ABSTRACT

Based on previous research, CDI technology has been developed using a water discharge of 40 ml / minute. However, the use of low discharge can cause the desalination processing time to be long and the electricity needed will be greater. Therefore, in this study developed the design of CDI instruments using water discharge control with a range of 10 - 120 ml / minute that has been adjusted to the capacity of CDI. Desalination measurements in this study were conducted by comparing the conductivity of salt water before disalization and after disalization. From this researchit was obtained that the design of the CDI instrument system with a debit control system can work well in desalination. Based on performance analysis, this CDI system has had a fairly good efficiency because the process is not taking a long time. However, the use of high discharge of 120 ml / minute is less effective in the process of absorption of salt content when compared to the use of low discharge of 10 ml / minute.

Keywords: *CDI Cells, Debit, Debit Control, Desalination, Instruments.*