

CHAPTER V

CONCLUSIONS

The promoter (Li) function in the regeneration procedure can be stated from the cyclic regeneration and partial regeneration tests. Lithium can help the migration of coke from the metal to the support according to the TPO result. The more lithium added, the less coke is deposited on the metal occurred but more coke is deposited on the support. This function is the same as the function of tin.

Different techniques give good agreement for the phenomenon of burning and the characteristics of coke. The coke is mostly removed in 5 minutes and then it is gradually burnt off. Thus the decoking rate is very high in the first 5 minutes. However, the effect of lithium on the decoking rate cannot be concluded due to the different initial coke contents.

The way to choose the best catalyst is to compromise between activity, selectivity, amount of coke and decoking rate. The Li/Pt ratio of unity (catalyst D2) is the best catalyst. Although it gives the highest amount of coke, the coke is almost completely removed (less than 0.005%) after regeneration for one hour. Moreover, it gives the highest activity, selectivity and decoking rate.