

ABSTRACT

In the application of automation technology required a planning and design of sistem design and specification of equipment needed. With the planning and design equipment design and specification of automation sistem implementation that is based on the expenditures that are expected to achieve the effective implementation of the automation sistem in which users control sistem automation manufacturing industri has a stable automation sistem and not get the sistem redundancies. This is to avoid the occurrence of sistem redesign that has been made in the form of additional hardware and reprogramming the control sistem that has been created in which the sistem redesign activities will lead to expenditures that are not effective. Therefore carried out the design and sistem design using the method of User Requirement Specification (URS) which determine the success of the design of the operator of the plant in the manufacturing industri.

URS requires a comprehensive understanding of the issues and needs of automation control sistem required by the automation sistem users. It is useful to determine the existing sistem and to develop in further act. In the URS method uses several method to define the descriptive sistem is the description of Piping and Instrument Diagram (P&ID).

From the result of research conducted it is concluded that automation sistem design simulating the manufacturing process of bottled water 19 liters based User Requirement Specification (URS) successfully designed. The result in the form of Process Description, Piping and Instrument Diagram (P&ID), and control philosophy in process filtration and packaging (bottling process).

Keywords : *automation, URS, Process Description, P&ID, Control Philosophy*