CHAPTER I

INTRODUCTION

Since the 1997 economic crisis, Thailand's steel and steel product industry has continuously encountered severe downturn. The fallout in real estate and construction sectors coupled with sluggish vehicle parts, electrical appliances and electronics industry have put a dent in demand for steel products. In effect, the steel industry was dealt a serious blow, particularly during 1998-2000. What's more, Thai manufactures also face steel dumping in the local market from other producing and exporting countries. Meanwhile, exports of Thai steel products are experiencing a slowdown in line with slumping demand amid a lackluster global economy, in particular, the lethargic US market, and Thailand's major market. Worse than this, the US has attempted to restrict steel imports and is mulling over the enforcement of Section 201 of the Trade Act to protect US steel manufacturers. Several producing countries, including Thailand, are now in the same plight, and it is highly likely that trade barriers by the U.S. may be applied to them.

The demand for iron and steel has risen to 8.5 million tons in 2000, showing a small progress since the economic crisis in 1997. However, the gap between demand and supply is considered high, with current capacity per year at 20 million tons. The situation could be worse given the imports of iron and steel products. Unstable pricing in this sector is a result of the lack of consumer's confidence in spending. Changes in political climate, the slowdown of U.S. economic, fluctuation of oil prices and exchange rate have given a negative impact to the recovery of this industry.

Iron and steel industry is facing problems as follows:

1. Influx of cheap imports
2. Trade barrier from joint-venture enterprises where purchasing obligation is already made with country of enterprise's partnership
3. Anti-Dumping, Countervailing measures and subsidies
4. Insufficient support from the government

1.1 Statement of problem

At present, demand of the steel market is quite raised from the economic crisis due to the government policy supporting the people for buying the land and house. In addition, the interest rate of loan and deposit are quite low comparing with before economic crisis. All of these motivate the power of buyer to people. It leads to the demand of buying the product especially steel and iron is more than the past. So the company needs to produce the product to support the requirement of customer. Currently the company has the high quantity of order and some order the company can not delivery the product on time. Therefore, the company needs to find the method to improve the capacity of producing or using the resource that it has efficiency and effectiveness.

According to the research in Japanese and the operating document of steel industry, the company found that managing the material using in the steel manufacturing is the major important to improving the capacity of production in the Japanese manufacturing. In the Japanese research, the company should managing and setting the raw materials density (scrap, pig iron and so on) before the charging them to the EAF to be 0.8-0.9 ton/m^3. At this density the company will save the energy to melting the raw material in the EAF. Besides, the Japanese company manages the appropriate balancing of the material in the manufacturing process in each step. The result of this research can be shown below:

Table1.1 The result of managing the density and the balancing of the material of the standard Japanese company for the product MS code 0001 at scrap 149.5 tons

Yield	*Tap to tap time*
85 %	72.2 minutes

So if there are comparison between the company and the standard Japanese company at the same product MS code00001 at the scrap 149.5 ton per heat, the different result of the production and yield can be shown below:

Table 1.2 Comparison of production between the company and the standard Japanese company for product MS code 00001

Items	*Our company*	*Standard company*	*Difference*
Scrap used (tons per heat)	149.5	149.5	-
Production (tons per heat)	112.125	127.075	14.95
Yield	75%	85%	10 %

Table 1.3 Comparison of Tap to Tap time between the company and the standard Japanese company.

Item	*Our company*	*Standard company*	*Difference*	*Percent*
T-T-T time (minutes/heat)	83	72.2	10.8	13%

According Table) 1.1-1.3, the production of the company is quite different from the standard company. So if the company would like to improve the capacity of production or ability for producing, the company needs to study the direction of working of the Japanese company for improving its capacity and producing ability.

1.2 Objective of study

To improve yield of the company

1.3 Scope of study

1.3.1 The study will be improvement in the product MS code00001

1.3.2 The study focus on improvement in aspect of material management

1.3.3 The study emphasizes improvement in the melting process and scrap preparation section

1.4 Expected Results

1.4.1 To increase yield of the company

1.4.2 To reduce time of melting process

1.4.3 To be the sample of improvement for industry that related

1.5 Methodology of study

1.5.1 Study related theory and present situation

1.5.2 Collect existed data of sample line (Overall data and focusing data)

1.5.3 Identify problems and causes

1.5.4 Analyze the relationship between causes and effects

1.5.5 Planning and implementation of countermeasures by using IE techniques

1.5.7 Summarize the improvement and make recommendations

1.5.8 Prepare report and presentation

1.6 Gantt Chart