

# IMPLEMENTATION OF FIDIC RED BOOK TO MITIGATE DISPUTES IN SUTT 150 kV MALOY-KOBEXINDO

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## Abstrak

Kontrak konstruksi yang berbasis pada sistem harga satuan sering menghadapi tantangan ketika volume pekerjaan yang sebenarnya menyimpang dari perkiraan awal. Penelitian ini mengeksplorasi penerapan ketentuan khusus dalam FIDIC Red Book untuk mengurangi sengketa yang muncul akibat perubahan volume pekerjaan, dengan menggunakan studi kasus pada proyek SUTT 150 kV Maloy-Kobexindo. Hasil penelitian menyoroti pentingnya ketentuan kontrak yang jelas, terutama yang berkaitan dengan variation orders dan harga satuan timpang, dalam mencegah sengketa dan meningkatkan efisiensi proyek. Penelitian ini juga merekomendasikan penerapan mekanisme penyelesaian sengketa yang efektif, seperti negosiasi ulang atau mediasi, untuk mengatasi perubahan yang tidak terduga dan memastikan bahwa baik kontraktor maupun klien mempertahankan hubungan kerja yang adil dan transparan. Dengan menekankan nilai ketentuan kontrak FIDIC Red Book yang fleksibel, penelitian ini menggarisbawahi peran penting ketentuan-ketentuan tersebut dalam meningkatkan kinerja keseluruhan proyek.

**Keywords:** *FIDIC, Red Book, variation orders, harga satuan timpang, sengketa konstruksi, efisiensi proyek, penyelesaian sengketa*

## Abstract

Construction contracts based on unit price systems often face challenges when actual work volumes deviate from initial estimates. This study explores the application of specific FIDIC Red Book conditions to mitigate disputes arising from changes in work volume, using the case study of the SUTT 150 kV Maloy-Kobexindo project. The findings highlight the importance of clear contract provisions, particularly those related to variation orders and unbalanced unit prices, in preventing disputes and improving project efficiency. The study also recommends implementing effective dispute resolution mechanisms, such as renegotiation or mediation, to address unexpected changes and ensure that both contractors and clients maintain a fair and transparent working relationship. By emphasizing the value of FIDIC Red Book's flexible contract conditions, this research underscores the critical role these provisions play in improving overall project performance.

**Keywords:** *FIDIC, Red Book, variation orders, unbalanced unit prices, construction disputes, project efficiency, dispute resolution*

## INTRODUCTION

Construction projects in Indonesia have seen substantial growth, particularly in the infrastructure sector, with numerous public and private sector projects being executed. Central to the successful execution of any construction project is the contract, which serves as the legal foundation for governing the relationship between the client (project

owner) and the contractor. The construction contract outlines critical elements such as the scope of work, timelines, payment schedules, rights and obligations of the parties involved, and provisions for modifying the scope of work in response to changing conditions.

A key type of construction contract employed in the industry is the unit price contract, where payments are made based on the actual quantity of work completed, using pre-agreed unit prices. While this contract type allows flexibility for adjustments in the scope of work, it also presents challenges, particularly when actual work volumes diverge significantly from initial estimates. This can lead to disputes over payment, work scope, and the interpretation of contract terms.

One of the most widely used contracts in construction is the FIDIC Red Book, formally known as the Conditions of Contract for Construction. This contract serves as the standard for large-scale projects, providing a clear framework for managing the relationship between the client (employer) and the contractor. The Red Book is typically used for traditional construction contracts, where the contractor is responsible for executing the works based on the client's design.

A key feature of the FIDIC Red Book is its ability to manage variations in the scope of work through variation orders. These are formal instructions issued by the employer to the contractor, which may involve changes to the quantity, quality, or scope of work. The contract also addresses issues such as pricing adjustments and time extensions, which are critical when dealing with unforeseen circumstances such as changes in work volume. However, despite these provisions, challenges such as unbalanced unit prices and unexpected variations can still lead to disputes and project inefficiencies.

In the SUTT 150 kV Maloy-Kobexindo project, a significant reduction in the volume of borepile work led to financial challenges for the contractor, particularly because of the unbalanced unit prices agreed upon in the contract. This situation exemplifies the potential for disputes that arise when actual work volumes deviate from initial estimates, despite the presence of a well-defined contract like the FIDIC Red Book. Therefore, this study aims to explore how the Red Book's conditions for variation orders and pricing adjustments can help mitigate these challenges and enhance project efficiency.

This paper aims to explore the application of these FIDIC clauses in managing disputes and ensuring project efficiency, with a focus on the management of variation

orders and unbalanced unit prices. The study also provides an analysis of the clauses that can help prevent or resolve conflicts in situations like those encountered in the SUTT 150 kV Maloy-Kobexindo project.

Based on this, the problem formulation to be discussed further in this paper is:

1. How do the particular conditions of the FIDIC Red Book help manage variations in work volume and prevent disputes in construction projects?
2. What are the challenges associated with unbalanced unit prices in unit price contracts, and how can FIDIC Red Book clauses help mitigate these issues?
3. How can dispute resolution mechanisms, such as renegotiation or mediation, address the challenges arising from unexpected changes in work volume and unbalanced unit prices?

The objectives of the research conducted in this paper include:

1. Evaluation of how the particular conditions in FIDIC's Red Book contribute to managing variation orders and changes in work volume in construction projects.
2. Identification of challenges related to unbalanced unit prices in unit price contracts and an examination of how FIDIC contract clauses can mitigate these challenges.
3. Exploration of the role of dispute resolution mechanisms, such as renegotiation and mediation, in addressing issues arising from unexpected changes in work volume and unbalanced unit prices in construction contracts.

The study aims to offer recommendations for improving contract terms, enhancing project efficiency, and minimizing disputes in future construction projects.

## **RESEARCH METHODE**

This study employs a juridical normative approach with a case study methodology. Data for this study was collected from the project documents of the SUTT 150 kV Maloy-Kobexindo construction project, including the contract, Bill of Quantity (BoQ), and Harga Perkiraan Sendiri (HPS). The case study approach was chosen to examine the practical application of the FIDIC Red Book in real-world projects, focusing on its role in managing variation orders, pricing adjustments, and disputes.

A qualitative analysis was conducted, integrating theories on construction contract law, public procurement regulations, and construction management practices. This analysis aims to evaluate the effectiveness of the FIDIC Red Book's provisions in

managing work volume changes and mitigating disputes in the context of construction projects.

## **RESULT AND DISCUSSION**

The application of the FIDIC Red Book provisions, specifically those related to variation orders and unbalanced unit prices, plays a critical role in mitigating disputes and ensuring fair project execution. In the case of the SUTT 150 kV Maloy-Kobexindo project, the reduction in borepile work volume led to significant financial challenges for the contractor, highlighting the importance of these contract conditions. This section delves deeper into the application of these provisions, exploring the contractual mechanisms, legal implications, and impact on project efficiency.

### **1. Managing Variation Orders under FIDIC Red Book**

The FIDIC Red Book provides a robust framework for managing changes to the scope of work through variation orders. As specified in Sub-Clause 13.1 (Right to Vary), the client (employer) has the right to issue variation orders, which can modify the scope of the work, including adding or omitting certain tasks. The key to minimizing disputes lies in how variation orders are issued, documented, and agreed upon by both parties.

In the SUTT 150 kV Maloy-Kobexindo project, where the volume of borepile work was reduced from the estimated 9,840 meters to 4,332 meters, the application of variation orders would have been critical in ensuring that both parties agreed on the adjusted scope and cost of the work. However, despite this provision, the unbalanced unit prices in the contract led to financial challenges for the contractor, highlighting the need for clearer price adjustments.

The FIDIC Red Book sets forth provisions for variation orders under Clause 13, which allows the client to instruct the contractor to carry out additional work, modify existing work, or reduce work, as needed. The key aspects of Clause 13 are:

- a. Sub-clause 13.1 (Right to Vary): Grants the client the right to alter the scope of work, including increasing or decreasing quantities, changing the character or quality of work, or even omitting work altogether.
- b. Sub-Clause 13.2 (Value Engineering): This clause allows the contractor to propose changes to the design or the scope of work that could result in cost savings

for the project. It outlines a process where the contractor suggests a modification to improve efficiency, reduce cost, or enhance quality. If the client approves the proposal, the contract is adjusted accordingly.

- c. Sub-Clause 13.3 (Valuation of Variations): Deals with valuation of variations, ensuring fair compensation for the additional work or altered scope.
- d. Sub-Clause 13.4 (Provisional Sums): Requires the contractor to notify the employer of any adjustments required in the time or cost due to variations.

For example, in the SUTT 150 kV Maloy-Kobexindo project, where borepile work was significantly reduced, the Variation Order under Clause 13.1 allowed for a reduction in the contract price based on the actual work performed. This provision reduces the likelihood of financial disputes by ensuring both parties are in agreement about the scope and cost of the revised work. From a legal perspective, the right to vary provision in FIDIC allows for flexibility in dealing with unforeseen changes in the scope of work.

The legal implications of variation orders are significant because they prevent disputes regarding work scope, but only if both parties understand the process of formalizing and agreeing to the changes. If the variation order procedure is not followed correctly, it can lead to claims of breach of contract or even force majeure defenses, depending on the circumstances.

## **2. Impact of Unbalanced Unit Prices on the Project**

Unbalanced unit pricing is one of the most common issues that leads to disputes in construction projects. FIDIC contracts offer some protections against the risk of unbalanced bidding through provisions related to pricing adjustments and variation orders. However, the occurrence of unbalanced unit prices remains a challenge, particularly in situations where contractors submit unrealistically high unit prices for certain items with the expectation of more work, but later face significant reductions in work volume.

In the SUTT 150 kV Maloy-Kobexindo project, the unit price for borepile work was set at 171% higher than the Harga Perkiraan Sendiri (HPS), creating an unbalanced unit price scenario. According to Clause 13.3 (Valuation of Variations) of the Red Book, the payment for variations should be based on the unit rates specified in the contract, unless the rates are deemed unreasonable for the variation. This clause

provides a basis for adjusting the unit price to a more reasonable value in cases where the original unit price was excessively high or low, or where the change in work volume was not anticipated. Key Provisions in the Red Book for Unbalanced Unit Prices:

- a. Sub-Clause 12.3 (Evaluation of Variations): Ensures that variations are evaluated and priced fairly, accounting for actual quantities, not the initially estimated figures.
- b. Sub-Clause 13.3 (Valuation of Variations): Provides a basis for adjusting unit prices when variations occur, ensuring that the pricing reflects the actual work completed.

From a legal standpoint, the issue of unbalanced bidding could be deemed a form of bad faith if the contractor deliberately inflated the unit prices in anticipation of larger work volumes. While unbalanced bidding is legally permissible, its ethical and practical ramifications should be considered. Under Sub-Clause 13.3, the client is entitled to request a review and adjustment of unit prices, especially when the actual work volume deviates substantially from the estimates provided.

### **3. Impact of Variation Orders on Project Efficiency**

The flexibility offered by FIDIC contracts through variation orders can significantly enhance the efficiency of construction projects by accommodating changes in scope. Variation orders, as outlined in both the Red Books, allow for adjustments to be made in response to unforeseen circumstances, such as changes in work volume. This flexibility is crucial in ensuring that the project can continue despite unforeseen challenges, such as in the case of the SUTT 150 kV Maloy-Kobexindo project, where the borepile work volume was reduced.

However, the challenge lies in managing the financial implications of these variations. Significant changes in work volume, especially reductions, can create discrepancies between the contractor's expectations and actual payments. This is why it is important to apply the provisions in Clause 13.3 (Valuation of Variations) of the Red Book, which allows for adjustments to be made in a transparent and agreed-upon manner, based on actual quantities and revised pricing.

#### **4. Dispute Resolution Mechanisms in FIDIC Red Book**

Clause 20 (Claims, Disputes, and Arbitration) in the FIDIC Red Book provides a detailed dispute resolution framework that is designed to address issues arising from variations and unbalanced unit prices. The process starts with the notification of claims, followed by an opportunity for both parties to settle the dispute through discussions or a Dispute Resolution Board (DRB). If the issue cannot be resolved, the parties are directed to arbitration. Steps in the Dispute Resolution Process:

- a. Notice of Claim: The contractor must formally notify the client of any claims related to variations or pricing discrepancies.
- b. Dispute Resolution Board (DRB): If a resolution is not reached through negotiation, the DRB provides an impartial decision.
- c. Arbitration: If the DRB cannot resolve the dispute, the matter is taken to arbitration, where a legally binding decision is made.

Legal implications of the dispute resolution process in FIDIC ensure that both parties have a clear pathway for addressing issues without resorting to litigation. The DRB provides a quick and cost-effective resolution to disputes, while arbitration serves as a final mechanism if the dispute cannot be settled amicably. Failure to follow these processes can lead to breach of contract claims or delays in the project timeline, potentially resulting in penalties or loss of business for the party found at fault.

#### **CONCLUSION**

The FIDIC Red Book provides essential contractual mechanisms for managing variations and ensuring fair pricing in construction contracts. The use of variation orders allows for clear documentation and formal adjustments to the scope of work, while provisions for unit price adjustments ensure that both the contractor and the client are treated fairly when changes occur. However, challenges such as unbalanced unit prices and unexpected variations can still lead to disputes, which underscores the need for thorough contract management and transparent pricing mechanisms.

The study highlights that FIDIC's well-structured clauses offer flexibility, ensuring that modifications in project scope and pricing are handled fairly and transparently. This approach fosters a collaborative environment, reducing misunderstandings and financial discrepancies between the parties involved.

Here are some recommendations related to the research that has been conducted :

- a. Enhance the clauses related to unbalanced unit prices to ensure that variations are evaluated and priced based on actual quantities and fair pricing.
- b. Conduct accurate geotechnical surveys and thorough planning to minimize the risk of significant variations in work volume, ensuring the contract price reflects the actual scope of work.
- c. Utilize effective dispute resolution mechanisms, such as renegotiation or mediation, to resolve issues quickly and amicably without resorting to lengthy arbitration or litigation processes.
- d. Encourage contractors to conduct due diligence when reviewing pricing data and submitting bids. Contractors should ensure that unit prices reflect realistic quantities and scope, avoiding inflated prices that may result in financial loss.

By adopting these recommendations, construction projects can achieve better financial predictability, smoother execution, and greater overall success, with a reduced likelihood of legal conflicts.

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