

Cost Claims due to Extension of Time on Construction Contracts (Case Study: Power Plant Project)

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ABSTRACT

Delays in the execution of construction contracts are common occurrences and are generally understood to be the contractor's responsibility. In practice, however, delays in construction contracts can also be caused by factors beyond the contractor's control or responsibility, leading to an extended duration for project completion. Delays that are not attributable to the contractor grant the contractor the right to a time extension. Such extensions of time often trigger cost claims resulting from delays in work execution that are not the contractor's fault, as the contractor incurs additional costs due to the extended of project completion.

This paper discusses the primary causes extension of time and the mechanisms for resolving cost claims arising from these extensions based on legal principles, including *pacta sunt servanda*, the principle of fairness, and the risk theory in contracts. The research employs a qualitative approach involving contract document analysis, case studies, and literature reviews.

The findings indicate that excusable and compensable delays provide a legitimate basis for contractors to propose cost claims, while non-excusable delays may result in penalties for the contractor. This paper offers practical and theoretical recommendations for more effectively managing cost claims due to extension of time and highlights the importance of risk allocation in construction contracts.

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INTRODUCTION

Construction projects are complex activities involving various parties with different interests, including project owners, contractors, and consultants. In practice, there is often a gap between what is planned (*das sollen*) and the reality on site (*das sein*). One recurring issue is delays in project completion, which can lead to extension of time and cost claims.

Delays in project completion are generally perceived as the contractor's responsibility. However, a contractor's performance cannot be entirely separated from the project owner's performance, as their interaction determines the overall success of the project (Hatmoko and Khasani, 2016). Often, delays in fieldwork are caused by issues that are actually the responsibility of the project owner.

According to Arditi and Patel (1989), the key to project success and timely completion lies in comprehensive and accurate project planning and scheduling. Delays in project execution can be seen as the result of a failure to meet the planned schedule, as real-world conditions often differ from those anticipated during the scheduling process.

Sarwono (2014) states that an extension of time (EOT) is almost inevitable in construction projects. It typically occurs due to the project owner's failure to fulfill contractual obligations, such as delays in site handover, change orders, and external factors beyond the contractor's control, such as force majeure events or changes in laws or regulations. These causes of delay raise questions about whether the contractor is entitled to an extension of time when project completion is delayed and whether the contractor is entitled to cost claims for delays not attributable to their negligence.

Delays in site handover by the project owner are one of the most significant causes of extension of time. In construction contracts, timely provision of site is the project owner's responsibility. When this obligation is not met, contractors may suffer losses in the form of increased overhead costs, adjustments to work schedules, and impacts on project resources. This situation reveals a gap between practical realities and existing legal principles, where contractors have the right to claim compensation for the damages incurred.

According to Arcuri and Hildreth (2007), delays caused by the project owner fall under the classification of excusable delays, granting contractors the right to an extension of time and, in some cases, cost compensation. Similarly, Chong and Leong (2012) explain that extension of time is the contractor's entitlement when project delays are caused by the project owner, provided the contractor can demonstrate evidence of events impacting the overall project duration. Furthermore, extensions of time as compensation for delays are frequently granted to contractors due to the prevalent use of the FIDIC Conditions of Contract (2017), which state that contractors are entitled to extension of time for any delays, obstructions, or hindrances attributable to the project owner.

This phenomenon has been addressed in previous studies. Wallace (2015) explored contractual risk management in construction projects, while Gibson & Fraser (2018) emphasized the importance of risk allocation in reducing conflicts among parties. However, these studies have not specifically addressed the mechanisms for cost claims arising from delays in site handover, particularly in the context of Indonesian law. Zou, Zhang, & Wang (2009) also highlighted that effective risk management could mitigate the financial impact from extension of time but did not provide practical solutions for contractors facing such situations. Therefore, this study aims to fill this gap by providing a legal analysis and practical solutions through actual case studies.

Additionally, this paper examines relevant legal principles, such as *pacta sunt servanda*, the principle of fairness, and risk theory, as the basis for resolving cost claims. Thus, the research contributes not only to academic literature but also provides guidance for construction practitioners in managing claims arising from time extensions.

METHOD

This study employs a qualitative approach involving the analysis of contract documents, legal regulations, and related literature. Case studies are used to provide practical insights into the application of legal theories in cost claims resulting from extension of time. Data collection is conducted through a literature review of books, journals, and international contract standards such as FIDIC. This approach is designed to identify common patterns in the submission and resolution of cost claims, as well as to assess the validity of legal arguments presented by the parties involved.

RESULT AND DISCUSSION

In the execution of construction contracts, delays in completing the scope of work often result in the contract's completion time exceeding the agreed period. Risk mitigation is therefore essential to ensure timely, cost-effective, and quality project execution.

Delays in project completion can be caused by several factors, categorized as follows:

Internal Factors

1. **Planning Errors**
Project planning is a critical initial step to ensure that all phases of work can be carried out efficiently and on time. Errors in planning—such as inaccurate time estimation, improper resource allocation, or failure to identify potential obstacles—can lead to extended project durations. Poor planning can prevent project managers from mitigating emerging issues during execution, ultimately causing delays.
2. **Material Procurement Delays**
The procurement of materials involves organizing and sourcing the raw materials needed for the work. Delays in material procurement, whether due to supplier issues, stock shortages, or transportation problems, can halt or postpone work reliant on those materials. Such delays may lead to the use of substitute materials that may not meet standards or cause the project to stop altogether until the required materials become available.
3. **Resource Shortages**
Resources such as labor (workers, technicians, specialists) and equipment (machinery, heavy tools) are crucial for project progress. Resource shortages can stem from a lack of skilled labor, worker rotation issues, or equipment breakdowns requiring repairs. These shortages slow down project progress, as there may not be enough manpower or equipment to perform tasks as scheduled. In extreme cases, the project may have to pause until the necessary resources are available.

External Factors

1. **Design Changes**
Design changes often occur after a project has started, typically due to client requests, new regulations, or unforeseen discoveries requiring adjustments. Such changes can prolong project timelines due to the need for re-planning, material modifications, adjustments to construction processes, or even new permit applications. These changes require coordination among stakeholders, potentially causing significant delays.
2. **Extreme Weather Conditions**
Weather is an unpredictable factor that can disrupt projects, particularly those involving outdoor work. Extreme weather, such as heavy rain, snow, storms, or extreme temperatures, can delay work, hinder progress, or even damage materials already installed. For example, heavy rain can make soil muddy and unusable for heavy equipment, while extreme temperatures may affect materials like concrete, which requires specific conditions to cure properly.
3. **Force Majeure**
Force majeure refers to extraordinary events beyond human control, such as natural disasters (earthquakes, floods, hurricanes) or unforeseen global events like pandemics or wars. When such events occur, work may be temporarily halted or even canceled. Construction contracts often provide relief clauses in such situations, as they are beyond the project manager's ability to resolve. These events can significantly extend project completion times.
4. **Site Handover Delays**
One of the biggest obstacles in construction projects is delays in site hand over from the project owner to the contractor. Without ready of site, construction cannot begin. In some cases, project owners may face administrative challenges or legal issues regarding ownership or land use rights. Such delays force contractors to wait before commencing work, potentially delaying the entire project timeline.

Mitigating Delays and Legal Frameworks in FIDIC Contracts

Both internal and external factors play significant roles in determining the success or delay of a project. Proper planning, effective resource management, and anticipation of external factors are key to minimizing delays and ensuring timely project completion.

Under the FIDIC Conditions of Contract, various causes of project delays and corresponding provisions are outlined as follows:

1. Force Majeure
Clause 19: Force Majeure
Covers extraordinary events beyond the parties' control, such as natural disasters, war, or other exceptional circumstances, allowing contractors to request time extensions.
2. Design or Scope Changes
Clause 13: Variations and Adjustments
Regulates changes to the scope of work ordered by the employer or engineer, which may affect the project schedule or costs.
3. Employer's Delay
Clause 8.4: Extension of Time for Completion
Grants contractors the right to a time extension for delays caused by the employer, such as failure to provide timely site access.
Clause 2.1: Right of Access to the Site
Outlines the employer's obligation to provide site access to contractors.
4. Subcontractor or Third-Party Performance
Clause 4.4: Subcontractors
States that the main contractor is responsible for subcontractor performance, except when delays are caused by external factors that can be proven.
5. Unforeseeable Site Conditions
Clause 4.12: Unforeseeable Physical Conditions
Grants contractors the right to claim time extensions or cost compensation for unexpected site conditions.
6. Permits and Regulatory Issues
Clause 1.13: Compliance with Laws
Obligates parties to adhere to local laws and regulations, including necessary permits.
7. Extreme Weather
Clause 8.4: Extension of Time for Completion
Allows for time extensions due to exceptionally adverse climatic conditions, with sufficient evidence.
8. Contractor's Planning or Execution Errors
Clause 8.1: Commencement of Works
Emphasizes the contractor's responsibility to complete the work on schedule.
Clause 8.6: Rate of Progress
Requires contractors to rectify work progress plans without additional cost claims if they fail to maintain adequate progress.

In the event of delays or potential delays in the completion of a construction contract, as stated by Sarwono (2014), the FIDIC Conditions of Contract provide an opportunity for contractors to submit claims following the procedures outlined in Clause 20 on claims, disputes, and arbitration. This clause is based on clear provisions regarding the circumstances under which claims for an Extension of Time (EOT) and/or additional costs can be submitted.

An Extension of Time (EOT) is a contractor's right to file a construction claim, as stipulated in the FIDIC Conditions of Contract. This applies particularly in cases where the employer fails to fulfill their obligations, such as delays in granting site possession and 11 other clauses specified in FIDIC.

Delay Classification

1. Excusable Delay

This type of delay arises from factors beyond the contractor's control, such as extreme weather, natural disasters, delays in site handover by the project owner, work instructions beyond the contractor's scope, or design changes requested by the owner. In these situations, the contractor is entitled to an extension of time (EOT) and will not be penalized.

2. **Non-Excusable Delay**
This delay occurs due to the contractor's own mistakes, such as inadequate planning or failure to provide sufficient resources. In such cases, the contractor is not entitled to an EOT and may face penalties.
3. **Compensable Delay**
Compensable delays result from actions or omissions by the project owner, such as delays in site handover, work instructions beyond the contractor's scope, or design changes requested by the owner. Additionally, this category includes delays caused by changes in regulations or laws. In such situations, the contractor has the right to submit claims for both EOT and cost compensation.
4. **Non-Compensable Delay**
Non-compensable delays do not grant the contractor the right to claim costs, although an EOT may still be provided. Examples include delays caused by force majeure events such as natural disasters or other unforeseen circumstances.

For further clarification, the classification of delays is illustrated in the diagram below:

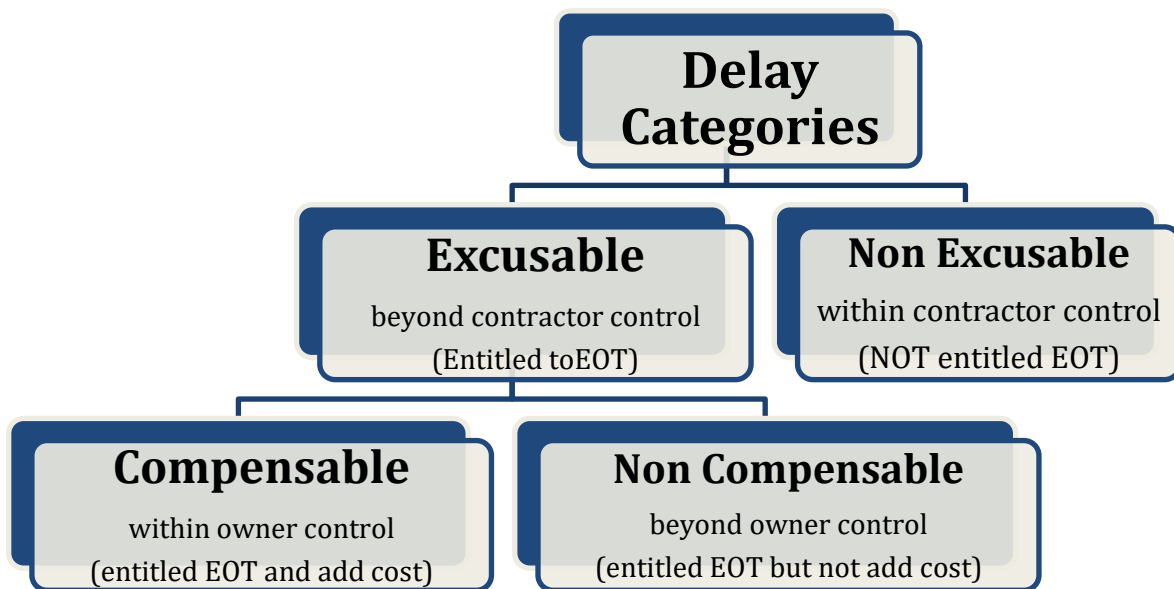


figure 1. Delay Category

Case Study

In a power plant construction project, there was an extension of time due to delays in site handover by the project owner and a variation order for additional work land embankment for the entire project area.

The contractor and the project owner signed a contract with a project completion duration of 26 (twenty-six) months.

After the contract was signed, the contractor could not immediately begin work because some works in the construction area were still the responsibility of the project owner. These works included: (1) Relocation of two 150 kV transmission lines and the tower structures crossing the construction area; (2) Relocation and dismantling of solar pipes and cables in the middle site; (3) Relocation of trees, plants,

and the remains of piles from underground; (3) Earthwork to reach an elevation of +2.2 (handover elevation) for the entire construction area.

Then, 9.5 (nine and a half) months after the contract signing, the project owner partially site handing over to the contractor, as some work under the owner's scope had not been completed. The partially handed-over land could only be used for support activities, so the contractor could not yet start the main work (critical path work).

Seven (7) months after the partial land handover, the project owner handed over the full site hand over to the contractor. After the full site handover, the project owner instructed the contractor to carry out additional work, which involved raising the land elevation for the entire project area from contract elevation +2.57m to elevation +4.00m, with an agreed duration of 8.5 months from the full site handover.

The project owner and the contractor agreed to an extension of time for project completion, which was documented in a contract amendment for 15.5 (fifteen and a half) months, consisting of: (1) 7 (seven) months from partial land handover to full land handover; and (2) 8.5 (eight and a half) months from full land handover to the completion of the additional work.

From the above explanation, the contractor could only begin the main construction work 25 (twenty-five) months after the contract signing, as follows: 9.5 (nine and a half) months from the contract signing to partial land handover; 7 (seven) months from partial land handover to full land handover; and 8.5 (eight and a half) months from full land handover to the completion of the additional soil embankment & soil improvement work. This can be explained in the following timeline:

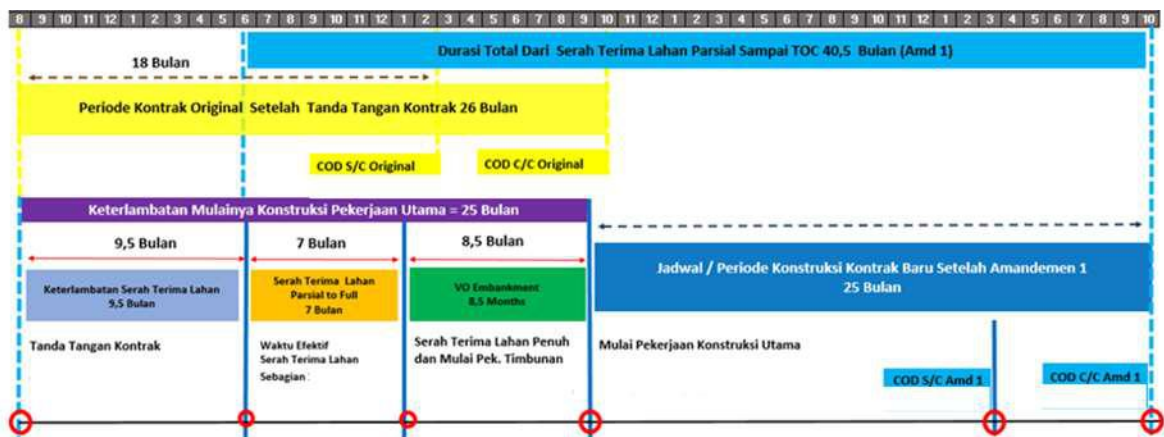


figure 2. Time line of delay causes

Relevant Legal Principles

Principle of Pacta Sunt Servanda

This principle states that agreements made legally must be respected (Subekti, 1982). In the context of cost claims, any changes affecting contractual obligations must refer to the agreed clauses.

According to the site handover definition in the contract under Clause 41 ALLOCATION OF SITE, which explains, “the Owner will upon commencement of the Works allocate to the Contractor so much of the site as required to enable the contractor to commence and proceed with the construction of the

works in accordance with the contract schedule”, the readiness and handover of the site is the project owner's responsibility so that the contractor can begin the work. However, in this case, the contractor could not begin the work as per the schedule because the site was not ready for handover.

Meanwhile, the contract's Part 2 General Condition of Contract Clause 1.17 Definition of Effective Date explains, “effective date of contract for EPC shall mean the date when the following precondition has been fulfilled: (1) Signing of Contract, (2) Owner’s Confirmation of Site Hand-Over for Construction, and (3) Date of Loan effectiveness.”

One of the conditions for the effective date is the successful site handover for construction work. In practice, when the project owner carried out the land handover, the contractor could not immediately begin the main construction work due to remaining tasks that were the project owner’s responsibility in preparing the construction site. These tasks included the dismantling of transmission lines and tower structures, the dismantling of solar cables and pipes in the middle of the site, land elevation improvements as per the handover elevation in the contract, and the relocation of remains of underground structures, among others.

According to the contract's Clause 40 COMMENCEMENT OF THE WORK, Sub-Clause 40.2, it states, “The Contractor shall commence the Works upon Effective Date of Contract in order to fulfill the schedule of the Commercial Operation as specified in Part 5, Schedule 4.”

This article indicates that the contractor will begin work on the effective date of the contract, but in this case, neither after the contract signing nor after the land handover could the contractor immediately start the construction work.

Based on the Extension of Time for Completion clause in the contract, in accordance with Sub-Clause 43.4, “Should any circumstance beyond the control of the Owner prevent or delay his performance hereunder, the Owner shall notify the Contractor thereof within fourteen (14) days after its occurrence, and time for the Owner's performance shall be appropriately extended, and the Contractor’s performance will be discussed in good faith.”

This provision states that if there are circumstances beyond the project owner’s control that prevent or delay their performance, the owner must notify the contractor within fourteen (14) days of the occurrence, and the performance period for the owner shall be extended accordingly, with the impact on the contractor’s performance discussed in good faith.

Principle of Equity

This principle emphasizes the need for balance between the rights and obligations of the parties in a contract (Friedman, 2005). If an extension of time occurs due to factors beyond the contractor's control, a cost claim can be made to ensure fairness.

Clause 67 Law in Part 2 General Condition of Contract, which states “The Contract shall be construed according to the laws in force in the Republic of Indonesia,” requires both the contractor and the project owner to comply with the relevant regulations and laws in Indonesia during the execution of the contract.

In line with the above explanation, referring to Article 2 of the Construction Services Law regarding the Principles and Objectives, the provision states that the implementation of construction services is based on principles of: Integrity and fairness; Benefit; Equality; Harmony; and Balance.

Therefore, this construction contract must also be executed in accordance with the principles of fairness, equality, and balance, where no party should be harmed. Hence, any changes to the work schedule caused by the project owner should entitle the contractor to compensation, in accordance with the principles of fairness and balance.

Given the facts explained earlier, the legal principle *Exemptio Non Adimpleti Contractus* can apply, referring to Article 1478 of the Civil Code: “The seller is not obliged to deliver the goods in question if the buyer has not paid for them, and the seller has not allowed for a delay in payment.”

From this provision, it can be understood that if the creditor does not perform the agreement as expected, the debtor cannot be held accountable for the creditor’s fault.

In this situation, the principle of *Exemptio Non Adimpleti Contractus* can be applied, meaning that any delay in the contractor's work beyond the agreed deadline cannot be held against the contractor, due to the project owner's fault in not being able to hand over the land to the contractor after the contract signing, considering that land handover is the project owner's responsibility.

Risk Theory in Contracts

This theory stipulates that the party most capable of controlling the risk is responsible for its consequences. In construction contracts, risk theory plays a crucial role in managing the uncertainties that may arise during the project's execution. Risks in construction contracts include responsibility for changes in conditions, losses, or failure to meet obligations due to both internal and external factors. By understanding risk theory in construction contracts, the involved parties can reduce uncertainties and ensure that the project is executed efficiently and fairly.

In the case presented above, the delay in land handover by the project owner to the contractor is entirely the responsibility of the project owner, and this is a risk that should have been mitigated by the owner. However, as a result of the extension of time, the contractor faces additional, unplanned costs. These additional costs include overhead expenses to maintain the workforce, as well as costs due to the increase in the price of steel and iron resulting from the delay in starting the work.

Regarding the additional costs faced by the contractor, based on the analysis, the delay caused by the project owner is considered a compensable delay. In this situation, the contractor can submit a cost claim for the time extension, referring to the principle of equity and the provisions in the contract.

Claim Dispute Resolution

Dispute Resolution Methods in Construction Contracts

Disputes in construction contracts often arise due to the complexity of projects that involve multiple parties, interests, and risks. Dispute resolution aims to prevent project delays, additional costs, and reputational damage. Several dispute resolution methods are commonly used, both through litigation and non-litigation channels.

1. Non-Litigation Dispute Resolution

Non-litigation dispute resolution emphasizes a peaceful approach and avoids the court system. Some commonly used methods include:

a. Negotiation

Negotiation is a dispute resolution method where the parties directly discuss and reach an agreement. The advantage of this method is that it is quick, inexpensive, and helps maintain good relationships between the parties (Munir Fuady, 2005). However, the agreement reached is not legally binding unless it is formalized in a written agreement.

b. Mediation

Mediation involves a neutral third party (mediator) who assists the parties in finding mutually beneficial solutions. This method is flexible and maintains confidentiality during the process. However, the mediator does not have the authority to issue a binding decision (Law No. 30 of 1999).

c. **Dispute Board**

A Dispute Board is a panel of experts formed at the beginning of a project to handle disputes that arise during the project's execution. This method allows for quicker resolution as the experts are already familiar with the project (FIDIC, 1999). However, forming the panel incurs additional costs.

d. **Arbitration**

Arbitration is a dispute resolution method involving a neutral third party (arbitrator) whose decision is binding. The arbitration process is faster than litigation, and its outcome is final, as regulated in Law No. 30 of 1999 on Arbitration and Alternative Dispute Resolution.

2. Litigation Dispute Resolution

Litigation is the resolution of disputes through the judicial system. In construction projects, litigation is often the last resort if non-litigation methods fail. The decision from the court is final and has binding legal force; however, the process is time-consuming and expensive (Munir Fuady, 2005).

Suyud Margono (2004) argues that, "Litigation is a lawsuit over a conflict that is ritualized to replace the actual conflict, where the parties give a decision-maker two opposing choices." Litigation is the dispute resolution process in court, where all the disputing parties face each other to defend their rights in front of the judge. The outcome of a litigation dispute resolution is a win-lose solution, as stated by Nurnaningsih (2012). The procedure in litigation is more formal and highly technical.

According to research by Utomo, Pratistha, & Hidayat (2022), the majority of contractors (93%) tend to prefer resolving delay claim disputes through negotiation over mediation, arbitration, or litigation. Negotiation is seen as less time-consuming and less costly, and it does not involve third parties, making it more effective in maintaining the relationship between the contractor and the project owner.

Principles of Dispute Resolution

Dispute resolution should prioritize good faith and efficiency (Redfern & Hunter, 2015). According to Kongchasing & Sua-lam (2021), disputes in construction projects stemming from claim issues can negatively impact the reputation of the project owner if not resolved effectively and optimally.

In construction contract dispute resolution, several principles guide the approach to managing disputes. These principles ensure that the resolution process is conducted fairly, efficiently, and in accordance with contractual agreements and applicable laws.

1. **Principle of Equity**

Dispute resolution must be conducted impartially, considering the rights and obligations of all parties involved in the contract.

All parties must have equal opportunities to present their arguments and evidence. This principle often serves as the basis for methods such as arbitration, mediation, and conciliation (Munir Fuady, 2005).

2. **Principle of Legal Certainty**

Dispute resolution must adhere to applicable laws, including contractual rules and sectoral regulations, such as Law No. 2 of 2017 on Construction Services.

Legal certainty provides a clear foundation for determining the rights and obligations of the parties, reducing uncertainty during the dispute resolution process.

3. **Principle of Mutual Agreement**

The parties are encouraged to seek solutions based on mutual agreement, especially through non-litigation methods like negotiation and mediation.

Such agreements can be documented in writing to serve as a binding basis for resolution.

4. **Principle of Efficiency**

The dispute resolution process should be carried out swiftly and efficiently, avoiding delays that could increase costs or exacerbate the conflict.

This principle supports the use of methods such as dispute boards and arbitration, which are faster than court litigation.

5. Principle of Confidentiality

Dispute resolution, particularly through methods like mediation and arbitration, is often conducted privately to protect business information and the reputation of the parties involved. This principle is crucial in large-scale construction projects involving numerous stakeholders.

6. Principle of Relationship Preservation

Dispute resolution in construction contracts should aim to maintain good relationships between the parties, especially since long-term collaboration is often required in construction projects. This principle is typically prioritized in non-litigation methods such as negotiation or mediation.

7. Principle of Professionalism and Expertise

Construction dispute resolution often involves complex technical aspects, making it essential to involve experts or panels with technical competence in the construction field.

In methods like dispute boards or arbitration, the selection of expert panels is critical to ensuring relevant and accurate decisions (FIDIC, 1999).

By adhering to these principles, dispute resolution processes in construction projects can achieve fairness, efficiency, and long-term sustainability for all parties involved.

Resolution of Claims Through Non-Litigation: Case Study

Resolution Method Used

The resolution of claims in this case was conducted non-litigiously through negotiation and mediation, involving a third party to ensure a fair and efficient agreement between the project owner and the contractor.

Evaluation Based on Legal and Technical Aspects

1. Legal Aspects

a. Clause on Extension of Time for Completion

Referring to Sub-Clause 43.4 in the contract, delays or obstacles beyond the control of the project owner must be notified to the contractor within 14 days of occurrence, and the performance timeline must be extended as necessary. In this case, the delay in site handover by the project owner was the main reason for the extension of time.

b. Agreement in Contract Amendment

Clause 5 (2) Appendix 1 Contract Amendment No.1 stipulates that additional costs incurred during the period from partial site handover to the completion of additional site formation work will be discussed separately by both parties. This clause serves as the legal basis for the contractor to file a cost claim.

c. Minutes of Mediation Meeting with a Third Party

The mediation results agreed to the contractor's claim, with the provision that the claim value be reviewed by the Badan Pengawasan Keuangan dan Pembangunan (BPKP), reflecting the commitment of both parties to resolve the dispute transparently and measurably.

2. Technical Aspects

The fulfillment of the technical aspect involves an extension of time for the project implementation by 15.5 (fifteen point five) months, which was not caused by the contractor's fault. The reasons for the extension were delays in the handover of the site from the project owner to the contractor and the additional work of site formation work. These conditions resulted in the contractor incurring actual costs that exceeded the agreed contract price. These

costs were substantiated by expenditure evidence that was evaluated by the project owner and agreed upon by the contractor.

Based on the evidence and the analysis of legal and technical aspects, the project owner approved the claim for overhead costs during the 15.5-month extension period, as well as compensation for increased costs of main materials, such as iron and steel, due to the delay in commencing work.

The calculation of the claim value, as agreed upon by the project owner and contractor, was subsequently reviewed by the Badan Pengawasan Keuangan dan Pembangunan (BPKP). The results of this review were then incorporated into a contract amendment, which served as the basis for the payment of the claim by the project owner to the contractor.

Resolution and Agreement Results

The project owner approved:

1. The claim for overhead costs during the 15.5-month extension period.
2. The claim for compensation for the increase in the price of main materials.
3. The agreed claim value between both parties was reviewed by BPKP.

Inclusion in the Contract Amendment

The BPKP review results were used as a legal basis for claim payments to the contractor. The agreement was documented in a binding contract amendment.

CONCLUSION

Cost claims resulting from time extensions are among the most significant issues in construction projects, as they can have a substantial impact on budgets, schedules, and project success. A deep understanding of the causes of claims, such as delays due to external factors (e.g., adverse weather or force majeure) and internal factors (e.g., design errors or coordination issues), as well as their effects on the project, is essential for effective project management.

Additionally, mechanisms for resolving claims—whether through negotiation, mediation, arbitration, or other methods—must be understood by all parties involved to ensure swift and fair solutions. In this regard, a comprehensively designed contract that includes clauses on risks, schedules, and claim procedures serves as a crucial foundation for avoiding conflicts.

Comprehensive documentation, such as records of work changes, progress reports, and communications between parties, also plays a vital role in supporting valid claims and minimizing disputes. Therefore, a structured approach to managing cost claims arising from time extensions can enhance efficiency, reduce the risk of disputes, and ensure the success of construction projects.

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