



NEWSLETTER

No.49

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July 2004

THE JAPAN SOCIETY OF WASTE MANAGEMENT EXPERTS

Greetings from the New President

Prof. Nobutoshi Tanaka from Hokkaido University

My name is Nobutoshi Tanaka and I have assumed the post of the 8th President of the board of directors of JSWME.

JSWME has been carrying out various interdisciplinary activities related to waste issues involving citizens, national and local governments, research institutions, universities, private firms and associations for 14 years since its establishment. The International Relations Committee, one of the committees of JSWME, has been playing an active role in information exchange with researchers not only in Asia but also all over the world and information dissemination on research activities in Japan.

Environmental issues have been getting more diverse and complex in recent years. Some of these issues such as



**The 8th President,
Prof. Nobutoshi Tanaka,**

SARS, bird flu, and BSE are suspected to have arisen in unsanitary areas and require an international effort to solve them. This suggests that such issues should be approached in the international context of proper waste management.

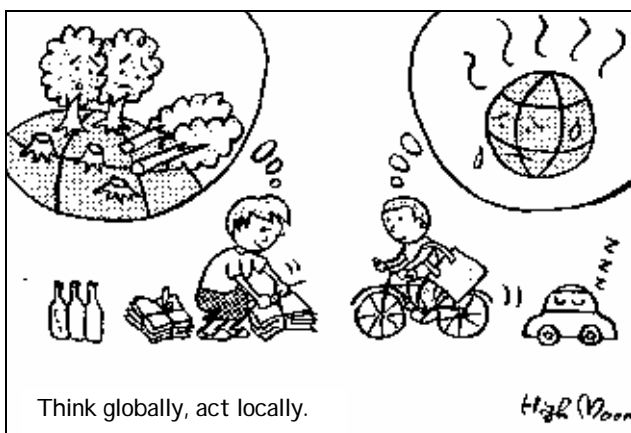
Furthermore, waste issues need both technical measures and the improvement of social systems as seen in the activities towards the establishment of a recycling-based society.

A detailed action plan for the International Relations Committee will be thoroughly discussed by the newly established board. Further development of the 10-year-long Japan-Korea interaction and the establishment of a network with waste related organizations in Asia and the Pacific will be of foremost importance. Encouragement of international experiences of junior researchers and waste experts in research and practical activities will enhance friendship and piece building via waste management.

The committee is also expecting to support the international societies and symposiums on waste management to be held in Japan in fiscal year 2004 and to promote people-to-people exchange. This will allow various experiences and lessons to be shared among such countries as those in Asia and the Pacific and the presence of JSWME to be highlighted.

I would be grateful for the further understanding and cooperation of the JSWME members and those who support our activities.

(Nobutoshi Tanaka)



Comments by High Moon: "Think globally about Environmental Problem, act for Environmental Reservation in your area."

Illustrated by Prof. Hiroshi Takatsuki (Taka-tsuki literally means "High Moon".) Taken from the Monthly "the Waste", May 2004 and translated by JSWME.

Guidelines for the Production and Use of RDF - by Investigative Commission on Proper Management of RDF -

The production and use of refuse derived fuel (RDF) serves as a safe and reliable system for disposing of municipal solid waste generated in small municipalities. Furthermore, through regional disposal it enables heat recovery, which cannot be realized at small-scale facilities. This is because RDF can be stored for

relatively long periods of time as decomposition is prevented, it is more transportable than regular waste due to its reduced volume and weight, and it has a constant shape and calorific value for stable combustion.

However, it is important to recognize that the primary role of a waste disposal system is the safe and reliable disposal of waste, with heat recovery as a secondary function. One must not be lax in regard to the safety and reliability of waste disposal by placing too much emphasis on efficient power generation and efficient sale of energy.

In August 2003, there was an explosion at the storage facility of the Mie RDF Electric Power Plant run by the public enterprise in Mie prefecture resulting in several deaths and injuries. It is believed that the RDF fuel became damp from the moisture in the air and condensation, which started a process of fermentation and heat generation, causing the RDF to ignite. There were also troubles in Fukuoka and Ishikawa Prefectures, where fire broke out due to the generation of heat in storage facilities containing large volumes of RDF. Based on those experiences, in order to safely operate and maintain facilities for the production and use of RDF, the Ministry of Environment prepared a report on guidelines for the production and use of RDF in December, and informed the prefectural governments throughout the country.

The guidelines consist of 1) a method for the proper management of RDF, 2) measures for RDF production facilities, and 3) measures for utilization facilities for RDF.

These guidelines have been well publicized and it is expected that a safe system for the production and use of RDF will be secured.

(Takashi Miyagawa)

**System of Pollution Control Managers
- Legal Framework of Waste Management in Japan -**

Japan achieved rapid economic growth during the 1960's. At the same time, it faced serious problems concerning industrial pollution. As a result, in 1970, the so-called "Pollution Diet" enacted or amended 14 laws including the Basic Law for Environmental Pollution Control, the Clean Air Act, the Clean Water Act, and so on.

However, in order for the factories, the pollution generation sources, to meet the regulatory standards, it was necessary for businesses to set up proper pollution

control systems on their own initiative. Therefore, in 1971, the Law for the Establishment of Pollution Control Organizations in Specified Factories" was set up, requiring factories (Specified Factories) with pollution generating facilities to form pollution control organizations comprising "Pollution Control Supervisors" (factory manager level) and "Pollution Control Managers" (section manager or sub-section manager level) at the core. According to the law, Pollution Control Supervisors must be stationed in factories with more than 20 workers, and Senior Pollution Control Managers (department or section manager level) in specified factories above a certain size (factories generating more than 40,000m³ of soot per hour and discharging more than 10,000m³ of wastewater per day) to assist the Pollution Control Supervisors.

Specified factories are those that set up pollution generating facilities (facilities that generate soot, dust, wastewater, noise, vibration, and/or dioxins) in the manufacturing, electricity supply, and gas supply industries.

Ex. Types of Pollution Control Managers for Air Pollution

Pollution Generating Facility	Amount of Gas Emissions	Type of Qualification
Facilities generating hazardous substances	40,000Nm ³ and above	Type 1 Air Pollution Control Manager
	Less than 40,000Nm ³	Type 2 Air Pollution Control Manager
Other soot generating facilities	40,000Nm ³ and above	Type 3 Air Pollution Control Manager
	Less than 40,000Nm ³	Type 4 Air Pollution Control Manager

Pollution Control Managers and Senior Pollution Control Managers are legal qualifications, the former consisting of 13 types. In order to obtain the qualification, one must pass a national examination or complete a lecture course for certification. The national examination for air pollution control managers covers areas shown in the table below.

Regarding the lecture course, the technical capacity, educational background, and work experience of participants are reviewed prior to admission.

When a Pollution Control Manager is assigned, the prefectural governor must be notified.

Along with such a national system, Tokyo Metropolitan Government for instance has its own pollution control

Subjects of National Examination for Pollution Control Managers (in the case of air pollution)

Subject Type	Overview of environmental pollution	Air Pollution Laws and Regulations	Combustion/ Dust Control Technology	Air diffusion of Smoke	Treatment technology for Toxic air pollutants	Dust Removal/ Collection Technology	Measurement Technology
Type 1	○	○	○	○	○	○	○
Type 2	○	○	○		○	○	○
Type 3	○	○	○	○		○	○
Type 4	○	○	○			○	○

manager system to ensure its environment reservation ordinance as well.

(Hideo Azuma)

Report on the 2004 Spring Conference of the Korea Society of Waste Management Experts

On May 13-14, 2004, the Korea Society of Waste Management Experts (KSWME) held the 2004 Spring Conference, along with the 8th Korea-Japan International Session and the Korea-Japan Special Symposium at Hanyang University in Ansan City, located an hour outside of Seoul by subway. From Japan, there were 14 participants in total, one member of the international relations committee, nine presenters in the International Session, two panelists in the Korea-Japan Special Symposium, and two members of the secretariat.

At the Research Conference held by the Japan Society of Waste Management Experts last year in Tsukuba, a Japan-Korea Symposium was opened for the first time during the international session. There were approximately 80 participants. All of the papers were presented in a poster session format, which allowed face-to-face discussions with the presenters and was well received. Following that example, KSWME organized a Korea-Japan Special Symposium and poster session during the Spring Conference this year.

The theme of the special symposium held on May 13 was "RDF - Production and Use". There were three presenters from Korea and two from Japan, Mr. Bitoh of Kawasaki Heavy Industries, Ltd. and Mr. Miyagawa of the Japan Environmental Sanitation Center. The Japanese presentations focused on RDF production systems, conditions of use, examples of accidents and safety measures, while those from Korea centered on the use of RDF as a new fossil fuel substitute. Although the speakers were able to take many questions from the attendees, they did not seem to have the opportunity to share opinions and ideas among themselves. This should

serve as a reference in the management of future symposiums.

In the poster session on May 14, sixteen papers in total were presented, eight from the Japanese side and eight from the Korean side. The Japanese presenters included six from Hokkaido University and two from Ishikawajima-Harima Heavy Industries Co., Ltd. The theme was of great interest, sparking many questions and lively discussions.

Although the board members of KSWES have changed and the new chairman was not present for discussion, the former chairman confirmed that the international session would be continued in the same manner. He also asked for those interested to send in requests for the theme of the next symposium to be held in Japan.

(Akio Suzuki)

Journal of the Japan Society of Waste Management Experts, Vol. 15, No.3 (May 2004)

Recent issues of the Journal of JSWME contain the following articles. The articles are written in Japanese with the abstract in English.

Paper

Cogeneration through the Processing of Domestic Kitchen Waste and Night Soil Sludge in a Full-scale Sludge Treatment Plant

Yutaka Yoneyama, Katsuhiko Takeno, Kikuo Shimizu, Tatsuo Naito, Fumio Itagaki, Yoshimitsu Yasuhara and Mitsuo Nakada

Investigation of Material Recycling of Polypropylene

and Polystyrene Recovered from Waste Home Electrical Appliances

Toshiaki Miyanaga

Improvement of the Forced Static Aeration Method for High-rate Composting Fermentors for Organic Wastes

Hiroshi Eya

Distribution Behavior of Heavy Metal between Molten Chlorides and Slag

Etsuro Shibata, Kazuhiro Fukuda, Takashi Nakamura, Takeshi Ari, Tomio Takasu and Hideyuki Itou

Development of Deterioration Inspection for Plastic Chassis of OA Appliances

Toshiyuki Aoki, Eiji Satoh, Masakatsu Hayashi, Motoo Uno and Takeo Takagi

An Analysis of the Quantitative Relation of Recyclable Waste to Domestic Refuse Based on Continued Actual Survey Data

Yasuhiro Arai, Akira Koizumi, Noboru Tanikawa and Tomo Oikawa

Analysis of Discontinuation, Recovery, and Sustainable Management for a University Recycle Market

Yoshinobu Iyama, Kei Takeda and Kohji Hayase

Cadmium Removal in Flue Gas from the Incineration of Scallop Waste Using Sorbent Particulate

Ryo Yoshiie, Yuki Hashimoto, Mari Hoshiai, Higeiyuki Uemiya, Makoto Nishimura and Hiroshi Moritomi

Highly Selective Extraction of Palladium(II) with Alkyl Xanthine Derivatives

Katsuya Kaikake and Yoshinari Baba

Notes

Material Recycling of Flame Retardant Polystyrenes Recovered from Waste Televisions

Toshiaki Miyanaga

Waste Management Research
Vol. 15, No.3 (May 2004)

Preface

Understanding the Basic Concepts Regarding Global Environmental Problems

Tadaaki Mizoguchi

Special Issues: Ecodesign

Eco-Design in an IT-Networked Society

Jun Fujimoto

Recycling and Eco-Design of Household Electric

Appliances

Kiyoshi Ueno

Ecological Design for Copy Machines

Tomio Watanabe

Recycling Design Strategies for NISSAN Automobiles

Toru Tohata

Architectural Eco-Design

Toshio Ojima

Design Methodology for Upgradable Products

Yasushi Umeda and Shinsuke Kondoh

Report

Development and Application of a LCA Education Program for Energy and Environmental Education Targeting High School Students

Yoshimi Iwabuchi, Susumu Tohno, Mikio Kasahara, Yasufumi Kawamura, Yuko Murakami and Hisao Taoka

Current Members of JSWME As of 30 June 2004
(Values in parenthesis are differences from 31 March 2004)

Regular Members	3,491 (-165)
Students	298 (-7)
Non-Japanese Member	88 (8)
Public Institutions	113 (0)
Supporting Members	177 (-13)
Individuals of NPOs	3 (0)
Total	4,170 (-177)

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The Japan Society of Waste Management Experts

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International Relations Committee

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