

Regarding the Start of Full-Scale Undertaking of Environmental Solutions Business

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Abstract

Effective November 11, 2001, Nippon Steel renamed the Environmental Plant & Waterworks Division of its Engineering Divisions Group as the Environment and Waterworks Solutions Division. At the same time, it established the Environmental Solutions Business Center in the Group to comprehensively tackle environmental solutions businesses. Nippon Steel considers that positively responding to social needs in environment-related areas through the promotion of environmental solutions businesses is an extremely important strategy for the further growth of the company as well as a means of fulfilling corporate responsibility in society. Introduced below are the concepts behind Nippon Steel's environmental solutions businesses, namely, social needs, the company's expertise and core competence, targeted business sectors, etc.

1. Introduction

Effective on November 1st, 2001, Nippon Steel Corporation renamed Environmental Plant & Waterworks Division of its Engineering Divisions Group as Environment & Waterworks Solutions Division and at the same time, established Environmental Solutions Business Center in the Division to mark the company's full-scale undertaking of environmental solutions business. Nippon Steel considers that positively responding to social needs in environment-related areas through the development of the environmental solution business is a very important strategy for continued growth of the company and also for fulfilling corporate responsibility in the society. This paper introduces the concepts behind Nippon Steel's activities in the environmental solutions business (see Fig. 1).

2. Environmental Needs of Society

In the background of growing public interest in recent years in global environmental issues, the legal framework and social systems for low waste generation and resource recovery by materials recycling are being formed through the enactment of the Basic Law for

Establishing the Recycling-based Society and various materials recycling laws. In the private sector, as evidenced by the construction of zero emission plants, acquisition of ISO 14000 series accreditation and the like, the importance of environment management is being stressed in corporate administration. Environment-related social requirements have come to be strongly felt and what are required therein have become complicated and diversified in their nature. These requirements include, for example, the needs for adequate disposal of hazardous materials and objects difficult to treat such as dioxins and the needs for environmental restoration such as in soil and groundwater pollution problems. On the other hand, the privatization trend of environment-related public services such as the collection, treatment and disposal of general waste and water supply and sewage services in view of the fact that many municipalities face financial difficulties has created a new business field.

When how to address these social needs is studied from the standpoint of engineering business, it is noted that the conventional plant and equipment sales approach alone is not sufficient any more for providing satisfactory solutions to the problems of clients and the market in general. What is required now is to provide total solutions

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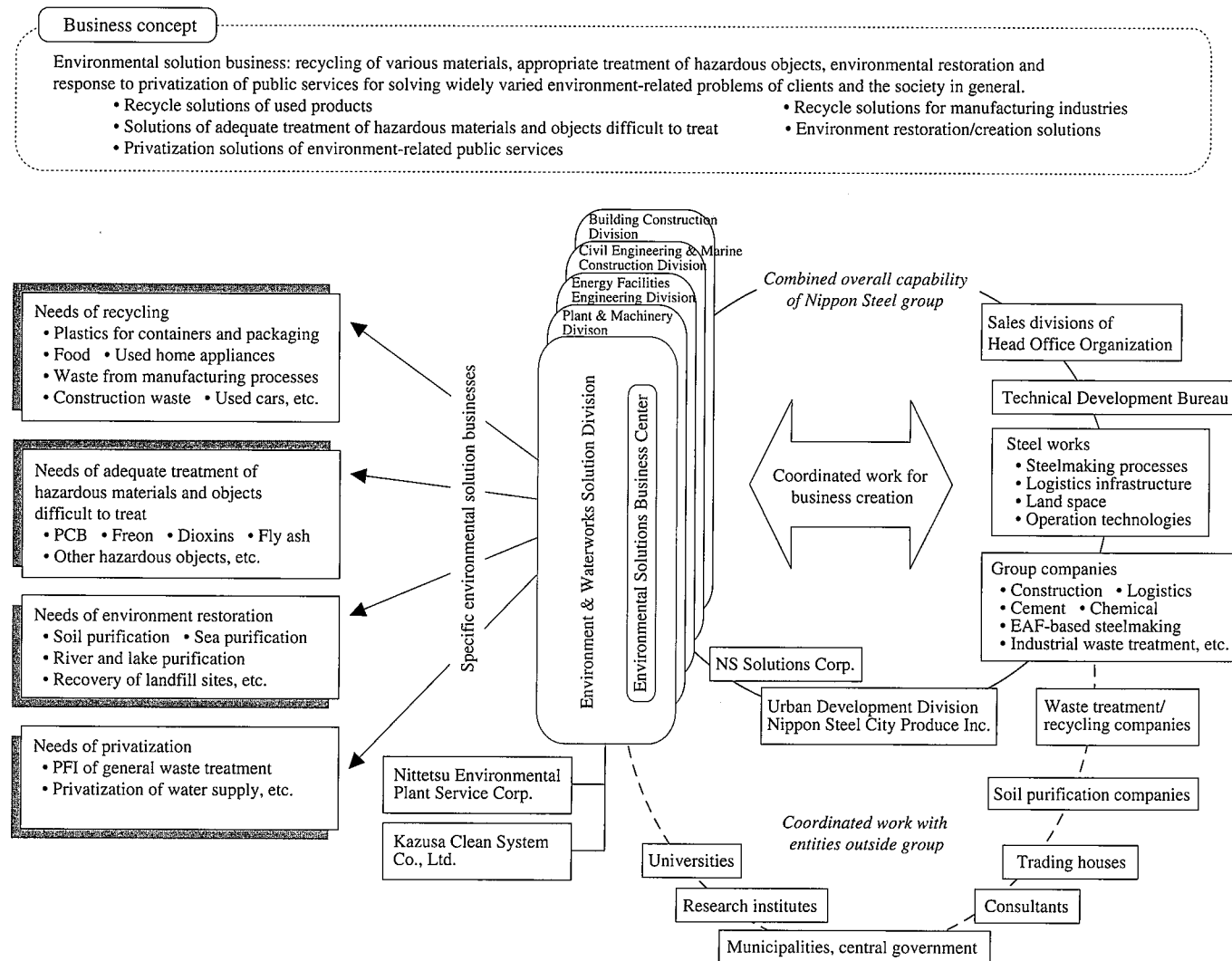


Fig. 1 Development of environmental solution business

combining the hardware and software aspects, for example, to form a business scheme covering logistics, plant operation/management and finance, to supply integrated services covering from the treatment for recycling to the use of recycled materials, and so on.

3. Current Environment-related Activities of Nippon Steel

In view of the above social requirements, Nippon Steel has promoted pioneering activities as explained below through its Engineering Business Organization, Iron and Steel Business Organization and its group companies.

3.1 Direct Melting System

The shortage of landfill sites and the emission of dioxin are very serious problems in the disposal of general waste by municipalities. The Direct Melting System for waste recovery of Nippon Steel is capable of solving the former problem by volume reduction and resource recovery and the latter by melting waste at high temperatures and, thanks to these advantages, the system counts 21 supply references already. The system is highly appreciated in the market as a solution tool of waste treatment owing to its ability to deal with com-

combustible waste, non-combustible waste and incineration ash and its applicability also to the treatment of waste reclaimed from landfill sites and the decomposition of freon gasses.

3.2 Privatization of General Waste Treatment (Kazusa Clean System Co., Ltd.)

Nippon Steel established a company for intermediate treatment of general waste in 1998 under joint investment with 4 municipalities in the Chiba Prefecture, namely, the city governments of Kisarazu, Kimitsu, Sodegaura and Futtsu, as the first case of general waste treatment under the private finance initiative (PFI) scheme in Japan. This undertaking has a very unique business scheme. One of the features is that by making the most of the advantages of Nippon Steel's Direct Melting System that it is capable of treating combustible waste and incineration ash collectively, a regional waste treatment system is formed covering the four municipalities having different service lives of existing waste incineration plants. In the financial aspect, a project finance is organized wherein no guarantee of liabilities are required of the investors.

3.3 Participation in Kita-Kyushu Eco-Town Business

In the Kita-Kyushu Eco-Town business, which has been promoted

by Kita-Kyushu City as a forerunner of this kind in Japan, Nippon Steel's participation (mainly through Yawata Works) covers the recycling activities of PET bottles and used bicycles. Nippon Steel and its group companies also take part in various environment-related experimental studies promoted as a part of the Eco-Town scheme.

3.4 Reuse of Plastics Containers and Packages

As an activity of the reuse of container and packaging plastics in compliance to the Law on Recycling Containers and Packaging, Nippon Steel embarked on the chemical recycling of waste plastics as a business, significantly contributing to the promotion of resource recycling, based on the Coke-Oven from Waste Plastics to Chemical Raw Materials Method developed by Nippon Steel utilizing its steel-making processes. The recycling operation has been commenced at Kimitsu and Nagoya Works, and the equipment for the recycling process is under construction at Yawata and Muroran Works.

4. Nippon Steel's Core Competence in Environmental Solution Business

It is considered that the following, including the experience and knowledge accumulated through the above activities, form Nippon Steel's core competence in the environmental solution business.

- (1) Business infrastructure in the environment-related market such as: engineering technology and know-how of environment-related equipment accumulated by Environment & Waterworks Solution Division; trust in Nippon Steel of municipalities, the central government and universities and other research institutes earned through supply of facilities, joint researches, etc.; and business network with consultants, waste treatment companies and other business partners.
- (2) 10 steel works located in different districts of Japan having large potentiality as materials recycling bases with their large capac-

ity high temperature processes, logistics infrastructure, land space availability, etc.

- (3) Group companies possessing varieties of waste treatment technologies and logistics network.

In cultivating the environmental solution market as a full-scale business, Nippon Steel is determined to offer optimum solutions to complicated and widely varied market needs making the most of the overall capacity of the company, organizing a cooperation network among business divisions and group companies around the above core competence.

5. Target Business Sectors

Our efforts are focused on the following market sectors, in which the needs are becoming explicit and Nippon Steel's overall capability is most effectively utilized, and efforts will be concentrated on promoting specific business schemes in the market sectors.

- (1) Recycle solutions of used products for various manufacturing industries.
- (2) Adequate treatment solutions of hazardous materials and objects difficult to deal with.
- (3) Environment restoration solutions such as purification of soil and groundwater and recovery of landfill sites.
- (4) Privatization solutions of environment-related public services such as waste treatment and water supply and sewage services.

6. End Remarks

Nippon Steel is determined to strengthen its activities in the environmental solution business towards the construction of a low-environmental-load and recycling-based society in view of environmental problems, which are becoming more and more complicated. We would much appreciate if parties concerned could continue giving us instructions, guidance and suggestions.