

# CHAPTER 7

## CONCLUSIONS AND RECOMMENDATION

### 7.1 Conclusions

#### 7.1.1 Conclusion of research work

1. This thesis was proposed to improve jacketing machine set-up operation time of line no. Ex-302 and Ex-303 using method study, separating the preparation work from the operation work, rearranging the work, relocating the jig and tool, machine maintenance, setting spare parts system, preparing spare parts before machine break down, and performing the operation standard manual.

2. The result of improvement showed that the set up time was reduced from 58 minutes to 23 minutes which was saved about 35 minutes per 1 cycle set up operation or 60% of existing set up time.

3. The results showed that the average percentage of the overflow scrap was reduced from 15.69% to 10.93% for Ex-302 and from 24.09% to 13.74% for Ex-303.

#### 7.1.2 Problem of research work

The problems found during the study were as following.

1. Operator skill was depended on experience. The turned over of operators was very high and the experience of new operators having 50% of total operators was less than 1 years.

2. Operators had been changed their working style to perform the preparation step before do machine set up. It needs a time to control them to change the working style. Management should take responsibility of the way to motivate them.

3. When tested, the result showed that it was very good successful. But the actual data showed that it was longer than that. So management should considered how to maintain this situation.

4. It still took long period for machine set up operation due to wire breakage when pass line conductor and start machine. It needs to improve previous process such as drawing process or wire stranding process.

5. Management did not seriously control set up time and target so operators also did not seriously follow our procedure.

6. Number of set up time is increasing because customer has set new procedure which is decreased their stock so they had order with small quantity per time. It is impossible to control and it will make down time increase. And if operator must change product many time, they will get tired result in increasing set up time.

## 7.2 Recommendation and future work

### 7.2.1 Recommendation

Cable production member gave a good cooperation because they believed that the improvement method will help them to improve their process. This is the ultimate result of set-up time reduction and will be achieved if production increase the lot size as a result of reducing the set-up time.

### 7.2.2 Future work

The one problem which was found when machine was wire breakage due to conductor no good. It was occurred from Drawing process and Wire stranding process. The problem also made high scrap ratio and high set up time so it need to be solved in future.