

SAFETY MANAGEMENT SYSTEM REALIZATION IN AVIATION INDUSTRY

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The work is focused on safety management and its functions. It deals with the analysis safety in aviation and potential safety risks. Based on the analysis the proposed measures to ensure continuous monitoring and improving safety in aviation.

Keywords: Safety Management, Safety, Legislation, Aviation, Risk

1 INTRODUCTION

Safety in aviation is the most important measure. It has a decisive influence on the quality and the promotion of competitive environment goods and passenger transport. It is now often object and means of committing the criminal crime with catastrophic consequences. The role of aviation safety is to ensure the protection of passengers, crew, ground staff, the public and property from unauthorized interference. The level of safety is periodically analyzed, and must be taken into account all possible threats, their sources, and consequences of actual provision.

2 SAFETY MANAGEMENT

Security management has three meanings, both:

- **a management system** designed to minimize threats and dealing with incidents;
- **a summary of knowledge** on methods of reinsurance security and safety of persons and property, used by trained professionals;
- **a group of people** providing a safety management system.

A characteristic element of management, security not excluding are his functions, each of which has a specific role. These overlap each other and complementary. The disruption of either function will undermine the whole system. These include:

- **The planning for safety** as the process of creating the preconditions for the emergence of threats to peace in the period. This activity aims determine the role of safety, security and ways of implementation of preventive measures. Part of planning is the analysis of

the security system, the collection of timely, reliable and relevant information on the status of secure environment. The information collected is needed to identify the source of threats to security risks.

- **The organizing**, which in safety management represents the process of implementing the security objectives, processing security strategy of drafting and implementing security solutions protect the system. Safety organization is a functional provided, that each employee knows what is his role, as has rights and obligations. Coordination of actions allows to introduce a uniform rules for different sections, to exercise control in the whole organization and effective use of deployed forces and equipment.
- **The personal management**, which deals with everything concerning the people in the workforce, and preparation, selection and staffing workers in job positions, shaping, organizing and networking skills and their work results as well as their personal and social development. In the system safety work mostly professionals from a wide range of professions whose skills and readiness for the tasks are continuously reviewed and deepened. For safety and security is needed teamwork, but also team responsibility.
- **The management as a process** of influencing and motivating workers to achieve stated objectives, in which managers take measures to promote willingness subordinates. In the Safety Management must be leadership strong, effective and functional especially in the period the crisis. From ability and how to lead the results depend on individuals and the whole system.

- **The reviewing is the process** as a key acquisition, evaluation and comparison of achievements and planned targets. In the safety has a check designed to ensure compliance with established standards. Deviations and deficiencies are removed subsequent remedial measures, training programs and regular inspections. The staffs of the control authorities are experts for the areas with defined responsibilities.

3. CLASSIFYING THREATS AVIATION

In the aviation terminology is defined incident as a dangerous ground or flight situation threatening the life or health of persons on the ground and in the air, the environment or a threat to flight safety. Under the regulation L13 is a general indication of aircraft accident, incident or serious incident.

Before the adoption safety measures is necessary to know the factors and characteristics of unusual incident such as the causes, consequences, time, length, time, location, intensity and risk. The most common risk factors for air transport are:

- Human;
- Technical;
- Natural.

Prevention of threats in aviation consists of theory, which includes analysis and categorization of risk and prevention through measures, technical assistance and personnel training.

4. ANALYSIS OF AIR SAFETY

Threatened entities in air transport may be airports, air carriers and services related to the operation of air transport.

The analysis is used for assessing the risks to identify and assess threats and followed design safeguard measures in an effort to minimize loss of human life, property, environmental and financial resources. Her process is composed of the following:

- analysis of the security environment,
- identification of risks,
- classification of risk,

- assessment of risks,
- prioritization of risks.

4.1 Analysis of the Security Environment

Analysis of the security environment consists of obtaining information about the characteristics of the object, his surroundings, the natural situation, criminological factors and dislocation of the security forces.

For example, the security area of the airport is difficult to specify, because there is a close association of public and private section. Under the control of security must also be a public area, which also lives in danger. The critical airport infrastructure constitutes entities whose disablement or temporary closure has a result disruption of air traffic, threat or loss of life or property. These include primarily:

- aircrafts;
- airport halls;
- navigational equipments;
- movement areas;
- operational buildings;
- storage of aviation fuel.

4.2 Identification of Risks

Objects included in air transportation, their environment and people may be threatened environmental, procedural, social, technical and technological resources.

The emergence environmental risks are not affected, but their effects can be eliminated measures. This group includes mainly lightning, storms, frost, snow calamities, floods, earthquakes, bird hazards or industrial accidents.

Procedural risks are primarily deficiencies in management, poor personnel policy, weak control mechanisms, inefficient use of technology and information escape.

Between social risks include mainly caused by human error, staff strike, injuries, civil disturbances, Illegal entry, unlawful interference, terrorism or extremism.

Threats technical character are mainly failure of safety equipment, technical equipment damage, escape of dangerous substances, the interruption of energy, materials and water.

The result is a register identifying security risks, which is the basis for the next step.

4.3 Classification of Risk

Every security risk is characterized by specific features. A classification of risks in aviation is performed according to criteria such as:

- duration;
- effect;
- range;
- trends;
- resource.

Information obtained security management is used to create a comprehensive security system, which consists of technical equipment, physical security and organizational measures.

4.4 Assessment of Risks

The role of risk assessment is to assess likelihood and severity of the consequences risk. Expert evaluation method using a relationship:

risk = likelihood occurrence x intensity result

Values of likelihood:

- **low (1)**,
the risk is very unlikely,
- **medium (2)**,
the risk is likely,
- **large (3)**,
the risk is significant and frequent,
- **high (4)**,
the risk is often a need to carry out continuous monitoring.

The impact also has four stages, namely:

- **low (1)**,
the distortion is negligible,
- **medium (2)**,
the damage had a significant,
- **large (3)**,
the extensive is disruption to critical,
- **high (4)**,
the damage is catastrophic and devastating.

4.5 Prioritization of risks

The setting of priorities according to severity of impact is arrangements threatened process, which has the task of identify the most frequent and the most serious threats and propose measures to improve security. Another task of security management is to determine acceptability and level of risk resistance.

The most critical and therefore the most urgent priority threats into the value of 16 and this includes in particular:

- Human Error;
- Unlawful Interference;
- Terrorism;
- Dangerous Objects.

Human error is the leading cause of aviation accidents. On their elimination is primarily used these means:

- courses and training programs;
- verification of eligibility;
- medical screening;
- information staff;
- training of airport unusual incident.

To avert the unlawful interference and terrorism are mainly used these methods:

- major indication borders of public and private spaces;
- mechanical barriers to entry;
- electronic means for the entry of authorized persons and cars to non-public parts;
- uninterrupted physical control of and patrol also in public places;
- cameras security system with movement reagents and night vision cameras and his uninterrupted operation;
- systematic training and verification of security personnel.

To prevent transmission of dangerous objects are also used these means:

- physical control;
- detecting drugs and explosives available means, for example dogs;
- camera systems;
- screening;

- personal search;
- security check baggage and aircraft;
- check all persons entering into non-public areas including aviation personnel.

5. CONCLUSION

It is easier to face risks and threats they are analyzed in advance and developing appropriate prevention plan. The primary precondition for the elimination of safety hazards is the proper selection and combination technical, organizational and personnel measures. To ensure a consistent level of security risk analysis must be performed repeatedly in a closed cycle.

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