

Report of Physical Inspection of two 777-200ER aircraft offered by Egypt Air

1. Introduction

Biman Board of Directors in its 116th meeting held on 03 September 2013 approved to float RFP Notice No. DACPM/B777/140/2013/907 dated 11 September 2013 for five years Dry lease of 02 (two) Boeing 777-200ER aircraft. Accordingly four bidders submitted offer. In evaluation by the Techno-Financial Sub-Committee headed by Director Engineering & Material Management, the offer of EGYPT AIR Holding Company for 02 (two) 777-200ER (MSN-32629, Reg: SU-GBX & MSN-32630, Reg: SU-GBY) aircraft was found responsive. The matter was discussed in the meeting held on 21 October 2013 chaired by Managing Director & CEO and subsequent Board committee meeting held on 24 October 2013. In order to expedite next course of action for leasing 02 (two) 777-200ER aircraft from Egypt Air, Managing Director & CEO directed to carry out physical Inspection of the above mentioned aircraft and related documents pending approval of the Board of Directors. Accordingly, Biman Management constituted the following delegation consisting of the officials of Biman Bangladesh Airlines Ltd and the Civil Aviation Authority of Bangladesh headed by Capt. Ishrat Ahmed, Director Flight Operations of Biman, for physical inspection of the mentioned aircraft along with verification of relevant documents:

Sl. No.	Name	Designation	Status
1	Capt. Ishrat Ahmed	Director Flight Operation	Team Leader
2	Md. S. A. Siddique	Dy. Chief Engineer, Maint	Member
3	Mohammad Abdur Rahman Faruky	Dy. General Manager, PIng	Member
4	S M Hanif	Principal Engineer, Services & Audit, I&QA	Member
5	Debesh Choudhury	Principal Engineer, MCC & L/M	Member
6	Md. Saiful Haque Shah	Asstt. Director of AELD, CAAB	Member
7	Ghulam Sarwar	Airworthiness Consultant, CAAB	Member
8	Md. Sadequl Islam Bhuiyan	Engineer Officer, MCC	Member
9	Kamal Uddin Ahmed	Manager, EMP&P, BFCC	Member

Terms of Reference: The team will carry out physical Inspection of two 777-200ER aircraft (MSN-32629 & 32630) offered by Egypt Air for dry lease to Biman. The team will also inspect related documents and submit a specific recommendation to Biman Management.

The mentioned delegation physically inspected the 02 (two) 777-200ER (MSN-32629, Reg: SU-GBX & MSN-32630, Reg: SU-GBY) aircraft of Egypt Air at Cairo International Airport, Cairo, Egypt from 09th November 2013 to 14th November 2013.

2. Methodology of the Inspection

The Physical Inspection team checked and reviewed all relevant documents of the two 777-200ER (MSN-32629, Reg: SU-GBX & MSN-32630, Reg: SU-GBY) aircraft in the concerned offices of Egypt Air Maintenance & Engineering Headquarter and discussed with the concerned officials of Egypt Air for further clarification at the Cairo International Airport, Cairo, Egypt. Delegation physically inspected both the aircraft, checked the original documents and relevant others during the time made available by Egypt Air for inspection of aircraft. The team was assisted by concern officials of Egypt Air Engineering & Maintenance for physical Inspection of both the offered aircraft and made the relevant documents available for checking and review.

[Handwritten signatures and initials at the bottom of the page]

3. Review of Inspection of two 777-200ER aircraft of Egypt Air

a. Verification of Documents of 777-200ER (MSN:32629 & 32630)

- i. **Air Operator Certificate (AOC):** The AOC & AOC operations specifications (original copy) of both aircraft MSN:32629 & 32630 were verified from onboard aircraft documents folder. As per operations specifications both the aircrafts are approved by *Egyptian Civil Aviation Authority* for RVSM, ETOPS, RNP10, RNP5, B-RNAV, P-RNAV, RNAV2, & MNPS operations,
- ii. **Export Certificate of Airworthiness:** Manufacturing date of both the aircraft were confirmed through original delivery document issued by FAA after completion of manufacturing process. As per "Export Certificate of Airworthiness" issued by country of origin, the manufacturing date of two 777-200ER aircraft containing MSN:32629 & 32630 are 21st Sept'2001 & 17th Oct'2001 respectively.
- iii. **Certificate of Registration (C of R):** Both the subject 777-200ER aircrafts were registered in Aircraft register of Egyptian Civil Aviation Authority (ECAA). "EGYPTAIR Holding Company" is presently the owner of the aircraft and "EGYPTAIR Airlines Company" is the operator or legal holder of the aircraft. The current Egyptian Registration mark is SU-GBX for MSN:32629 & SU-GBY for MSN: 32630.
- iv. **Certificate of Airworthiness (C of A):** The Certificate of Airworthiness of both the aircraft having MSN 32629 & MSN:32630 were issued by the Civil Aviation Authority of Egypt are remain valid till 02nd October 2014 & 17th October 2014 respectively. At present both the aircraft are engaged in regular schedule operations Egypt Air. Validity of Certificate of Airworthiness (C of A) of both the 777-200ER aircraft were expired on 2nd October 2013 & 17th October 2013 respectively. "Egyptian Civil Aviation Authority" (ECAA) has renewed the C of A for both the 777-200ER aircraft on 2nd October 2013 & 8th October 2013 respectively. As Egypt Air Maintenance & Engineering has proven track record maintenance with FAA and EASA certification, they have fulfilled the airworthiness requirements of local regulatory authority (ECAA) on both the 777-200ER aircraft during the last one year period including storage period.
- v. **Noise Certificate:** The original copy of Noise Certificates issued by Egyptian Civil Aviation Authority (ECAA) is verified. The document numbers are 169/R1 & 171/R1.
- vi. **Aircraft Radio Station License:** Original copy of Aircraft Radio Station License issued by "National Telecom. Regulatory Authority, Egypt" is verified. The License Number is 42/4/5081 for both the aircraft and it remains valid up to 31st October 2014.
- vii. **Certificate of Insurance (C of I):** The validity of the Certificate of Insurance (C of I) is verified. Both the subject 777-200ER (MSN-32629, Reg: SU-GBX & MSN-32630, Reg: SU-GBY) aircraft are insured for HULL ALL RISKS, HULL WAR AND LIABILITIES for the period from 1/11/2013 to 31/10/2014 under the "Misr Insurance Company".

Signature

Signature

Signature

Signature

Signature

Signature

Signature

- viii. **Compliance Report of Airworthiness Directives:** AD's summery report for compliance as per offer of Egypt Air has been checked & verified, found there are number of AD's/Repetitive AD's are open to be accomplished as per agreement. Team recommended to ensuring accomplishment of open AD's by acceptance team during the delivery check.
- ix. **Maintenance Check Cycle Interval:** Maintenance check cycle & Aircraft Maintenance schedule will be forwarded through e-mail by Egypt Air Maintenance and Engineering.
- x. **Brief Maintenance activities for the twelve months:** Last twelve month maintenance history of the aircraft has been checked at Egypt air Maintenance & Engineering head office at Cairo International Airport, Cairo. The last "C" Check of 777-200ER aircraft containing MSN:32629 have been carried out at Phase-84 maintenance on 15th September 2012 and last "C" Check of 777-200ER aircraft containing MSN:32630 have been carried out at Phase-84 maintenance on 29th September 2012. After that both the 777-200ER aircraft were kept for a longer period of storage with effect from 20th November 2012 to 20th June 2013. Phase-88 maintenance including Phase 85, 86 & 87 has been carried out on 20th June 2013 on 777-200ER aircraft having MSN:32630 and on 777-200ER aircraft having MSN:32629 on 25th June 2013. Subsequently Phase-89 maintenance has been carried out on 777-200ER aircraft having MSN:32630 on 13th August 2013 and on 777-200ER aircraft having MSN:32629 on 1st September 2013. Recently, Phase-90 maintenance was carried out on 777-200ER aircraft containing MSN:32630 at flying hours 39072 on 13th October 2013.
- Validity of Certificate of Airworthiness(C of A) of both the Boeing777-200ER aircrafts was expired on 2nd & 17th October'2013. "Egyptian Civil Aviation Authority" (ECAA) has renewed the C of A for both the aircrafts on 2nd & 8th October'2013 respectively. As Egypt Air Maintenance & Engineering has enable to prove, that they have fulfill the airworthiness requirements of local regulatory authority (ECAA) on both aircrafts during the last one year period including storage period.
- xi. **Aging Aircraft Safety Compliance Report as per the format given by the Civil Aviation of Bangladesh (CAAB) if the age of the aircraft is more than 15 (fifteen) years:** Not applicable as age of the proposed aircraft are completing 12 (twelve) years on 21st September 2013 & 17th October 2013 respectively.
- xii. **Galley loading diagram:** Galley facilities and arrangement as per current offered configuration has been checked and verified at the time of physical inspection of one ship set Galley equipment and insert positioning in both aircraft were:
Full Meal Cart-33, Half Meal Cart-03, Waste Cart-02, Oven Insert-14, Std. Unit. -35 quantities found available.
Tea/Coffee Pot-20 not found, TRAY s/s (Rectangle)-08 not found, Louts Round Tray S/S-04 not found, Ice Tongs-04 not found, Bread Tongs-04 not found, Drawers-66 not found but they will provide at the time of aircraft delivery.
Ice Bin-04, hot cup-03, Baby bassinet-06, Freezer-04, Water Boiler-06, Folding trolley-03, Waste Container-03 quantity found in both the aircraft.
- xiii. **TCAS-II, EGPWS and RNP 10/5 Installation/Compliance document:** Above mentioned system has been installed in both 777-200ER aircraft during the manufacturing process and it is reflected in FAA approved Airplane Flight Manual (AFM).

Signature:       
SAC/SGS

- b. Exterior: Fuselage rivet heads are visible at many places, thorough sanding & paintings required as per agreement, All Nose & Main landing gear wheel well thorough cleaning & painting required, Cleaning required inside the Fan & reverser cowl of both engines, Repair and dent chart to be reviewed for class of repair & SRM references, Oil seepage / traces of oil observed inside no. 01 engine reverser cowl of SU-GBY aircraft.
- c. Wheels and brakes: Wheels and brakes part numbers are different than Biman B777-300ER aircraft, required spares and tools for build-up in-house.
- d. All hard time component remaining life as per Egypt air offer to be verified, Engine & APU LLP to be verified as per Egypt air offer for remaining life, All EBU / LRU installed on both engines of both aircraft to be verified for remaining life at delivery according to utilization, AD compliance requirement, All Records to be checked per planning requirement, LLP status of APU S/N-P1444/SU-GBY, Shop reports of all engines and APU, On wing EGT margin and latest LLP life remaining of all fitted engine of both aircraft, landing gear ship set latest status and last shop visit report,

Pax Oxygen life remaining to be verified & approx. 340 (three hundred forty) Oxygen generator replacement will be due within 02 year of aircraft delivery.

- e. Avionics component serviceability to be verified, Copy of all approval of regulatory Authority on applicable Avionic system, Supplementary Type Certificate (STC) , Data Sheet as required by I&QA & CAAB to be verified at the time of both 777-200ER aircraft delivery.
- f. BFCC: Meal carts fitted in both the offered Egypt Air dry lease Aircraft are of Jamco-Singapore Brand. Egypt Air has agreed to provide two ship set galley equipment per each aircraft through an e-mail (copy attached). For LHR & FCO station operation 02 (Two) more ship set will be required. Required Branded Galley equipment and Insert (full meal cart, oven rack/insert and baby bassinet) need to be procured at Biman's own cost for smooth operation of LHR & FCO.
- g. Egypt Air authority verbally conveyed that they would deliver the mentioned two 777-200ER aircraft within 20 days from the date of signing final dry lease agreement with Biman upon accomplishment of "C" check;
- h. Both the 777-200ER aircraft are equipped with cockpit and cabin crew bunk. The cabin crew bunk is installed in the cargo hold. Egypt Air authority verbally conveyed that they could deliver both the 777-200ER aircraft removing the cabin crew bunk within the period of delivery check mentioned above, if required;
- i. Both the 777-200ER aircraft will be delivered with marathon white at the cost of Lessor. Aircraft may be painted with Biman livery as same will remain with Biman for a longer period of time;
- j. Both the aircraft are capable to operate no-stop direct flight between Dhaka and London without any load penalty. It has also been verified by the office of chief of Technical of Biman;
- k. Egypt Air expressed their eagerness in cooperating Biman regarding maintenance of aircraft, spares pooling and training of crews, ground engineers and operations staffs by concluding separate agreements;
- l. Egypt Air authority verbally confirmed to lease mention aircraft to Biman for a period of 05 (five) years on dry lease basis;

Stephanie Ellis

WAP

SARAZA

8

Shut

5. **RECOMMENDATION**

- a. Biman inspection team has carried out physical inspection on both Egypt Air offered Boeing 777-200ER aircraft (MSN: 32629 & 32630) including its Engine, Auxiliary Power Unit (APU) & Landing Gear. Subsequently aircraft original certificates / documents onboard of both the aircraft including manufacturer & owner name plate and original maintenance record/documents, aircraft delivery documents kept in the Egypt Air record section are verified. Biman inspection team has conducted several meeting with engineering management of Egypt Air to clarify the different queries of team members. Inspection team has also sit together including representative of CAAB for their own discussion & decision.

After thorough inspection of aircraft, airworthiness documents, ongoing flight performance the inspection team found the submitted documents is comply with the original documents and the team unanimously agreed and recommend that the two 777-200ER (MSN: 32629, Reg: SU-GBX and MSN: 32630, Reg: SU-GBY) aircraft are found satisfactory for Dry Lease;

- b. At the time of "Delivery C-Check" and acceptance of the Egypt Air Boeing 777-200ER aircraft (MSN32629 & MSN 32630) the delivery & acceptance team required to verify proper rectification of all the above mentioned findings & observation.
- c. Aircraft Maintenance program of Egypt Air is different from Biman Aircraft Maintenance program. So Bridge-In inspection shall have to be carried out for converting the same to Biman Maintenance Program
- d. Considering the present Biman Engineering facilities and to ensure smooth operations/ Maintenance of the subject dry lease aircraft from the day one of induction, Inspection team recommend to settle the following issues with Egypt Air Holding Company during the negotiation period.
- Initial Maintenance (Line & Base) support at Dhaka by Egypt Airlines Company.
 - Spare parts support at Dhaka base for all rotatable & consumables required for two leased 777-200ER aircraft during dry lease period.
 - Loan of tools & Test Equipment as & when required during the lease period.
 - Engineer's training on P&W4090 engine with Ground Run and Boroscope Inspection.
 - Spare P&W4090 Engine & Auxiliary Power Unit (APU) support from Egypt Air may be arranged on loan / lease basis for two offered dry leased 777 -200ER aircraft.
 - Aircraft Nose/Main wheels & its change kits (tools) are completely different Part number than Biman 777-300ER aircraft. So, Inspection team recommends to arranging from Egypt Air Airlines Company to use from the day of induction.
 - Pax Oxygen life remaining to be verified & approx. 340 Oxygen generator replacement will be due within 02 year of both aircraft delivery.
- e. BFCC Meal carts fitted in both the offered Egypt Air dry lease Aircraft are of Jamco-Singapore Brand. Egypt Air has agreed to provide two ship set galley equipment per each aircraft through an e-mail (copy attached). For LHR & FCO station operation 02 (Two) more ship set will be required. Required Branded Galley equipment and Insert (full meal cart, oven rack/insert and baby bassinet) need to be procured at Biman's own cost for smooth operation of LHR & FCO.

Shahin *Ch* *Uul*

BR

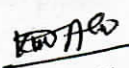
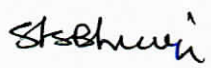

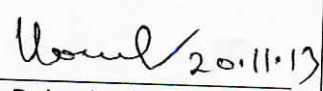
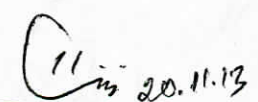
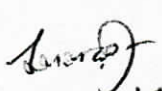

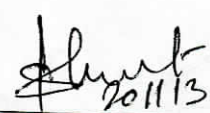
Sunder

ing

Handwritten signature

Handwritten signature

- f. LLCR (Lower Lobe Crew Rest) for 06 (six) Cabin crew rest area at lower deck forward of AFT cargo may be removed to accommodate more cargo container in aft cargo compartment.
- g. Total number of passenger seats on both the 777-200ER aircraft is 319 in three class configurations (12 First class, 21 Business class & 286 Economy class). Both the aircraft may be reconfigured into two classes (Business and Economy) as the existing fleet of Biman is under same configuration.
- h. Aircraft should be delivered to Biman with existing livery of Biman;

 20.11.2013 Kamal Uddin Ahmed Manager, EMP&P, BFCC Member	 20.11.2013 Md. Sadequl Islam Bhuiyan Engineer Officer, MCC Member	 Ghulam Sarwar Airworthiness Consultant, CAAB Member
ABSENT Md. Saiful Haque Shah Asstt. Director of AELD, CAAB Member	 20.11.13 Debesh Choudhury Principal Engineer, MCC & Line Maint Member	 20.11.13 S M Hanif Principal Engineer, Services & Audit, I&QA Member
 20-11-2013 Mohammad Abdur Rahman Faruky Dy. General Manager, Png Member	 20.11.2013 Md. S. A. Siddique Dy. Chief Engineer Maintenance Member	 20.11.13 Capt. Ishrat Ahmed Director Flight Operation Team Leader

50