated control module from the set of the automated control technical aids. It was developed by the Ruselectronics holding company incorporated into Rostec State Corporation.

The automated control module may be located at a range up to 5 km from the radar. It is actually a small tablet the commander of the anti-drone unit is equipped with. Data on the RPVs designated for destruction or electronic effect (target designation) is transmitted to the anti-aircraft gunners of the "Verba" man-portable air defence system made by the High Precision Systems holding company included into Rostec State Corporation or to the operators of the anti-drone rifles fitted with an individual automation package.

The operator's individual automation package includes special goggles with visualization capability, a headset and communications means. This set provides automation of guidance at an air target. It is used for visualization and transmission of the voice commands to the anti-aircraft gunner, electromagnetic rifle operator, sniper or to a shooter armed with other weapons (if needed).

An electronic effect on the RPV's communication and navigation channels or its physical destruction constitute the final stage of the process. At the Dubai Airshow 2023, JSC ROSOBORONEXPORT will present the "Argument-2" anti-drone rifle as an electronic warfare (EW) asset. At the Customer's request, it can be replaced with any other portable anti-drone system.

JSC ROSOBORONEXPORT is prepared to consider requests of the foreign customers for the supply of the said system. ■

Bundeswehr Successfully Concludes Laser Weapon Trials at Sea

The High-Energy Laser Naval Demonstrator Working Group (or ARGE), consisting of MBDA Deutschland GmbH and Rheinmetall, is responsible for development and construction of the LWD, and for supporting the trials that were planned and organised by the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw).

During the trials, comprising six campaigns lasting nearly a year, the combat effectiveness of the LWD was proven in increasingly complex scenarios, under realistic operating conditions and against different target types. This included all LWD aspects: from detection and tracking (including highly agile targets); the interplay of sensors, command and weapon engagement systems, and effectors; possible rules of engagement; and of course the successful engagement of targets with a high-energy laser beam.

The LWD has performed more than a hundred test firings onboard the Sachsen and proved that a laser is capable of successfully engaging targets in a maritime environment. At the end of the trials,



the LWD's capabilities were successfully demonstrated at two VIP days in front of high-ranking representatives of the Federal Office for Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw), the German Navy and Army, as well as the Bundeswehr Office for Defence Planning (PlgABw), which also included shooting down a drone. Also, representatives of the British, Netherlands, and Norwegian Navy participated during the demonstration. The huge success of the test campaign was due to excellent co-operation between the BAAINBw and its subordinate detachments, the German Navy and especially the crew of the frigate Sachsen, and ARGE, the industry working group.

Following nearly a year of tests, the

BAAINBw and the defence industry have gained valuable knowledge into the operational possibilities, performance capabilities and development potential of high-energy laser effectors. The demonstrator is currently undergoing detailed examination, after which it will be transferred to Bundeswehr Technical Centre 91 in Meppen. The test results and subsequent analysis will be used for minimizing risks in a possible next phase i.e. the development of an operational laser weapon system.

The prerequisites for the development of a first laser weapon have generally been set. Both companies have launched internal preparations for the development phase within their own field of responsibility.

Complementing gun-based systems and guided missiles, an operational laser weapon system lends itself particularly well to countering the threat from drones, drone swarms, speedboats and possibly missiles at close to very close range. In the future it could also undergo a performance upgrade for destroying supersonic missiles, rockets and mortar and artillery rounds. ■

Defence export production surge under Modi Govt.



A broad political consensus built up over decades, irrespective of the colour of the political dispensation in Delhi, has helped India leapfrog into the privileged club of defence exporters, with the exports touching roughly Rs 16,000 crore as against a measly Rs 678 crore in 2014.

Prime Minister Narendra Modi's Aatmanirbhar Bharat has been in the vanguard, dictating a policy framework to promote indigenisation in defence, boost exports and reduce imports. Mr Modi's 'Make in India, Make for the World' motto has manifested in the defence ecosystem inviting active foreign participation in domestic manufacturing.

There has been a private-public sector synergy but of crucial significance has been the launch of strategic partnership models to encourage foreign original equipment manufacturers (OEMs) to set up domestic manufacturing units.

This includes manufacturing critical platforms like the Rafale, Akash missiles and Heron drones. Boeing has started manufacturing Apache helicopters in the country in a joint venture with Tata.

The Investment Information and Credit Rating Agency expects total business opportunities (order inflows) of Rs 2.75 lakh crore to be available for the Indian defence entities in the next two years. Of this, the private sector share is estimated at 22 per cent, roughly Rs 60,000 crore.

Rs 1.75 lakh crore is the Government's annual defence production target (operating income) expected to be achieved by 2025. ICRA reckons the Indian defence production to reach around Rs 1.6 lakh crore by 2026, of which an estimated 0.34 lakh crore would be by private entities. This narrowly trails the Government's goal of Rs 1.75 lakh crore by 2025.

These targets have been sought to

be achieved by a slew of administrative measures such as tenders exclusively for the private sector and discontinuation with excise or customs duty exemptions hitherto enjoyed by the defence public sector undertakings, says ICRA vice-president Chintan Lakhani.

The Centre has allowed 74 per cent FDI to encourage foreign original equipment manufacturers, established two defence industrial corridors, one each in UP and Tamil Nadu and launched the indigenisation portal, Srijan.

The portal enables all stakeholders and private vendors to interact with each other and the Indian vendors to identify items within their capabilities, thus reducing the need for import.

This is besides the Centre notifying four positive indigenization lists and three positive indigenization lists for DPS to provide ample visibility and opportunity to the domestic defence industry and create requisite R & D and manufacturing capacity domestically.

(Indigenisation lists consist of equipment and platforms that the government aims to completely indigenise by December 2025. Orders up to Rs 100 crore are exclusively earmarked for domestic MSMEs).

Export procedures have been simplified and made industry-friendly, with end-to-end online export authorisation curtailing delays and bringing ease of doing business.

The policy initiatives have reduced procurement from foreign vendors to 32 per cent in 2023, RE from 61 percent in FY2016-17.

ICRA believes the defence public sector undertakings would continue their dominance in the naval, aerospace and armaments segments.

Public sector units, once dubbed the commanding heights of the economy, continue to blaze a trail of glory, underscoring the continuum in the country's defence

preparedness.

The Stockholm International Peace Research Institute has noted that three Indian companies that rank among the top-100 defence companies- Hindustan Aeronautics Limited, AVNL and Bharat Electronics Limited, account for 1.2 per cent of the defence exports of the top-100 total. These three companies have been trailblazers of the early thrust the country gave to indigenization.

To end the phase of inertia wrought by bureaucracy and "to enhance functional autonomy, efficiency and unleash new growth potential & innovation", the Government carved out seven 100 per cent Government-owned companies from the Ordnance Fund Board (OFB).

The new Defence companies are Munitions India Limited, Armoured Vehicles Nigam Limited, Advanced Weapons and Equipment India Limited, Troop Comforts Limited, Yantra India Limited, India Optel Limited and Gliders India Limited.

"Public and private sectors are working hand-in-hand to enhance the preparedness of our Armed Forces," Defence Minister Rajnath Singh said, presiding over their launch in 2021.

The move involved more than 75,000 employees, 41 production units and a number of non-production units spread over 10 States/UT in the country, having assets worth more than Rs. 79,000 crore and above all, legacy of more than 220 years.

The Defence Ministry has stated that the equipment and platforms that are on the third indigenisation list could result in state orders worth more than Rs 2,10,000 crore being placed on the Indian defence industry in the next five years.

A hundred Indian firms engaged in defence production, helping in the country's defence exports reaching more than 85



countries. The outgo in the expenditure on defence imports reduced from 46 per cent of the total expenditure in 2018-19 to 36.7 per cent as of December 2022.

This underscores a shift towards self-reliance and indigenous manufacturing capabilities.

Notable examples include the indigenous production Brahmos Missiles, PINAKA rockets, aircraft such as the Dornier-228, artillery guns, launchers, radars, simulators and armoured vehicles. There is also growing interest in the Tejas and Dhruv aircraft.

Personal protective gear, offshore patrol vessels, advance light helicopters, SU avionics, coastal surveillance systems and Kavach MoD II launcher are among the major defence items being exported, according to the Department of Defence Production website.

Precisely, 25 percent of defence R&D budget has been earmarked for private industry and start-ups which will pave the way for innovation of new defence technologies.

Till October 2022, a total of 595 industrial licences have been issued to 366 companies operating in the defence sector. Defence exports grew by 334 per cent in the last five years.

Yet, India has been the world's third-

largest defence expenditure, as of 2021, and expects to export equipment worth \$ 15 billion by 2026.

However, India was the largest importer of defence supplies, with a share of 11 per cent of the total global arms imports between 2018 and 2022. It has held its position as the largest arms importer since 1993.

"India's tensions with Pakistan and China largely drive its demand for arms imports," says a SIPRI report. India retained its position even as its arms imports dropped by 11 per cent between 2013-17 and 2018-22.

Despite the push to privatize the defence sector in order to become self-reliant in terms of defence equipment, public sector enterprises continue to produce a majority of defence equipment (57%), but private companies are catching up (21%).

The ability to produce cost-effective equipment makes India a solid defence partner for developing economies in Asia and Africa.

Domestic companies also have orders from US defence majors to supply parts for platforms like the F16, Chinook and Apache helicopters. The country is in talks with the US for a Security of Supply Arrangement and Reciprocal Defence Procurement Agreement, which would put it in a club of 26 countries allowed to supply major components and

parts for American military orders.

Constructing an effective India-US reciprocal defence procurement agreement has been a major step taken at the meeting between Prime Minister Modi and US President Joe Biden on June 22. The defence industrial cooperation is committed to addressing any regulatory barriers to mutual defence industrial cooperation.

Pursuant to this joint statement, the US Department of Defence has published a notice and request for public comments on October 10 seeking stakeholder comments and inputs of its concern.

Even as India ambitiously looks to increase its defence exports, crucial projects are getting delayed.

Minister of State for Defence Ajay Bhatt told Parliament that 23 of 55 DRDO's 'mission mode' projects have been delayed.

Mission mode projects are taken up by the DRDO as high-priority cases with a definite schedule for their completion.

Projects related to Tejas Mark-2 light combat aircraft (LCA), naval LCA, underwater endurance submarines, light machine guns, surface-to-air missiles, surface-to-surface missiles and advanced towed artillery gun systems are among those delayed.

The Comptroller and Auditor General had flagged the delay and cost overrun in completion of DRDO projects.

The CAG said that DRDO couldn't stick to the original time frame in 119 out of 178 projects. In 49 cases, the additional time was in fact more than 100 per cent of the original schedule, the report said.

However, markets are buoyant. A true indicator of the surge in the indigenous defence industry has been the performance of PSUs and private defence companies. Mazgaon Docks, Cochin Shipyard, Bharat Dynamics and Hindustan Aeronautics Limited have witnessed their shares boom on the back of new orders.



EDGE to Showcase Advanced Solutions and Products at Dubai Airshow



- EDGE Group will have largest presence during the Airshow, as the official Defence Technology Partner
- Approximately 60 products and solutions will be showcased with a strong focus on advanced autonomous and precision guided systems

The EDGE Group is participating in the Dubai Airshow 2023 as the Official Defence Technology Partner, underpinning its position as one of the world's leading advanced technology groups across the defence, civil aviation, and aerospace industries.

EDGE will showcase over 60 state-of-the-art products, solutions, and services at the event, covering autonomous systems, smart weapons, electronic warfare, secure communications, emergency response, and precision engineering, highlighting the Group's ongoing commitment to disruptive technologies and underscoring the interoperability of its highly competitive products across multiple domains.

Mansour Al Mulla, Managing Director and CEO, EDGE Group said, "EDGE is proud

to once again be the Defence Technology Partner at Dubai Airshow. Our presence here as an official partner and major exhibitor underscores a national vision, ensuring the UAE thrives as a global hub of indigenous future technologies for the defence, civil aviation, and aerospace sectors. It is also a testament to the rapid progress EDGE has made since our first Dubai Airshow participation, demonstrating our significant sovereign capabilities and growing global footprint.

"We look forward to exhibiting our portfolio of unique products and solutions for the third time. As the world's leading aerospace event, Dubai Airshow remains an ideal opportunity for EDGE to demonstrate its high-quality aerospace offerings, with a clear, continued focus on autonomous and

unmanned systems, smart weapons and electronic warfare."

In addition to new product and service launches, EDGE will place a focus on sophisticated autonomous and unmanned systems, particularly its wide range of precision guided munitions (PGMs). This year, EDGE will have an outdoor display area, where visitors will be able to view several new products for the first time, in addition to displays of the SKYKNIGHT defence system and the current RASH series of PGMs.

EDGE will showcase the QX family of autonomous loitering munitions, the GARMOOSHA rotary-wing unmanned aerial vehicle (UAV), and the JENIAH UAV. The HUNTER series of loitering munitions will also be on display, including the HUNTER 2-S swarming UAV, which features powerful



His Excellency Mohammed Ahmed Al Bowardi, UAE Minister of State for Defense Affairs visiting the Dubai Airshow site at DWC, Al Maktoum International Airport on 3rd November, with senior officers from the Ministry of Defence and Dubai Police General Command to see the final preparations for the event.

artificial intelligence (AI).

In the Smart Weapons domain, EDGE will exhibit the AL TARIQ line of long-range PGMs, the DESERT STING line of air-to-surface precision-guided glide weapons, and the THUNDER family of guidance kits.

A full suite of Electronic Warfare solutions will be displayed, including the ACTIVECELL location system, the SKYSHIELD counter-UAS solution, convoy

protection, and homeland security solutions. Secure communications are set to include ultra-secure KATIM communications and collaboration applications, smartphones, and GATEWAY network encryptors.

Training and Services capabilities will be displayed through a variety of facility models and solutions, including a full scope of air field consultation, firefighting and emergency response training solutions, as well as the

HORIZON helicopter pilot training portfolio. Additionally, an extensive range of precision engineering for aerospace, machining, treatment, and assembly solutions will be exhibited.

Attendees of Dubai Airshow can visit EDGE and its portfolio of companies at Stand 520 at the Dubai World Central between 13 to 17 November.

Kraken and L3 Harris Collaborate for USSV Innovation



Kraken Technology Group has announced an official collaboration with L3Harris Technologies to advance the integration of control systems within the K40 MANTA prototype.

This is a pivotal step in the technical evolution of Kraken's K40 MANTA platform, setting the foundation for the development of enhanced autonomous capabilities and

ultimately, full autonomy.

The K40 is an uncrewed surface-subsurface (USSV) platform that utilises foils for rapid surface transit before submerging for clandestine manoeuvring.

This high-performance vessel requires well-established, cutting-edge control systems and L3Harris possesses the necessary components and expertise required for

seamless integration into the K40 MANTA. These integrated systems will enable the remote control of the uncrewed platform for engineering testing, foil development, powertrain calibration and demonstration before enhancement in later developmental stages.

"We look forward to working with L3Harris on the implementation of key systems for K40 MANTA as a foundation for future developments," said Mal Crease, Founder and CEO of Kraken Technology Group.

"L3Harris is proud to collaborate with Kraken on this groundbreaking platform," said Mark Exeter, Managing Director, ASV, L3Harris. "Our two companies possess complementary skills, benefiting both organisations through this venture. Furthermore, this collaboration paves the way for broader collaboration, capitalising on our shared expertise and further facilitated by our proximity to Portsmouth, a renowned UK marine innovation hub."

PBS INDIA - Trusted Partner for Helicopter APUs, UAV Engine Solutions



PBS India, an established Indian supplier of APUs for medium helicopters and engines for UAV applications, is expanding its presence in Southeast Asian countries. PBS engine's high quality and reliability are proven by more than 2000 successful installations in UAVs, target drones, microjets, and light helicopters. In an interview with Aeromag, Ravi Hazarika, Chief Commercial Officer of PBS India elaborates future plans, critical technology and more. Excerpts :

*Ravi Hazarika
Chief Commercial Officer, PBS India*

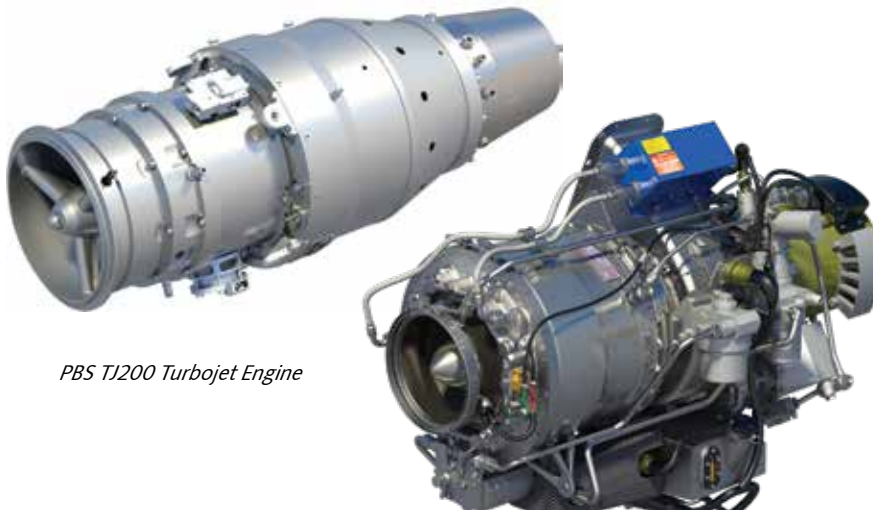
How long is the history of the PBS brand in India?

The PBS brand has a long history in India, having been registered in 1955. However, it is only in the last few years that the business has really taken off thanks to the Indian company PBS INDIA PRIVATE LIMITED. PBS

INDIA is part of the PBS GROUP, a Czech engineering company with global operations in aerospace, precision casting, cryogenics, and the power industry.

It has more than 200 years of history and the ability to design, engineer, manufacture, and test entire aerospace products. This is a

significant competitive advantage, as is the ability to adapt products to specific customer requirements. PBS has been developing and supplying small turbine engines for the aerospace industry for half a century. Building on our success in the Indian market, we are now increasing our presence in other Southeast Asian markets.



PBS TJ200 Turbojet Engine

The new PBS APU SPARK40 auxiliary power unit

What will you be presenting at Defense & Security 2023?

We would like to introduce our APU development programme to build on our current success in delivering these units for the IAF medium helicopters and, of course, the most successful turbine engines in the PBS engine portfolio.

Last year the company celebrated 20 years since the start of development of its highly successful SAFIR APUs intended especially for medium helicopters and training airplanes.

During these years PBS has developed a number of very successful auxiliary power units and gained the certification by the European Union Aviation Safety Agency for the design, production, and maintenance of auxiliary power units. Our SAFIR auxiliary



Visualisation of a missile powered by PBS TJ200 turbojet engine

power units can be primarily seen in several developed versions and modifications. The achieved parameters of these units enable the simultaneous supply of compressed air and electricity, an operating altitude of up to 6,000 m, continuous operation for up to 6 hours, a service life of 4,500 hours, simple maintenance, and reliable operation in extreme weather conditions ranks PBS APUs in the category up to 100 kW among the world's best. To this day, PBS has installed over 7,000 PBS auxiliary power units (APUs).

This year PBS unveiled the PBS APU SPARK40 during the Paris Air Show 2023. This APU delivers twice the AC power to onboard systems in comparison to earlier models. Notable enhancements have been implemented in various subsystems and components to enhance overall reliability and operational capabilities. The choice of the PBS APU SPARK40 for a new medium helicopter project in Europe highlights its exceptional quality and performance.

What else can you offer to potential partners?

We would like to showcase our ability to offer our partners mutually interoperable modern APU and Environmental Control Systems (ECS) units. PBS has 50 years of experience with the development, manufacture, and testing of ECS for airplanes and helicopters, including more than 7,000 implemented aircraft installations. The main advantages of ECS made by PBS include the possibility of cooling, heating, and ventilation in one system, minimal power consumption, ecological operation without the need for a coolant, and a compact design.

Your offer also includes a wide range of turbine engines. Can you tell us something about them?

PBS has developed and successfully launched a range of high-quality, reliable small turbojet engines used primarily in UAVs,

target drones, and defense applications. Thanks to their excellent technical parameters and reliability, PBS turbojet engines are world leaders in their category. Currently, the PBS engine range includes engines in the 400 N to 3,400 N thrust category.

The newest addition to the PBS engine range is the PBS TJ200 turbojet whose development is in its final stages. It will be the most powerful engine designed by PBS when it goes into production. As usual with the company's engines, the new turbojet will have an excellent power-to-weight ratio. It will also have a small frontal diameter and a small installation footprint.

Moreover, at the Paris Air Show, PBS took a significant step by signing a Memorandum of Understanding (MoU) with Ivchenko Progress SE, a major Ukrainian aircraft engine manufacturer. This MoU focuses on producing and further developing the AI-PBS-350 engine, with a thrust of 3,400 N, tailored for missile propulsion.

We are also able to offer the PBS TP100 turboprop engine, suitable for applications such as MALE UAVs, and its turboshaft

variant, the PBS TS100.

PBS engines' high quality and reliability are proven by more than 2,000 successful installations in UAVs, target drones, microjets, and light helicopters.

What benefits can you offer to potential customers?

These include, of course, a good knowledge of the markets and needs of potential partners in Southeast Asia, as well as the ever-growing technological background of our company at our headquarters in Bangalore.

Another advantage is that we can draw on the development base of our parent company, PBS, which has been a leading manufacturer of products and equipment for the international aerospace industry for almost 50 years. The ability to design, manufacture, and test aircraft products in-house to global aerospace standards is well known.

PBS intends to strengthen its presence and plans to expand its business there. ■



With the support of the parent company, PBS INDIA organizes a series of specialized seminars every year.

Rosoboronexport to present aircrew survival system at Dubai Airshow



The new export product is intended for the aircrews that ejected from their aircraft or found themselves on the ground after an emergency landing. It was configured by Rosoboronexport in cooperation with pilots of the Russian Aerospace Forces, as well as specialized equipment manufacturers drawing on lessons learned from actual combat operations.

"The survival of helicopter and fixed-wing aircrews in emergencies before the arrival of search-and-rescue units largely depends on the level of equipping them with the necessary life-support and self-defense items. Rosoboronexport has studied the real experience of recent military conflicts and chosen the most optimal set of equipment and gear enabling the crews

to survive and maintain combat capability in the most extreme conditions. At Dubai Airshow 2023, we are unveiling this unique product consisting of entirely Russian-made components that have been tested in combat conditions," said Alexander Mikheev, Director General of Rosoboronexport.

The aircrew survival and self-defense system, offered by Rosoboronexport for foreign markets, is thematically divided into 4 clusters: functional personal items, individual protection and survival equipment, communications and surveillance equipment, as well as self-defense weapons.

The first cluster includes combat trousers, shirt and shoes. The proposed configurations for all climatic and weather conditions are designed for a temperature range from +50

to -50 °C. In addition, the personal items cluster also includes a tactical pouch for a survival kit and a webgear with ammunition, life support, first aid kit pouches and a holster for a Lebedev compact pistol.

Individual protection and survival equipment includes a plate carrier and two types of armor plates for it, ceramic and UHMWPE, as well as a ZSh-7 upgraded protective helmet. A survival kit, tailored taking into account the experience of pilots' survival in real combat conditions, is offered in the same cluster. It contains a first aid kit, dry ration, a hook with a fishing line, a knife and other equipment.

For communications and surveillance purposes, the system includes an R-187 Azart software-defined radio with a headset, PN-21K night vision monocular, GEO-ONV1-01M night vision goggles for piloting helicopters.

In the self-defense equipment cluster, Rosoboronexport, on advice from Russian Aerospace Forces specialists, proposes to equip the aircrews with a 5.56mm Kalashnikov AK-19 shortened assault rifle, presented abroad for the first time, or a 9mm Kalashnikov PPK-20 submachine gun with a PKU-2 collimator sight, as well as a 9mm Lebedev PLK compact pistol.

Rosoboronexport is ready to consider requests from foreign customers for the supply of the presented system. In addition, in case of interest, the company's specialists can offer relevant options for replacing its individual components with those available from partners and give recommendations on the use in real conditions.

ROSOBORONEXPORT to Develop Technology Partnerships

"One of the key current tendencies in military-technical cooperation is a rising global interest in technology partnership. According to our estimates, the share of such projects will double by 2030 and occupy 40% of the entire global arms market," Alexander Mikheev, Director General of Rosoboronexport said. "ROSOBORONEXPORT has strong competencies in launching licensed production, setting up joint ventures and conducting joint R&Ds with foreign customers. We have an impressive portfolio of completed and current projects for all services of the Armed Forces."

JSC ROSOBORONEXPORT has been fulfilling technology partnership contracts with foreign customers since the first year of its establishment. In 2000, the company signed a major contract with India's HAL Corporation to organize licensed production of Su-30MKI aircraft in India. As early as next year, in 2001 another contract was

signed with India for the licensed production of Russian MBTs. Production of Russian BMP-2 IFVs, 125mm Mango APFSDS rounds and Invar gun-launched ATGMs was also launched in India through JSC ROSOBORONEXPORT.

In addition to organizing licensed production on the customer's premises, JSC ROSOBORONEXPORT actively operates in the field of establishing and managing joint ventures to manufacture Russian military products in partner countries.

The largest and best-known examples of this type of cooperation are the operating Russian-Indian joint venture for the production of AK-203 assault rifles in India with 100% final local content, as well as a joint venture engaged in modernization and maintenance of Su-30MKM aircraft.

JSC ROSOBORONEXPORT also provides technical assistance in establishing special facilities in foreign countries as part of

technology cooperation.

Russian design bureaus and manufacturers have a broad technology base and extensive experience in developing and making unique military products. As a result, the world market today shows strong interest in joint projects with Russia to develop new advanced models of weapons and military equipment.

"Technology partnership projects with foreign countries are mutually beneficial. On one hand, unique competencies of domestic arms manufacturers are in demand abroad. At the same time, our enterprises are able to focus on manufacturing and supplying products for the Russian Army, which is a top priority today. On the other hand, partner countries get opportunities to launch full-scale production on their territory and develop their own industrial base," Alexander Mikheev added.



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Qatar Airways Announces Appointment of New CEO

Qatar Airways Group announces the appointment of Engr. Badr Mohammed Al-Meer as the new Group Chief Executive.

Akbar Al Baker will be stepping down from his current position as Group Chief Executive Officer effective November 5th, 2023 after 27 years of remarkable service.

Under Akbar Al Baker leadership, Qatar Airways has grown to become one of the most recognisable and trusted brands globally, synonymous with customer service quality and the highest of standards. The National Carrier of the State of Qatar achieved an unprecedented seven-time winner of the "World Best Airline" award and its state-of-the-art Hamad International Airport, which is under its management and operation, has also been recognised as the World Best Airport.

The Qatar Airways Group's contribution to helping deliver the best ever FIFA World Cup 2022 showcased to the world its capability, commitment to excellence and its passion for bringing the world together



Engr. Badr Mohammed Al-Meer
Group Chief Executive, Qatar Airways

Empire Aviation showcases award-winning services at Dubai Airshow



Paras P. Dhamecha,
Managing Director of Empire Aviation

Empire Aviation Group, the Dubai-based provider of integrated private aviation solutions with aircraft management, sales, charter and CAMO services, is supporting Dubai Airshow 2023 with a dedicated pavilion at the show. The company will meet aircraft owners, charter customers, partners and aviation officials during the course of the event and deliver a very positive message about the prospects for the regional private aviation industry.

Empire Aviation operates one of the Middle East's most extensive managed fleets of business jets across key regions for private aviation (Middle East, USA, Europe, Africa, and Far East). The company provides owners with a choice of aircraft registries (UAE and San Marino) private registries (Cayman Islands), and an aircraft sales representative in the USA. Empire Aviation Group is also the authorised Independent Sales Representative (ISR) for Gulfstream Aerospace Corporation



in India.

As a global private aviation enterprise, the team of 130 aviation specialists provides a wide range of integrated aviation services for aircraft owners and charter clients, and personalised customer services. Empire Aviation's unique ability to integrate all facets of private aviation – sales, management, operations, and charter – is what sets the company apart and enables the team to deliver a rewarding experience to aircraft owners.

The key is selecting the right aircraft and entrusting its management to experienced professionals who can safeguard its value through the appropriate ownership model.

Each of the company's aircraft owner business models offers unique advantages - comprehensive management, revenue generation, expert maintenance supervision, or access to private jet travel.

According to Paras P. Dhamecha, Managing Director of Empire Aviation, the Middle East is among the fastest-growing aviation markets and the evolution of private aviation has seen a significant surge in recent years, thanks to its unparalleled flexibility, convenience, and privacy.

"Many people have had their first taste of private flying and continue to use private aircraft as charter clients or owners. We remain highly optimistic about the future of our industry, as we see private aviation coming of age.

"2023 has been exceptional for Empire Aviation with strong performances across aircraft sales and charter bookings. We see sustained international interest in all our services – aircraft management, aircraft sales, charter, and CAMO – from various sectors, including individuals and families, corporates, and government entities.

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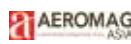


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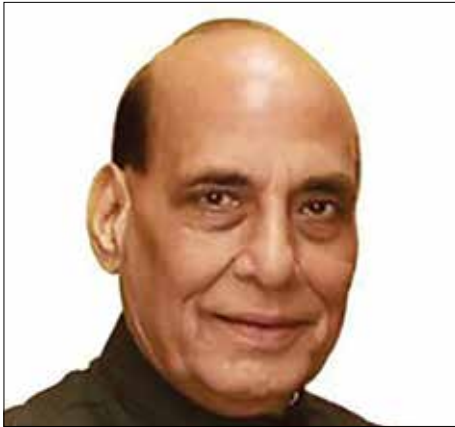
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“Multinational collaborative frameworks must to tackle maritime challenges”



Defence Minister of India, Rajnath Singh has called for establishing multinational collaborative mitigation frameworks in the Indian Ocean Region to effectively tackle common maritime challenges such as climate change, piracy, terrorism, drug-trafficking, overfishing and freedom of commerce on high seas. He was delivering the keynote address at the fourth edition of Goa Maritime Conclave (GMC) on October 30, 2023.

The three-day conclave, was attended by Chiefs of Navies/Heads of Maritime Forces/Senior representatives from eleven Indian Ocean nations - Bangladesh, Indonesia,

Madagascar, Malaysia, Maldives, Mauritius, Myanmar, Seychelles, Singapore, Sri Lanka & Thailand.

The minister emphasised that common maritime priorities need to be addressed cooperatively by avoiding selfish interests that make the region less secure and less prosperous. He underlined the importance of respecting the international maritime laws, as enunciated in the United Nations Convention on the Law of the Sea (UNCLOS) 1982.

“A free, open and rule-based maritime order is a priority for all of us. ‘Might is right’ has no place in such a maritime order. Adherence to international laws and agreements must be our lodestar. Our narrow immediate interests may tempt us to flout or disregard the well-established international law, but doing so would lead to the breakdown of our civilised maritime relations. Our common security and prosperity cannot be preserved without all of us committing to cooperatively adhering to the legitimate maritime rules of engagement. Fair rules of engagement are crucial for fostering collaboration and ensuring that no single country dominates others in a hegemonic manner,” said Rajnath Singh.

On climate change, the minister stated that the collaborative mitigation framework

can involve the countries working together to reduce carbon emissions and transition to sustainable practices. He pointed out that the world could overcome this problem if all countries accepted the responsibility to cut emissions by investing in green economy and share technology & capital with the needy countries.

Speaking on the occasion, Minister of State for External Affairs Meenakshi Lekhi batted for cooperation among IOR nations to ensure peace & prosperity in the region. Underscoring the importance of IOR, she lauded the Indian Navy for protecting the nation’s maritime interests and being the first responder in the region in times of crisis.

In his address, Chief of the Naval Staff Admiral R Hari Kumar emphasised the changing nature of threats, both traditional & non-traditional and those emanating from the sea. He added that the GMC offers a valuable opportunity towards developing effective mitigation strategies against such threats, thereby maintaining peace and securing growth in the IOR.

The theme for this fourth edition was ‘Maritime Security in the Indian Ocean Region: Converting Common Maritime Priorities into Collaborative Mitigating Frameworks’.

Thales receives US Army order for more than 7,000 of Combat Net Radios

Thales receives an order increase for more than 7,000 Combat Net Radios (CNR). This is the second order in a dual-vendor, multi-year Indefinite Delivery, Indefinite Quantity (IDIQ) contract.

The Combat Net Radios (CNR) is a cryptographically modernized radio drop-in replacement that will replace legacy SINCGARS radios, forming a critical element of the U.S. Army’s modernization.

The CNR enables resilient communications in all environments while enhancing combat weapon systems throughout the Army’s portfolio.

The U.S. Army has ordered more than 7,000 Thales RT-2129 Combat Net Radios (CNR) based on the Improved Multiband Inter/Intra Team Radio (IMBITR) technology, demonstrating the service’s continued confidence in Thales’ ability to deliver next-generation radios for the Army’s network modernization effort.

As a fully software-defined communications solution, the Thales CNR



ensures interoperability with the legacy Single Channel Ground and Airborne Radio System (SINCGARS) waveform, as well as enables the Army to quickly add improved waveforms to address evolving requirements. The RT-2129 CNR is a critical component to the Army’s unified network providing robust communications capabilities to the tactical edge.

The Thales CNR, built around the

battle proven AN/PRC-148 handheld family of radios, provides the Army a crypto modernized tactical radio solution. The flexible software-defined solution enables the Army to seamlessly replace the legacy RT-1523 fleet of mounted and dismounted radios.

Under this award, Thales will deliver more than 7,000 RT-2129 Tactical Secure Voice Crypto Interoperability Standard (TSVCIS) compliant radios. To date, the Army has ordered more than 8,100 CNRs.

“The Combat Net Radio continues Thales’ tradition of being responsive to emerging needs in support of the warfighter with a next-generation radio that uses existing training, installation kits and system integration to ensure mission readiness,” said Mike Sheehan, CEO, Thales Defense and Security, Inc. “The CNR is designed to easily integrate into the Army’s Integrated Tactical Network and operate reliably under the most extreme conditions.”



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Embraer displays C-390, Super Tucano, E195-E2 and Praetor 600 at Dubai Airshow



Eve Air Mobility will showcase a full-size eVTOL cabin and a virtual reality experience in the advanced air mobility pavilion.

Embraer will present its capabilities in defense and security, commercial and business aviation, technology and innovation at the Dubai Airshow, one of the largest aerospace exhibitions in the world.

The company's chalet will be at A38/A39 area of the biannual event, held at Al Maktoum International Airport.

Among the main highlights of the static exhibition will be the E-195-E2 commercial jet, which makes its public debut with an exciting new livery - the Tech Eagle livery, reflecting

high-technology characteristics, excellent performance, efficiency, and low noise. Additional aircraft on display include the Praetor 600, the most technologically advanced executive jet in its category, the C-390 Millennium multi-mission military tactical transport aircraft and the A-29 Super Tucano training, aerial interception and surveillance aircraft.

Eve Air Mobility will also display the full-size model of the electric vertical take-off landing (eVTOL) vehicle cabin in the pavilion dedicated to advanced air mobility. Eve will

be offering visitors a virtual reality experience of the eVTOL cabin at booth #87.

"Our strong presence at the Dubai Airshow reflects the Middle East's growing interest in Embraer's products, services high-technology solutions," said Francisco Gomes Neto, President and CEO at Embraer. "Our constant expansion in the region, as well as in other regions of the world, is a direct result of our increasingly competitive innovation and our ability to satisfy the most diverse customer needs."



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HAL Hands Over LCA Tejas Twin Seater to IAF

HAL handed over the first LCA Tejas twin seater to the Indian Air Force in the presence of Minister of State for Defence Ajay Bhatt. It is a huge boost to self-reliance, said the minister in his address to the packed audience. "I am proud to be part of this historic occasion and salute the spirit of HAL which has been spearheading Swadeshi manufacturing in defence", he said.

He unveiled the twin seater LCA. "In all, the development of LCA Tejas has also brought about a shift in our approach to defence procurement. It has demonstrated that India has the talent, knowledge and capability to design, develop and manufacture world-class fighters", he added.

Speaking on the occasion, Chief of Air Staff Air Chief Marshal VR Chaudhari said that IAF would be going forward to procure 97 more LCAs and with this it will have 220 LCAs in its inventory.

C B Ananthkrishnan, CMD, HAL said that the company is committed to deliver all the twin seater aircraft pertaining to IOC and FOC contract to IAF in the current financial year. With this, we are moving one step closer towards achieving self-sufficiency on the fixed wing segment. These trainers also ensure smooth transition for the pilots from trainer to fighter aircraft in this class", he added.

The event was graced by Chief of Air Staff Air Chief Marshal VR Chaudhari, C B Ananthkrishnan, HAL CMD, Girish S Deodhare, Director General, ADA, A P V S Prasad, CE (A), CEMILAC, officials from IAF, MoD, DGAQA, DRDO, HAL and production partners. The Release to Service Document (RSD) and the Signalling out Certificate (SOC) were also handed over during the event.

LCA Tejas twin seater:

The LCA Tejas Twin Seater is a light weight, all weather multi-role 4.5 generation aircraft. It is designed to support the training requirements of the IAF and augment itself to the role of a fighter in case of necessity. It is an amalgamation of contemporary concepts and technologies such as relaxed static-stability, quadraplex fly-by-wire flight

control, carefree manoeuvring, advanced glass cockpit, integrated digital avionics systems and advanced composite materials for the airframe.

The production of the LCA twin seater variant adds India to the list of very few elite countries who have created such a capability and have them operational in their Defence Forces, another feather in the cap of "Aatmanirbhar Bharat" initiative of Govt. of India. ■



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