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FLYING START TO INDIA AVIATION



PRESIDENT OF INDIA PRANAB MUKHERJEE INAUGURATES INDIA AVIATION 2016 BY LIGHTING THE CEREMONIAL LAMP

By **R. CHANDRAKANTH & SURESH.D**

- **Government to invest over \$120 billion in aviation infrastructure**
- **India to become third largest aviation market soon**

The government is planning to invest over \$120 billion for development of airport infrastructure and aviation navigation services over the next decade to propel the growth of the civil aviation sector in the country, the President Pranab Mukherjee said. This is the first time that India Aviation, in its fifth edition, was inaugurated by the President of India.

While expressing happiness over the rapid growth of the civil aviation market with India set to emerge as the third largest aviation market in the world by 2020, the President said much remains to be done in terms of improving penetration and regional connectivity.

"The deeper air penetration to smaller cities; better connectivity to North Eastern part of India; higher disposable incomes of the middle class of India is ex-

pected to further propel the growth of the country's civil aviation industry," he said.

With a network of domestic and 85 international airlines connecting 40 countries, Indian airports handled passenger traffic of 190 million persons in 2015. Yet, India is one of the least penetrated air-markets in the world with 0.04 trips per capita per annum as compared to 0.3 of China and more than two in the USA, the President pointed out.

Despite rapid growth of aviation industry, several Tier-II and Tier-III cities of India still remain unconnected or inadequately connected with the national grid. Stating that the middle-income population of India has grown by 60 per cent over the last five years and has reached about 270 million in 2016, the President said: "The consistent increase in income levels of the middle class in India has enhanced their capacity to undertake air travel for business and leisure. This has resulted in further growth in the business of low-cost airlines."

421 MILLION PASSENGERS BY 2020

By 2020, the total passenger traffic in India is likely to touch 421 million. "It is time for the government and



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all stakeholders of the civil aviation industry to leverage this tremendous business opportunity," he said. It is estimated that India should require at least 800 aircraft by 2020 to cater to the phenomenal increase of air passenger and freight traffic. The supporting aviation infrastructure has to be suitably upgraded by building new greenfield airports; expanding the existing airports and upgrading facilities for maintenance, repair and operations. While India has registered 14 per cent growth in the sector during the last decade, the foreign direct investment (FDI) in air transport during last 15 years has touched the mark of \$570 million. "India continues to be a favourite destination for foreign investors in civil aviation sector," Mukherjee noted.

The Minister of Civil Aviation, Ashok Gajapathi Raju said civil aviation has had a chequered past, sometimes flying, sometimes in turbulence. However, in the last one and a half years, it has been growing and the government was creating an eco-system for aviation growth. The government, along with state governments, were providing actionable inputs for the industry to benefit.

TELANGANA AEROSPACE PARKS

The Chief Minister of Telangana, K. Chandrashekar Rao said Telangana had two aerospace parks and another one is in the offing. There were about 250 aerospace and defence companies in the state and Telangana is becoming a favoured investment destination for aerospace and other sectors.

The Civil Aviation Secretary, R.N. Chaubey said the growth of 20 per cent in passenger traffic in India is unparalleled in the world. In the civil aviation landscape, India has arrived.

The President of FICCI (Federation of Indian Chambers of Commerce and Industry), Harshavardhan Neotia, proposed a vote of thanks. •

Civil Aviation Policy to be out in April 2016



By **R. CHANDRAKANTH & SURESH.D**

The much-awaited civil aviation policy would be announced by April, 2016, the Civil Aviation Minister P. Ashok Gajapati Raju at the press conference at India Aviation 2016. The Cabinet is expected to give the nod soon to the policy which has many components to promote civil aviation in India.

"The work on the new aviation policy is in an advanced stage. We have put out the draft policy in the public domain. We are now seeking the guidance of senior Ministers. The new policy will be out by April this year," the Minister said in an interaction with the media. The aviation policy covers a wide gamut of issues including taxation and simplification of procedures to achieve the goal of making India a global aviation hub in the coming years. "There are 22 items in the draft policy and some of them have implications on the growth of the sector. Our idea is to give a boost to the entire ecosystem so that air connectivity in the country improves substantially," Gajapathi Raju said.

The Minister admitted that India has the highest ATF (aviation turbine fuel) tax in the world and said despite the fall in the international prices of aviation fuel the benefit has not been passed on to the airlines. "We are still the highest price of ATF in the world, but at the same time we have the highest passenger growth in the world." However, foreign airlines flying out of India would have no VAT (value added tax) and no excise duty. It is zero." This is peculiar to India and we have to look at the bilateral air services agreement with different countries.

5/20 RULE, GOVERNMENT HAS PLAN

The proposed policy will address this issue along with the restrictive 5/20 rule for operating international flights. "Once cleared by the cabinet, the policy will be unambiguous on this issue," the Minister

(Continued on page 17...)

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Embraer Executive Jets receives Phenom 100E order from India



CAPTAIN SAKEER SHEIK, MANAGING DIRECTOR OF TITAN AVIATION GROUP AND CLAUDIO CAMELIER, VICE-PRESIDENT OF SALES FOR EMBRAER EXECUTIVE JETS IN ASIA-PACIFIC AND THE MIDDLE EAST

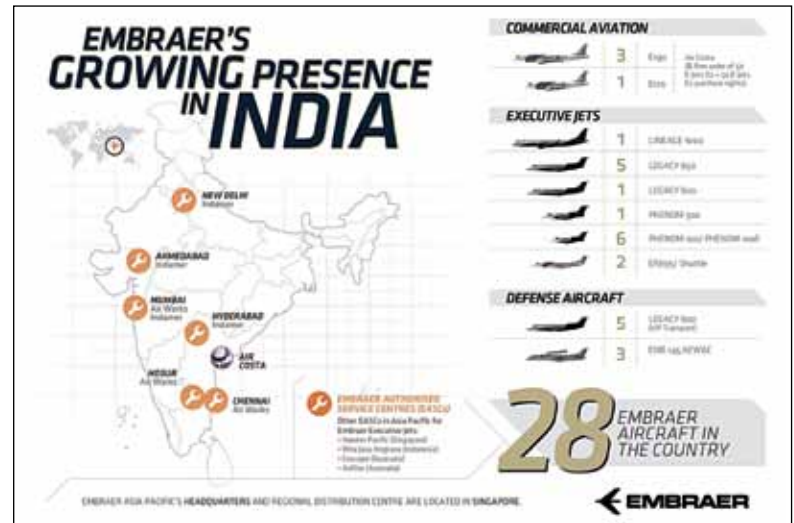
BY R.CHANDRAKANTH

Embraer Executive Jets announced an order for a new entry-level business jet Phenom 100E from an undisclosed customer based in India. The aircraft will be managed by Titan Aviation Group, a global aviation specialty service provider headquartered in the United Arab Emirates.

Captain Sakeer Sheik, Managing Director of Titan Aviation Group and Claudio Camelier, Vice-President of Sales for Embraer Executive Jets in Asia-Pacific and the Middle East celebrated the deal at India Aviation, held in Hyderabad, India.

"The Phenom 100E has proven itself to be a very agile aircraft that is capable of taking off and landing on short runways, while fuel economy helps keep operating costs low," said Claudio Camelier, Vice-President of Sales for Embraer Executive Jets in Asia-Pacific and the Middle East. "We are grateful for the confidence the customer has placed in us and thank Titan Aviation for their unwavering support. This order takes the Embraer Executive Jets aircraft registered in India to 22, across six aircraft types."

"Titan Aviation Group has been in the aircraft management business for 12 years providing differentiated services to our customers," said Captain Sakeer Sheik, Managing Director of Titan Aviation Group. "Embraer Executive Jets' broad portfolio of efficient aircraft and their solid customer support and services network allow us to assure the low operating costs, high dispatch



reliability and superior operational readiness expected by our customers."

Winner of various innovation and design awards, the Phenom 100E is best-in-class jet, having redefined the entry-level segment with the latest generation technology, a new style concept, premium comfort, performance and reliability. To date, over 330 Phenom 100 and 100E jets have been delivered for customers worldwide.

Recently, Titan Aviation Group started operating a new Embraer Legacy 650 large business jet under an aircraft management agreement with a customer in Middle East. The newly ordered Phenom 100E will be the fourth Embraer airplane managed by Titan Aviation when it is delivered later this year.

ABOUT THE PHENOM 100E

The Phenom 100E has a four-occupant range of 1,178 nautical miles (2,182 km), with NBAA IFR reserves. With a high speed cruise of 390 knots, the Phenom 100E is one of the fastest jets in its class, with operating costs comparable to that of leading turbo-prop aircraft. The Phenom 100E also features multi-function spoilers, and the aircraft is capable of flying at 41,000 feet (12,500 m), powered by two Pratt & Whitney Canada PW617F-E engines with 1,695 pounds of thrust each.

The pilot-friendly cockpit enables single-pilot operation and offers the Prodigy Flight Deck, with Synthetic Vision System. Other standard features include improved takeoff performance with thrust reserve, increased Maximum Zero-Fuel Weight and an electronic checklist. •

5/20 or no 5/20, AirAsia India going full steam: Tony Fernandes

BY R.CHANDRAKANTH

The CEO of Malaysia-based Air Asia, Tony Fernandes today told SP's ShowNews that irrespective of the 5/20 rule (five years and 20 aircraft rule to fly international destinations from India) getting scrapped or not, Air Asia India would be going full steam. "There is no looking back."

He told SP's ShowNews that the airline was getting two more aircraft in the next couple of months, adding to its fleet and the destinations it is going to connect in India. "We are highly optimistic of the Indian market and we have been running passenger load factor of 85 per cent and it is good." The market is big enough, he said and added that Air Asia is here for the long run.

"We are in full force at India Aviation and our aircraft is on display. We are working on different strategies to expand the market here."

Air Asia has a fleet of six Airbus aircraft and presently connects 10 destinations in India. The airline had deferred aircraft deployment as it was expecting changes in the policy but now is going ahead with plans as it sees the market opening up further on the domestic sector. •



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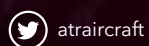
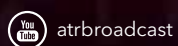
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BAOA to fight 'Battle of Perception'

Business Aircraft Operators Association (BAOA) determined to engage, engage and engage with government to propel aviation growth



JAYANT NADKARNI, PRESIDENT, BAOA



KURT EDWARDS, DIRECTOR GENERAL, IBAC

By **R. CHANDRAKANTH**

The refrain at the second edition of the BizAvIndia conference of the Business Aircraft Operators Association in Hyderabad has been to fight the biggest battle, the battle of perception that business aviation is a rich man's tool. The association has vowed itself to come together on a stronger note and engage the government at different levels, not just the Ministry of Civil Aviation (MoCA).

Though no representative of the Ministry or government was present at the BAOA conference (Anil Srivastava, Joint Secretary of MoCA did not turn up), industry leaders and experts said it was imperative for all to keep going after the 'big optics' of aviation (5/20 rule and other issues) got sorted out.

In his welcome address, the BAOA President, Jayant Nadkarni reiterated that the Association which is celebrating its fifth birthday, has been continuously working on fighting the biggest battle, the battle of perception. The association is approaching the issue on different levels, through seminars, through video presentation (the first of the videos was presented at the conference), reports, connecting with different ministries (such as Ministry of Finance) etc. The BAOA president said that business aviation which had enormous potential was presently stagnating due to various issues. The projection that it would contribute ₹3,400 crore to the GDP between 2016-20 had been downsized to ₹2,300 crore due to growth stagnating. High input duties was one of the dampeners. "If the duty differential regime is removed, the business aviation fleet will grow."

Jayant Nadkarni said after the big optics of '5/20 rule, 160 airports development, etc' which the government was now seized of, it would be the turn of the general aviation/business aviation sector.

The Director General of the International Business Aviation Council (IBAC), Kurt Edwards said IBAC is to business aviation like what IATA (International Airport Transport Association) is to airlines. IBAC is working with the International Civil Aviation Organisation (ICAO) in taking up several issues affecting the community and one of the priorities is aviation safety. International standards in safety, environment, etc were being established and member organisations were working together

to have them implemented.

PANELLISTS RALLY ON POINTS TO GET ATTENTION

Rohit Kapur, former President of BAOA and Managing Director of Arrow Aviation, who moderated the first session quizzed the panellists on whether the NCAP was a big departure from earlier instances; whether regional connectivity which was the buzz word good enough to kick-start the sector; infrastructure issues etc.

Amber Dubey, Head Aerospace & Defence, KPMG, complimented the government for the 'big departure' from the four page policy to a comprehensive one. Regional connectivity and MRO reforms were captured majorly in the NCAP.

Dhiraj Mathur, Executive Director, PWC, said it is the beginning and there is need to leverage capacity as per the regional connectivity scheme. Though the budget does not have provisions for the sector, it was essential for the industry to interact with different ministries well in advance.

Captain M.K. Valsaraj, President & Chief Pilot, Deccan Charters and Colonel Sanjay Julka, Vice President, BAOA & CEO, IndiaFlySafe, were of the view that categorisation such as general aviation, business aviation, private operators, non-scheduled operators etc were terminologies which were confusing the authorities. There was need to simplify the categories. Captain Valsaraj was critical of the draft on helicopters stating that it was completely wide off the mark on several points. Group Captain R.K. Bali (Retd), Secretary of BAOA, talked about viability gap funding (VGF).

Arun Sharma, Managing Director, Aviators India, spoke about helicopter emergency medical services (HEMS) and asked whether it was possible to grow this business with costing of ₹1,50,000 per hour. There was need for landing of helicopters on site for HEMS to take-off and hoped it would happen soon. Vinit Phatak, Managing Director, Invision Air asked 'when are you happy in business aviation?' and answered by saying "first when you buy the plane, and then when you sell." The charter aircraft business is not making money. Rajeev Wadhwa, CEO, Baron Aviation, said charters are primarily driven by metros and we are not reaching out to markets outside metro. Now thanks to app driven portals such as bookmycharters and JetSetGo, it was possible for anyone to get a charter from any part of the world. Nevertheless, he said it was imperative for operators to comply with the bookings. Kanika Tekriwal, CEO, JetSetGo, talked about how her company was making profits and that the industry should not get despondent.

Kapil Kaul of CAPA talked about developing institutional infrastructure which needed to be aligned to industry needs. Prashant Bhushan, CEO, Taj Air Metrojet Aviation, said the country was faced with inadequate manpower. Group Captain Pankaj Chopra, said there were 360 unused airports in the country and it was totally skewed towards five-six cities. •

Owner/operator recounts changes in business aviation over the years

He belongs to a family which has been flying planes from the 1930s. A family which has participated in World War II. A family which has spread its industrial tentacles across Punjab and Uttar Pradesh, creating jobs and creating wealth. The Saraya group. And its interest in business aviation is well known.

The Chairman and Managing Director of the Saraya Group, Capt. S.S. Majithia, who has over 6,000 hours of flying under his belt, made a splendid case for business aviation as a business tool and not a rich man's toy. Recalling how his grandfather had stakes in pre-independent India, extending from Lahore to Delhi to Gorakhpur, Capt. Majithia said in those days the trip used to take three days and the last mile invariably used to be by road. It was in 1935 that the group bought a small airplane which did the journey in half a day



CAPTAIN S.S. MAJITHIA

with one fuel stop. "Our sugar unit in Gorakhpur survived because of the airplane as we could connect and ferry engineers and consultants quickly from plant to plant."

"The small airplane was never a wasteful expenditure. It is totally beyond me that it is a rich man's toy." Industries, he said, are increasingly being set up in backward regions as land is easily available and the

only way to access these plants in quick time is through airplanes as the road network in most places are under-developed."

Despite the anguish, Capt. Majithia said the industry should not despair but should strengthen the association to resolve issues. He mentioned how the sugar industry survived because of the sugar associations. •



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'Right capacity is the solution for India'

Dinesh Keskar

Boeing commercial airplanes are on a steady course and the US-based company has laid out its strategies in the world market in general and India in particular. In an exclusive interview with **SP Guide Publications** Editor-in-Chief **Jayant Baranwal**, the Senior Vice President of Boeing (Asia-Pacific & South Asia) **Dinesh Keskar** talks on how the company is going to expand its market share.

(...Continued from SP's ShowNews, Day 1)

Jayant Baranwal (Baranwal): What do you think is the solution to serve smaller cities? Tier-II and -III destinations in terms of capacity build up, in terms of the size of the aircraft and so on?

Keskar: In particular the Airports Authority of India (AAI) has done a reasonably good job in terms of Tier-II cities getting airports ready. A significant number of airports have been improved, however there are more to be improved in the Tier-II level. In the Tier-III level, you need to improve not only the airport itself, but also the runways, the facilities, the navigation, the ATC towers. All of that is going to come into play and when that is happening, you clearly need all the help you can get, and not only from the government and AAI but potentially from privatisation—the public-private partnership will continue and that is what is going to happen. This of course will require a lot of money. It will all not come from AAI, but will come from other sectors, other people. The state governments have a role to play in this kind of a situation because they will be benefiting from this as well. For example, in Maharashtra, besides its main three or four airports, there are other airports which are in need of improvement.

Baranwal: What kind of mix of capability build-up is advisable for India which is an evolving market as you know—maximum number of seats versus optimum number of seats and overcapacity versus right capacity?

Keskar: Exactly, Jayant, I have been very vocal on this point. The overcapacity is what has led to significant troubles for India in 2008-10 when the fuel prices went up dramatically. We are in a fortunate position right now because operating costs have come down significantly, mainly because of the fuel component. It used to be 40 to 45 per cent of the total costs and now has come down to 20 per cent. If you have overcapacity, then you will get into a fierce fare war. I don't consider what is happening today as a significant fare war. It is there with the airlines all trying to establish themselves in the market, but it is not a fare war to be concerned about. But if you have overcapacity and a passenger is being faced with offers by five other airlines, clearly the fares are going to go down and they may go down below the cost, and that is when we need to watch carefully. I am a

firm proponent of adequate capacity not overcapacity. Yes, airlines can have four or five per cent additional capacity and some seats can be sold at low fares to attract first time travellers rather than having overcapacity. The solution for India is really the right capacity or slight overcapacity not overcapacity.

Baranwal: What kind of future do you foresee in the context of airline operations with the fuel prices which are currently quite down now but definitely may go up?

Keskar: Of course they will go up, but not in the foreseeable future. What I mean is that in the next six to 12 months, nobody is expecting

price environment which would not have been possible otherwise.

Baranwal: So you agree that some role can be played by aircraft which is not more than 100-seater capacity?

Keskar: Absolutely. We have always said that about the aircraft below 100-seater. But as you know, we don't make planes below our 737 family. The below 100-seater is a wide open market and there is a lot of crowding: the Chinese are entering that market, the Japanese with MRJ, the Russians with SSJ, of course Bombardier is in that market and so is Embraer. We feel their presence is needed, as you cannot start with a 150 or 180 passenger airplane. You just won't get that kind of traffic on the first day. These airplanes are complimentary to us. You may have seen in our forecast that we don't predict that there is room for many planes in this segment, as they have range limitations. When they are flying distances of one, one-and-a-half hours, we do have roads and trains. We have to take into account: going to airport one hour earlier, going through security, waiting for the airplane and then take off and at the other end, getting down, waiting for baggage and the travel back, and that amount of time you are taking is going to be substantial. That is when train or road will come into play. It is why we believe that not many of these will have a market in India.

Baranwal: Any comment you would like to make on the price war which continues to take place in India. Does it really make business sense, Dinesh, after all?

Keskar: Clearly nobody can make money on a sustained basis below cost. But what I am also observing is that when I go online to check prices, I almost never find flights available at that price, that means that they may be selling a handful at that price to attract people. If a passenger sees ₹2,000 fare and ends up as a ₹2,700 as the final price on the website, the passenger says he is okay with the additional ₹700 spend. These low fares are available but it gets filled up within five minutes of that fare being advertised. They will be all gone, very quickly. •

(Continued in SP's ShowNews, Day 3)



BOEING DREAMLINER 787 IN AIR INDIA LIVERY

fuel prices to go higher than 50 or so. In that environment I think airlines can try growth, and new markets by connecting Tier-II cities. That is what is possible in terms of experimentation in a low operating cost environment. You cannot play these scenarios when the fuel prices are high. In today's market, where you build a route, you start with a 100-seater airplane and then you build up that route until you eventually can become a 737 route (180 pax). That is what somebody like SpiceJet can do with the Q400 and then build that route and hand it over to a 737. We don't have very many small airplanes in India, but because of having a low fuel price, it will allow us to develop some markets in a low fuel



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Bombardier Business Aircraft looking at long-term profitability

By **SP'S CORRESPONDENT**

Bombardier Business Aircraft continues to restructure and enhance its business model to improve long-term profitability. To that end, the business segment has completed initiatives to increase the number of direct-to-market channels, including termination of third-party sales representative and distribution agreements, as well as the restructuring of customer commercial agreements. As a result of these agreements, Bombardier will incur pre-tax special charges of \$278 million in the fourth quarter of 2015, of which approximately \$145 million is non-cash. Of the cash impact, approximately \$50 million was disbursed in Q4 2015 and the balance will be paid in 2016.

"We are changing our sales strategy to increase our focus on direct channels," said David Coleal, President, Bombardier Business Aircraft. "This, coupled with our robust transformation plan, will increase our long-term profitability. Our overall business model enhancements will leverage our class-leading aircraft, which continue to be outstanding business tools for operators in all regions of the world."

In line with this change in sales strategy, Bombardier terminated select sales representative and distribution agreements. Bombardier will become directly responsible for sales activities in the associated regions leveraging its existing sales teams allowing for increased direct relationships with operators.

Bombardier Business Aircraft has also completed a restructuring of certain customer commercial agreements. These agreements resulted in the cancellation of 24 firm orders, which had an aggregate value of \$1.75 billion at 2015 list prices, with an additional cancellation of 30 optional orders. Bombardier expects to sell these positions at improved margins.

"Restructuring these commercial agreements will strengthen our busi-



BOMBARDIER GLOBAL AIRCRAFT FAMILY

ness and solidify our long-term profitability," added Coleal. "Our sales team is well equipped to increase our position in the marketplace, and ultimately, we expect our current industry-leading backlog to become even stronger." •

An aerial photograph of a Boeing 737 MAX 8 aircraft in flight. The aircraft is white with a teal and white patterned tail fin featuring a large white number '8' and the text '737' below it. The registration 'N737AMX' is visible on the rear fuselage. The plane is flying over a lush green landscape with a large dam and a reservoir in the background. The sky is clear and blue.

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Bell 429WLG delivers exceptional speed, range and performance

By **SP'S CORRESPONDENT**

After having unveiled the Bell 429WLG in late 2013, Bell Helicopter completed its first North American delivery of the aircraft in early spring, and recently flew almost 30 Bell 429WLG sorties with the support of the Vietnam Helicopter Corporation to introduce the wheeled rotorcraft to the southeastern Asia country.

Adding a new dimension to the versatile Bell 429, the Bell 429WLG combines the advanced capabilities and adds the operational flexibility of retractable-wheeled landing gear. This added gear makes the Bell 429WLG ideal for both repositioning in limited spaces and situations that require ground taxi, such as positioning closer to fixed-base operators. Additionally, its exceptionally spacious cabin, excellent avionics options and impressive power and range make it an ideal helicopter for a variety of missions. The Bell 429WLG delivers exceptional performance with state-of-the-art single and dual pilot instrument flight rule capabilities. The Bell 429 can be configured for multi-missions to be utilized for both airborne law enforcement operations and helicopter emergency medical services (EMS) including patrol, surveillance and search and rescue. The Bell 429 sets the standard for police and



BELL 429 HELICOPTER

EMS operations with its generous cabin volume, hoist and single-engine fly away capability, and smooth, quiet ride.

A fully integrated glass cockpit with two or three multi-function displays, dual digital autopilot and an integrated electronic data recorder help increase situation awareness and safety margins. The Bell 429 model is the first helicopter certified through the MSG-3 process, resulting in reduced maintenance costs for operators.

"Bell Helicopter has traveled to a number of countries showcasing the aircraft's ability to provide support for a wide range of mission profiles," said Sameer Rehman, Bell Helicopter's Managing Director of Asia Pacific. "As it continues to gain recognition across the globe, the Bell 429WLG is impressing customers with its versatile capabilities, and exceptional speed, range and performance."

It delivers 152 knot (282 km/h) speed with a state-of-the-art cockpit featuring single pilot IFR and WAAS precision ap-

proach capabilities. Offering exceptional safety features, the helicopter offers a collective mounted throttle, damage tolerant hub and rotor system and energy attenuating seats. In addition to offering outstanding product features, the Bell 429WLG is backed by Bell Helicopter's renowned in-service support, voted #1 by customers for twenty-two years running. •

IndiGo celebrates the delivery of its first A320neo

By **SP's CORRESPONDENT**

Reinforcing its commitment to the Indian aviation industry, India's largest airline by market share, IndiGo has taken delivery of its first A320neo. The airline's first brand new A320neo was received with a water-cannon salute at Delhi's Indira Gandhi International Airport (IGI), recently. Powered by Pratt & Whitney's fuel-efficient geared turbofan engines, the new A320neos "new engine option" incorporates many innovations, including latest generation engines and large Sharklet wing-tip devices, which together deliver 15 per cent in fuel savings from day one and 20 per cent by 2020. This is equivalent to a reduction of 5,000 tonnes of CO₂ per aircraft per year. In addition, the A320neo provides a double-digit reduction in NO_x emissions and reduced engine noise.

Speaking on the occasion, Aditya Ghosh, President and Whole-time Director said, "The delivery of the first brand new A320neo reaffirms IndiGo's commitment to the long-term future of aviation in India. This marks the beginning of the next phase of our growth and will enable us to make air transportation far more accessible for the people of India. Our environmentally friendly fleet of the A320neo will set a benchmark by significantly reducing the impact on the environment and lead the way to a more sustainable mode of flying".

Ghosh further added, "This is a proud moment for us. The fact this delivery makes IndiGo the first A320neo operator in India and in Asia, makes this moment even more special. On behalf of the entire team at IndiGo, we thank our travel partners, members of the aviation fraternity and passengers who have been a part of this extraordinary journey".

IndiGo is one of Airbus' biggest A320 family customers having ordered 530 aircraft in total. These include 430 A320neo from orders placed in 2015 (250 A320neo) and 2011 (180 A320neo). IndiGo also placed an order in 2005 for 100 A320s which have all been delivered.

"It fills us with pride that IndiGo, India's largest airline and the biggest



customer for our A320neo, has taken delivery of its first aircraft. On top of best in class operational efficiencies and environmental benefits, the A320neo will offer IndiGo's passengers unmatched comfort," said Dr Kiran Rao, Airbus EVP Strategy and Marketing.

The A320 family is the world's best-selling single aisle product line with over 12,450 orders to date and almost 6,900 aircraft delivered to 300 customers and operators worldwide. Thanks to its widest cabin, all members of the A320 family offer the industry's best level of comfort in all classes and Airbus' 18" wide seats in economy as standard. •

Rolls-Royce despatches 100th Trent XWB for service with Singapore Airlines



Rolls-Royce despatched its 100th Trent XWB engine, which entered service on a Singapore Airlines A350 XWB. The engine left the Rolls-Royce site in Derby, UK to Toulouse where it powered the Singapore Airlines' fourth Airbus A350 XWB.

The Trent XWB is the world's most efficient engine flying today, and the fastest-selling wide-body engine with more than 1,500 engines sold to 41 customers. It has already delivered the best-ever entry into service for a large engine since it entered commercial service in January 2015.

Chris Young, Rolls-Royce, Director, Programmes – Civil Aerospace, said: "It is great to reach this milestone and we continue to increase Trent XWB production to meet future demand." Singapore Airlines has a total of 67 A350-900 aircraft on order, all powered by the Trent XWB. •

Viking Twin Otter, first dedicated seaplane in 15-19 seat category

Viking Air Limited of Victoria, British Columbia, has introduced the world's first dedicated seaplane in the 15 to 19-passenger category, the Viking Twin Otter 400S Seaplane. Viking has developed the new 400S variant of the Series 400 to optimize the Twin Otter platform for commercial seaplane operations.

The Viking 400S is specifically designed as an economical seaplane for commercial operation on short to medium flight segments, and will be offered at a list price under \$6.0 Million (USD). Adapted for quick turn-around between cycles, the 400S can achieve a breakeven load factor of around 8 passengers under typical operating conditions.

To enhance the quick-turn capability of the Viking 400S, an avionics-dedicated battery allows cockpit screens to remain live during short loading intervals while the modified double swing-out aft passenger doors and internal access to the rear baggage compartment further increases loading efficiency.



The Viking 400S Seaplane features the Honeywell "Super-Lite" integrated digital avionics suite adapted for VFR operations, and comes equipped with 17-passenger seating configuration, new generation composite floats, and Pratt & Whitney PT6A-27 engines incorporating platinum coated CT blades. Avionics upgrade for IFR operation, 19-passenger seating or combination 15-passenger/cargo configuration are all available options for the 400S.

"The Twin Otter is already the world's most successful commercial seaplane, and with the modifications we are making to streamline the flight deck and optimize the aircraft for seaplane operations, we see our market share expanding even further," stated Evan McCorry, Viking's vice-president of International Sales & Marketing. "Quite simply, no other twin turbo prop aircraft can do what the Twin Otter can do, especially on water."

Viking expects customer deliveries for the 400S to commence in first quarter 2017. •

CFM orders strong in 2015; LEAP engine surpasses 10,000 orders

2015 proved to be another strong year for CFM orders with the company booking a total of 2,135 engines, including 736 CFM56 engines (commercial, military and spares) and 1,399 LEAP engines (including spares). 2016 is already off to a good start, with nearly 600 engine orders received in January. At the same time, the LEAP engine has now surpassed 10,000 total engine orders and commitments (excluding options) at a value of \$140 billion US at list price.

CFM continues to achieve historic production rates for the CFM56 product line with the company producing 1,638 CFM56 engines in 2015. CFM maintains the highest production rate in the industry and has consistently built more than 1,000 CFM56 engines per year since 2006.

"We are honored that airline customers around the world continue to show a preference for CFM engines," said Jean-Paul Ebanga, president and CEO of CFM International. "The CFM56 family is still going strong and we

believe LEAP orders raise even higher as our technology choices prove themselves out in the flight test programs at Airbus and Boeing.

"Our 2015 orders bring the current backlog to more than 13,400 engines and our biggest challenge now is building them all. To meet that challenge, GE and Snecma have invested nearly \$1 billion US to date in new and upgraded facilities that incorporate today's most advanced manufacturing technology. Our goal is to ensure that each new LEAP engine is delivered on time with the same level of quality and reliability our customers have come to expect from a CFM product."

This year makes the start of the transition to LEAP engine production, with more than 140 units in the plan. The company expects to complete the transition by 2020 with an annual production rate of more than 2,000 engines. CFM will continue to build CFM56 spare engines for many years to support the in-service fleet and plans to produce spare parts for the programme until around the year 2045. •

Pratt & Whitney Canada doubles Asia-Pacific support hub as customer momentum builds

In response to a growing Asia-Pacific operator base comprising more than 7,000 Pratt & Whitney Canada (P&WC) engines in service in the region, P&WC has doubled the staff at its Singapore-based Pratt & Whitney Canada (SEA) Pte Ltd ("Asia Hub") – including its 24/7 Customer First Center (CFirst) support staff – to more than 30 people since its opening in 2012. P&WC is a subsidiary of United Technologies Corp.

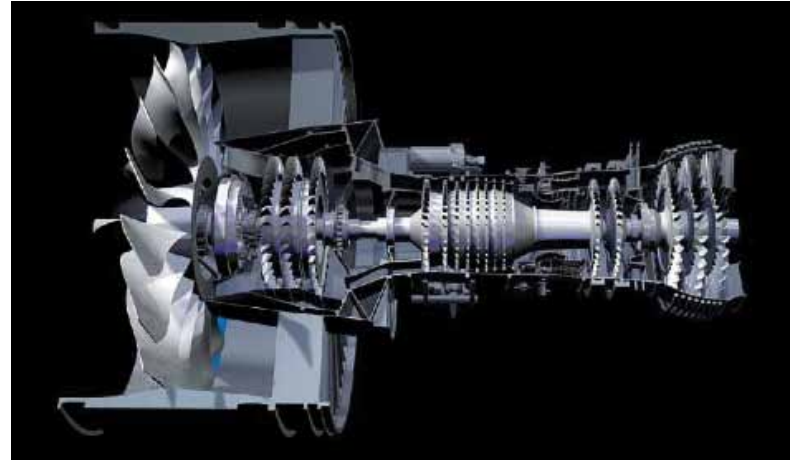
In 10 years, the total number of P&WC engines in service in Asia Pacific has more than doubled for the regional, general, business aviation and helicopter segments. For the same period, the number of PW100 turboprop engines in the region has nearly tripled to 1,600. Asia-Pacific accounts for 15 per cent of P&WC's global in-service engine fleet.

"We've significantly invested in supporting customers in the Asia-Pacific region and in establishing a strong local presence to support all of our engine families," said Timothy Swail, Vice President, Customer Programs. "That's the difference between having an aircraft back flying within hours versus days."

P&WC has the largest global service network of P&WC-owned and designated overhaul facilities (DOFs) in the industry, of which its Singapore CFirst centre is a fully integrated part of the company's dedicated Asia Hub. In addition to P&WC's maintenance, repair and overhaul (MRO) services, P&WC's frontline support team – which includes technical specialists, commercial and logistics specialists and aircraft-on-ground (AOG) specialists – enables P&WC service centers to rapidly respond to customers in their own time zone in six languages.

P&WC's service companies and DOFs presence is expanding across all segments within Asia Pacific including significant growth in the regional turboprop market. Countries like Indonesia, India and Japan – which are geographically dispersed and/or have multiple island-based communities where regional aircraft are often the only option – are seeing the strongest increase in P&WC engines and operators. The ability to deliver end-to-end service and support to customers, leveraging the Asia Hub in Singapore and regionally distributed field service representatives, is a key part of P&WC's long-term development plan.

"Having a full support team of on-the-ground service experts within the Asia Pacific region, ready to serve customers where and when they need us,



is a key part of our global customer service strategy and a top priority," said Swail. "From a frontline support perspective, we are the pioneers in Asia-Pacific. We have an integrated support team locally serving customers in their own languages, in the same time zones, responding to their end-to-end needs – from parts, to rentals, to MRO."

In addition to the Singapore Asia Hub, Pratt & Whitney Canada (Australasia) Pty Ltd, the P&WC facility in Brisbane, Australia, provides local frontline support as well as line and heavy maintenance on PT6A, PW100 and PT6C engines. This support is further complemented by P&WC's DOFs including Vector Aerospace's PT6A facility in Brisbane, Australia as well as Vector's PW150 facility in Singapore, which will soon celebrate one year of service. In addition, P&WC's DOF, H+S, in Abu Dhabi is now fully operational supporting the PW200 and PT6C-67 engines with the PW210 coming on within the year. •

HAL exports structural assemblies of Dornier ahead of schedule to RUAG

By **R. CHANDRAKANTH**

The Hindustan Aeronautics Limited (HAL) has handed over the first ship-set to RUAG, Germany, as part of export orders for structural assemblies of Do-228-212 NG (New Generation). "We have manufactured and supplied the ship-set in a record time, ahead of schedule commitment", said T. Suvarna Raju, Chairman-Managing Director of HAL. This is the first of the four ship-sets for which HAL had received the export order only about four months ago.

RUAG is a Swiss technology company with its headquarters in Bern and it is OEM of Dornier-228-NG aircraft. HAL has manufactured these ship-sets at its Transport Aircraft Division, Kanpur and exported them to the OEM.

Volker Wallrodt, Managing Director of RUAG and his team of senior officials were present at the handing-over programme. Both Raju and Wallrodt felt that the business alliance has been rewarding for both the companies in terms of technological advancement and costs. They stressed on strengthening the ties with continued mutual support and cooperation by exploring more avenues and business opportunities in larger interests of both the companies.

HAL is also exploring cost reduction to make the aircraft viable for more export opportunities and internal civil operations. HAL's Kanpur division has produced more than 120 aircraft for the IAF, Navy, Coast Guard and to other export customers in Mauritius and Seychelles. HAL has plans to upgrade these aircraft. HAL Board has sanctioned for manufacture of two civil Dornier aircraft. HAL intends to operate from its own airport at Nasik.

HAL Kanpur has received the Directorate General of Civil Aviation's (DGCA) approval for manufacture of Dornier aircraft in civil role in accor-



dance with India's Civil Aviation Requirement (CAR 21G). HAL has achieved an important milestone by becoming a production organisation for Dornier. •

AAI's belligerent marketing efforts

The Chairman and Managing Director of Airports Authority of India (AAI), **R.K. Srivastava** has outlined the strategy of AAI in not only improving airport infrastructure across the country but also monetising through non-aeronautical revenues.

SP's Shownews (SP's): Mr. Srivastava, there is a lot of talk about diversification in AAI's activities towards generation of non-traffic revenue thereby giving a new flip to commercial activities by marketing the products developed by AAI?

R.K. Srivastava: At the outset, you may please note that the Airports Authority of India, over a period of time, has established itself as a brand in the airport sector. AAI has a large pool of professionals, who have world class expertise in various fields of aviation ranging from airport planning, management of airports, air navigation, etc. AAI has recently modernised the facilities at more than 60 airports in India across metro and non-metro cities at the cost of \$1.60 billion. We have plans to undertake infrastructure projects worth \$2.5 billion in the coming years.

With such diversified experience in aviation field, AAI can compete with the best in the world. As regards generation of non-traffic revenue we have set up a dedicated business development cell and marketing cell to give impetus to generate the activities giving rise to non-aeronautic revenue and increase the footfall at the airport. We intend to leverage the expertise to other international markets at a bigger scale not only for development of airport Infrastructure but also marketing our own expertise and technology.

SP's: Would you like to further dwell upon the type of products and categories of products which AAI intends to market?

Srivastava As a matter of fact, AAI is the sole service provider of Air Navigation Services in the country ensuring seamless transition of aircraft within and beyond Indian boundaries. As a part of ANS infrastructure augmentation, GAGAN (GPS Aided Geo Augmented Navigation System) jointly developed by AAI and ISRO was conceived and have been put in operation. India has become the fourth nation in the world to possess such a technology. It is a proud moment for the country to be in the elite league.

Another feather in our cap is AFTM which is under implementation. The system will cover entire the Indian airspace and integrate various subsystems with



a decision support capability to safely, efficiently, and predictably manage demand when it exceeds capacity in various phases of flight thus regulating flow of traffic to minimize delays and congestion. The stakeholders i.e. airlines will benefit enormously in form of improvement in overall turn-around time of aircraft resulting in considerable savings in fuel consumption and significant reduction in carbon emissions.

We have developed several products such as capturing the demand on the airlines entering and leaving the Indian airspace, several products relating to use of GAGAN and other ATM and CNS activities, several training modules in the field of ANS etc. in the region, we can market these products for use by our counterparts in the region as well as globally. We are in the process of engaging with the countries particularly in Africa or in East Asia where we can collaborate and provide these products.

We have an expertise in the field of Flight calibration. We have our own aircraft and technical team with necessary ratings from the respective bodies of civil aviation for undertaking such precision based calibration of CNS equipment in-house. We are engaging with the neighbouring countries for providing flight calibration to their ANSP's.

We have also started engagement with several countries to undertake development of airports and airport infrastructure related projects. Recently, our teams visited countries such as Jordan, Tanzania and Nepal to explore the business potential.

AAI has also developed a comprehensive 'e-billing' solution capable of gathering of billing data, invoicing and collection of payments. We have tied up with IATA for realization mechanism through BSM & ICH and have plans to aggressively market the e-billing software. Strategic level discussions are on with DGCAs and other senior level officials of Indonesia and Cambodia for this product.

Besides this, AAI has vigorously participated in various road shows, exhibitions, seminars, conferences wherever AAI gets an opportunity to showcase our products. There are few breakthroughs which are expected to mature soon. We will announce the same on maturity of the orders. •

Pawan Hans in an expansion mode

The Pawan Hans Ltd (PHL) and the Hindustan Aeronautics Ltd (HAL) are collaborating with each other for setting up of MRO business for defence and civil helicopter industry, which has a potential to provide an efficient, cost effective, better turnaround time for the customers.

A memorandum of understanding (MoU) between PHL and HAL has been signed on March 16, 2016, at India Aviation 2016 for setting up of Helicopter MRO facility for both defence and civil helicopters at Rohini Heliport in Delhi. The facility is expected to be operational by June 2016. MoU was signed by CEO, HAL, and Executive Director, PHL, in the presence of Minister of Civil Aviation P. Ashok Gajapati Raju, Secretary, Civil Aviation, R.N. Choubay and both the Chairmans of HAL and Pawan Hans.

India is among the fastest growing and currently the ninth largest civil aviation market in the world. India is expected to become the third largest aviation market in the world by 2020. Civil Aviation Industry in India has ushered in a new era of expansion driven by suitable growth factors. As per international forecasts the fleet size of helicopters in Civil segment in India is expected to go up to 800 from present number of 280 in the next 10-15 year period



and that the growth would come on two counts – fleet expansion and replacement of the ageing machines. Defence helicopter in India segment is rapidly growing. Currently there are approximately 1,200 helicopters with defence customers. There may be a demand of 800-1,000 new helicopters in next 10 years.

The new Draft Civil Aviation Policy, released by the Government last year gives the required and emphatic boost to the MRO sector with proposed reforms on MRO taxation, duties/cess, procedures, etc. These should result in re-bounce of Indian MRO industry with performance and expansion.

The prospects for the helicopter MRO market are encouraging given the number of helicopters expected to be active over the next ten years and beyond. Besides, there is growing demand in defence segment, domestic civil segment and potential to enter into international market.

Both PHL and HAL, who are already leaders in their domains, are collaborating in MRO field as one of the areas to effectively exploit future business prospects as well as to take on competitors to maintain leadership positions in helicopter industry in India. •



Bombardier Fleet steadily climbing in Asia

Bombardier is the world's largest manufacturer of both planes and trains. Bombardier is evolving mobility worldwide by answering the call for more efficient, sustainable and enjoyable transportation everywhere. Here in an interview with **Jayant Baranwal**, Editor-in-Chief, the Vice President Sales, South East Asia and Australasia, **Frank Baistrocchi** gives details about Bombardier's plans in India.

Jayant Baranwal (Baranwal): Which one according to Bombardier Commercial sells fast and sells the most – turboprop or jet?

Frank Baistrocchi (Baistrocchi): Bombardier has built a leading portfolio of commercial aircraft in the 60- to 150-seat category. More than 1,200 Q Series turboprops have been ordered and the program includes approximately 150 owners and operators worldwide. Our most advanced model – the Q400 aircraft – counts over 60 owners and operators in almost 40 countries worldwide. Bombardier has recorded firm orders for a total of 547 Q400 aircraft.

The CRJ Series regional jet family includes over 100 owners and operators in approximately 40 countries. Bombardier has booked firm orders for a total of 1,883 CRJ Series aircraft. We have booked 678 orders and commitments for our all-new C Series aircraft – including firm orders for 243.

We have forecasted that the 60- to 100-seat segment will continue to be one of the most dynamic in commercial aviation over the next 20 years. It is anticipated that the fleet in this segment will more than double in size. Deliveries will be split roughly equally between regional jets and turboprops, with lower forecasted fuel prices favouring the regional jet share.

The 100- to 150-seat segment, which has not been the focus of aircraft development for at least the past two decades, will witness a major fleet transformation with the entry-into-service of new clean-sheet aircraft designs.

Baranwal: What are the contemporary features of Q series and CRJ series?

Baistrocchi:
Q400 AIRCRAFT

Designed as a modern, 21st-century turboprop, the Q400 aircraft is the most recent development in the Q Series family of aircraft. It provides unmatched performance, operational flexibility and passenger comfort. Thanks to its combination of turboprop attributes, jet-like features, industry-leading passenger experience and light environmental footprint, the Q400 aircraft is exceptionally versatile and can be adapted to a variety of business models.

The Q400 is an aircraft nimble enough for a steep approach, yet tough enough to land on unpaved runways. It's a real performer at high altitudes airports too, like that of La Paz, Bolivia, one of the world's highest. By offering an additional 12 to 14 seats, 20 per cent cash operating cost advantage per seat, and over 30 per cent higher speed, the Q400 turboprop delivers over \$8 million US additional value per aircraft compared to competing turboprops. Its speed – 160 kmph faster than



BOMBARDIER CRJ1000

conventional turboprops – puts the aircraft's flight time within minutes of jet schedules, at the same seat-cost as larger single-aisle jets.

CRJ SERIES AIRCRAFT

The CRJ Series regional jets have revolutionised aviation with their proven efficiency, reliability and profitability. The CRJ Series regional jets share commonality benefits that provide flexibility to operators and allow them to optimise their fleets to meet specific market demands. No other regional aircraft deliver this capability. Optimised for medium-haul regional routes, these aircraft can provide up to 10 per cent cash operating cost advantage over competing jets.

Each of the CRJ aircraft models offers its own distinct advantages. The CRJ200 regional jet offers outstanding ownership cost, ideal for opening new routes and markets. The CRJ700 regional jet is the lightest aircraft in its category, delivering impressive efficiency, performance and fuel burn savings, while the CRJ900 regional jet offers tremendous flexibility and is ideally suited for growing markets. The CRJ1000 regional jet, which has the highest passenger capacity in the family, delivers the lowest seat-mile cost in the regional jet market and burns up to 13 per cent less fuel than its competitors.

Baranwal: What kind of presence Bombardier Commercial has enjoyed in Asia?

Baistrocchi: The fleet of Bombardier commercial aircraft in the Asia-Pacific region is steadily growing with more than 360 Q Series turboprops, CRJ regional jets and C Series airliners now in service with, or on firm order from, approximately 50 customers and operators in the region. Sales and Marketing Offices are located in Singapore, and Shanghai, China

Bombardier Commercial Aircraft's Customer Services network includes: Regional Support Offices in Singapore; Shanghai, China; Tokyo, Japan; and Mumbai, India; Parts Services Depots in Singapore; Tokyo, Japan; and Hong Kong and Beijing, China; Authorized Service Facilities include STAECO in Jinan, China and GMR Aero in Hyderabad, India

Baranwal: Could you give us some details on the Bombardier Commercial's presence in India?

Baistrocchi: India represents a great market opportunity for Bombardier Commercial Aircraft. Our fleet includes up to 19 Q Series turboprops and CRJ regional jets. As part of Bombardier Commercial Aircraft's globalisation strategy, the demand for the Q Series, CRJ Series and the C Series in India presents a significant opportunity to grow the company's presence and market share in this region and we have numerous sales campaigns on-going.

Additionally, Bombardier Commercial Aircraft's presence in India has grown over the years and we are working to further expand it in the very near future. We currently have a regional support office in Mumbai (since 2010) and an authorised service facility in Hyderabad (GMR Aero Technic, 2015).

Baranwal: What is the current deployment of Bombardier Commercial aircraft in India and what do you see the figure to be in the next five to 10 years?

Baistrocchi: India represents a great market opportunity for Bombardier Commercial aircraft. Our fleet in India includes up to 19 Q Series turboprops and CRJ regional jets. As part of Bombardier Commercial Aircraft's globalisation strategy, the demand for Q Series, CRJ Series and C Series aircraft in South Asia presents a significant opportunity to grow the company's presence and market share in this region.

Bombardier Commercial Aircraft's market forecast for the period 2015-2034, covering aircraft from 60 to 150 seats, predicts deliveries of 700 units to the South Asia region (which includes India) over the forecast period. Over the next 20 years, we forecast that the industry will deliver 300 aircraft in the 60- to 100-seat category in South Asia.

Over the next 20 years, we forecast that the industry will deliver 400 aircraft in the 100- to 150-seat category in South Asia. Bombardier's portfolio of commercial aircraft – the Q400 turboprop, the CRJ Series regional jets and the all-new C Series family of aircraft – are ideally suited to meet the forecasted requirement for 700 aircraft in the 60- to 150-seat category in the South Asia region. •

(Continued in SP's ShowNews, Day 3)

Spectacular flying display

On the inaugural day of India Aviation 2016, Mark Jefferies Air Displays' put up an exhilarating flying performance of Extra 330 C aircraft to the delight of the viewers.



(...Continued from page 3)

said. The Civil Aviation Secretary, R.N. Choubey said that the Ministry had received substantial inputs on the 5/20 rule, both favouring and opposing. Weighing all options, the government will take the right decision soon.

MRO PUSH

On MRO sector, the Minister said this was being given a policy push and issues such as taxation, customs duty and VAT were all being revisited. Once the MROs come, there will be quick turnaround of aircraft and also it will bring in revenues. "About \$700 million of business can come into India." The MROs would given fiscal concessions. With regard to the slow start of Air India's MRO in Nagpur. 'It took long years to come. There were problems and one of which was access, clearly visible. We have rectified that problem. There is talent in Nagpur and I am optimistic that it will be in full use soon.'

GENERAL AVIATION /BUSINESS AVIATION NEED TO COMEFORTH

Asked about issues to do with GA/BA, the Minister said they had not approached him as yet and they were 'most welcome' to bring forth their issues such that they can be resolved. So also scheduled airlines could approach him anytime. The Secretary said there is 'no policy bottleneck' with regard to GA/BA and market forces would decide on their viability.

Answering a question on Air India's debts, Gajapati Raju said that it was first time that the company had reported operating profits and was well on course to recovery. Disagreeing with a questioner drawing parallel between Air India and the debt-ridden King Fisher airlines, the Minister said, "Air India has not cheated anyone. In fact, it has not defaulted on the payments. The debts have been accumulated over years."

KINGFISHER GIVING A BAD NAME

What happened with Kingfisher Airlines, he said 'should never have happened. It has given airlines a bad name and increased leasing costs.'

The turnaround plan for Air India was working exceedingly well and it has been making consistent operational profits since December last. Air India is now expected to post net profit by 2019, about one-and-half years ahead of the original deadline worked out as per the turnaround plan. The capital infusion for Air India has been on an average around ₹2,500 crore.

REGIONAL CONNECTIVITY, GAME-CHANGER

The biggest game changer for the country's civil aviation sector would come when the government's plans for improving regional connectivity by reviving the unused air strips across the country. The idea is to make air travel affordable for a major chunk of an estimated 350 million people belonging to middle class. "In our draft policy, we have proposed to add 50 airports every year by reviving the air strips that are now lying idle. For this, we are offering a series of incentives to the operators including viability gap funding to ensure connectivity between smaller towns and the big cities. The idea is to see that a passenger pays not more than ₹2,500 for air travel for a distance of 500 km," the Aviation Secretary said.

Choubey said that it was heartening to note that almost all the airframers are here at India Aviation and that they have been specifically told to create an eco-system and not just sell an aircraft. The eco-system for the airframer comprised selling the aircraft; creating MRO facility; simulation and training facilities and leasing options. "This has been made clear to all the airframers."

Expressing happiness over the enthusiastic response to the fifth edition of India Aviation event, he said that 25 countries were participating in the event while seven states have partnered with the union civil aviation ministry for the show. As many as 210 companies are represented at the show while 29 aircraft are on display. Two partner countries at India Aviation 2016 are the United States and Canada. •

Club One Air on an expansion drive

Inducts 3rd Falcon and opens airport & aviation service, targeting combined turnover of more than ₹ 200 crore by 2020

Club One Air- India's largest and oldest luxury jet charter operator is all set to increase its total fleet size to a double digit! With the introduction of their 3rd Falcon-2000 into its fleet, the Delhi headquartered private jet operator has now doubled its total fleet size to 10 within just two years.

Commenting on this new addition to the family; Bhupesh Joshi, Director & CEO, Club One Air said, "It gives me immense pleasure to introduce one more Falcon -2000 into our fleet. We believe this initiative will help us to provide best in class services to our customers in a seamless manner."

The third Falcon 2000 was manufactured by Dassault who strongly have presence since 50' as provider of fighter jet for the Indian Air force such as iconic 'Mirage 2000'. Dassault aviation is also a business jet market leader in India in the long range large cabin segment.

"We want to congratulate Club One Air for the addition of one more Falcon 2000 to its fleet. We are looking forward to support the aircraft through extended customer service network in India," Gilles Gautier, Senior Vice President-Sales, Dassault Aviation.

"We are very proud to be associated with Dassault whose aircrafts are also Indian Airforce's pride. We are extremely impressed with the timely delivery of Falcon's which are the backbone of our fleet," Joshi added.

Besides, introducing new jets, Club One Air has also doubled their revenue since 2013-14 along with the flying hours per plane per month. Growing at 20% the company has also opened F&B services and ground handling services under the brand name of Club One Class and Club One Concierge. The organization is set to achieve Rs.100cr. by next financial year and is eyeing a combined turnover of over Rs.200 cr. by 2020. Club One Air is already operating at over 100 airstrips in India and played an instrumental role during recent natural calamities in Uttarakhand and Chennai. •



L-R, BHUPESH JOSHI, GILLES GAUTIER AND DASSAULT TEAM MEMBERS

First indigenously developed tarmac coach by Veera

BY SURESH.D

India's first indigenously designed and developed tarmac coach, Veera, was formally unveiled at the India Aviation 2016 by the Civil Aviation Minister P Ashok Gajapati Raju. What makes this bus stand out from others in the market is that it has two-and-half times higher passenger capacity than the regular coaches and helps the ground-handling companies to clear passengers faster and at a much lower cost.

"Ours is the first indigenously designed, developed, built and tested tarmac coach in India. We are the fourth company in the world to have manufactured this bus completely independently," the Managing Director of the Bangalore-based Veera

Vahana Udyog Private Limited K Srinivas Reddy said in an interview to SP's ShowNews.

Fitted with Euro- IV diesel engine with fully Allison transmission, this 14.40 meter long, 3 meter wide coach with three doors on either side has a clearing capacity of 106 passengers. This will assist in quick boarding and deboarding.

"Initially, we are deploying two vehicles and another eight are in the pipeline," the MD said adding that his company's manufacturing facility at Bangalore has the capacity to manufacture 4 to 6 coaches in a month at present. "We are proud to be manufacturing such a state-of-the-art coach in India. We are in talks with Air India, Indigo, Spice Jet, GoAir and some other international clients as well," Reddy said.

Three extra wide doors guarantee a smooth, safe and easy entry or exit on either side of the bus. There are two cameras on either side of the bus and one on the rear of the bus. "Ours is the only tarmac coach in the world which provides wheelchair access on both sides of the bus," the company official said.

The coach has ultra-low floor, normal floor height of 360 mm and kneeling height of 280 mm. The entire vehicle is controlled by multiplexing electrical system with onboard diagnostic tool which is user-friendly for fault identification and for trouble-shooting. An ergonomically designed control elements and fully adjustable driver's seat with air-conditioning unit-- all as standard features allow for a stress-free operating climate for the operator of the bus. •

Air India future A320neo operator

Airbus is delighted to further its long relationship with Air India and to welcome them as a future A320neo operator from 2017.

Air India and Alafco have signed a lease agreement for operating lease of 14 A320neo aircraft at the Hyderabad airshow in India. With this agreement Air India will benefit from A320neo's 15 per cent fuel burn reduction, reduced noise and environmental footprint, while offering its passengers the best in class comfort.

Today Air India already operates 66 A320 family aircraft including 22 A319, 24 A320 and 20 A321. Airbus and Air India have enjoyed a very long term partnership. Air India was the first airline in India to operate A320s and it was 27 years ago. •



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ENGINEERED WITH PASSION

G280

MAX SPEED: MACH 0.85 · MAX RANGE: 3,600 NM · MAX ALTITUDE: 45,000 FT



THE TOTAL PACKAGE

Outstanding performance and exceptional comfort—the Gulfstream G280™ delivers with best-in-class range, speed and fuel-efficiency. The aircraft can fly from Mumbai to Seoul in 7 hours and 22 minutes. Autothrottles and autobrakes provide impressively smooth flight backed by Gulfstream's award-winning product support. For superior flight in a super-midsize jet, fly the G280.

For more information, visit gulfstreamg280.com.

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Theoretical range shown is based on cruise at Mach 0.80 with four passengers, two crew and NBAA IFR fuel reserves. Actual range will be affected by ATC routing, operating speed, weather, outfitting options and other factors. Flight duration is estimated at best cruise speed and account for 85% annual winds conditions.

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A GENERAL DYNAMICS COMPANY