

ABSTRACT

According to petrochemicals, many people have never been thinking of them before but at the present time petrochemicals are related to everyday life, the four necessities of life (living, foods, clothes, and drug). Due to the growth of petrochemicals, the growth of the economy and the growth of petrochemical industry, the company has a larger production scale with integrated production processes both downstream and upstream and it has become a huge amount of purchase raw materials and spare parts for supporting growth. And the company always has a long customs clearing time for importing the customs process. So the company needs to develop a strategy for more efficiency to serve its expanding business.

According to Jirasukprasert, Garza-Reyes, Kumar and Lim (2013) DMAIC is an important part of Six Sigma, can be described as a structured approach for solving problems. DMAIC is an important key to define the problem of long import customs process and analyze the root cause to find the new way to improve the processes. There are five steps to execute the goal of the process improvement and stability of reduction. The steps are defined as measure, analyze, improve and control. It was recommended when the cause of the problem is unknown or unclear (Breyfogle et al., 2001). So this case study choose DMAIC for solve the problem of long customs clearing time.

The DMAIC model supports the researcher to define the problems, understand the root causes of the problem, identify the as-is process and area of improvement then recommend a to-be process. Moreover it suggested the way to control the end guarantee and the maintainable customs clearing time.