

ABSTRAK

Cuaca merupakan salah satu bentuk risiko yang sangat penting dalam perencanaan dan pelaksanaan sebuah proyek, terutama yang berkaitan dengan pekerjaan eksternal. Kondisi perubahan cuaca yang selalu terjadi pada saat pelaksanaan konstruksi, dan tidak adanya kompensasi pembayaran kerugian dalam kontrak proyek yang harus dibayarkan oleh pemilik proyek, menjadi *research gap* dan latarbelakang penelitian. Penelitian ini bertujuan untuk mengetahui risiko yang akan timbul akibat cuaca selama pekerjaan konstruksi berlangsung, berdasarkan persepsi dan pengalaman kontraktor di lapangan. Metode penelitian dan analisa yang digunakan adalah melalui metode survei dan analisis faktor menggunakan SPSS. Berdasarkan hasil pengujian validitas, reliabilitas dan rotasi faktor data kuesioner dengan metode varimax pada variabel jenis pekerjaan, yang paling dominan terkena dampak disebabkan oleh faktor cuaca adalah pada jenis pekerjaan galian *basement* sebesar 92.1%, galian pondasi 90%, pembetonan *basement* 84.4%, *bored pile* 84%, pemancangan *pile* 83.2%, *finishing* eksterior 83.0%, *plumbing* eksternal 82.5%, pekerjaan *facade* 76.6%, pembesian balok dan plat lantai 72%, *erection* tulangan kolom dan balok 62.3%, bongkar pasang *schafolding* 62.1%, pembongkaran bekisting 62.0%, dan pekerjaan pengecoran 60.5%. faktor cuaca yang berpengaruh paling dominan terhadap biaya dan waktu pelaksanaan adalah kondisi fisik pekerja 84.9%, kualitas bangunan sebesar 83.4%, pekerja sakit 78.4%, sengatan listrik 75.6%, kualitas material 64.1%, penundaan pekerjaan TC 55.4%, dan kecepatan angin 52.6%. Faktor biaya yang paling dominan terkena dampak disebabkan oleh adanya faktor cuaca adalah mobilisasi pekerja 91.5%, usia pemakaian material 88.7%, kondisi alat kerja 87.0%, kerusakan alat kerja 78.1%, suplai pekerja 76.4%, kemampuan pekerja 75.4%, mobilisasi peralatan 75.3%, produktivitas pekerja 73.3%, dan absensi pekerja 54.6%. Faktor waktu pelaksanaan yang paling dominan terkena dampak disebabkan oleh adanya faktor cuaca adalah pada item pekerjaan tertunda lama 80.3%, *time overrun* 74.8%, pekerjaan berhenti sementara 74.7%, produktivitas waktu pekerjaan 64.4%, *time extention* merugikan 64.2%, dan pekerjaan berhenti total 58.0%.

Kata Kunci : Faktor Cuaca, Biaya, Waktu, Kontraktor, *time overrun*, *time extention*

ABSTRACT

Weather is one of the most important forms of risk in planning and executing a project, especially with regard to external work. Constant weather conditions during construction, and the absence of compensation for loss payments in project contracts that must be paid by the project owner, become the research gap and research background. This study aims to determine the risks that will arise due to weather during construction work, based on the perceptions and experience of contractors in the field. The method of research and analysis used is through survey method and factor analysis using SPSS. Based on the results of validity testing, reliability and rotation of questionnaire data factor with varimax method on job type variables, the most dominant affected by the weather factor is the type of basement excavation work of 92.1%, foundation excavation work of 90%, 84.4% basement concreting, bored pile 84%, 83.2% pile finishing, 83.0% exterior finishing, 82.5% external plumbing, 76.6% facade work, 72% beam and slab preparation work, 62.3% erection work of column and beam reinforcement, 62.1% scaffolding unloading work, 62.0% formwork demolition, and concrete work 60.5%. The most dominant effect of weather factor on the cost and time of implementation is the physical condition of the workers 84.9%, the building quality is 83.4%, 78.4% sick workers, 75.6% electric shock, 64.1% material quality, 55.4% of TC job delay and wind speed 52.6%. The most dominant cost factors were affected by weather factor, 91.5% of workers were employed, 88.7% of material use, 87.0% of working conditions, 78.1% of work tools, 76.4% of workers' supply, 75.4% of workers' ability, 75.3% mobilization of equipment, productivity of workers 73.3%, and absenteeism of workers 54.6%. The most dominant time factor of impact is caused by weather factor is delayed work item 80.3%, time overrun 74.8%, temporary stop job 74.7%, productivity time 64.4%, time extension 64.2%, and total job stop 58.0 %.

Keywords: Weather Factor, Cost, Time, Contractor, time overrun, time extension