

## ABSTRACT

Compressor is the primary device in a factory. Each device contained in the plant site should be kept cool to prevent overheating which can cause damage to the device. However, the compressor itself also must be maintained in order to avoid damage to the so-called surge in the compressor.

This research emphasized on anti- surge control system design on the compressor contained in the natural gas processing plant using DCS CENTUM 3000 contained in PT Arun NGL. On the basis of the specification and the sensor used. The system can cope with the surges that can cause damage to the system. From the data obtained from the sensor will be processed through the anti- surge control to avoid surges in the system.

The level of accuracy of the test system is based on the action taken against the system instructions given by the user, or automatically by the sensor. Testing is also done through a virtual DCS CENTUM 3000. It is expected that this research compressor can run well and minimize damage to the system.

**Keyword:** *Surge, Anti Surge, DCS CENTUM 3000, Compressor, MCR Compressor*