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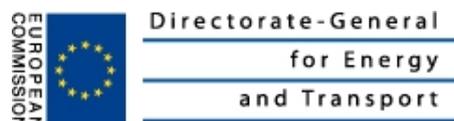
Workshop Malta September 2010 Proceedings

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Glossary

AOC	Air Operators Certificate
DME	Distance Measuring Equipment
IFR	Instrument Flight Rules
IMC	Instrument Meteorological Conditions
GPS	Global Positioning System
MEL	Minimum Equipment List
MMEL	Master Minimum Equipment List
NAA	National Aviation Authority
VFR	Visual Flight Rules
VHF	Very High Frequency
VOR	VHF Omni directional Radio Range

1 Summary

The workshop was basically broken down into four main subjects;-

- Design
- Landing Sites
- Crew Licensing
- Tourism

There was also an evaluation from University of Munich on the findings of the questionnaire sent out earlier in the program. The findings of this report did highlight some interesting and surprising findings (see document Survey_Results_Malta.pdf). Beside several presentations two plenary workshops about “New Aircraft Concepts” and “Operational Issues” were performed.

1.1 Aircraft Design

On this subject, it became evident that the technology for future equipment is at a level which is capable of producing aircraft which would enable Commercial Seaplane Operations to operate at a far greater level of reliability, and a considerable reduction in maintenance costs.

1.2 Landing Sites

There is clear evidence that FUSETRA needs to address a requirement for a clearer ‘path’ to a more standardized development of water landing sites with the various authorities within Europe.

1.3 Licensing

This subject indicated to all that there is a need to encourage EASA toward a more understanding approach to validation of foreign licenses. A system also needs to be put in place so as to be able to train more European pilots to operate commercially within holders of European seaplane AOC holders.

1.4 Tourism

A director from the Malta Department of Tourism gave an excellent summary of tourism in Malta including ideas about additional markets and how to increase seaplane operation. Although based on Malta experiences The content of this

summary was in several aspects transferable to other European regions though could - at this stage - only be considered of value to Harbour Air Malta.

2 Introduction

2.1 Scope

The scope of this report is to outline the presentations (which are attached) given during this workshop, and outline their relevance to the FUSETRA aims. It is intended to highlight what aspects of the workshop should be looked into and followed up on.

Whilst the author of this report will draw up certain conclusions and make limited recommendations, it would be up to the other delegates to add to these conclusions and recommendations in our endeavors to move forward in the development of Seaplane traffic in Europe.

2.2 Presentations

Presentations were given by:

- Dina Krivonsova Beriev Aircraft
- Wolfgang Wagner Dornier Aviation
- Benedikt Mohr University Munich
- Joachim Schömann University Munich
- Barry Lightening Harbour Air Malta
- Pelle Sherdin Viking Aviation
- James Labouchere Centaur Seaplanes
- Heiko Harms Clipper Aviation.
- Leslie Vella Malta Tourism

3 Workshop Results

3.1 Aircraft Issues

3.1.1 Aircraft Design

The presentations given by design teams from (Beriev, Dornier Aviation and Centaur Seaplanes) show that the present technology of seaplane design goes

a long way into reducing what is currently the most restrictive item of any Commercial Seaplane operation, namely, being better equipped to operate in heavier sea conditions. The sea state although not always a cause of cancellation of a service, is more often a reason for not accepting a booking for fear of late cancellation.

There is no doubt that the current DHC 2 / 3 / 6 and Cessna aircraft most widely used in Commercial Operations are not suitable to operations in the Mediterranean area. This is especially so in the Tyrrhenian Sea, Sicilian Channel and Malta Channel.

The type of technology presented during this workshop would greatly improve commercial operations in this area. Harbour Air Malta lost some 3 to 5% of flights in July, August and September of 2010 due to weather which could not be described as severe.

There is one area of the technology presented during the workshop that could have a negative impact on commercial operations, and that is the commercial payload design. A five passenger aircraft may be desirable for leisure flying, but reduces the potential when considered for commercial operations. The figures of 9, 19, 50 and multiples of 50 are significant, as is the weight 5700kgs.

An aircraft with nine seats (or less) is able to operate under the regulations governing Performance Class B. As such less than nine seats availability would constitute an operational loss, so nine seats is the optional figure.

When the seating goes above nine, the next limiting factor is nineteen seats. This requires more equipment, and the possibility of an extra pilot. Above nineteen seats, then further crew are required. Less than nineteen seats constitute a possible loss in revenue.

Further cabin crew would be required for multiples or fractions of fifty.

The larger aircraft as presented by Dina Krivonosova (Beriev) while of great interest would under European regulations be quite restrictive when considering water Landing Sites. One of the most important considerations in sea plane operations is the impact on the infrastructure. At present in commercial operations we are using the fact that seaplane operations do not require a restricted area to conduct commercial operations and as such can be considered as 'infrastructure friendly'. This consideration would appear at this stage of seaplane operations to be lost when operating aircraft larger than nineteen seats, and pure jet engines.

A further consideration of size and weight is the fees payable to the various regulating authorities. In Malta the difference between the annual fee of the DHC 3 and the DHC 6 is more than double. Fees however, may vary between different regulatory authorities, but should be taken into consideration when planning re-equipping of the airline.

3.1.2 Aircraft Equipment

It would be advantageous if seaplanes could be equipped for instrument flight. Although in accordance with EU-OPS a single engine aircraft may not fly in IFR conditions, FUSETRA should approach EASA with a view to obtaining

alleviation on this regulation (see also recommendations). There would be very little risk if a flight conducted in IFR conditions were to be entirely over water with a cloud base of 500 feet. Provided the aircraft has a reliable system of thunder storm avoidance, and adequate anti/de-icing systems, the only risk would be total or partial power loss. In the event of this occurrence over water, there would be minimal risk to persons or other surface installations, as well as minimal risk to passengers and crew.

The avionics and navigation aids would include VOR/DME, GPS and NDB to assist in cloud break procedures. A cloud base of 500feet would be required to allow for an inspection of surface conditions prior to landing. The destination where a cloud break procedure was in place would need to have a means of communication with the aircrew.

3.1.3 MMEL

Even though an aircraft has nine or less seats, operating as a performance B aircraft, it is important that the designers produce a MMEL so enabling the operator to construct an MEL. There is nothing more frustrating to an operator than to have their aircraft grounded for a minor defect which does not impinge on safety matters.

3.2 Operational Considerations

3.2.1 Air Crew

At present commercially acceptable pilots are predominantly of North American origin. The main reason for this is that the opportunity to gain experience in seaplane operations is available in that area. At present, the Operations Inspectorate attached to the regulatory bodies in Europe are demanding a high level of seaplane experience. This is understandable at present, but it is imperative that a system whereby European pilots can be trained to an acceptable level of proficiency in seaplane operations should be put in place. The obvious is to introduce a two crew operation, but this can also lead to financial restrictions for a commercial operator.

The author of this report has interviewed a lot of locally trained and licensed pilots who he considers could be easily trained to a high level of proficiency. A pilot graduating from a respected Flight Training Organisation (with highly regarded comments on his/her training record) is generally a well formed future professional, with the right degree of confidence, and flying discipline. The main drawback with these young pilots is their aspirations to airline flying. There are some however, who have reached an age where a career in Airlines will not be as rewarding. The important aspect is that a well trained pilot has the ability to adapt to seaplane requirements in a lot less flying time than is required at present.

3.2.2 Night Flights

Seaplane operations are at present limited to daylight operations only. At this stage it is difficult to see how this restriction can be removed to make way for a safe night operation. Landing sites would have to allow for a considerably longer landing path, and the danger of foreign objects would always be present.

3.2.3 IFR

Flights under Instrument Meteorological Conditions would lead to a far more reliable commercial operation. For Performance Class B aircraft alleviation would be required, but as reported in paragraph 3.2 above, there is a case for a safe operation during adverse meteorological conditions.

3.2.4 Landing Sites

A more standardized approach to the requirements for water landing sites must be structured. During this workshop, it was shown that three NAA's had a very different approach to the construction of landing sites. This differing approach leads to lengthy delays in the planning and accomplishment of new route plans.

It is obvious that there needs to be a form of certification (rather than full licensing) of proposed landing sites so as to enable the regulators of any member state to be confident that an operator issued an AOC under their jurisdiction can safely operate into the area of another member state.

3.3 Tourism and Seaplane Operations

There can be no doubt that tourism is the main market force in the present structure of Harbour Air Malta's operation. The present ratio is approximately 95 Passengers who are on holiday in Malta to 5 local persons. It can also be said that the 5% of local passenger are on the flight for leisure purposes. The main attraction is the seaplane aspect of the flight.

From July 2010 to September 2010, Harbour Air Malta operated with an average 61.5% load factor.

Within this traffic count 27% of passengers were not booked on a planned flight, but were last minute acceptances. This figure was mainly enhanced by Cruise Liner passengers (Tourist within Tourist so to speak).

It is possible to organize the shipping line to sell seats directly to cruise passengers, but after they have added their commission to the booking, the tourist finds it too costly, so direct sales from within the Airline is the preferred sales line.

When considering the number of tourists that visit the Mediterranean Area each year, it can be seen that an airline need only capture a small percentage of this market in order to operate a successful commercial enterprise.

Advertising does raise some problems in attracting the tourist's interest while in transit from home to their destination. An advertisement in a Low Cost Airline

magazine while not unduly costly becomes hidden in a large document which covers all their destinations and has been found to be largely ineffective.

At present the low figure of reliability due to weather and sea state makes it difficult to attract the inter island, sea port business commuter. It can also be further stated that any regular commuter would not be prepared to pay the present cost of a regular flight.

4 Future Traffic Expansion

At the present time, it is probably advisable for seaplane operators to concentrate their activities on the tourist market. With the advent and popularity of the low cost no frills airlines, it should be possible to attract tourists to the many attractive marinas in the Mediterranean area.

These low cost airlines also bring in a lot of Holiday Home owners, and or yacht owners. Given the limited time they may have to visit their second homes, a seaplane service between a regular aerodrome and a yacht marina could become a viable method of travel.

Golfing tourists can also be attracted to use the service, as many a tourist golf course is situated along the coastal regions.

One day excursion trips to far away locations needing several hours of ship cruise (e.g. Malta – Sicily) may be another market for seaplane operations in several destinations in Europe.

The most important aspect however is that a thorough market research be completed ahead and good marketing strategy is required before operations commence. Nothing is a greater disappointment than to start an operation that has good potential but starts badly as a result of poor or late marketing strategies.

5 Conclusions

On the outcome of the two workshops carried out so far, it is obvious that the future of seaplane traffic within Europe has a lot of potential. It is also obvious that there is a tremendous amount of 'spade' work that needs to be accomplished to realise this potential. Once this 'spade' work is accomplished, the acquisition of an AOC to operate a seaplane company should more attainable and become more in line with an application for a land based operation. It now rests with the aircraft designers and manufactures to produce the technology they have shown exists, and for commercial operators to expand their areas of experience to help other operators within Europe become a reality.

6 Recommendations

- I. Design plans for future aircraft need to be distributed to Operators to help in future equipment planning.
- II. The standard equipment of a seaplane needs to be upgraded so as to enable operators to approach their authorities for permission to operate in more restrictive environments
- III. Aircrew must be locally recruited and trained to a high standard of seaplane operations
- IV. There is a need for FUSETRA to approach the European politicians and lobby as a united group for help in obtaining conditions and alleviations for seaplane operations.

As a final word the author adds the five point plan he suggested as a requirement for future seaplane operation during his speech at the first workshop.

1. A better understanding of the seaplane pilots requirements for safe operations, and a means of streamlining future training, licensing and recurrent checking of seaplane aircrew intending to operate within Europe.
2. A European controlled and regulated system of approving or licensing seaplane operating bases so as to be acceptable for all commercial seaplane operations in the same manner as regular airfields. They should have an accepted method of classification when risk assessment is taken into consideration and remove the need for an operator to negotiate with various authorities other than their own authority when extending operations within Europe.
3. Alleviation on Flight Time Limitations so as to better meet the requirements of seaplane operations thus making them more financially sustainable without any resultant erosion of flight safety standards
4. Set up an achievable minimum level of training and acceptability of Dock Operating Crew so as to be multi-functional with regard to, assisting in the arrival and departure of aircraft on pontoons or piers, passenger handling, as well as manning the requirements of Rescue and Fire Fighting activities.
5. A system of Security management at and around seaplane bases which would be financially achievable to the operating companies and acceptable to the traveling public.