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KEY WORD : CLINOMETER.

CHANARONK RODCHANASAKSOTORN : TECHNOLOGY ASSESSMENT FOR DESIGN AND  
DEVELOPMENT CLINOMETER FOR SOIL AND WATER CONSERVATION . THESIS ADVISORS :  
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Erosion is a continuing and expanding threat to the land's natural resources and economy . In order to accurately measure erosion this study assessed an existing clinometer and considered necessary improvements. This tool can assist soil and water conservation by accurately measuring land level and slope.

Six Government technicians working for the Department of Land Development were surveyed using questionnaires. All were asked to evaluate an existing clinometer and to provide recommendations for improvement.

The results showed six variables : accuracy, using facility, size and weight, setting equipment, cost and maintenance. The three most important variables are accuracy, using facility and cost. The 4th variable was maintenance and the least significant variables were size and weight and setting. The survey also indicated that a clinometer requires an accuracy level of 1% slope. Additionally, an ideal clinometer should be light weight and convenient to use, and provide both measurement and scale readings. Ideally a clinometer should cost no more than 500 Baht be easy to maintain and have a long operational life.

In summary, a clinometer meeting these requirements is feasible. A prototype has been developed in Ubonratchathani and is available for further testing and development. Acceptance of this design and its wide spread production in Thailand's provinces will also assist with cost controls. If the production were conducted through the industry process the clinometer will be more accurate light weight and have a lower cost .The researcher does not expect the invented clinometer to be the best and improvements and needed. There are many problems such as parts and the production process. This study can assist further research and development toward production of an instrument for measuring level and slope with a suitable design in the future.