# CHAPTER- 6

# CONCLUSION AND FUTURE SCOPE OF WORK

## 6.1 CONCLUSION

Based on this study it can be concluded that,

- Modification of FDY line is quite economical & technically feasible option.
- The cost of modification of one spinning line of 24 positions with 26 winders (two numbers extra) is about 2.42 crores whereas the cost of the new spinning line for mother yarn is 15-16 crores.Therefore the cost of modification of existing spinning line is about 15% of the cost of the new line.

- Modified line mother yarn is quite comparable with yarn produced from original new spinning line supplied by TMT, however, imported TOPLON yarn is more superior and also more consistent than mother yarn produced on new original line.
- The fabric produced from monofilaments of modified spinning line is also comparable from yarn produced from the original spinning lines.
- The quality of 20/1 monofilament yarn produced by modified spinning line mother yarn is quite comparable with 20/1 monofilament from new spinning line mother yarn.
- Management of Garden Silk Mills has decided to convert two more FDY spinning lines on mother yarn based on the result of this modification.

Hence it is established that PET-FDY spinning line can be modified to produce PET 240/12 mother yarn, however, while converting lines, one has to go by systematic approach as described in this research work for producing good quality of the yarn.

## 6.2 Future scope of this work:-

Any spinner can modify their existing PET-FDY spinning line to produce PET mother yarn by following above modification process in a systematic way.

Looking to the increased demand of Nylon monofilament 20/1 and 30/1, a spinner can modify their existing PET-FDY line to produce Nylon mother yarn 240/12 and 300/10 by incorporating suitable screw for Nylon polymer and fume exhaust system.

And also independent academic studies can be carried out to find the effect of some important parameters on the quality of mother yarn and its performance at splitting stage e.g.

(a) Effect of quench air temperature on the quality of mother yarn.
(b) Effect of quench air velocity on the quality of mother yarn.
(c) Effect of % spin finish on the performance of mother yarn at splitting stage.