

Kaizen Practices in Chewing Gum Production

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The story of Kaizen miracle started with Sakichi Toyoda, founder of Toyota, implementing quality circles leading to the development of the "Toyota Production System" in 1950. In 1986, Masaaki Imai introduced to the Western World the Japanese term Kaizen and made it famous through his book, "Kaizen: The Key of Japan's Competitive Achievement". Kaizen means change to better in Japanese. This understanding requires a way to take everything forward. This necessitates two important principles: reducing losses and revealing problems instead of hiding them. In this respect, there is always loss prevention and problem hunting in a workplace that has gone through total quality management. Techniques developed to solve the problem have an important place in the KAIZEN philosophy (Masaaki, 1994).

Today, even if automation is used in industrial production of food, raw materials, semi-finished products and final product losses can be experienced in lines caused by old production lines, the improvement needs of time, and some wrong personnel practices. Moreover, due to shelf life, the preference of the raw materials as powder generally prevents the use of closed systems, which can lead to pouring, risk of contamination or airborne losses. Kaizen philosophy aims to eliminate losses with the continuous improvements in equipment, labor, material and energy use. Apart from that, it also covers improvements of environment, the health, safety and office processes of employees. At the heart of Kaizen's work is the constant, small improvements that are made especially by the workers. Continuous improvement is a management system that prioritizes the process, supporting people's process-oriented efforts. This can only be achieved through the training of workers are working in production. Perfetti van Melle continuously educates all personnel working in production on Kaizen practice principles and evaluates Kaizen applications that have reached success in the internal rewarding system, thus increasing employee contribution and continuity.

With Perfetti van Melle's in-house software system, all Kaizen ideas can be evaluated and archived on this system. All stages of Kaizen applications are recorded in the system with a photograph. It is a big step forward in this system to spread an Kaizen application that is successful on one line to all other lines quickly.

The main sources losses of gum raw materials formed in the lines are;

- Taking out or not using back chewing gum during metal and weight control,
- Gum, syrup and raw material residues formed in the walls of mixer, boiler and extruder,
- The need for elimination of some machine failures, especially when the line is being operated,
- Not to make technical improvements on time,
- Pouring in production and weighing areas,
- Late detection of problems during production.

Average of 108 Kaizen in a year are being undertaken that provides to reduce loss and positive returns for the company as financial and labor power caused by the above-mentioned

main reasons. Looking at their profit points, it can be seen that there is usually efficiency in lines, material gain and decrease in labor force and production period. It can also be considered that these studies also provide a financial gain as they are carried out with in-house training rather than purchasing external services.

As a result of this review, the presentations to be presented at the congress will focus on numerical values, annual average Kaizen numbers, their numerical returns, and personnel training periods. Kaizens are derived maximum profit will be presented with photo pre-post impressions and explained with the outlines of these applications which can be an example to other sector companies.

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