

## **ABSTRACT**

### **TELEMETRY SYSTEM OF LANDSLIDE DATA FROM POTENTIOMETER SENSOR USING APC220 RADIO FREQUENCY**

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This research has been realized a remote communication instrument using APC220 radio frequency as transmitter and receiver of landslide data that has controlled by Atmega32 microcontroller. Landslide sensor utilized by two potentiometers that converting the shift distance into a voltage. The system used 10 WP solar cell and 12V 12Ah battery as a voltage source that can be operated in the isolated area for 15 hours in practice, while in theory can be used for 24 hours.. Computer received voltage and shift distance data from system with interval 10 seconds. In this research, the sensor was able to detect 0 to 15 cm shift distance. First sensor has equation  $y = 0.275x + 0.138$  with linear correlation 0.999 and sensitivity 0.235 V/cm while second sensor has equation  $y = 0.317x - 0.677$  with linear correlation 0.968 and sensitivity 0.270 V/cm.

**Keywords.** *Potentiometer, APC220 radio frequency, landslide.*