



## Playing a Role in the Global Strategy of the NSSMC Group Started up the Business Operation On-schedule

### NSSOL fully supports system development and operation

#### Background

Launching the production and sales of hot-dip galvanized steel sheets in Thailand. The idea is to introduce state-of-the-art facilities and sales and production management system in order to ensure high product quality.

#### Solutions

NS Solutions staff participated in the project from the concept stage, to promote reliable progress in Thailand, and provided a one-stop solution ranging from design to operation of the system for NSGT.

#### Outlook

A sales and production management system supporting stable 24/7 operation was completed. Business operations began in October 2013, right on schedule. NSSOL established a local subsidiary in Thailand to support system operations.



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#### Building a system to accompany business startup in Thailand

Forming part of the global strategy of the Nippon Steel & Sumitomo Metals(NSSMC) Group, Nippon Steel & Sumikin Galvanizing (Thailand) (NSGT) is engaged in the production and sales of hot-dip galvanized steel sheets in Thailand, mainly for use in automobiles.

Around the year 2011 NSGT considered building a sales and production management system to starting up local operations in Thailand. At that time, NSSMC was exporting hot-dip galvanized steel sheets manufactured in Japan to Thailand, but in order to cope with rising demand, the company established NSGT and intended to change the supply chain to procuring the raw sheets from Japan and performing the zinc plating process in Thailand. The aim was to supply customers in Thailand with the same high quality products as those from Japan while realizing shorter lead times.

#### Using a framework with clearly defined role

Setting up the plant equipment including IT was to be completed within a short time frame. NS Solutions (NSSOL) participated in the project from the concept stage. To meet the requirement for continuous 24/7 operation, a system with high availability was built successfully, in spite of certain infrastructure related problems encountered in Thailand.

In view of the development period, the decision to narrow down the development range by integrally designing business operations and IT, and adopting a parallel system development approach was taken early on in the project. NSSOL staff was mobilized both from Japan and overseas, and developed the system with clearly defined role of design and implementation. On the quality front, system modules such as "Aramaho 2" with a solid implementation track record at Japanese plants of NSSMC were selected.

#### NSSOL establishes a local subsidiary for system operation

NSGT business operations began according to schedule in October 2013. The company now manufactures and markets products of similarly high quality as those from Japan. The sales and production management system that has gone into full operation ensures that the entire process from online ordering of raw sheets to production and marketing is performed efficiently. This system is expected to be used as a basis for future overseas development projects of the NSSMC Group. Stable 24/7 operation is made possible by the operations and maintenance support framework provided by NSSOL. NSSOL established a local subsidiary called Thai NS Solutions in January 2013, and is transferring operations and maintenance know-how gained in Japan to the staff of the new company with operations and maintenance know-how were dispatched from Japan for this purpose.

### Key to Success

Launching the production and marketing of hot-dip galvanized steel sheets in Thailand was done as part of the global strategy of the NSSMC Group.

Mr. Shuichi Shirasuna, General Manager of the General Administration Division explained, "In order to achieve the same high quality as in Japan, we deployed the same state-of-the-art production equipment as at home. Being 100% owned by NSSMC, we can benefit from fully optimized management from Japan to Thailand, and thereby realize world-class competitiveness both in terms of product quality and of delivery capability."

Mr. Yasuo Kondoh, General Manager of the Production Planning Department added, "By establishing a framework where we import raw sheets from Japan and do the zinc plating and final production as well as marketing in Thailand, we have shortened the lead times drastically and can meet our customers' requirements with minimum stock."

As Mr. Shirasuna recalled, "Although we started from zero in establishing this overseas base, our brief was to employ state-of-the-art facilities including IT, and realize deployment within a short time span."

NSSOL staff participated in the project from the concept stage onwards, with staff of the business unit of NSSMC and NSGT. Utilizing actual results and know-how from similar systems built in Japan, the design work progressed with a view towards shortened completion period, high availability.

Mr. Kondoh commented, "To reduce time requirements, several functions were being developed in parallel. Although this made project management more complex, NSSOL always thought ahead and provided us with a roadmap, outlining what to consider next. As a result, business operations and the entire system could be launched in the shortest possible time."

Valuable support was also provided in setting system specifications.

Mr. Kondoh added, "At the stage when we were deciding on specifications, NSSOL created a proposal that projected a clear and specific image. And they were not simply using diagrams or specifications from similar systems configured in the past. Rather, the proposed content was based on a solid understanding of business operations and IT, and reflected the characteristics of our particular situation very well."

#### Carefully consider even seldom used functions to enhance quality

According to Mr. Shirasuna, "The quality of the completed system exceeded our expectations. While the project was in progress, problems were encountered, but the NSSOL staff worked out a solution for each and every one. Even seldom used functions such as exception handling were considered carefully and in de-

tail, without skipping anything. This led to a favorable overall result."

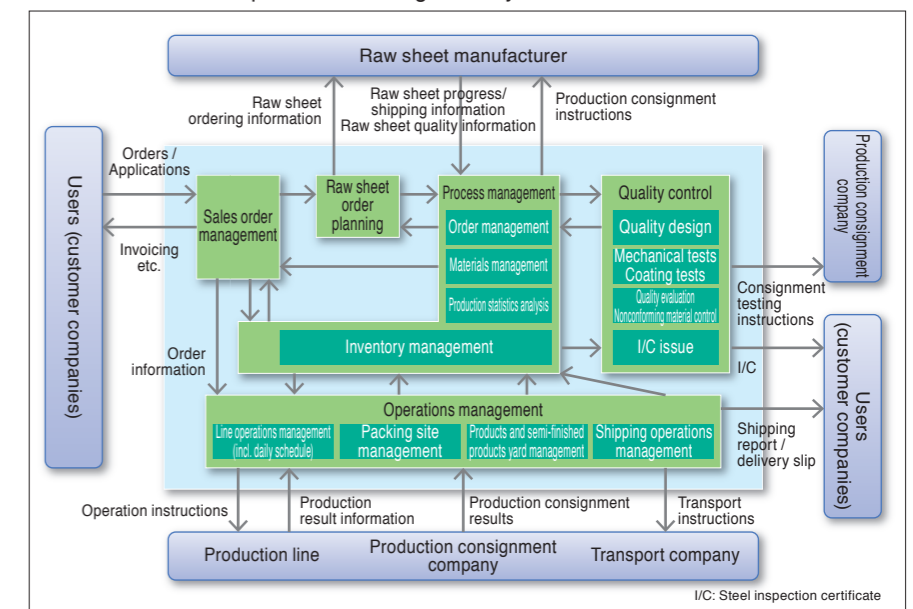
NSGT is set to make ongoing system improvements through maintenance by the Thailand subsidiary of NSSOL.

Mr. Kondoh explained, "In the course of diversifying our product range and accommodating changes in the laws and regulations of Thailand, we expect that ongoing system modifications will be necessary. We would therefore appreciate a further strengthening of the local subsidiary."

This underlines the fact that customer place high expectations in NSSOL, which is steadily accumulating a solid track record in systems construction and operation overseas.

Mr. Shirasuna added, "The sales and production management system created for us by the NSSMC Group is the largest such system done by the company overseas, and it will become an important starting point for further our overseas projects. We hope that the experience gained from the current project will bolster the global strategy of the group."

#### Outline of sales and production management system built for NSGT



#### Core technologies

Business knowledge of steel industry, Java, Aramaho 2 Library, Iron and Steel Solutions AP Common Library, 24/7 operation

#### System outline

- Servers: Physical server x 4; Virtual server x 32
- Applications: Sales order management, Process management, Quality control, Operations management



Nippon Steel & Sumikin Galvanizing (Thailand) Co., Ltd.  
Factory location: Hemaraj Eastern Industrial Estate, Rayong Province, Thailand  
Established: 2011  
Capital: 118,000,000 USD  
Production capacity: 360,000 tons per year  
Start of operations: October 2013  
Number of employees: Approx. 200