

# Legal Protection of Inventors on Patent Rights for Defense and Security Equipment Within the Indonesian National Army

Ateng Karsoma

akarsoma74@gmail.com

Sekolah Tinggi Hukum Militer (AHM-PTHM) Jakarta Timur

## Article Info

Received: 2024-01-30

Revised: 2025-05-11

Accepted: 2025-06-22

## Keywords:

Legal Protection, Patent Inventor, Defense and Security Equipment (Alpalhankam).

## Abstract

The legal protection provided by the state through Law Number 65 of 2024 concerning the Third Amendment to Law Number 13 of 2016 on Patents, specifically regarding Defense and Security Equipment (Alpalhankam) related to national defense and security, is explicitly and implicitly outlined in Article 109 Paragraph (1) letter a of the Patent Law. This provision affirms the Government's authority to independently implement patents in Indonesia when deemed necessary for national defense and security interests. In such cases, patent holders are restricted from exercising their exclusive rights. To ensure the confidentiality of Alpalhankam patents and to safeguard the moral and economic rights of inventors whose patents are appropriated by the Indonesian government, it is essential to establish a dedicated patent management body under the Ministry of Defense. This model follows practices adopted by countries such as China and South Korea.

## 1. Introduction

The implementation of national defense encompasses all activities aligned with defense policies aimed at achieving strategic objectives. These include building a defense system capable of addressing various threats; safeguarding maritime, land, and aerospace territories; contributing to global peace; establishing a strong, independent, and competitive defense industry; and fostering national

awareness and capability for state defense among Indonesian citizens.

The development of a national defense industry is essential to meeting the operational needs for defense and security equipment (Alpalhankam). Reliance on foreign-sourced defense technologies can create vulnerabilities and impair the readiness of the Indonesian National Armed Forces (TNI) in future operations. Therefore, empowering domestic industries to innovate and produce Alpalhankam is a strategic necessity.

According to Article 1 paragraph (1) of the Minister of Defense Regulation No. 44 of 2016 concerning the Defense and Security Equipment Production Line, Alpalhankam refers to all equipment intended to support national defense, public safety, and order. Alpalhankam products may consist of primary systems, essential or supporting components, as well as raw materials developed through research, design, and testing by the national defense industry.

The current Patent Law provides more comprehensive legal protection for Alpalhankam-related inventions compared to previous legislation, which only acknowledged government-initiated patent implementation in the health sector. Nonetheless, Law No. 65 of 2024, amending Law No. 13 of 2016 on Patents, still lacks clarity in regulating patents concerning national defense and security technologies.

Article 109 paragraph (1)(a) of the Patent Law clearly defines the Government's authority to independently execute patents in cases involving national defense and security. This authority applies strictly to patents registered within Indonesia and is limited to those of critical importance to defense operations.

Within the Ministry of Defense and the TNI, military personnel acting as inventors are governed by the ethical framework of the Indonesian military, including the Soldier's Oath, the Sapta Marga, the Eight Obligations of TNI, and the Eleven Principles of TNI Leadership. Under these values, inventions developed by soldiers during official duty are not treated as products of a formal employment

agreement, but as a fulfillment of orders based on discipline, loyalty, and duty. Consequently, it is unlikely for such personnel to assert moral or economic rights over their inventions.

The current Patent Law does not address the legal status of military inventors working in R&D units within the Ministry of Defense or the TNI. Legislators have focused primarily on securing state control over inventions with defense implications, to prevent such innovations from being exploited by hostile entities or falling into enemy hands, thereby compromising national security.

In addition, the Ministry of Defense has yet to issue specific technical regulations to implement moral and economic protections for military inventors. As a result, there are no known military inventors officially registered with the Directorate General of Intellectual Property (Ditjen KI) for any Alpalhankam-related patents.

If the intention of the Patent Law is to protect national security by granting the Government the right to implement defense-related patents unilaterally, then this must be accompanied by initiatives to elevate public morale and foster a culture of national self-reliance in safeguarding security interests.

Based on this background, the research poses two primary questions:

1. How is the principle of confidentiality regulated in Alpalhankam inventions in Indonesia?
2. What conceptual model can be applied for managing Alpalhankam inventions in the Indonesian defense sector?

## 2. Research Method

This study adopts a normative juridical approach. The hallmark of this type of legal research is its reliance on legal materials rather than empirical data or social facts. In normative legal research, the primary focus lies in examining legal sources that contain binding rules and normative provisions. These legal

materials are categorized into primary and secondary legal sources, serving as the core reference for analysis and interpretation.

The research is descriptive-analytical in nature, aiming to describe and analyze secondary data relevant to the legal framework of the study. The emphasis is placed on examining primary and secondary legal documents, supported by tertiary sources when necessary. The primary legal sources in this research include several key laws and regulations: Law No. 65 of 2024 (Third Amendment to Law No. 13 of 2016 on Patents); Law No. 18 of 2002 on the National System of Research, Development, and the Application of Science and Technology; Government Regulation No. 27 of 2004 on the Procedures for Government Patent Implementation; Minister of Defense Regulation No. 17 of 2014 on the Procurement of Main Weapon Systems within the Ministry of Defense and the Armed Forces; Minister of Defense Regulation No. 44 of 2016 on the Defense and Security Equipment Production Line; and Minister of Defense Regulation No. 9 of 2019 on the Management of R&D within the Ministry of Defense and TNI.

To enrich the data collected from legal literature, supporting field data were obtained through structured interviews. Interviews were conducted selectively with informants who have direct involvement in defense innovation, including inventors within the TNI and Ministry of Defense, as well as officials responsible for formulating legal policies related to patents. The interviews were guided by a predetermined set of questions designed to align with the research objectives.

The data analysis method applied in this study is qualitative juridical analysis. The data collected were organized and interpreted qualitatively based on relevant statutory laws, doctrines, and legal theories. The presentation of research findings follows a normative-descriptive-analytical structure, wherein applicable legislation concerning patents in the defense sector is examined in light of legal norms and principles. The analysis also links legal provisions with

theoretical frameworks and explores their relevance to the issues raised in the research questions.

### **3. Results and Discussion**

#### **1. Regulation of the Confidentiality Principle in Defense Equipment Innovation in Indonesia**

Article 2 letter j of Law Number 16 of 2012 concerning the Defense Industry (hereinafter referred to as the Defense Industry Law) states that the implementation of the defense industry is based on the principle of confidentiality. The "principle of confidentiality" means that the implementation of the defense industry related to the design formulation of products during research and development processes of Defense Equipment and Security (Alpalhankam) technology must not be disclosed to parties outside the defense industry and institutions related to the defense industry.

Article 30 paragraph (1) of the Defense Industry Law stipulates that research, development, and engineering activities related to the design formulation of Defense Equipment and Security technology are confidential. The confidentiality is determined by the Defense Industry Policy Committee (KKIP) following prevailing regulations. This article explains that the confidential design formulation refers to original innovations created by human resources at research and development institutions, universities, government or private institutions in defense and security, users, or main industries.

However, up to now, no clear parameters have been established to enforce the confidentiality principle that prohibits the disclosure of product design formulations during research and development of Alpalhankam technology to external parties outside the defense industry. The KKIP, as the authorized institution to designate the confidential status of such products, has not issued any official policy on this matter.

Consequently, no Alpalhankam inventions have been patented through the Directorate General of Intellectual Property at the Ministry of Law and Human Rights. This is due to the disclosure clause inherent in the patent system. Once a patent is granted, the invention details in the specifications become publicly available, contradicting the confidentiality principle that applies to Alpalhankam inventions.

Law Number 13 of 2016 on Patents attempts to balance the disclosure clause and the confidentiality principle for Alpalhankam patents through Article 109, which allows the government to execute patents related to national defense and security. This governmental execution is limited, non-commercial, and requires presidential regulation.

Currently, many research and development results of Alpalhankam by the Indonesian National Armed Forces (TNI) and the Ministry of Defense, produced through the defense industry via KKIP, are commercially manufactured to fulfill international demands. For example, the United Nations has used 350 units of Panser Anoa produced by PT Pindad, although the government has not executed the patents themselves. Thus, inventors of Alpalhankam deserve economic rights as a reward from the sales of their inventions.

According to Article 22 paragraph (1) of the Patent Law, patents are granted for 20 years from the filing date, after which they enter the public domain. However, for Alpalhankam patents executed by the government, Article 109 paragraph (4) allows extensions based on recommendations from relevant ministers or agency leaders. Thus, if the government deems the design formulation important for national security, the patent may never enter the public domain.

The government's decision to execute a patent itself is final and irrevocable, emphasizing the paramount importance of national defense and security interests. The evaluation process is meticulous, hierarchical, and culminates in a presidential decree. Once decided, the decision cannot be challenged legally.

Article 109 paragraph (1) restricts the government's authority to patents deemed vital for national defense, applicable only to patents granted in Indonesia, excluding foreign registrations. This reflects the territorial principle of patents and acknowledges the government's social function in protecting national security through patent control.

Article 110 of the Patent Law specifies the defense-related inventions that may be taken over by the government, including firearms, ammunition, military explosives, interception devices, surveillance, cryptographic equipment, and other defense and security processes and tools.

This provision clarifies the term "important for national defense," but the broad wording of letter h creates ambiguity. Inventors cannot independently register their inventions, as they would always fall under this provision's scope.

Article 112 paragraph (1) states that when the government executes a patent for defense purposes, the patent holder loses exclusive rights during the government's execution period. This reinforces that government execution overrides individual patent exclusivity for national security reasons.

Article 50 of the Patent Law allows the Minister, after consulting with defense authorities, to withhold publication of patent applications related to national defense to protect state secrets. This confidentiality applies only domestically and does not restrict applicants from filing abroad.

This indicates that Indonesian patent law limits confidentiality to domestic patent objects and does not restrict inventors from filing abroad to circumvent government control.

The researcher interprets that confidentiality applies only to defense-related design formulations known to the government, not to inventions unknown to the government or filed overseas by the inventor.

Confidentiality of technology in Indonesian law is not only governed by

patent law. Article 3 paragraph (2) of Law Number 30 of 2000 on Trade Secrets defines information as confidential if known only by certain parties and not public knowledge. Trade secrets must relate to technology or business.

Unlike patents, if another party independently develops the same technology in good faith, trade secret law does not prevent them from owning, commercializing, or patenting the invention if patent conditions are met.

Moreover, if a secret is embedded in a product, enabling reverse engineering, trade secret law does not consider reverse engineering a violation if done for product improvement purposes.

The researcher points out that this creates a legal vulnerability for Alpalhankam, because once secrecy is lost through public disclosure, legal protection ends, unlike patent law, which protects the owner despite publication.

In China, government takeover of defense patents aims to guarantee secrecy. Inventors are prohibited from transferring national defense patent rights to foreign entities or individuals within China.

All patent applications for defense must be submitted to the National Defense Patent Institution (NDPI), which maintains state secrecy. If a patent application concerns national defense interests, it may be reclassified as a defense patent with the applicant notified accordingly.

South Korea applies similar rules, allowing the government to refuse patents deemed necessary for national defense or emergency situations, with government acquisition of patent rights through the Ministry of Defense Acquisition Program Administration. Korea also restricts patent filings abroad under secrecy maintenance policies.

These foreign regulations demonstrate that both countries restrict defense-related patent disclosures domestically and abroad through institutional controls responsive to national situations like war or emergencies, contrasting with

Indonesia's current patent secrecy approach limited to domestic protection only.

## 2. Concepts Applicable to the Management of Defense and Security Equipment (Alpalhankam) Inventions in Indonesia

First, Establishment of a Defense Patent Management Institution. Article 30 of Law Number 16 of 2012 concerning the Defense Industry stipulates that research, development, and engineering related to the design and formulation of Defense and Security Equipment technology must be kept confidential. This confidentiality is determined by the Defense Industry Policy Committee (KKIP) in accordance with applicable laws and regulations. Consequently, the government through KKIP should establish a dedicated unit responsible for managing the confidentiality of Alpalhankam patents.

This unit could function similarly to a patent consultant, assisting military personnel in patent registration processes with the Directorate General of Intellectual Property (DGIP). Furthermore, it could actively coordinate with DGIP to gather intelligence on patent applications deemed critical to national defense and security, thereby enabling the Minister of Defense to intervene and take over patent implementation by the government before the invention is publicly disclosed by DGIP. This framework is expected to encourage the community to innovate and produce technological advancements, ultimately enhancing national productivity and supporting the growth of defense industries based on Intellectual Property Rights (IPR).

The patent manager for Alpalhankam would be a government official authorized and responsible for overseeing the management of these patents. The process begins once the invention is registered; the institution managing Alpalhankam patents will determine the secrecy level of the invention. The confidentiality officer may advise agency heads on classification, similar to practices in China and South Korea.

China's National Defense Patent Institution (NDPI) is responsible for

receiving and examining national defense patent applications. If the NDPI determines that an applicant meets regulatory requirements, the State Council's Patent Administration Department grants the national defense patent. The State Council's Department of Science, Technology, and Industry for National Defense, along with the People's Liberation Army General Armaments Department (GAD), manage defense patents in both civilian and military systems according to their respective mandates.

Regarding national defense science and technology information management except for highly sensitive military content the Minister of Defense Procurement Programs administers its distribution in line with national science and technology policies.

Due to the specialized nature and heavy responsibility of this role, the patent managers of Alpalhankam must possess particular expertise, including certification in the protection and management of classified defense technology. They should also receive adequate physical and psychological protection, as well as appropriate compensation to ensure their welfare and that of their families. This safeguards both the security of the classified inventions and the well-being of those managing them.

Second, Limiting the Confidentiality Value of Government Patent Objects. Article 78 of the Patent Law explains that "national interest" includes ideological, political, economic, social, cultural, defense, security, energy, technology, and other goals crucial to Indonesia's national objectives as enshrined in the 1945 Constitution. Patent protection centers on the claims' essence, not merely their literal wording. The scope of patent protection for Alpalhankam inventions greatly affects inventors, technology, economic interests, and national defense and security.

Currently, the "national interest" concerning Alpalhankam patents has not been clearly defined in terms of patent value, leading to government intervention in patent ownership. Patent value refers to the tangible and intangible benefits derived by the rights holder from exclusive use of the patented technology.

In modern times, patent use is complex and intertwined with various life aspects, resulting in diverse motivations among patent holders: from personal achievement to direct economic gains, strategic value, or personal satisfaction.

Typically, patent value is divided into economic and non-economic categories. Economic value refers to the financial benefits a patent confers, primarily for business use. The patent system's core purpose is to grant monopolistic rights to ensure economic returns, thereby encouraging research and innovation.

According to 2024 research within the TNI's research and development sphere, many individuals or units are motivated by non-economic values such as personal achievement, academic credentials, task completion, or awards. These non-economic values often lack standardized evaluation and depend heavily on leadership judgment, which varies.

The strategic value of Alpalhankam patent objects is difficult to quantify. Leaders sometimes overlook strategic value, resulting in excessive time and cost burdens on research activities. Researchers therefore argue that despite the absence of formal parameters for strategic value, it is essential to assess the quality of management hierarchy and reconsider government intervention when strategic value is low.

From these considerations, patent value classification differs depending on perspective. This means patent objectives and value orientations vary. For defense patents, KKIP as the authorized body determining secrecy of defense inventions could adopt the following value parameters:

1. Military Value: Effectiveness and role in national defense, measured by urgency (10 points), importance in military applications (10), practical maneuverability (10), and compatibility with operational systems (10).
2. Technical Value: Technological innovation level and standardization, including innovation (10), replacement technology (5), key process elements (5), standardized technology (5), and new technology development (5).

3. Economic Value: Derived from licensing and transfer agreements, including market demand (5), industrialization prospects (5), market trends (5), and application scope (5).
4. Legal Value: Protection of inventor rights, such as independent claim scope (1), formal protection level (1), claim authority (1), and remaining patent protection time (2).
5. Social Value: Positive societal impact through implementation, including influence on defense science and technology (2.5) and enhancement of national and public pride (2.5).

Military urgency assesses whether a technology is crucial for combat effectiveness and maneuverability. Patents scoring 81-100 points qualify for government takeover and implementation. Technologies scoring 50-80 points may be diversified or spun off, while patents scoring below 50 are considered general and outside military interest.

Defining clear secrecy parameters for Alpalhankam ensures balance between national interests and legal protection for inventors.

This aligns with Bentham's concept of utility as something that brings benefit, pleasure, and happiness, or prevents harm and unhappiness. Clearly defining patent objects eligible for government implementation enhances individual and communal welfare.

Third, Utilization of Alpalhankam Technology Secrets. Considering the greater need for diversified or spin-off applications, technologies scoring 50-80 points may be used by other agencies under controlled conditions and based on governmental legislation. Agencies authorized to access these classified technologies must maintain confidentiality.

The defense industry is required to have spin-off capabilities to diversify products with commercial value derived from defense technology. For example, the

hydraulic pump application invented by Colonel Cpl Simon Petrus Kamlasi for artillery recoil is a defense technology with potential civilian use.

Like profit-oriented industries, defense technology resources should also serve commercial purposes when demand declines, as defense product markets are relatively static. Utilizing capabilities for commercial production benefits society and ensures adequate profit.

This situation demands high production flexibility, business acumen, and unique competitive advantages. Such approaches are practiced in advanced defense industries, like those in the United States, where strategies such as the Blue Ocean Strategy by W. Chan Kim and Renee Mauborgne are implemented defense industries often set benchmarks for other sectors.

Utilitarian philosophy holds that actions should at least avoid harm and ideally maximize benefits, happiness, and utility for the greatest number. Thus, human actions should ethically promote the best outcomes for oneself and others.

#### **4. Conclusion**

1. The notion of confidentiality referred to in Article 110 of the Patent Law relates specifically to the design formulation of defense and security technologies deemed strategic by the government. However, it does not extend to inventions unknown to the state that are registered by inventors with foreign patent offices. Therefore, the Patent Law should explicitly regulate the prohibition of filing patents abroad for undisclosed defense-related inventions to protect national security interests.
2. Currently, the legal status of military inventors is not clearly addressed within Indonesia's patent legislation. Patent protection encompasses both moral and economic rights of the inventor. Without such legal safeguards, research and development activities risk becoming stagnant across all fields. Thus, a sui generis legal framework should be established for managing defense-related

patents within the Ministry of Defense and the Indonesian National Armed Forces (TNI). This framework, similar to that implemented in developed nations, would ensure specific legal guarantees for military inventors so that every intellectual innovation in defense technology contributes effectively to national interests.

3. As the authorized institution responsible for classifying defense-related inventions, the Defense Industry Policy Committee (KKIP) must issue more detailed technical regulations. Such measures would help clearly delineate which inventions are to remain strictly classified as state secrets, which may be eligible for controlled diversification or spin-offs, and which are appropriate for eventual public use.

### References

#### A. Book

Bahder J Nasution, *Metode Penelitian Ilmu Hukum*, Bandung: Mandar Maju, 2008

Berkowitz, Morton, and Bock, P.G, eds. *American National Security*. New York: Free Press, 1965.

Dixon, M.A. and Sagas, M., "*The Relationship between organizational support,work-family conflict, and the job-life satisfaction of university coaches*", Research Quarterly for Exercise and Sport, 2007. Vol. 78

Eddy Damian, *Hukum hak Cipta Menurut Beberapa konvensi internasional, Undang-Undang Hak Cipta dan Pelindungan Terhadap Buku Serta Perjanjian Penerbitnya*. PT Alumni Bandung, 2002

F. Sugeng Istanto, *Penelitian Hukum*, Yogyakarta: CV Ganda, 2007

Fatdina.. "*Peran Dukungan Organisasi yang dirasakan Karyawan sebagai Mediator Pengaruh Keadilan Prosedural terhadap Perilaku Kewarganegaraan Organisasi*", Humanitas, 2009, Vol.6 No.1.

Fuller, J.B., Marler, L.E., Hester, K., "*Promoting felt responsible for constructive change and proactive behavior: Exploring aspects of an elaborated model of work design*", Journal of Organizational Behavior, 2006. Vol. 27

Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation*, Kitchener, Batoche Books, 2000

Mangundjaya, W.H. *Hubungan antara perilaku kewarganegaraan organisasi, psychological*

*capital, dan workplace well-being terhadap kesiapan untuk berubah. Laporan Penelitian Fakultas Psikologi. (Publikasi Terbatas). Depok : Fakultas Psikologi, Universitas Indonesia. 2011*

Michael Tushman and Charles O'Reilly III, *"The Ambidextrous Organization: Managing Evolutionary and Revolutionary Change,"* in *Managing Strategic Innovation and Change: A Collection of Readings, 2nd ed., Michael Tushman and Philip Anderson*, Oxford: Oxford University Press, 2004.

Mochtar Kusumaatmadja, *Hukum pembangunan yang berpengaruh di Indonesia: Fungsi dan Perkembangan Hukum dan Pembangunan Nasional*, Bandung, 1995.

Muhammad Djuhana, *Hak Milik Intelektual (Sejarah, Teori dan Prakteknya di Indonesia)*. Bandung : PT. Citra Aditya Bakti, 1993

Murray, *Innovation: Past and Future*, 301. *Although I cite Murray, he is not a proponent of this view. For his nuanced view of how military organizations respond to innovation, see his essays in Innovation in the Interwar Period and his more recent Military Adaptation in War: With Fear of Change* (Cambridge: Cambridge University Press, 2011).

Robert Audi. *The Cambridge Dictionary of Philosophy*. United Kingdom: Cambridge University Press 1995.

Saidin, *Hak Milik Intelektual*, Jakarta : Rajawali Pres, 1995

Samuel Huntington, *The Soldier and the State*, Cambridge, MA: Belknap Press, 1957

Williamson Murray, *"Innovation: Past and Future,"* in *Military Innovation in the Interwar Period*, ed. Williamson Murray and Allan Millett, Cambridge: Cambridge University Press, 1996.

## **B. Peraturan Perundang-Undangan**

Undang-Undang Nomor 18 Tahun 2002 tentang Sistem Nasional Penelitian, Pengembangan, Dan Penerapan Ilmu Pengetahuan dan Teknologi.

Undang-Undang Nomor 65 Tahun 2024 tentang Perubahan Ketiga atas Undang-Undang Nomor 13 Tahun 2016 tentang Paten

Peraturan Menteri Pertahanan Republik Indonesia Nomor 44 Tahun 2016 tentang Lini Produksi Alat Peralatan Pertahanan dan Keamanan.

Peraturan Menteri Pertahanan Republik Indonesia Nomor 9 Tahun 2019 tentang Penyelenggaraan Litbang di TNI dan Kemhan.

Peraturan Menteri Pertahanan Republik Indonesia Nomor 2 Tahun 2024 tentang Kebijakan Pertahanan Negara Tahun 2024.