

INTISARI

Praktek Kerja Lapangan (PKL) merupakan salah satu mata kuliah wajib sebanyak 4 sks yang harus diambil oleh mahasiswa Program Studi Diploma 3 Teknik Geomatika pada semester VI. Selain itu, PKL juga merupakan syarat kelulusan yang digunakan untuk mengukur kompetensi lulusan Program Studi Diploma 3 Teknik Geomatika. Hal ini dikarenakan praktek di kampus dirasa kurang sesuai dengan volume pekerjaan dan kondisi lapangan yang ada di dunia kerja.

Pelaksanaan Praktek Kerja Lapangan (PKL) dilakukan dalam 5 tahap, yaitu persiapan, pengukuran, perhitungan, penggambaran dan uji peta. Tahap persiapan dilakukan penyegaran materi dan pengecekan alat ukur yang akan digunakan di lapangan. Kemudian tahap pengukuran antara lain orientasi lapangan dan pemasangan patok, pengukuran kerangka kontrol horizontal dengan metode pengukuran poligon dibantu alat ukur *Total Station*, pengukuran *azimuth* ikatan dengan *Total Station*, pengukuran beda tinggi dengan metode sipat datar dibantu alat ukur *Waterpass*, dan pengukuran detail dengan metode ekstrapolasi dibantu alat ukur *Total Station*. Tahap perhitungan meliputi perhitungan kerangka kontrol horizontal berupa perhitungan kesalahan penutup sudut (*fs*), kesalahan penutup jarak (*fl*), dan koordinat (X,Y) titik poligon, perhitungan *azimuth* ikatan, dan perhitungan kerangka kontrol vertikal berupa perhitungan kesalahan penutup beda tinggi (*fh*) dan tinggi titik-titik poligon. Selanjutnya tahap penggambaran berupa peta digital dari data hasil pengukuran di lapangan kemudian digambar pada *software Surpac*, *AutoCAD*, dan *ArcGIS*, lalu dicetak pada kertas HVS ukuran A1 dengan skala 1 : 500. Setelah itu, untuk evaluasi peta yang telah dibuat, maka dilakukan uji peta dengan mengambil 25 sampel ukuran jarak dan 25 sampel ukuran tinggi titik yang akan menjadi perbandingan hasil ukuran lapangan dengan ukuran yang ada di peta.

Hasil yang didapatkan dari seluruh rangkaian kegiatan PKL ini sebagian besar telah sesuai TOR yaitu berupa hasil data ukuran KKH didapatkan *fs* sebesar $0^{\circ}0'5.85''$, *fl* sebesar 1:132886.728 dan toleransi sebesar 1:7500 maka dinyatakan telah memenuhi TOR. Kemudian hasil data ukuran KKV didapatkan selisih jarak pergi-pulang sebesar 2 mm dan toleransi sebesar 11,49560041 mm maka dinyatakan telah memenuhi TOR. Sedangkan hasil uji peta didapatkan prosentase 52% benar dari 25 sampel ukuran jarak dan 72% benar dari 25 sampel ukuran tinggi titik maka dinyatakan hasil uji peta belum memenuhi TOR. Telah diselesaikan pula peta situasi skala 1:500 lokasi 1 Dusun Kalicangak, Cungkrungan, dan Babadan, Desa Beluk, Kecamatan Bayat, Kabupaten Klaten, Jawa Tengah.

Kata kunci : Praktek Kerja Lapangan, pengukuran, hasil

ABSTRACT

Job training (PKL) is one of the required subject as much as 4 credits that must be taken by students of Diploma 3 Geomatics Engineering in VI semester. Besides, PKL also a graduation requirement that is used to quantify competence of graduates Diploma Course 3 Geomatic Engineering. This is because practice on campus less than work volumes and field conditions in workplace.

The implementation of Job Training (PKL) was done in 5 stages, which are preparations, measurements, calculations, delineations, and test of maps. The preparation stage was done as refreshment matter and checking measuring instruments that would be used in field. The second stage is measurement such as field orientation and setting-up stakes, the measurement horizontal control framework with polygon method by Total Station, tie azimuth measurement with Total Station, measurement of height difference with carpenter's level method by Waterpass, and detail measurement with extrapolation method by Total Station. The third stage is calculation such as calculation of cover angle error (fs) and calculation of cover distance error (fl) on horizontal control framework and coordinates (X,Y) polygon, tie azimuth calculation, and calculation of cover height difference calculation error (fh) on vertical control framework and high dots polygon. The next stage is delineations of digital maps based on measurement data in the field and drew it by the softwares such as Surpac, AutoCAD, and ArcGIS, then printed on A1 HVS paper, with scale 1 : 500. The last stage is evaluation of maps that have been made, then tested the map by taking 25 samples of measure distance and 25 samples size high point that will be compared of size with the size of the existing field on the map.

The results were obtained from a whole series of activities of Job Training (PKL) which is largely have been correspond with TOR as a data result of KHH size where fs at $0^{\circ}05.85''$, fl at 1: 132886,728 and tolerance of 1: 7500, and the results were complied with TOR. For the KKV results were gotten from difference of go-back distance as 2 mm and the tolerance is 11.49560041 mm, where the results also complied with TOR. On the other hand, results of map test showed percentage of 52% correct from 25 sample measure of distance and 72% true from 25 sample size high-point is expressed map test results had not yet meet the TOR. The situation map also has already done in scale of 1: 500 and the locations are 1 Hamlet Kalicangak, Cungkrungan, and Babadan, Village Beluk, Sub-district Bayat, Klaten regency, Central Java.

Keyword : Job Training, measurement, results