

CHAPTER V

CONCLUSIONS

In this work, the following can be concluded from the results and discussions:

1. The melt flow and mechanical properties are obviously enhanced with the amount of high Mw. MWD and its skewness strongly influence on both properties.
2. The operating point of this system is affected by Mw greater than by MWD. The output rate depends mainly on the screw speed of the extruder. Pressure build-up in the machine is caused by adding amounts of higher Mw or broader MWD and can be reduced by using die with large diameter.
3. Not only the Mw & MWD affected on the operating point, but also the operating variables such as rheological parameters in that pressure increases with increasing viscosity or high Mw polymer.
4. The magnitude of the melt fracture distortions can be decreased with the long die and using polymer with low Mw and broader MWD. The critical shear rate inducing melt fracture is about 9000 1/sec.