

ABSTRACT

In production processes in industries such as food industry, pharmaceuticals, oil and gas industry even households often produce waste water. This waste water if not processed will result in environmental pollution. For example is water mixed with oil and water containing heavy metal elements. Water like this should be treated with the new environmentally friendly ways . One of tools used for water treatment is separator.

This final project is taking reference from the project of parralel plate interceptor type separator in PT Surya Besindo Sakti with 84.015 inches in length and 42.008 inches in diameter. Separator with parralel plate interceptor type uses plate at all, including its internal construction. Of course this is inefficient because it makes separator heavier and more expensive. This final project replacing the internal with corrugated plate interceptor type to improve separation efficiency and speed of the oil droplet to the surface with cheaper materials.

The test results show that the construction of separator with 0.313 inch thickness of shell and head is safe to use. The test results also indicate that area and distance between the plate pack affecting the speed of the oil droplets when the droplets of oil rise to the surface. Smaller distance between plate interceptor make separation process will be more effective.

Keywords : *oil, water, separation, distance, area*