ABSTRACT

The need to maintain the quality of oil palm crops without reducing the quantity will be an important objective for the development of the palm oil industry. Palm oil processing is one of the factors that determine the success of oil palm plantation business. Palm oil is produced through several stages such as the acceptance of raw materials, boiling, spinning, pressing, crude oil processing, nut processing and kernels. One of the precipitation methods is the oil separation process that occurs due to the precipitation process caused by the specific gravity of oil, emulsion, and sludge. Because in processing to produce oil palm takes a long time. In this final project is done vertical clarifier tank upgrading with the addition of buffle platee to optimize the performance of vertical clarifier tank on palm oil processing system. This can reduce the volume of oil in the sludge underflow in order to reduce the workload of sludge certrifuge. The test results show that the renewal in the vertical clarifier tank uses buffle platee that is 200mm wide with 445mm platee buffer length and 5mm platee thickness which results in a smaller percentage of oil loss of 7,578%.

Keyword : vertical clarifier tank,buffle plate,underflow,centrifuge.