

ABSTRACT

The rapid development of technology in the world of automation technology today. In the past using the manual tools now been replaced with tools that do not require human hands. PT. Dirgantara Indonesia is the largest manufacturing company of aerospace in Southeast Asia. This company has many production processes, one of which surface treatment processes. namely the dyeing process uses a chemical solution in the parts section of the plane. In surface treatment processes which have some chemical milling process. Problems that occur in the chemical milling process is still workmanship using semi-automated system which still causes many human intervention, such as the operation of the crane and checking the temperature in each tub. This makes a design to automate the system so that the process runs automatically and integrate with each other. Therefore, prior to designing the User Requirements Specification requires. URS explain to the end user description of the process and the need for design automation system. URS is built using several methods to complement URS, such as Process Description method which would explain the chemical milling process flow using a two-dimensional diagram. Piping & Instrument Diagram showing all workflow processes and components of what it takes to design a process that will be created. The last method is a method of control philosophy is an explanation of what specifications will be required to obtain a decision on the automation system.

Based on this study concluded User Requirements Specification design automation system at chemical milling process. This design uses the results of method proces description, explanation of piping and instruments diagrams and control philosophy.

Keywords: Otomation, URS, Description Process, Piping & Instruments Diagram, Chemical milling