

**"Project Formulation Survey"
under the Governmental Commission on the
Projects for ODA Overseas Economic
Cooperation in FY2012"**

**Summary Report
(Vietnam)
(Survey on Leak Preventive Tank for
dangerous facilities)**

March, 2013

**(Tamada Industries Inc./
Yamada Business Consulting Co, Ltd)**

Introduction

The recent rapid growth has led to increasing environmental issues in Vietnam. Vietnamese government strives to achieve both the economic development and environmental sustainability and steps forward to deal with the environmental issues. So far Vietnamese government has concentrated on water contamination and air pollutions among environmental issues. Soil contamination remains unsolved.

Vietnamese government sets its sights on improving social environment including public safety. Currently the government regards leak accident as a potential risk in public safety and intends to tighten the regulations concerning such a risk.

Our company’s SF double shell tank has an advantage in leak prevention. Such technologies including unique leak monitor and coating method prevent performance loss and leakage. Leak accident has never been happened. Also unique manufacturing method called spray-up has an economic advantage which enables to improve working/material efficiency. Now more than 70% of SF double shell tanks in Japan are dominated by our company. The fact that our product has been used for nuclear waste in Fukushima after 3.11 has proved the advanced leak prevention technologies.

To promote the product through ODA can contribute to solve the development issues such as soil contamination and leak accident in Vietnam. We would like to propose technical assistant with ODA to Vietnam. The technical assistant intends to improve the understanding the current situation and introduce SF double shell tank and its effectiveness. Its activities include demonstrating a model case by installing SF double shell tank into gas station and show its effectiveness, inviting relevant officials and cooperating on legislation of regulations concerning soil contamination and disaster prevention. The transfer of technologies involving basic skill in heavy industry which is lacking in Vietnam will make a significant impact on cultivating high skilled engineers.

ODA will be a perfect start for our collaboration with Petrolimex who has already contacted and showed the interest on our product. ODA will help not only the launch of business in Vietnam financially but also the development of our business by understanding the advanced performance in leak prevention.

The first year of our business plan in Vietnam is to foster such awareness and boost the needs. At the second year we will launch the production in Haiphong Industrial Park with the national oil company Petrolimex (hereinafter called “Petrolimex”)and structure the business model which can achieve stable profit at the following year.

Introducing the product can meet the Vietnam’s development challenges, which will bring a positive impact on our future business.

I. Description of the current situation and development needs of the concerned development issues in Vietnam

The recent rapid economic growth has led to increasing environment issues. Vietnamese Government strives to achieve both the economic development and environmental sustainability and goes forward to deal with the environmental issues.

Vietnam is considered as a developing country with GDP per capita USD 1,374 in 2011, which belongs to one of the lower tier countries at the rank of 19th of 26 Asian countries. *Doimoi*(socioeconomic reforms) mainly focusing on economic open-door policy maintains Vietnamese economic growth at approximately 6% even after financial crisis.

The government sets manufacturing as a main investment industry, which encourages promoting large scale projects such as infrastructure investment. USD 24.382 billion of the Japanese direct investment position in Vietnam followed by the 1st ranked Hong Kong shows a deep economic relationship between Japan and Vietnam.

Under the circumstance where more and more issues on environmental protection and disaster prevention are triggered by rapid economic growth, Vietnam's socio-economic strategy approved in 2011 contains both economic policy and environmental protection plan which regulates that each new construction project requires adherence to environmental standards.

Among ODA projects the number of grant aid whose field is mostly composed by human education, environmental protection and system installment has been decreasing. Instead the number of loan aid mainly in infrastructure is increasing. Technical assistant runs over a long period of time comprehensively in a wide range of areas. Environmental issue is one of the hottest themes among ODA projects. However, environmental issue is mainly focusing on water contamination and air pollution. Our tank project will represent the first pioneering case of soil contamination which has never been responded before.

II. Possible applicability of the SME's products and technologies and prospects for future business development

Our company is a leading manufacturer of SF double shell tank which has a high performance in leak prevention.

In Japan the growing awareness of environmental protection and disaster prevention accelerates the restrictions on existing tanks in terms of safety reason, which leads to replace them to our products to avoid any leakage.

Our SF double shell tank can respond Vietnamese development challenges such as environmental issues and disaster prevention by boosting demands.

An advanced technology in leak prevention with SF double shell tank can help to solve leak accident and soil contamination. Currently the data of leak accident and soil contamination is not officially disclosed in Vietnam. According to local news, leak accidents are reported and oil distributor starts to get aware of soil contamination and potential risk of leak accident. In the same course of economic development as Japan the issue will be more seriously concerned. Since soil contamination is invisible compared to other environmental issues, it tends to be put aside. However, it should be aware not to be too late to restore under the sharp rise of gas stations. In Japan most of newly installed tanks are now SF double shell tanks of which our company accounts for 70%. After 3.11, our SF double shell tanks are ordered for nuclear waste in Fukushima by the sophisticated leak prevention/corrosion resistant technology and our company corporate to investigate all the underground tanks of gas stations around the 3.11 devastated areas.

Our company has tried to build up overseas business in China, India and Malaysia. Now more than ever our company goes all out to focus on overseas business as a top priority in our business strategy from a shrinking demand of Japanese economy. This survey is regarded as a very important milestone of our overseas business. Our company sets a short-term goal to establish the business in Vietnam by 2015 and expand to other neighbor countries in South East Asia. To begin our company plans to build up our own factory in Haiphong industrial park together with national oil company called Petrolimex. After the establishment of joint venture, our company will enhance the awareness toward soil contamination and leak accident through illuminating activities and boost the needs of our products through lobbying for development of legal system.

Meanwhile our company will approach to other sales channel other than gas station to install our leak preventive tanks and produce our other products and broaden a market to neighbor countries in South East Asia.

Our company is located in Kanazawa Ishikawa where 300 employees are now hired. Our CEO as a chairman of Ishikawa Association of SME Corporate Executives is leading SMEs to be a role model in Ishikawa. Local bank is also supporting our business to go abroad. Expanding our business will definitely give an impact on local economy.

Our company has been accepting the trainees from Vietnam, which has built a grass-rooted economic relationship between Vietnam and Ishikawa.

Growing motorization has led to increase the number of gas station in Vietnam. Our research shows that newly-installed tank of gas station hit 1,000 per year which will be increasing further. Currently low quality tanks made by a number of many different tank manufacturers are only

available in the market. Those tanks entail risks of leakage without proper standards, which Petrolimex is aware in terms of soil contamination and leak accident. Also Perolimex who already visited our HQ office in Ishikawa has a motivation enough to collaborate with our company to become competitive out of tank manufactures. The situation where our competitors remain absent in Vietnam gives us business opportunity as an antecessor. As for pricing, keeping competitive by localizing the products with Petrolimex is a key to expand our business. After our research, value added price will sit within 70% which has place to review to cut further in collaboration with Petrolimex. Our company plans to hire and train local engineers with the help of Vietnamese trainees who took our training course in Japan.

After reviewing several types of implementation structure, our company have chosen to set up a joint venture company to manufacture SF double shell tanks locally with Petrolimex. Our company plans to reach the profitable line in 3 years and sell JPY 250 million in 5 years.

The major risk would be no demands of SF double shell tanks. To respond the risk, the first year as preparation term is to establish our business base by promoting the understanding of soil contamination and leak accident and how SF double shell tanks are effective for such issues.

III. Expected development impact and effect on business development of the proposing SME in Vietnam through proposed ODA projects

In Vietnam there is a growing awareness of issues on environment and disaster prevention evoked by government's socio economic plan. While active laws do not clearly regulate soil contamination and leak accident, Vietnamese government begins to tighten the regulations on dangerous facilities including gas station by closely working with Petrolimex. The new legislation initiated by Public Safety Bureau is expected to come out in 2013.

Our product is competent to tackle soil contamination and disaster accidents, which meets the development issues in Vietnam.

Manufacturing SF double shell tank in Vietnam will create employment. Moreover through engaging in the manufacturing process involved with our unique technology, engineers can acquire the specialized skills on large-scale welding, molding for reinforced plastic and quality control. Under the circumstance where skilled engineer on welding and molding in particular which is vital for heavy industry is lacking, our project would contribute to cultivate the human resource.

Additionally leak prevention has a cost advantage by cutting cost of leak accident and remediation cost of soil contamination

There are two major effects on our business development. Firstly it would help our business plan financially. We estimate that cash flow will turn into positive at the 4th year in our business plan. Investment recovery is unable to achieve at the 5th year without ODA. ODA will make our company recover the investment at the 5th year by relieving the initial cost. Secondly ODA will deepen the connection with the government. Even before the survey, we have been getting touch with Petrolimex to discuss collaboration opportunity. However, we have so far found difficulties to make them to understand the full capability of our products and reality of defective existing tanks which will bring up compensation on environment and public safety. ODA project would be the final push to move forward our business corporation. Once we set up the business corporation and product recognition, it is much easier for our company to expand business in Vietnam. Our product among local tanks will be very competitive in its technologies and price by the collaboration with Petrolimex. In addition ODA project give a great impact on expanding business in other South East countries whose governments are dominated in the industry.

IV. Proposals for formulating ODA projects

After our survey, four types of ODA projects have been studied. As a result, our company would like to propose to formulate technology assistant project with ODA. In the scenario we set up a joint venture company with Petrolimex and launch the awareness campaign on understanding of SF double shell tanks and risks of soil contamination and disaster accidents triggered by existing tanks.

The outline of proposed ODA project is listed below.

Type	PROTECO, Issue-developing Type
Site	Suburbs of Hanoi
Schedule	2013/5-2014/3
Amount	JPY 104,341,570
Counterpart Organization	Petrolimex
Project type	<ol style="list-style-type: none"> 1. Proposal of Technical Cooperation/Field Experiment in terms of growing awareness of SF double shell tank 2. Non-project grant aid for purchasing SF double shell tank
Objective	<ul style="list-style-type: none"> • To improve the understanding the current situation and introduce SF double shell tank and its effectiveness • To present a model case by installing SF double shell tank into gas station and show its effectiveness • To enhance the understanding SF double shell tank by

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	inviting relevant officials and corporate on legislation of regulations concerning soil contamination and disaster prevention
Summary	<ol style="list-style-type: none"> 1. PR activity of SF double shell tank to national oil companies and relevant government organizations 2. Invitation of national oil companies and relevant government organization to manufacturing sites in Japan 3. Setup of model case of gas station with SF double shell tank and offering of technologies on installment and regular inspection 4. Offering of skill on inspection and quality control of SF double shell tank 5. Validity and Comparison of SF double shell tank 6. Support of development of relevant laws by offering training to government administrators

Our proposed ODA projects to solve soil contamination and leak accident can be regarded as a continuation of existing ODA projects related to environmental protection and living conditions.

Formulation Survey
Vietnam, Leak Preventive Tank for dangerous facilities

SMEs and Counterpart Organization

- Name of SME : Tamada Industries, INC.
- Location of SME : 61-1 Muryoji, Kanazawa City, Ishikawa
- Survey Site ▪ Counterpart Organization : Petrolimex, Vietnam

Concerned Development Issues in Vietnam

- In the course of economic development, **Environmental sustainability** is set as the highest priority in Vietnam.
- **Soil contamination** starts to draw more attention than now when air pollution and water contamination have been addressed.
- Improvement of Social environment including **disaster prevention** is emphasized .

Products and Technologies of SMEs

- SF double shell tank
- Features**
- Technologies including unique leak monitor and coating method prevent leakage
 - None of leak accident is happened without performance loss
 - Unique manufacturing method called Spray-up method is economic advantage which enable to improve working/material efficiency.

Proposed ODA Projects and Expected Impact

Proposed ODA project: **Technical Assistant**

- To improve the understanding the current situation and introduce SF double shell tank and its effectiveness
- To present a model case by installing SF double shell tank into gas station and show its effectiveness
- To enhance the understanding SF double shell tank by inviting relevant officials and corporate on legislation of regulations concerning soil contamination and disaster prevention

IMPACT: To solve **soil contamination and leak accident** by introducing SF double shell tank

Future Business Development of SMEs

- At the first year the business base will be established by promoting the understanding of risks on soil contamination and leak accident , introducing SF double shell tank as a solution and preparing setup of manufacturing site. In the second year our company start a full-scale production and achieve the profit line in the following year, which is placed as a milestone to our overseas business.