



PKP-PK Personnel Management Development Study at Halim Perdanakusuma Airport PT. Angkasa Pura II (persero) in Maintaining Competence and Airport PKP-PK Licenses

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Abstract: PKP-PK Personnel Management Development Study at Halim Perdanakusuma Airport PT. Angkasa Pura II (persero) in Maintaining Competence and Licenses. Thesis 2022. Sifa Alfiyah. NPM 91620040. Based on the Regulation of the Director General of Civil Aviation KP 14 of 2015, Chapter III Paragraphs 1 and 3 states that each airport is required to provide PKP-PK personnel who have the licenses required by the Directorate General in accordance with the airport category for PKP-PK and PKP-PK personnel are required maintain competence, license, and health. So this study aims to determine the organizational structure, number of personnel, competence and licenses of PKP-PK personnel, and efforts made to maintain competence and licenses. The object of this research is the PKP-PK unit at Halim Perdanakusuma Airport PT. Angkasa Pura II (Persero), with the subject being PKP-PK personnel. This research is a qualitative descriptive study using the observation and literature study method by analyzing HR needs or the number of PKP-PK personnel, determining the number of maintenance technicians using the Allotment Hours method per year, calculating the minimum requirements and composition of PKP-PK personnel competencies according to the city category air force, and analysis of the competency qualifications of PKP-PK personnel in carrying out their main and main tasks. The results of this study indicate that the Organizational Structure and the number of PKP-PK unit personnel at Halim Perdanakusuma Airport have not met the standards required in accordance with the KP.14 regulation of 2015, the calculation results for determining the number of maintenance technicians using the Allotment Hours method per year PKP-PK Bandar unit Air Halim Perdanakusuma requires 1 personnel as a vehicle maintenance technician. And the efforts made in maintaining competence and licenses are by making a scheduled work program for training and exercise PKP-PK Halim Perdanakusuma Airport.

Keywords: PKP-PK personnel, PKP-PK unit at Halim Perdanakusuma Airport, PKP-PK Competency and License.

PRELIMINARY

The airport is one of the mandatory transportation infrastructures in every country, and is a node in the air transportation network that has a very important role. Airports currently have the role of being the input front of an air transportation value chain, requiring a safe, effective and efficient management of goods and people according to internationally accepted standards. In general, an airport must be able to serve air transportation activities according to operating hours by ensuring flight safety, smoothness and regularity of flights. One of the efforts to improve security, aviation safety and air transportation services is to impose conditions in the form of an airport certificate that must be owned by every airport. To obtain the certificate, must have aviation accident rescue and fire fighting facilities in accordance with the category. This is in accordance with the regulations of the Director General of Civil Aviation, KP 172 of 2017 Article 1 Paragraph 1 and the Regulations of the Director General of Civil Aviation KP 458 of 2015 Article 2 Paragraph 2 and Article 3 Paragraph 2.

Each airport is required to form a PKP-PK organization in accordance with the airport category for PKP-PK and PKP-PK units are required to provide PKP-PK services according to the airport category for PKP-PK, and each airport is required to provide PKP-PK personnel who have the license required by the Directorate General according to the airport category for PKP-PK and PKP-PK Personnel must maintain their competency, license and health.

The management of PKP-PK personnel in maintaining the competency and licenses of airport PKP-PK personnel is very important as an obligation for PKP-PK service certification holders according to the airport category. This personnel management will regulate the number of personnel, maintain, add or reduce the number of personnel, manage personnel with good performance to be able to increase their competence, maintain their licenses, and ensure the proper performance of PKP-PK. Therefore, the importance of competence and licenses that must be owned by PKP-PK personnel as one of the technical standards and operations of civil aviation safety regulations as well as the obligations of PKP-PK service certificate holders, it is necessary to study the management of PKP-PK personnel in maintaining competence and licenses.

LITERATURE REVIEW

PKP-PK personnel

Aviation Accident Assistance Personnel and Fire Extinguishers, hereinafter referred to as PKP-PK Personnel, are officers who are responsible for operating and carrying out maintenance/maintenance of PKP-PK vehicles and handling emergencies at airports and their surroundings. Every PKP-PK personnel who handles emergencies must be equipped with protective clothing and breathing apparatus in ready-to-operate conditions and in sufficient numbers. In an emergency, airports with a limited number of PKP-PK personnel may use auxiliary personnel from other units at the airport who have at least basic PKP-PK competence.

PKP-PK personnel as referred to have the main tasks and main tasks as follows:

- a. The main task is to save lives and property from incidents and accidents at the airport and its surroundings.
- b. The main task is to carry out activities including:
 - 1) Operations include administration, standby, rescue, prevention and suppression.
 - 2) Training, both hard skills and soft skills.
 - 3) Maintenance of PKP-PK facilities, both vehicles and PKP-PK supporting and supporting equipment.

Organization, Duties, and Functions of the PKP-PK unit

Aviation Accident Assistance Unit and Fire Extinguisher (PKP-PK) is a unit part of emergency management at airports. Each airport is required to form a PKP-PK organization in accordance with the

airport category for PKP-PK. Airport administrators must maintain an organization in the form of a PKP-PK unit in accordance with a good and effective management structure linked to the existence and conditions of the services provided.

PKP-PK units are classified into 4 (four) types, namely:

1. PKP-PK type A unit for categories 8 to 10
2. PKP-PK unit type B for categories 6 and 7
3. PKP-PK unit type C for category 4 and 5
4. PKP-PK type D units for categories 1 to 3

Duties and functions of the PKP-PK unit at the airport, namely:

1. Providing PKP-PK services to save lives and property from an aircraft that has an incident or accident at the airport and its surroundings.
2. Prevent, control, extinguish fires, protect people and goods that are at risk of fire at facilities at airports.

Halim Perdanakusuma Airport is an airport in Jakarta, Indonesia which until now is managed by PT. Angkasa Pura II (Persero) since 1984. This airport is also the headquarters Air Force Operations Command I. Since the 10th January 2014, the airport is also used as a commercial airport for the region Greater Jakarta, originally to divert flights from Soekarno–Hatta International Airport, which was judged to be overcrowded. On April 10, 2017, at 09.00 at Halim Perdanakusuma International Airport, the inauguration ceremony for accepting PKP-PK personnel was held to complete PKP-PK personnel at Halim Perdanakusuma International Airport with the airport PKP-PK category being 9 with airport specifications based on the regulations of the Director General of Civil Aviation KP 14 Years 2015, which must have 25 personnel per shift, 3 Main Vehicles, and 7 Support Vehicles. This is a technical standard and operation of civil aviation safety regulations as well as Aviation Accident Assistance and Fire Fighting Services (PKP-PK) as a form of PKP-PK service certification PK.

PKP-PK Competency and License

Each airport is required to provide PKP-PK personnel who have the licenses required by the Directorate General in accordance with the airport category for PKP-PK. Every PKP-PK personnel must maintain their competence, license and health, and all personnel must receive appropriate training in order to carry out their duties efficiently and must take part in live fire drills according to the type of aircraft and equipment used at the airport, including fire drills pressure-fed fuel fires. One of the compulsory PKP-PK training programs is training in human performance including team coordination (Human Factors).

Competence is the ability and skills that must be owned by all PKP-PK personnel, both hard skills and soft skills to carry out routine activities and operations. Competency certificates are proof that a person has met the knowledge, expertise and qualification requirements in their field. A license is a permit that is given to someone who has met certain requirements to do work in their field for a certain period of time. A license card is an identification card for PKP-PK personnel that lists the license and or rating held. PKP-PK Personnel License consists of:

- a. PKP-PK Service License, given to personnel who carry out the task of operating PKP-PK vehicles at airports.
- b. PKP-PK Vehicle Maintenance Engineering License, given to personnel who carry out maintenance of PKP-PK vehicles so that they remain operationally viable through preventive and corrective actions.

Rating is the limit of authority and responsibility of a license holder in a field of work in accordance with the license he has. Education and/or training institutions are institutions that organize education and training for airport personnel including government agencies or business entities with Indonesian legal entities that have received permission from the Directorate General of Civil Aviation (DJPu). The PKP-PK service license has a rating with levels including:

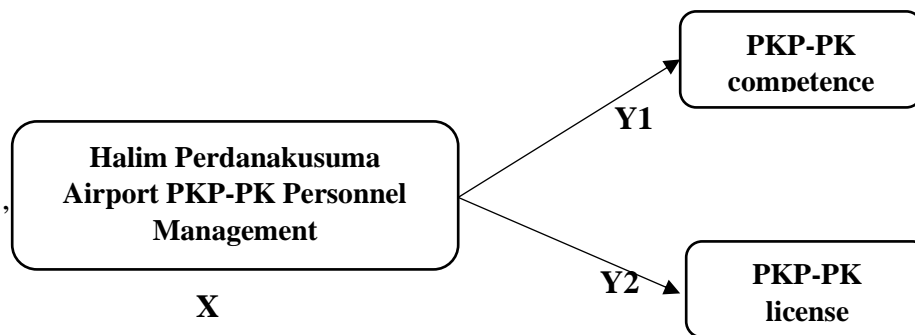
- Basic level service rating,
- Junior level service rating, and
- Senior level service rating.
- Rating of PKP-PK vehicle maintenance techniques.

RESEARCH METHODS

This research was conducted by conducting a study of the PKP-PK unit at Halim Perdanakusuma Airport PT. Angkasa Pura II (Persero), by analyzing all PKP-PK personnel at Halim Perdanakusuma Airport, totaling 43 people, consisting of: Basic Rating PKP-PK Personnel, Junior Rating PKP-PK Personnel, and Senior Rating PKP-PK Personnel

Data and Variables

As for the data and variables of this study, it can be seen from the following diagram.



How to Get Data

The way to obtain data in this research study is by observing and studying the literature by analyzing HR needs or the number of PKP-PK personnel, determining the number of maintenance technicians using the Allotment Hours method per year, calculating the minimum requirements and composition of PKP-PK personnel competencies according to airport category, and analysis of competency qualifications of PKP-PK personnel in carrying out their main and main tasks. This is based on Regulation of the Director General of Civil Aviation KP 14 of 2015, Chapter III No.11, 12, 13, and 14. To complete the results of the study by conducting interviews with the Head of the PKP-PK Service (Assistant Manager of PKP-PK) Halim Perdanakusuma Airport PT. Angkasa Pura II (Persero) and several PKP-PK personnel of 5 people.

Data Analysis Tools

This research is a qualitative descriptive study. Descriptive research is a study that aims to systematically describe certain facts or characteristics or certain fields factually and accurately. While qualitative is a way of research that produces descriptive analysis data, namely what is stated or informed by respondents in writing or orally and also their behavior in real terms. This research study was carried out by comparing the facts found in the field, whether they are in accordance with

applicable regulations and how an organization conducts its personnel management in maintaining competence and licenses. The following is the method of data analysis used:

1. Using the formula to determine the need for the number of airport PKP-PK personnel is as follows:

$$JMP = ((3KU + 2KP)x s) + TP$$

Information:

JMP = Minimum Number of Personnel

MY = Number of Main Vehicles

KP = Number of Support Vehicles

TP = Maintenance Technician

S = Number of work shifts per day

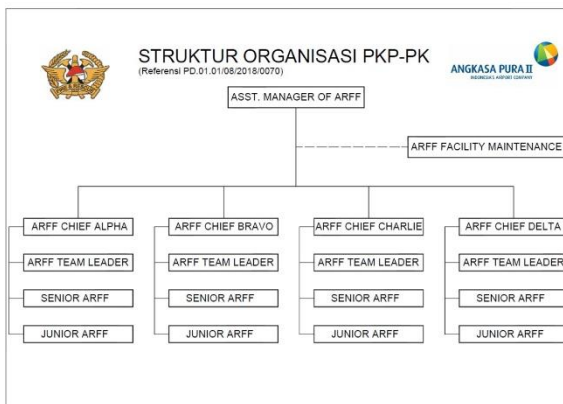
2. Determination of the number of maintenance technicians using the Allotment Hours method per year for preventive and corrective activities divided by the effective number of work in 1 (one) year, is as follows:

$$Jumlah\ teknisi = \frac{(Jumlah\ kendaraan \times Jumlah\ operasi\ kendaraan\ per\ tahun)}{jumlah\ kerja\ efektif\ per\ orang}$$

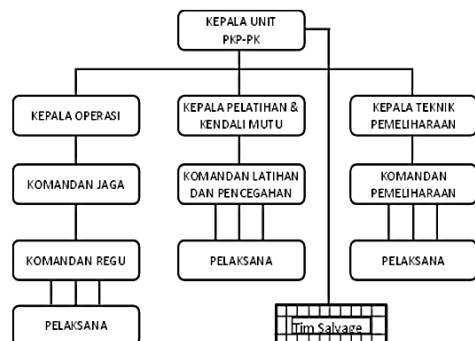
3. Calculation of minimum requirements and composition of PKP-PK personnel competencies according to airport category.
4. Analysis of personnel competency qualifications in carrying out the main tasks and main tasks as PKP-PK personnel.
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Chart 1. Halim Perdanakusuma Airport PKP-PK Organizational Structure and KP.14 Organizational Structure in 2015

The organizational structure of the PKP-PK at Halim Perdanakusuma Airport only has the Head of Service (Assistant Manager of ARFF), Guard Commander, Team Commander, and Executors consisting of senior rating executors and junior rating executors. Meanwhile, based on KP regulation

14 of 2015, PKP-PK units with category 9 must also have a Head of PKP-PK unit, Head of Operations, Head of Training and Quality Control, Commander of Training and Prevention, Head of Maintenance Engineering, Maintenance Commander, and Salvage Team.

Halim Perdanakusuma Airport PKP-PK Personnel Management

Calculation of the formula to determine the need for the number of airport PKP-PK personnel

Data on the minimum number of PKP-PK personnel at Halim Perdanakusuma Airport can be obtained based on the following table.

No	Need	Information	Amount
1	Number of Main Vehicles	MY	3 units
2	Number of Support Vehicles	KP	5 units
3	Maintenance Technician	TP	0
4	Shiftswork per day	S	4

Table 1. Calculation of the Minimum Number of Personnel

The formula for determining the number of airport PKP-PK personnel needed is:

$$JMP = ((3KU + 2KP) \times s) + TP$$

$$JMP = ((3 \times 3 + 2 \times 5) \times 4 + 0)$$

$$JMP = ((9 + 10) \times 4 + 0)$$

$$JMP = 76 \text{ Personel}$$

The minimum number of personnel obtained is 76 personnel, from the data on the number of PKP-PK unit personnel at Halim Perdanakusuma Airport there are currently 43 personnel with 4 platoons, each platoon has 10 personnel, the remaining 1 service head and 2 people as administrative staff and PKP-PK work program coordinating staff. So, the need for the number of PKP-PK personnel at Halim Perdanakusuma Airport is not in accordance with KP regulations. 14 of 2015, due to a shortage of personnel as many as 76 personnel - 43 personnel = 33 personnel.

Determination of the number of maintenance technicians using the Allotment Hours method per year

Based on KP.14 of 2015, the number of maintenance technicians using the Allotment Hours method per year for preventive and corrective activities divided by the number of effective work in 1 (one) year, is as follows:

$$\text{Jumlah teknisi} = \frac{(\text{Jumlah kendaraan} \times \text{Jumlah operasi kendaraan per tahun})}{\text{jumlah kerja efektif per orang}}$$

$$\text{Jumlah teknisi Kategori 9} = \frac{(8 \times 231,1)}{(12 \text{ jam kerja perhari} \times 16 \text{ hari kerja} \times 12 \text{ bulan})}$$

$$\text{Jumlah teknisi Kategori 9} = 0,80243056 \approx 1 \text{ Orang}$$

From the calculation above, it can be seen that the PKP-PK unit at Halim Perdanakusuma Airport requires 1 personnel as a vehicle maintenance technician.

Calculation of minimum requirements and composition of PKP-PK personnel at Halim Perdanakusuma Airport with Category 9

The number (quantity) of personnel/officers (SDM) of the PKP-PK Unit at Halim Perdanakusuma Airport is still not in accordance with the ideal conditions for the operational needs of the PKP-PK that should be (KP. 14 of 2015). The table below presents a comparison matrix between the minimum requirement standards contained in the Decree of the Directorate General of Civil Aviation KP.14 of 2015 and the existing condition of the number of PKP-PK personnel at Halim Perdanakusuma Airport. From the matrix it is clear that the number of personnel/officers at Halim Perdanakusuma Airport is still far below the minimum requirements standard set out in the KP. 14 of 2015. must be operated in accordance with the airport category.

The minimum competency composition of PKP-PK personnel at Halim Perdanakusuma Airport is as follows:

Kategori PKP-PK : 9 (Sembilan)

NO	JABATAN	JUMLAH PERSONIL			JUMLAH LISENSI			USIA PERSONIL				KETERANGAN
		AP II	KMPg	TNI AU	BSC	JNR	SNR	SALVAGE	20 - 29 TH	30 - 39 TH	40 - 49 TH	
	ARFF											ibalian Personel pasca asi Bandara Halim ikusuma sebanyak 23 l ARFF dari Bandara rdiri dari :
1	Assistant Manager of AR											
2	Chief											
3	Team Leader	Uraian	Standar Minimum KP 14 Tahun 2015			Bandar Udara Halim Perdanakusuma				Status		
4	ARFF											
5	Junior ARFF											
6	Maintenance Staff											sonel Junior ARFF onel ARFF onel Team Leader
	JUMLAH	Kelompok Fasilitas PKP-PK	Category 9			Category 9			Memenuhi			
	TNI AU											
1	Kasubsie Base Rescue											
2	Bintara Sarban Base Res											
3	Tamtama Sarban Base R											
	JUMLAH	Jumlah Personel /	100 personel			43 personel			Tidak Memenuhi			

Uraian	Standar Minimum KP 14 Tahun 2015	Bandar Udara Halim Perdanakusuma	Status
Kelompok Fasilitas PKP-PK	Category 9	Category 9	Memenuhi
Jumlah Personel / Petugas	100 personel	43 personel	Tidak Memenuhi

Table 2. Comparison Matrix between KP.14 of 2015 and the Existing Conditions of PKP-PK Unit Personnel/Officers at Halim Perdanakusuma Airport

Petugas per-shift

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

The conclusions of this study are as follows.

1. The Organizational Structure of the PKP-PK unit at Halim Perdanakusuma Airport has not met the required standards in accordance with regulation KP.14 of 2015 concerning Requirements for Technical and Operational Standards Civil Aviation Safety Regulations Part 139 (Manual of Standard CASR part 139) Volume IV Aviation Accident Relief Services and Fire Extinguisher (PKP-PK).
2. The number of PKP-PK personnel / officers at Halim Perdanakusuma Airport still does not meet the standards required in accordance with KP 14 of 2015. The need for the number of PKP-PK

Table 3. Composition of Minimum Competency of PKP-PK Halim Perdanakusuma Personnel

personnel at Halim Perdanakusuma Airport is based on calculations using the JMP formula (Minimum number of Personnel) is 76 personnel , resulting in a shortage of personnel as many as 33 personnel.

3. There are not yet available personnel who have a PKP-PK vehicle maintenance engineering rating / license at Halim Perdanakusuma Airport.
4. From the calculation results of determining the number of maintenance technicians using the Allotment Hours method per year for preventive and corrective activities, the PKP-PK unit at

Halim Perdanakusuma Airport requires 1 person as a vehicle maintenance technician.

5. PKP-PK Halim Perdanakusuma Airport in its implementation divided 43 personnel into 4 platoons (Alfa, Bravo, Charlie, and Delta), each platoon had 10 personnel included in the service roster, the remaining 1 service head and 2 staff administration and coordinating staff of the PKP-PK work program. However, this is still far below the minimum requirement standard set out in the KP. 14 of 2015. The following table presents a comparison matrix between the minimum requirements standards contained in the Decree of the Directorate General of Air Transportation KP.14 of 2015 with the existing condition of the number of PKP-PK personnel at Halim Perdanakusuma Airport.
6. Efforts made by the Halim Perdanakusuma Airport PKP-PK unit in maintaining competence and licenses are by making a scheduled PKP-PK training and exercise work program consisting of: class theory, dry training, wet training, fire training, tabletop training, partial training exercise, Full Scale Exercise, and Modular Exercise. In addition, there is a PKP-PK service certification and the following certification activities.
7. The work program of the PKP-PK training and exercise unit at Halim Perdanakusuma Airport is in accordance with the syllabus curriculum of the Directorate General of Air Transportation from the Indonesian Aviation College (STPI).

Suggestion

As for suggestions that can be given to PKP-PK units Halim Perdanakusuma Airport as follows.

1. In order to realize excellent service and to support the operations of the PKP-PK unit, especially for the PKP-PK operations at Halim Perdanakusuma Airport, it is necessary to immediately recruit employees to meet the shortage of personnel for each shift on duty.
2. Good cooperation is needed from all parties involved in the operation of Halim Perdanakusuma Airport to support the acceleration of the process of procuring new vehicles and rejuvenating PKP-PK operational vehicles because their designation is very important in supporting Emergency Management at Halim Perdanakusuma Airport.

BIBLIOGRAPHY

Airport Service Manual Documents 9137 AN/898 Part. 1 Rescue and Fire Fighting.

Document Standard Operating Procedure (SOP) for Aviation Accident Assistance and Fire Fighting (PKP-PK) Number: 17.02.07 Concerning Exercise.

Hasibuan, Malayu SP 1989. Management, Basis, Understanding, and Problems. Jakarta : CV Haji Masagung.

Mangkunegara Anwar Prabu. 2008. Enterprise Resource Management. Tiredung: PT Juvenile Rosdakarya.

Mathis Robert L., Jackson John H., 2001. Human Resource Management, BNA includes student edition. United States of America: South-Western College.

Mathis Robert L., Jackson John H., 2001. Human Resource Management (Translation) Book 2, Ninth Edition. Jakarta: Salemba Empat.

Regulation of the Director General of Civil Aviation Number: KP 002 of 2012 concerning Licenses and Competency Standards for Aviation Accident Assistance Personnel and Fire Extinguishers (PKP-PK).

Regulation of the Director General of Civil Aviation Number: KP 14 of 2015 concerning technical standards and operations of Aviation Accident Assistance and Fire Fighting Services (PKP-PK).

Regulation of the Director General of Civil Aviation Number: KP 90 of 2016 concerning guidelines for preparing the Airport Emergency Management Plan document.

Regulation of the Director General of Civil Aviation Number: KP 458 of 2015 concerning Certification of Flight Accident Assistance and Fire Fighting Services (PKP-PK) at Airports.

Regulation of the Director General of Civil Aviation Number: KP 479 of 2015 concerning Airport Emergency Plans (AEP).

Regulation of the Minister of Transportation of the Republic of Indonesia number: PM 37 of 2021 concerning Airport Personnel.

Regulation of the Minister of Transportation of the Republic of Indonesia number: PM 83 of 2017 concerning civil aviation safety regulations part 139 (Civil Aviation Safety Regulation part 139) concerning airports.

Rahmawati Ike Kusdayah. 2008. Human Resource Management. Yogyakarta: CV. ANDI

Law number 1 of 2009 concerning Aviation.