

ABSTRACT

Automation systems requires an understanding of the planning system design, equipment specifications, and resources needed for the automation system is running as it should. In addition, in design automation of system design requires not cost a bit. Therefore, users of automation systems, a company manufacturing industry (end user) designed the automation of system design is stable and there is no system redundancies occur in the automation system. If the automation system is unstable and a lot of redundancies, the company will undertake manufacturing activities redesign design automation systems, reprogramming and also additions hardware to the redesigned system. As a result of the redesign of the activity of the manufacturing industry companies will incur additional costs for those activities. To avoid it then the design automation system design using the method of User Requirement Specification (URS).

The use of URS method useful for determining the solution to the planning system automation that will be made by manufacturing companies. In the use of URS requires a comprehensive understanding of the needs and problems of automation systems needed by the the manufacturing industry companies. URS will undertake an analysis on the activity of the production system and the results of the analysis will produce a flow process in the form of Piping and Instrumental Diagram (P&ID). P&ID would be useful to clarify understanding of the automation system made by the manufacturing industry company. After knowing the process flow automation system, the company can determine the specifications of the device and the resources needed to design automation system at the manufacturing company.

From the research results that has been done it is concluded that the process automation system design simulating manufacturing Bottling Plant Bottled Drinking Water (bottled water) bottles with a capacity of 600 ml and 330 ml are using the method of User Requirement Specification (URS) successfully designed. The results of the research form Description Process, Piping and Instrument Diagrams (P&ID) and Controlling Process Scenario at the Bottling Plant.

Keywords: *Automation, URS, Process Description, P&ID, Controlling Process Scenario*