

## The construction Technology Review and Certification (Sewerage Technology)

Whole term

2005.4 ~ 2006.3

### (Purpose)

For the purpose of smooth and fast introduction of newly developed technology by private enterprises to sewerage works, Japan Institute of Wastewater Engineering Technology 'JIWET' started the business of 'the Construction Technology Review and Certification' in the field of sewerage works, under the authorization by the Ministry of Land, Infrastructure and Transport in 1992.

Later in 2001, JIWET jointly with other 13 members (foundations) established 'the Council for the Construction Technology Review and Certification' based on the increasing needs for the development and introduction of new technologies from not only private enterprises but also local governments. Carrying out this business, JIWET has greatly contributed to the promotion of research and development and also to the improvement of the sewerage technology.

Technical areas intended for are classified in 2 categories of the following.

Technologies related to the planning, design, construction and operation & maintenance.

Technologies related to machines for construction work, equipments, appliances, and materials.

### (Result)

In 2005 fiscal year, 37 technologies (7 renewal, 3 modification, 27 new technologies) applied by 77 private enterprises were evaluated under the scheme of 'the Construction Technology Review and Certification'.

Those evaluations were conducted based on the guidance of Review and Certification Committee consisting of members with learning and experiences.

Certificates were issued to the following 37 technologies listed below.

#### . Renewal

- 1 . Thin Lining for Sewer Pipe Line (Polyethylene Strip Rolled Lining)  
OKUMURA CORPORATION, OSAKA BOUSUI CONSTRUCTION CO.,LTD.
- 2 . A Quakeproof Coupling for Manholes of Sewer Pipe (Spacer Joint SR)  
SANRITSU Co., Ltd. , SANESU GOMU KOGYO Co., Ltd. , SHINMEI SANGYO Co., Ltd.
- 3 . Panel Rehabilitation Process (3S SEGMENT Process )  
SHONAN PLASTIC MFG. CO.,LTD. , Maeda Corporation ,  
Nishimatsu Construction Co., Ltd. , NIPPON HUME CORPORATION
- 4 . Renovation Method of Sewerage Pipe – Slipping Pipe Method – (Slipping Pipe Method by FRPM Pipe)  
KUBOTA CORPORATATION , SEKISUI CHEMICAL CO., LTD. , NIHON HOBAS CO., LTD. ,  
KURIMOTO PLASTICS CO., LTD.
- 5 . Inversion Process (ICP Breathe Process)  
Shonan Plastic MFG Ltd.
- 6 . ALL LINER Z  
ASAHI TEC CORPORATION
- 7 . The grit cleaning machine by air pumping (SAND-CLEAN)  
SANEI Co.,Ltd.

. Modification

- 1 . To protect concrete structure of sewerage facility from sulfuric acid attack  
(BOHSHOKUBAN)  
KAJIMA CORPORATION , LEO KAKEN COMPANY LIMITED. , KAJIMA  
RENOVATE COMPANY LIMITED
- 2 . High performance polyethylene pipe and fittings for sewage water (High density polyethylene pipe for  
sewage water)  
MESCO,Inc.
- 3 . Rehabilitation Method of Sewage Pipes - Formation Method – And Repair Method of Lateral Pipes  
(Seamless System Method)  
Toa Grout Kogyo Co., Ltd. , Obayashi Road Corporation , SGC Gesuido Center Co., Ltd.

. New Technology

- 1 . Method for Constructing Sewer Pits by Using Future-oriented Rotating-pushing-down Machines (KCMM  
CR (Cutting Rock) Method  
COPROS CO.,Ltd.
- 2 . Sewer pipe rebirth method of construction-inversion method of construction-  
(C-ONE method)  
DAIKANKOUGYO CORPORATION , OSAKAGUMI,INC.
- 3 . Rainwater storage and infiltration facilities composed of plastic blocks (Sin Sin Block Storage)  
HAYASHIBUSSAN Corporation , Sin Sin Block Company
- 4 . Construction Method of Earthquake and Liquefaction Resistant Sewage Main Eliminating Retaining  
Works for Excavation (PLUSS Method)  
Raito Kogyo Co., Ltd.
- 5 . The Corrosion-proof System with Fiber Reinforced Plastics (FRPS Method)  
OSAKA BOUSUI CONSTRUCTION CO.,LTD. , SHOWA HIGHPOLYMER CO.,LTD. , PLUS  
INDUSTRY CO.,LTD. , Aica Kogyo Company, Ltd.
- 6 . Sheet Lining Method for Concrete Structure (FRP Panels Corrosion Protection Method)  
OKUMURA CORPORATION , FUKUI FIBERTHECH CO.,LTD.
- 7 . Non-clog Submersible Pump with Helical Flow Channel (High Efficiency and High Passage Performance  
Submersible Pump)  
Shinmeiwa Industries, Ltd.
- 8 . The Inner Lining Method of Shield-tunneled Sewerage Channels Using Ultra-Violet Hardening Type FRP  
Sheet (TUF-SHEET METHOD)  
TEKKEN CORPORATION , ASAHI KASEI GEOTECHNOLOGIES Co., LTD
- 9 . Trenchless Pipe Replacement by Expandit (J-EXPANDIT technology)  
Obayashi Road Corporation , Toa Grout Kogyo Co. Ltd. , Iseki Poly-Tech, Inc.
- 10 . SKYLIGHT SAVE METHOD (SKA METHOD)  
FUJINO KOUGYO CO.,LTD. , FRP SUPPORT SERVICE CO.,LTD. ,  
KINKI KANKYO SERVICE CO.,LTD.
- 11 . Sewer pipe rebirth method of construction-Inversion method of construction- and Repair method of  
lateral pipe (Through Ring Method)  
TAICHI CO.,LTD , CCS INC. , PLANNER CO.,LTD , RAC CO .,LTD. ,  
YOKOSHIMA COMPANY

- 12 . FFT-S lateral rehabilitation method  
TAKIRON ENGINEERING CO.,LTD.
- 13 . Repair System of Branch Pipe (FRP Branch Pipe Liner System by UV)  
Toa Grout Kogyo Co.,Ltd. , SGC Gesuido Center Co.,Ltd.
- 14 . Regeneration Method of Mnahole (LLC100 System)  
Toa Grout Kogyo Co.,Ltd. , SGC Gesuido Center Co.,Ltd.
- 15 . Honeycomb Filter  
SANKI ENGINEERING CO., LTD. , Nippon Steel Corporation , MITSUBISHI HEAVY INDUSTRIES  
ENVIRONMENT ENGINEERING CO., LTD. , JFE Engineering Corporation
- 16 . Aquabelt gravity belt thickener  
TOMOE Engineering Co., Ltd. , Ataka Construction & Engineering Co., Ltd.  
EBARA Corporation , SANKI ENGINEERING CO., LTD. , Sumitomo Heavy Industries, Ltd.
- 17 . ThichTech rotary drum thickener  
TOMOE Engineering Co.,Ltd.
- 18 . SHOVELCHAIN Sludge Collection System  
Hitachi Plant Technologies,Ltd.
- 19 . Hitachi Screen type thickener  
Hitachi Plant Technologies,Ltd.
- 20 . High Efficiency Screw-Press Type Dewatering Machine  
MITSUBISHI KAKOKI KAISYA , LTD.
- 21 . Solid Separation System  
TORISHIMA PUMP MFG. CO., LTD.
- 22 . Vertical axis mixer placed on the top of a tank (Vertimixer)  
Hitachi Kiden Kogyo , Ltd.
- 23 . New Generation of Plant Control System with Handheld Terminal (Smart PAD)  
Matsushita Electric Industrial Co., Ltd.
- 24 . Screen for CSO (Sliding rake type screen)  
MARUSHIMA AQUA SYSTEM CORP.
- 25 . Molten Carbonate Fuel Cell (fueled by Sewage Aerobic Digester Gas)  
Marubeni Corporation , Fuel Cell Japan Co., Ltd.
- 26 . A low powered propeller mixer with a vertical shaft, which is installed above the water surface  
(WEEDLESS-V)  
MISUZU INDUSTRIES,CO.,LTD.
- 27 . Sulfur Corrosion Protection System for Sewage Facilities (Eco-Sulfur Corrosion Protection System)  
Obayashi Corporation , Nippon Oil Corporation

Secretariat : Makoto TERUNUMA, Hiroshi TORIUMI, Nobuhiro MOTOSHIGE, Mitsuru MAEDA  
Tsunetoshi FUKUSHIMA, Takeshi YAMAUCHI

key words

examination proof, rehabilitation technology, technology of making to earthquake-proof,  
concrete anti-corrosion coating industrial method, materials for sewage, technology for sewage  
treatment