

## CASE HISTORY

SEMICONDUCTOR  
SOLAR  
PHARMA  
POWER GENERATION  
FOOD & BEVERAGE  
PULP AND PAPER  
CHEMICAL  
OIL AND GAS  
MINING  
AEROSPACE AND TRANSPORT  
**TOVEKO FILTERS**

# Toveko Filters

Dong-San River Park – Yi Lan County, Taiwan



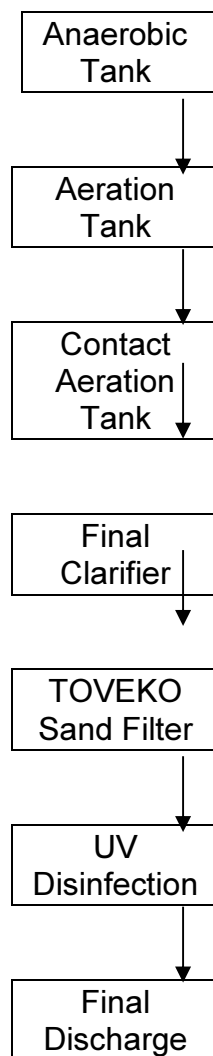
## Introduction

Dong-San River Park is located in the north eastern part of Taiwan near the National North Eastern Coast Park which is famous for its beautiful Pacific Ocean coastal landscape. The Park is beside the Dong-San River and uses the river water for recreational purposes. It has become the most famous and popular recreational area in the NNECP.

To reduce the pollution resulting from visitors and the on-site restaurant, a wastewater treatment plant has been built. The treated wastewater flows back into the Dong-San river, and treated water quality is therefore of great importance.

## Treatment Process

The wastewater treatment plant process is outlined below:



## Discharge Quality

The following are Official analysis results from samples of the final discharge taken at the times shown:

| Date     | pH  | SS (mg/l) | BOD (mg/l) |
|----------|-----|-----------|------------|
| 04/11/98 | 7.2 | 8.5       | 7          |
| 11/11/98 | 7.8 | 5         | 6          |
| 18/11/98 | 7.0 | 4         | 5          |
| 25/11/98 | 7.3 | 9         | 7          |
| 02/12/98 | 7.4 | 10        | 8          |
| 09/12/98 | 7.8 | 6         | 7          |
| 16/12/98 | 7.7 | 5         | 6          |
| 23/12/98 | 7.8 | 4         | 5          |
| 30/12/98 | 8.0 | 7         | 5          |
| 06/01/99 | 7.1 | 9         | 7          |
| 13/01/99 | 7.8 | 4         | 5          |
| 20/01/99 | 7.7 | 2         | 3          |
| 27/01/99 | 7.9 | 5         | 4          |
| 03/02/99 | 7.2 | 3         | 3          |
| 10/02/99 | 7.1 | 2         | 3          |
| 03/03/99 | 7.8 | 8         | 7          |
| 10/03/99 | 7.7 | 4         | 5          |
| 17/03/99 | 7.6 | 3         | 4          |

The average water quality following the TOVEKO sand filters is shown below:

| Item           | Before Sand Filter | After Sand Filter |
|----------------|--------------------|-------------------|
| SS (mg/l)      | 20                 | <10               |
| BOD (mg/l)     | 20                 | <10               |
| Total P (mg/l) | -                  | <0.2              |

## Conclusion

The TOVEKO sand filter has been applied successfully to this plant for tertiary treatment. It has also demonstrated its stable treatment efficiency for this polishing application.

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