

## CHAPTER 6

### CONCLUSION

As mentioned in Chapter 3 , percolation process is old fashion process which was used for finishing step of base oil production. Because of its low production out put and very high power consumption this method is not economic for large scale production . However, this method is still popular for re-refining or reconditioning of oils at smaller scale. For small scale ,percolationequipment may be stationary or in the mobile vehicle which provide flexibility forat site service. The mobile reconditioning unit is widely used for reconditioning transformer oil at site. The advantage of this process is that used bauxite can beregenerated by burning off the impurity substances adsorbed by bauxite.

The results from this study show that air release value and sulphur content have decreased after percolation process and more decreasing in both properties at higher operating temperature (100 ° C.) . However , color of oils have been improved at lower operating temperature (60 ° C.) due to deterioration of oil at high temperature. The other properties such as viscosity , viscosity index and hydrocarbon components content have not very much changed.

The deterioration problem of may be overcome by operate the percolation process at 60 ° C. or below ,depending on the viscosity of oil to be process- ed , with the contact time of 60 minute through three percolation columns connected in series.