



The ineffectiveness of personal protective equipment in the face of exposure to carcinogenic agents in social security law

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Summary

This article delves deeper into the ineffectiveness of Personal Protective Equipment (PPE) in combating exposure to carcinogenic agents in the context of Social Security Law. The discussion focuses on the impossibility of considering the neutralization of harmful effects based solely on administrative records, such as the Professional Social Security Profile (PPP), when there is no technical and effective proof of the equipment's effectiveness. Based on an in-depth normative, jurisprudential, and technical-scientific analysis, particularly of Supreme Federal Court (STF) Topics 555 and Superior Court of Justice (STJ) Topics 1090, as well as the application of the burden of proof under Article 373 of the Code of Civil Procedure, the article seeks to demonstrate that the mere allegation of provision of PPE is not sufficient to disqualify the specialty of the activity, reinforcing the primacy of protecting workers' health.

Keywords: Social Security Law; PPE; carcinogens; PPP; special time; burden of proof; occupational health; toxicology.

Abstract

This article delves deeper into the analysis of the ineffectiveness of Personal Protective Equipment (PPE) in the face of exposure to harmful carcinogenic agents in the context of Social Security Law. The discussion focuses on the impossibility of considering the neutralization of harmfulness based solely on administrative records, such as the Professional Social Security Profile (PPP), when there is no technical and effective proof of the equipment's effectiveness. Based on an in-depth normative, jurisprudential, and technical-scientific analysis, particularly of Supreme Federal Court (STF) Topics 555 and Superior Court of Justice (STJ) Topics 1090, as well as the application of the burden of proof under Article 373 of the Code of Civil Procedure, the article seeks to demonstrate that the mere allegation of provision of PPE is not sufficient to disqualify the specialty of the activity, reinforcing the primacy of worker health protection.

Keywords: Social Security Law; PPE; carcinogenic agents; PPP; special time; burden of proof; occupational health; toxicology.

1. Introduction: The Inherent Danger of Carcinogens and the Social Security Challenge

Exposure to carcinogens in the workplace represents one of the most insidious and serious risks to occupational health, with profound implications for Social Security Law.

Unlike other harmful agents, whose danger can be mitigated by tolerance limits or intermittent exposure, carcinogens have a unique characteristic: the ability to cause irreversible damage even at minimal concentrations and for short periods of time. The World Health Organization (WHO) and the International Agency for Research on Cancer (IARC) classify these substances based on

its evidence of carcinogenicity to humans, recognizing that for many humans there is no safe level of exposure [1].

Under Brazilian Social Security Law, recognition of special activity is conditional upon proof of habitual and permanent exposure to harmful agents, as provided for in Law No. 8,213/91. However, attempts to discredit this classification by claiming the provision of Personal Protective Equipment (PPE) have been common practice. This argument, however, clashes with technical and scientific reality when it comes to carcinogenic substances. The intrinsic limitations of PPE are widely recognized, especially given the complex absorption pathways—inhalation, dermal, and ocular—that allow these agents to penetrate the body, often imperceptibly [2].

This study aims to deepen understanding of the ineffectiveness of PPE against carcinogens, demonstrating, in light of legislation, doctrine, and established and updated case law, that simply noting the effectiveness of PPE in the Professional Social Security Profile (PPP) is not sufficient to exclude the specialty from the activity. Furthermore, the role of the National Social Security Institute (INSS) in proving the effectiveness of this equipment will be examined, in accordance with procedural principles and binding precedents of the Superior Courts, reinforcing the need for an approach that prioritizes the health and dignity of workers. The analysis will extend to the mechanisms of action of carcinogens, practical examples of exposure, and the challenges in applying the theory of PPE ineffectiveness, aiming for a more holistic understanding of the topic.

2. The Complexity of Carcinogens and the Insufficiency of PPE: A Technical-Scientific Analysis

Carcinogenic chemical agents have specific characteristics that make them especially dangerous and challenging for personal protection. The National List of Carcinogens for Humans (LINACH), developed based on the classifications of the International Agency for Research on Cancer (IARC), lists a series of substances that pose a high risk to human health, even in short-term exposures or at low concentrations [3]. The IARC, for example, classifies agents into groups, with Group 1 (carcinogenic to humans) being the one of greatest concern, including substances such as benzene, asbestos, formaldehyde, and crystalline silica [4].

2.1. Mechanisms of Action and Routes of Exposure of Carcinogens

A substance's carcinogenicity lies in its ability to induce genetic mutations, damage DNA, promote uncontrolled cell proliferation, or interfere with cellular repair mechanisms. These processes can lead to the development of cancer after a latency period that can range from years to decades. The main routes through which these agents enter the body are:

- **Inhalation:** Inhalation of vapors, gases, dusts, or aerosols containing carcinogens is one of the most common routes of occupational exposure. Examples include inhalation of asbestos fibers, silica dust in mining and construction, or benzene vapors in petrochemical industries.
- **Dermal Route:** Direct skin contact with carcinogenic substances can lead to skin absorption. Many organic solvents and mineral oils, for example, can be absorbed through the skin, even without causing immediate irritation.
- **Ocular Route:** Although less common as the main route of systemic absorption, contact with the eyes can allow entry of agents and cause local or systemic damage.
- **Digestive Route:** Accidental ingestion, for example, through contamination of hands or food in work environments, is also a relevant route of exposure.

2.2. Intrinsic Limitations of PPE Against Carcinogens

Given the complexity of carcinogen absorption pathways and mechanisms of action, even the most modern PPE has significant limitations. It is virtually impossible to guarantee absolute sealing against all exposure vectors, especially for agents in gaseous or fine particulate form. The effectiveness of PPE depends on multiple factors, including [5]:

- **Risk Adequacy:** PPE must be specific to the agent and route of exposure.
A dust mask, for example, is ineffective against chemical vapors.
- **Perfect Seal:** Respirators and gloves require a perfect seal to prevent contaminants from entering. Small gaps in the seal, caused by beards, glasses, or improper use, drastically compromise protection.
- **Time of Use and Permeation:** Glove and clothing materials can be permeated by chemicals over time, even if initially resistant. The useful life of PPE is limited, and frequent replacement is essential.
- **Human Factors:** Incorrect use, lack of adequate training, poor maintenance, discomfort, and worker resistance to wearing PPE for long periods are factors that contribute to its ineffectiveness in practice. Furthermore, simply issuing PPE does not guarantee protection, so ongoing monitoring and training are essential.

Therefore, it is technically incorrect to claim that the simple use of gloves, masks, or creams is sufficient to neutralize the risk of cancer. The provision of PPE, in addition to being adequate and continuous, also requires guidance, training, supervision, and rigorous maintenance, otherwise it will be completely ineffective and create a false sense of security.

2.3. The Superiority of Collective Protection Measures (EPCs)

Regulatory Standard No. 15 (NR-15) of the Ministry of Labor and Employment, which addresses unhealthy activities and operations, implicitly recognizes that there are situations in which the elimination of harmfulness is not possible solely through the use of PPE. The hierarchy of measures

The occupational risk control system establishes that priority must be given to Collective Protection Measures (EPCs), which act at the source of the risk, eliminating or reducing it before it reaches the worker [6].

Examples of PPE include localized ventilation and exhaust systems, process enclosures, replacing hazardous substances with less toxic ones, and task automation. For carcinogens, the implementation of PPE is crucial, as it aims to eliminate or minimize the exposure of all workers in the environment, not just the individual wearing the PPE. Furthermore, it is important to highlight the ineffectiveness of PPE against certain chemical agents, especially carcinogens, reinforcing that the neutralization of unhealthiness should be sought primarily through collective protection measures, with PPE playing only a complementary and subsidiary role.

3. Analysis of PPPs and the Lack of Technical Evidence: Beyond Mere Annotation

The Professional Social Security Profile (PPP) is a worker's employment history document, which gathers administrative, environmental, and biological data to demonstrate their qualifications for social security benefits, especially special retirement. However, merely noting the provision of PPE or the generic indication of "effective PPE" in the PPP has proven insufficient to discredit the activity's specialty, particularly when it involves exposure to carcinogens.

3.1. The Insufficiency of Generic Annotation in PPP

As widely established by legal doctrine and case law, simply specifying "effective PPE" in a PPP does not guarantee absolute veracity. In many cases, the analyzed PPPs reveal that during certain periods, no PPE was even provided, with only the acronym "NA" (Not Applicable or Not Evaluated) appearing, denoting a complete lack of protection. In periods where equipment provision was recorded, the control methodology is often not indicated, nor are there any documents proving the neutralization of harmfulness.

For carcinogens, exposure alone constitutes a serious health risk, requiring no proof of actual harm to the worker. The presumption of PPE ineffectiveness against these agents stems from their intrinsic nature and the difficulty of fully controlling exposure. Interministerial Ordinance MTE/MPS/MS No. 9 of October 7, 2014, which established LINACH, already signals concern about exposure to these agents, regardless of concentration levels or PPE use.

3.2. Suggestions for Improvements to the PPP and Security Documentation

For the PPP to be a more reliable document and reflect the actual situation of worker exposure and protection, especially regarding carcinogens, it would be essential for it to contain more detailed and technically sound information. Some suggestions include:



- **Fit Test Results:** For respirators, the inclusion of fit test results (qualitative or quantitative) that demonstrate the proper fit of the equipment to the worker's face.
- **Maintenance and Replacement History:** Detailed record of PPE maintenance, cleaning and replacement, with dates and responsible parties, demonstrating the continuity and adequacy of the supply.
- **Specific Training:** Proof of training completed, with program content that addresses the specific risks of carcinogenic agents, the correct use, storage, conservation and limitations of PPE.
- **Assessment Methodology:** Clear indication of the methodology used to assess exposure to carcinogenic agents and to prove the effectiveness of PPE, based on recognized technical standards (e.g., FUNDACENTRO NHOs, ABNT standards).
- **Attached Supporting Documents:** Reference to technical reports, prevention programs (PPRA, PCMSO, PGR, GRO) and other documents that support the PPP information, making them accessible for verification.

3.3. The Role of Auditing and Oversight

Labor inspectors and the INSS (National Institute of Social Security) play a crucial role in auditing PPPs and prevention programs. A mere review of documents is not enough; *on-site* inspection is necessary to verify the effectiveness of control measures and the correct application of PPE. The audit must go beyond formal compliance, seeking actual compliance with occupational health and safety standards. This implies:

- **Verification of EPC Implementation:** Prioritize the analysis of the existence and effectiveness of Collective Protection Measures (EPCs) before considering the effectiveness of PPE.
- **Interviews with Workers:** Collect statements from workers about the use, comfort and perception of the effectiveness of PPE.
- **Analysis of Occupational Accidents and Illnesses:** Correlate the information in the PPP with the company's history of accidents and occupational illnesses, looking for patterns that indicate failures in protection.
- **Requirement of Robust Evidence:** The INSS must require companies to provide robust evidence of the effectiveness of PPE, especially for carcinogens, and not be content with generic statements.

This more rigorous approach to the preparation and monitoring of the PPP is essential to ensure that the document fulfills its role of reflecting the reality of working conditions and ensuring the worker's right to special retirement, without compromising their health due to false protection.



4. Burden of Proof and Application of the CPC: The Necessary Reversal in Favor of the Worker

In the context of recognizing special activity, the issue of the burden of proof assumes particular relevance, especially when discussing the effectiveness of Personal Protective Equipment (PPE) against carcinogens. Traditionally, under Article 373, I, of the Code of Civil Procedure (CPC), it is up to the plaintiff (in this case, the insured) to prove the facts constituting his or her right. However, §1 of the same article allows the reversal of the burden of proof when it is excessively difficult for the plaintiff to produce proof or when it is easier for the opposing party [7].

4.1. The Worker's Insufficiency of Evidence

Evaluating the effectiveness of PPE, particularly in relation to carcinogens, requires specialized technical knowledge and access to documentation, which is often held exclusively by the company or the National Social Security Institute (INSS). Workers, in turn, find themselves in a position of weaker evidence, as they lack the technical means or access to the records necessary to demonstrate the ineffectiveness of a piece of equipment or the inadequacy of a prevention program.

In this scenario, the application of the dynamic burden of proof theory, as provided for in the Brazilian Civil Procedure Code (CPC), becomes imperative. It is the social security authority, or the company, that must demonstrate that the PPE used was, in fact, adequate, effective, and correctly applied, especially when dealing with high-risk agents, such as carcinogens. Case law has leaned toward this reversal, recognizing the insured's difficulty in producing negative evidence (the ineffectiveness of the PPE).

4.2. Practical Challenges in Applying the Ineffectiveness Thesis

Although the thesis that PPE is ineffective against carcinogens is sound in its legal and technical foundation, its practical application in day-to-day social security processes presents challenges:

- **Difficulty of Proof for the Worker:** Even with the reversal of the burden of proof, the worker still faces obstacles in demonstrating exposure and the ineffectiveness of PPE, especially in cases of diseases with a long latency period, where the causal relationship between exposure and disease may be difficult to establish years after the end of the activity.
- **Resistance from Companies and the INSS:** Companies and the INSS itself often insist on the validity of the information contained in the PPP, even when generic, which requires considerable effort from the worker and their lawyers to dispel this presumption.
- **Need for Technical Expertise:** In many cases, proving the ineffectiveness of PPE or exposure to carcinogenic agents without proper protection requires complex technical expertise, which can delay the progress of processes and generate additional costs.



4.3. Implications for Businesses and Public Policies

The consolidation of the thesis of the ineffectiveness of PPE against carcinogens has significant implications for companies and for the formulation of public health and safety policies at work:

- **Investment in PPE:** Companies are compelled to invest more in Collective Protection Measures (CPE) and more robust occupational health programs that eliminate or control risks at the source, rather than relying solely on PPE. This represents a step forward in protecting worker health.
- **Review of Prevention Programs:** There is a need to review and improve environmental risk prevention programs (PPRA, PGR, GRO), so that they more effectively address the management of carcinogenic risks, focusing on elimination and control, and not just mitigation via PPE.
- **Legislative Gaps:** Although case law has advanced, there are still gaps in Brazilian legislation that could be filled to strengthen worker protection against carcinogens, such as the creation of more specific standards for the handling and disposal of these agents, and the requirement for more rigorous biological monitoring for exposed workers.

In short, the reversal of the burden of proof and the recognition of the worker's insufficiency are essential mechanisms to guarantee social justice and the effectiveness of social security law, driving the adoption of more effective protection measures in the workplace.

5. Jurisprudence of the Superior Courts: The Consolidation of the Thesis of Ineffectiveness

The jurisprudence of Brazilian Superior Courts has played a fundamental role in solidifying the understanding that PPE is ineffective in the face of exposure to carcinogens, reinforcing worker protection. Decisions by the Federal Supreme Court (STF), the Superior Court of Justice (STJ), and the National Uniformization Panel (TNU) serve as guidelines for the interpretation and application of Social Security Law in this area.

5.1. Federal Supreme Court (STF) – Topic 555: Doubt in Favor of the Worker

The Supreme Federal Court, in the judgment of Extraordinary Appeal (RE) 664,335/SC, with recognized general repercussion (Theme 555), established a thesis of great relevance to the topic.

Although the main decision addressed the issue of noise, the vote of Justice Luiz Fux, the rapporteur of the ruling, established a fundamental principle that applies broadly to carcinogens:

"In case of disagreement or doubt about the real effectiveness of Personal Protective Equipment, the premise guiding the Administration and the Judiciary is the recognition of the right to the benefit of special retirement." [8]



This thesis enshrines the principle of *in dubio pro misero* (when in doubt, in favor of the weaker) in the social security context, shifting the burden of proof of PPE effectiveness to the administration or the company. For carcinogens, where proving risk neutralization is complex and often impossible, doubt about PPE effectiveness should always result in recognition of the specialty of the activity.

5.2. Superior Court of Justice (STJ) – Topic 1090: The Burden of Proof of Ineffectiveness

The Superior Court of Justice, in Theme 1090 (REsp 2.082.072/RS), complemented the STF's understanding by establishing the following thesis:

"It is the responsibility of the author of the social security action to prove [...] any other reason capable of leading to the conclusion of the ineffectiveness of the PPE. If the assessment of the evidence concludes that there is a divergence or doubt about the real effectiveness of the PPE, the conclusion must be favorable to the author." [9]

Although the thesis mentions that it is the author's responsibility to prove ineffectiveness, the final part of the thesis reiterates the principle of *in dubio pro misero*, stating that doubts about the effectiveness of PPE must be resolved in favor of the insured. This is particularly relevant for carcinogens, where proof of ineffectiveness is inherent to the very nature of the agent and the limitations of protective equipment.

5.3. Updated Jurisprudence of the Federal Regional Courts (TRFs)

The Federal Regional Courts (TRFs) have followed the Superior Courts' pro-guarantee approach, applying established theories to recognize the specialty of the activity even with the provision of PPE when there is exposure to carcinogens. Recent TRF decisions reinforce the need for a qualitative analysis of exposure and the presumption of PPE ineffectiveness against these agents:

- **TRF 3rd Region (ReclnoCiv 0002756-38.2020.4.03.6312): CIVIL PROCEDURE. SOCIAL SECURITY. REVIEW OF RETIREMENT BY CONTRIBUTION TIME. RECOGNITION OF SPECIAL PERIODS. NOISE. CHEMICALS. PPE. INEFFICACY FOR THE NOISE AGENT AND FOR **CHEMICAL AGENTS INDICATED IN LINACH AS CARCINOGENS**. TOPICS 555/STF AND 170/TNU. TOPIC 1,083/STJ. RESTRICTION OF DEFENSE. APPEAL PARTIALLY GRANTED. JUDGMENT OVERRIDDEN. 1. The Supreme Federal Court, in RE 631,240, regarding the parameters of the need for a prior administrative request, established that, in principle, the request for review can be filed directly in court, except in cases where the factual matter has not been brought to the prior attention of the social security agency, provided that the Administration's understanding is not notoriously and repeatedly contrary to the insured's claim. 2. The use of PPE never precludes specialty for the noise agent. Binding precedent – Topic 555/STF. 3. **For those chemical agents indicated as carcinogenic by****



LINACH, the use of PPE, even if indicated as effective, does not exclude the specialty of the period (Topic 170/TNU).

4. In the Federal Small Claims Courts, the rules of burden of proof apply identically to those in the ordinary court, and the party must take steps to adequately instruct the case, in accordance with current legislation, applicable precedents, and possible legal interpretations. 5. For periods after April 28, 1995, a specific form must be attached to acknowledge exposure to harmful agents, which must clearly describe the risk factor, prepared based on an environmental technical report, refusing the presumption of subjection to difficult conditions due to the professional activity performed. 6. In the case of a request for recognition of special time by proving the worker's exposure to a harmful agent, in which the only supporting document is the form (SB-40, DSS-8030 or PPP) or the respective technical report, the document attached to the case file, but filled out incompletely, deficiently or with irregular information, becomes incapable of proving the insured's exposure to harmful agents, thus generating the situation of inadmissibility of the request, except in relation to the methodology of measuring noise for the period after 11/18/2003, due to recent developments in case law and the principle of no surprise. 7. Topic 174/TNU determines that, for the period worked after November 18, 2003, there must be an indication of noise measurement using the methodologies contained in NHO-01 or NR-15, being sufficient, for this purpose, the inclusion of such information in the PPP or, in its absence, the attachment of environmental technical reports; for prior periods, however, such observance is unnecessary. 8. Topic 1,083/STJ, in turn, dealt with the analysis of the appropriate technique for verifying noise above the tolerance limits when different sound levels are observed, establishing the thesis in favor of measurement using NEN; in the absence of such information, the criterion to be considered should be the noise peak, provided that the habitual and permanence of exposure is proven through judicial expertise.

9. Since Topic 1,083/STJ became final and binding in 2022 and introduced a very innovative interpretation of the matter, due to the principle of no surprises, the parties in cases filed up to this timeframe should be given the opportunity to present evidence, even if there was no prior request during the course of the case. For actions filed after 2023, however, the issue must be analyzed under the procedural rules of burden of proof. 10. In this specific case, the judgment did not recognize either period, based on the effectiveness of PPE in neutralizing chemical agents and noise. It is not possible to determine whether the presented PPP complies with Topics 174/TNU and 1,083/STJ, because there is information that disproves the use of an adequate methodology after November 18, 2003. 11. In these circumstances, the plaintiff's appeal should be partially granted to set aside the judgment and allow him to produce evidence of his interest in taking action and that the methodology was followed or that the exposure to the noise peak was habitual and permanent, which does not necessarily need to be expert evidence, as there are other evidence to consider, allowing him to complement the evidence produced in relation to the other agents in the periods in question. 12. The plaintiff's appeal is partially granted to set aside the judgment. [10].

- **TRF 3rd Region (ReclnoCiv 5000303-45.2021.4.03.6119): RETIREMENT BY TIME OF CONTRIBUTION. REVIEW. RETIREMENT CONVERSION**



SPECIAL. SENTENCE OF PROCEEDING. INSS APPEAL. REMOVE SPECIALTY PERIODS OF WELDER ACTIVITY. CTPS ONLY.
NO PROVISION IN THE DECREES. NO PROOF OF USE OF ELECTRIC WELDING OR OXYACETYLENE. IMPOSSIBILITY OF CLASSIFICATION BY CATEGORY. PREVENT GENERIC EXPOSURE TO METAL FUMES AND MINERAL OIL. EFFICACY OF PPE FOR CHEMICAL AGENTS. PROVEN SPECIALTY FOR EXPOSURE TO NOISE IN ACCORDANCE WITH CURRENT STANDARDS AND **CARCINOGEN CHEMICAL AGENTS. INEFFICIENCY OF PPE.**
GROUP 1 LINACH. INSS APPEAL PARTLY GRANTED [11].

- **TRF 4th Region (AC 5013208-89.2020.4.04.9999): SOCIAL SECURITY. RETIREMENT DUE TO CONTRIBUTION TIME. SPECIAL SERVICE TIME. CHEMICAL AGENTS. LINACH. CARCINOGENS. QUALITATIVE ASSESSMENT. INEFFICIENCY OF PPE RECOGNIZED.** BIOLOGICAL AGENTS. MERE RISK OF CONTAGION. UNNECESSARY PERMANENCE REQUIREMENT. INITIAL TERM OF THE BENEFIT. 1. Recognition of specialty is subject to the legal discipline in force at the time the activity was performed, becoming part of the worker's legal assets as an acquired right. Therefore, once the service is provided under a certain legislation, the insured acquires the right to be counted in the established manner, as well as to proof of working conditions as required at the time. New laws that may establish restrictions on the admission of special service time will not be applied retroactively. 2. The habitual and permanent working time in conditions that are harmful to health or physical integrity referred to in article 57, §3, of Law 8.213/91, do not presuppose exposure to the harmful agent throughout the working day, and should be interpreted as meaning that such exposure is inherent to the development of the activities assigned to the worker, integrated into his/her work routine, and not an eventual or occasional occurrence. **3. Regarding the agents listed in the National List of Carcinogenic Agents for Humans - LINACH, their concentration in the work environment and the use of PPE are not relevant for the recognition of special work.** 4. In order to recognize special time due to exposure to biological agents, it is essential to establish a potential risk of contamination and contagion that is greater than the general risk. Such exposure does not need to occur permanently throughout the insured's working day. It must be proven that the insured performed a professional activity that requires direct contact with patients or animals affected by infectious diseases or contaminated objects, the handling of which is capable of constituting a risk to their health and physical integrity. 5. The period related to sickness benefit, of any nature, may be counted as special time, provided it is preceded by the performance of activities under special conditions. 6. Considering that, since the administrative request, the insured requested recognition of a rural period after October 31, 1991, through the payment of compensation, the starting date of the financial effects of the benefit must be the DER and not the date of payment of the guide. [12].

These decisions demonstrate the consolidation of the thesis of the ineffectiveness of PPE against carcinogens in the Brazilian Judiciary, guaranteeing greater protection for workers and aligning legal interpretation with scientific advances and occupational health principles.

6. Final Considerations: The Primacy of Worker Health Protection

Given the above, it is concluded that the mere claim of provision of Personal Protective Equipment (PPE), without robust technical proof of its effectiveness and suitability for the risk, does not have sufficient legal force to invalidate the right to recognition of special time. This conclusion is even more evident and imperative when it comes to carcinogenic chemical agents, whose harmfulness is independent of proof of concrete harm to health, given their intrinsic nature and the long latency period for the development of diseases.

Social security protection, in this context, must be guided by the precautionary principles, human dignity, and the social function of social security benefits. Workers' health and lives cannot be compromised by generic assumptions of administrative effectiveness or by exclusive reliance on PPE, which, due to its technical limitations and human factors, is inherently insufficient to guarantee protection against carcinogens. Brazilian case law, in a remarkable evolution, has already consolidated the understanding that, in these cases, the worker's right to recognition of the specialty of the activity prevails, with appropriate differentiated counting of service time, reflecting a commitment to social justice and occupational health.

It is essential that companies prioritize investing in Collective Protection Measures (EPCs), which eliminate or control risks at their source, and that regulatory agencies, such as the INSS (National Institute of Social Security) and the Ministry of Labor, improve their auditing and monitoring mechanisms, requiring concrete evidence of the effectiveness of protective measures. Reversing the burden of proof, recognizing the worker's insufficiency, is an essential legal instrument for balancing the procedural scales and ensuring that protecting workers' health is a true priority in the workplace and in the recognition of social security rights.

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