

S5. Expanding Deep Ocean Water Resource Applications in Taiwan -in case of Kung-Long Enterprise

°Yu-Chi Vickey Tseng

(Kung-Long Ocean Biotech Co., LTD., Taiwan)

Introduction

Deep Ocean Water (DOW) industry has been developed for over two decades in Taiwan. While reviewing the past 10 years, some works could be served as a model, yet there are also more to be improve. As a private company, Kung-Long began DOW researches since 2003, and it was the first company building DOW facilities in Taiwan. Following the developments of DOW in Taiwan, Kung-Long has kept working to make more improvements in product applications and wish to make butterfly effects to encourage more people join this industry.

The development and transformation process of Kung-Long enterprise in the past 10 years

50 years ago, Hsin-Hsiung Tseng, the founder of Kung-Long enterprise, moved to Hualien with his family started marble process and tourist business. Soon after, when those business became stable, Tseng sensed the instability of stone resources and for the company sustainable development, he established Kung-Long Ocean Biotech Co., LTD. in 1996. On the other hand, Taiwan government released DOW industry development policy to encourage enterprise at early 2000s. Kung-Long has started DOW business resolutely in 2003 ahead to other peers and started water intake and production plants installation projects. In 2006, Kung-Long and its' engineering team had completed DOW intake project, desalination, sea salt, electrodialysis, and concentrates plants, and immediately started researching and developing

products by using DOW that taken from a depth of 618m and related facilities. Based on these research results, Kung-Long became a company that can supply DOW raw materials in Taiwan. Products with low technical requirements such as mineral water, processed foods such as snacks, etc. were developed rapidly by referring oversea experience. At the same time, Kung-Long has cooperated with other companies to provide aquatic products such as abalone and shrimps. And then Kung-Long was working on high value products developments such as cosmetics, dietary supplement products, high hardness mineral water. In September 2005, Taiwan DOW Development Association was established by Kung-Long, Eastlife Biotech and Taiwan Fertilizer Co., LTD., and the government permitted to construct two DOW research centers in Taitung County. During that time, the DOW industry in Taiwan was prosperous under the efforts of local people and companies.

However, good time never lasts, the press "Next Magazine" reported a lie in 2007 that DOW has harmful substances. Although it has been clarified but already damage the DOW industry development deeply until now. This case shown DOW application is lack of scientific argumentation supports in Taiwan. Therefore Kung-Long started to build connections with education and research organizations, such as National Taiwan Normal University, Tzu Chi University, National Ilan University, and Stone & Resource industry R&D center, to study the raw materials, product safety

and bio-functionality. Meanwhile, establishment of a new mineral water production line with international certification and marketing of DOW raw materials and products were re-planned and carried out.

In 2016, a bottled water product line certified by ISO22000, HACCP, GHP, HALAL was completed, which can produce 500ml, 600ml, 800ml, and 1500ml bottled water, makes Kung-Long become the biggest DOW bottled water and drinks manufacturer. This production line not only produces Kung-Long owned brand products, it also does the OEM for other famous beverage brands. Besides that, Kung-Long found cooperated researches, such like blood sugar reduction and increase immune function products. Kung-Long believe these researches would add high brand value to lead company development.

The present situation of DOW resource applications by Kung-Long

Kung-Long is the only DOW enterprise with equipment that able to desalination, vacuum concentration, electrodialysis, electrolytic water, and carbonated water in Taiwan. Through different facilities give various raw materials to produce multi-derivatives for buyer needs. For example, bottled water products with different water hardness, electrolytic ionic water, different ratio between calcium and magnesium. Sea salt related products are such as general sea salt, or with high calcium, low sodium sea salt, etc. Kung-Long is also focus on market development by sponsor Lamigo professional baseball team in Taiwan. As well as products such as its own brand of DEEP OCEAN KING and THETIS have been distributed in Taiwan markets, more than 20 original equipment manufacturer

products are sold in China, Europe, South Asia and lots of countries.

However, to make DOW industry greater in Taiwan, Kung-Long corporate with other company energetically. For instance, Aqualohas Co., LTD. set up its factory in the park to work on DOW concentrates and lead into Europe and USA market. Kung-Long also corporate with famous cosmetic maker to develop product for China market.

The development and prospects in the future of Kung-Long

For the purpose of sustainable development, Kung-Long planning to build new DOW intake facilities in 2015 and completed successively after August 2018. By using the new facilities that can take totally 20,000 tons of DOW and surface seawater per day, the aquaculture, tourism, thalassotherapy, and more applications should be satisfied and developed well than nowadays. Furthermore, Kung-long is working towards to drive industry cluster and popularize DOW resource applications.

Advice to new entrants

Many people have questions about that can DOW really make profits to an enterprise. DOW is a long-term business, need time and detail strategies before making money. The growth of aging population, environment and water pollutions, rise of health awareness are the future tendency. Traditional industries and even the artificial intelligence business are focusing on all these categories. DOW is highly related to health care and preventive medicine as aging population become an inevitable problem. We hope that the 10-year experience of Kung-Long will help solve the problems in the future development of DOW industry.