

**PENALARAN KUALITATIF UNTUK EVALUASI
PERANCANGAN ALAT PERPINDAHAN PANAS
(HEAT EXCHANGER)
jenis "SHELL AND TUBE HEAT EXCHANGER"**

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ABSTRACT

The manual services must be change to computerized this is connected with accuracy, safety and speed in the industrial operation. Especially for the equipment suscept to the used of explosive material of the main product process. This process need or explore the temperate caused of that special treatment will be needed for detection the function of the equipment.

The design, detect and qualitative reasoning of Heat Exchanger Software made base on "Pascal's for Windows". That software will give information for user about the accuracy and the operational of Heat Exchanger (HE) it can be minimized the danger that will be done.

The software design base the case study of Potasium Phosphat (K_3PO_4) chemical industry which 20.160 lb/hr product. The product came out from reactor at 160°F (T_1) before it placed in the storage tank, the liquid temperature must be decreased until 90°F (T_2) by water as cold media at 68°F (t_1) so the temperature of water come out from the HE is not more than 90°F (t_2).

Information of overload or underload of HE can get from this software beside that the software can give safety or not information caused of another treatment of HE with Qualitative Reasoning Model.

The result of the running program:

The System be able give change information became on every data entry to be combined by user.

Keywords : feed as load, last temperature feed (T_2), last temperature cooler (t_2)