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ENVIRONMENTAL PROBLEMS OF AIRCRAFT MAINTENANCE AND RENOVATION AT THE LISZT FERENC REPAIR BASE – SUMMARY

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***Abstract**: During my research I tried to draw attention to the environmental risks arising during the activities of the airplane repair base at Liszt Ferenc Airport. Since its foundation, 58 Boeing and 42 Airbus aircraft have rolled out of the Liszt Ferenc repair base in a brand new, refurbished condition. It is worth mentioning here that in a hangar they usually deal with the repair of two machines at the same time. It is planned that over time, wide-body aircraft will also be repaired in Hungary. In my research I describe the environmental problems caused by transport, including aviation. I describe the emissions to the environment during the maintenance and renovation of aircrafts at the repaiar base. Within this topic, I would like to discuss in more detail the problems of waste generation, waste management, wastewater discharge, noise pollution and air pollution in the light of the technological processes of maintenance, repairs and renovations. In addition to the effects on the environment, special attention must be paid to the effects that adversely affect the health of the workers on the Repair Base. In the course of my work, I focus on one of the most critical technologies of major repairs, paint removal in connection with the renovation of machine bodies, and air pollution during the painting process. I examined the extent of personal exposure of workers and the qualitative and quantitative characteristics of air pollution, taking into account the presence of toxic substances that are extremely harmful to health and the environment. My aim is to highlight the critical points associated with environmentally harmful emissions in order to protect the environment and the health of workers, and to draw attention, where necessary, to the need to take appropriate measures. It would be useful to extend the scope of separate collection not only to paper and wood waste, but also to other recyclable waste materials. The waste on the base is transported, disposed of and recycled by specialized companies contracted for this purpose only.*

***Keywords:** Environmental problems, environmental risks, environmental problems caused by transport*

In September 2009 there was an accident involving a kerosene spill, 4 people were involved. The case started as a relatively simple fixing work. They wanted to replace a leaking valve in the center tank. They also embarked on the work, although it was a unique system that no one has been working on before. It was not quite clear whether the wing tanks needed to be downfueled or not, so the seemingly simpler solution was chosen. The fuel was not downfueled.
The valve was removed, but as a result, fuel immediately began to flow from the discharge branch into the centrifuge tank, where one of the mechanics was also located. He quickly climbed out of there, and the direct staff who worked in the same place shut down the tank while naturally running kerosene on them. Other colleagues nearby started the "usual" procedure: they immediately stopped the spread of kerosene to prevent it from entering the manhole, which also contained electrical wires (risk of explosion), started soaking, of

course, unplugging the room (to prevent sparks) and care adequate ventilation. Of course, in the meantime, the Airport Fire Department was also notified, because there is always a risk of an explosion.
During my research I tried to draw attention to the environmental risks arising during the activities of the airplane repair base at Liszt Ferenc Airport. Since its foundation, 58 Boeing and 42 Airbus aircraft have rolled out of the Liszt Ferenc repair base in a brand new, refurbished condition. It is worth mentioning here that in a hangar they usually deal with the repair of two machines at the same time. It is planned that over time, wide-body aircraft will also be repaired in Hungary.
In my research I describe the environmental problems caused by transport, including aviation. I describe the emissions to the environment during the maintenance and renovation of aircrafts at the repaiar base. Within this topic, I would like to discuss in more detail the problems of waste generation, waste management, wastewater discharge, noise pollution and air pollution in the light of the technological processes of maintenance, repairs and renovations. In addition to the effects on the environment, special attention must be paid to the effects that adversely affect the health of the workers on the Repair Base.
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It would be useful to extend the scope of separate collection not only to paper and wood waste, but also to other recyclable waste materials. The waste on the base is transported, disposed of and recycled by specialized companies contracted for this purpose only.
It is important that the base uses environmentally friendly technology and products for their activities in as many cases as possible.
In the case of technologies and materials that pose a risk to the health of workers, such as the work phases related to painting, air pollution is significant, but the risk of damage to health can be significantly reduced with the use of appropriate protective equipment.
In most cases, the situation is satisfactory in all areas.
However, with regard to the activities taking place at the base, I would like to highlight a few things.
Based on the example, I see the biggest problem in the initial stage of employees 'environmentally conscious approach.
I would like to emphasize once again the repair and replacement of equipment related to the fuel and oil system of aircraft. In this case, the oil or fuel may spill unintentionally, and the interior design of the aircraft makes it difficult to access these areas with collection containers.
Instead, use materials with good absorbency (the best in the world for this purpose, silica aerogels).
We have now reached the point where environmental considerations are important in the life of an airline company. People at the company, at the various authorities, and on the street, all expect this.
Whenever we talk about some kind of pollution, it is a sign that our operation is not efficient enough. This is a waste of energy, material, and labor time at the same time, which has to be paid for separately. Continuous improvements would be needed to reduce its scale.
It would be expedient to introduce an environmental management system to each airline companies.
As other foreign airline companies, they have EMAS (Regulation EC 761/2001, Eco-Management and Audit Scheme), this would be the most appropriate for the Hungarian subsidiary due to the uniform operating criteria.
The scheme is nothing more than a voluntary European Union organization that aims to support the assessment and development of organizations' environmental performance and to inform the public about the organization itself and its environmental performance.
With its help, the operation in accordance with the environmental regulations and expectations can be realized at the same time, and also that everyone knows about it!

Recommendation

I recommend EMAS instead of ISO 14001, because in the case of certification according to the ISO 14001

standard, the interested party only receives information that an independent organization has found the system to be suitable. On the other hand, it does not know the actual environmental effects, the pollution that may be caused. In the case of ISO 14001, it is also not clear what the company actually does to protect the environment.

In contrast, EMAS registered organizations issue an annual environmental statement, the authenticity and conformity of which are verified each time by an independent body.

Interested parties and partners can receive accurate and credible information every year.