

Development of Risk-Based Standardized WBS (Work Breakdown Structure) for Civil and Structural Works of Coal-Fired Steam Power Plant Construction Project in Indonesia to Improve Time Performance

Veriza Agistin, Leni Sagita Riantini and Yusuf Latief

Department of Civil Engineering

Universitas Indonesia

Depok, 16424, Indonesia

verizaagistin14@gmail.com, leniarif@gmail.com, yusuflatief73@gmail.com

Abstract

The Coal-Fired Steam Power Plant development project has crucial role in encouraging economic growth. The Coal-Fired Steam Power Plant is a complex EPC project that often experiences delays in its completion. The factors that affect the delay are a change in scope, reworking, and lack of coordination. The delay of this Coal-Fired Steam Power Plant project can be overcome with a clear scope through the approach of project management tools, called WBS. This study aims to the development of risk-based standardized WBS for civil and structural works of Coal-Fired Steam Power Plant construction projects in Indonesia. Work Breakdown Structure is a decomposition of activities so that the project is easier to manage and it can increase the probability of project success. The development of WBS standards uses survey methods and expert validation including risks monitoring that affects project time performance. The WBS standard consists of the work package, method, activity, labor, material, and equipment resources.

Keywords.

WBS, Risk factor, Civil and structural, Time performance, Coal-Fired Steam Power Plant

Biographies

Veriza Agistin is a student from Universitas Indonesia majoring Construction Management, from Department of Civil Engineering. She is also earned Bachelor Degree from Civil Engineering of Sriwijaya University in 2018. She has published a journal with specification in the area of construction materials science entitled “Mechanical Properties Analysis of Reactive Powder Concrete with Curing Temperature Variation”.

Leni Sagita Riantani is a lecturer and serves as head of the management specialty association in 2021 at the Faculty of Engineering, University of Indonesia. She teaches for Undergraduate, Graduate and Doctoral Programs. She actively writes articles in national and international journals with specification in the areas of Project Management and Construction.

Yusuf Latief is a Professor at the Faculty of Engineering, University of Indonesia. He teaches for Undergraduate, Graduate and Doctoral Programs. He has published journal and conference papers with specification in the areas of Project Management and Construction. He has served as head of the management specialty association at the Faculty of Engineering, University of Indonesia.