

# The natural energy that the soil is splendid



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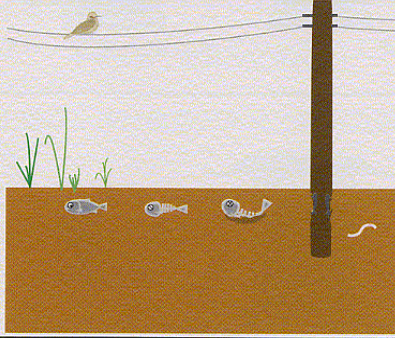
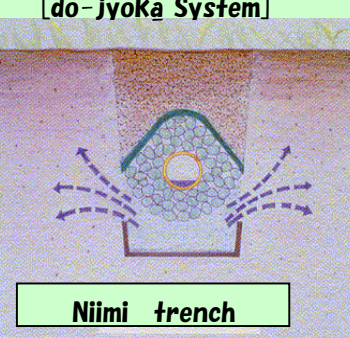
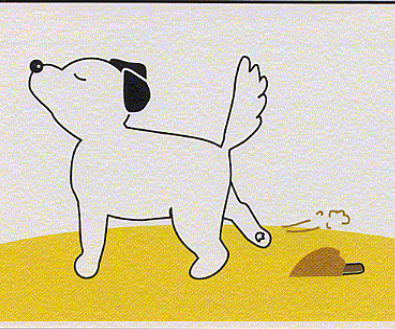
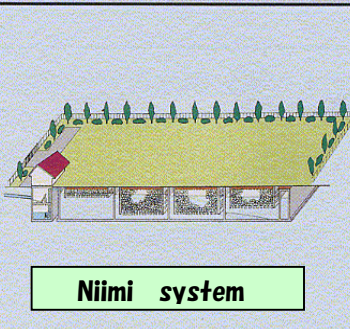
## Sewage disposal plant by [do-jyoka system]



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## The birth of the [do-jyoka system]

<p><b>natural phenomenon</b></p>	<p><b>flash of Tadashi Niimi</b></p>	<p><b>The birth of the [do-jyoka System]</b></p>
	<ul style="list-style-type: none"> <li>• I will use soil creature</li> <li>• I will use a capillary siphon phenomenon</li> <li>• The soil can resolve organic matter</li> </ul>	 <p><b>Niimi trench</b></p>
	<ul style="list-style-type: none"> <li>• In the sewage disposal plant a bad smell occurs</li> <li>• The soil removes a bad smell</li> </ul>	 <p><b>Niimi system</b></p>

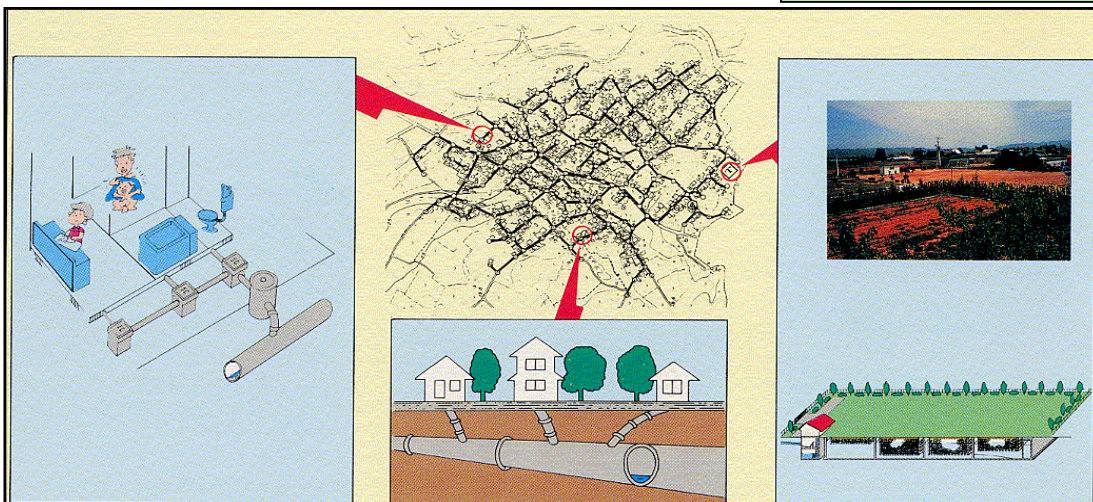
3

## The structure of the sewer

The messy water which flows from a family

The construction

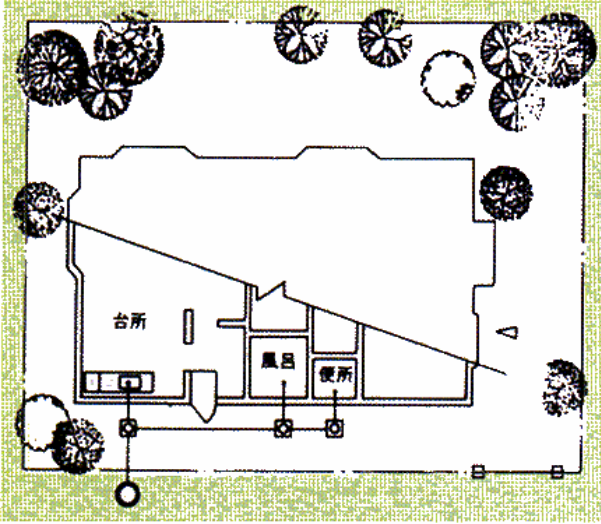
clean it at a sewage disposal plant



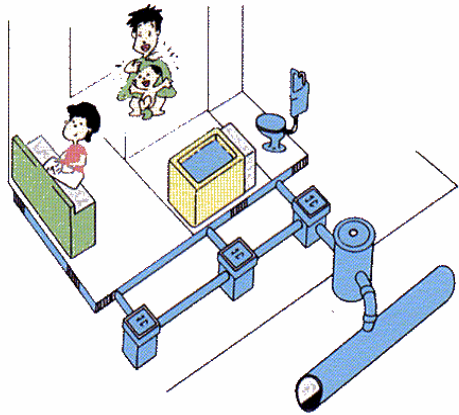
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# The messy water




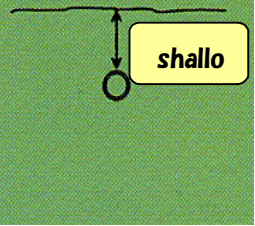
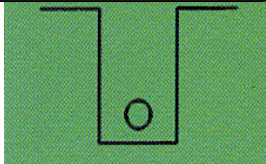
connected to the pipe of the sewer




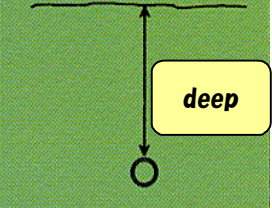
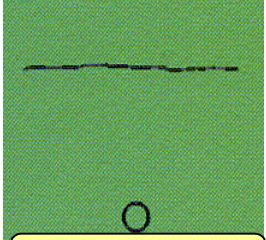
5

# The construction of the sewage pipe

A low construction amount of money

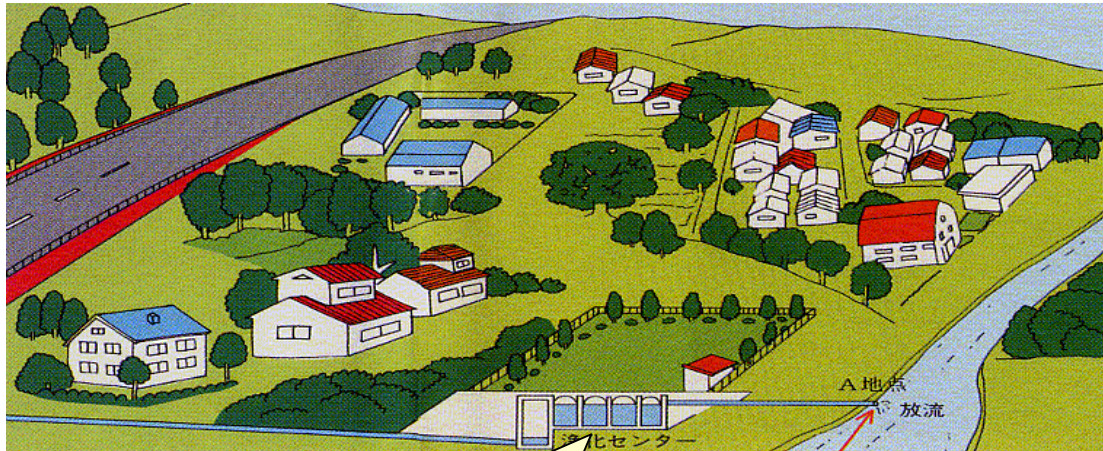
<p>Pipe diameter</p>  <p>Small Pipe</p>	<p>covered with soil</p>  <p>shallo</p>	<p>A method of construction</p>  <p>The construction method of the pipe</p>
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A high construction amount of money

 <p>big Pipe</p>	 <p>deep</p>	 <p>Shield tunneling</p>
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**purify filthy water at a sewage disposal plant**



**sewage disposal plant**

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**Sewage disposal plant such as the park**



8



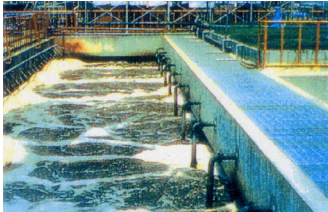
## Comparing of conventional sewage disposal plant and [do-jyoka system]

[do-jyoka system] is the sewage treatment technology that can easily prevent second pollution by the coating soil of these. The pollution control system is unnecessary. Therefore, the construction cost is lower than a usual sewage disposal plant.

### Conventional sewage disposal plant

### [Do-jyoka system] plant

The second pollution control device  
Facilities to delete a bubble      Big building to manage it



Deodorization device



Covered equipment



It solves it by this

It solves it by do-jyoka.



Plant that is adjacent to house



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## [do-jyoka system] is easy to procuring of site

The construction cost of

[do-jyoka system] is low.

The coating soil provides the function of the deodorization equipment. The coating soil provides the function of the Bubble cancellation device.

The coating soil provides the function of the Bacillus dispersion prevention device.

The sewage disposal plant as the park.

The machine is few in an easy technology.

The machine is few and the building is small.

The detention period is long and the treat water is excellent.

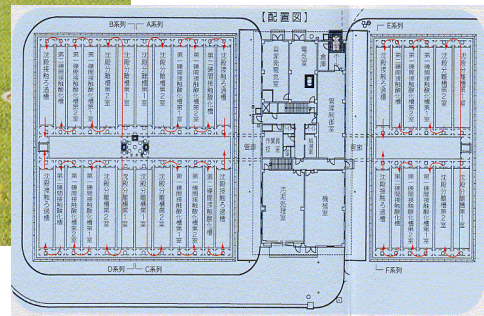
The operation and maintenance is easy in the unattended operation.



It is eating on the sewage disposal plant.

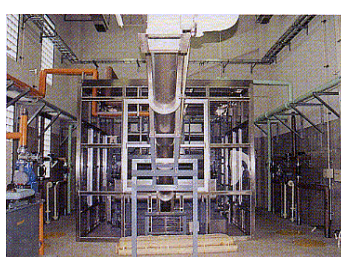
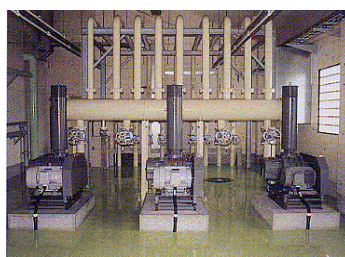
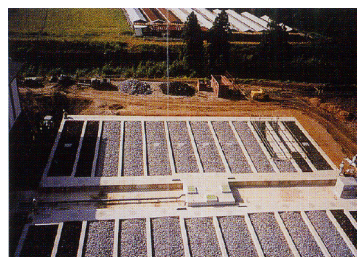
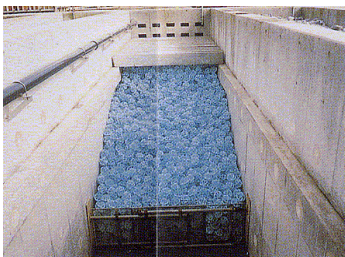


# Chiran sewage disposal plant 2,400m<sup>3</sup> /day



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# Process of the construction



1-29

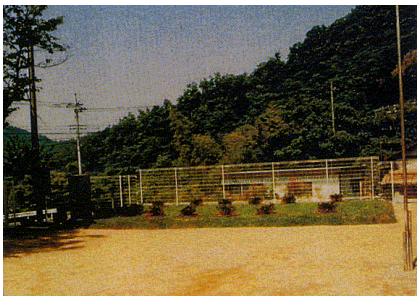
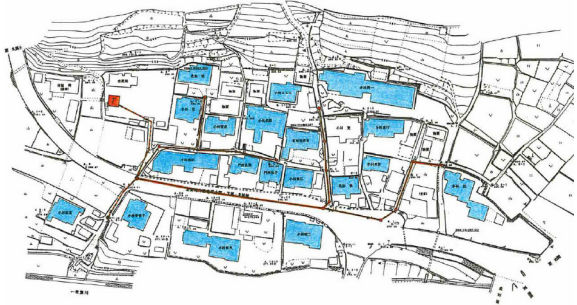


# The Niimi system of a small village

**Minobu sewage disposal plant**  
**48m<sup>3</sup> /day**



**Kitagawa sewage disposal plant**  
**19m<sup>3</sup> /day**



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# The Niimi system of Nantan-city, Kyoto

園部町生活排水処理区総合計画図

日吉町  
 園部北部地区汚水処理場  
 園部浄化センター  
 山崎本郷  
 船岡地区汚水処理場 (緑と水の館)  
 丹波町  
 園部東部地区汚水処理場 (三層床の館)  
 園部浄化センター  
 川辺地区汚水処理場  
 △南河内浄化センター (八木町)  
 天守地区汚水処理場  
 西本浄化センター  
 大川内地区汚水処理場  
 (700m<sup>3</sup> /day)

( 680m<sup>3</sup>/day )

( 75.6m<sup>3</sup>/day )

( 89.1m<sup>3</sup>/day )

( 145.8m<sup>3</sup> /day )

( 197.1m<sup>3</sup> /day )

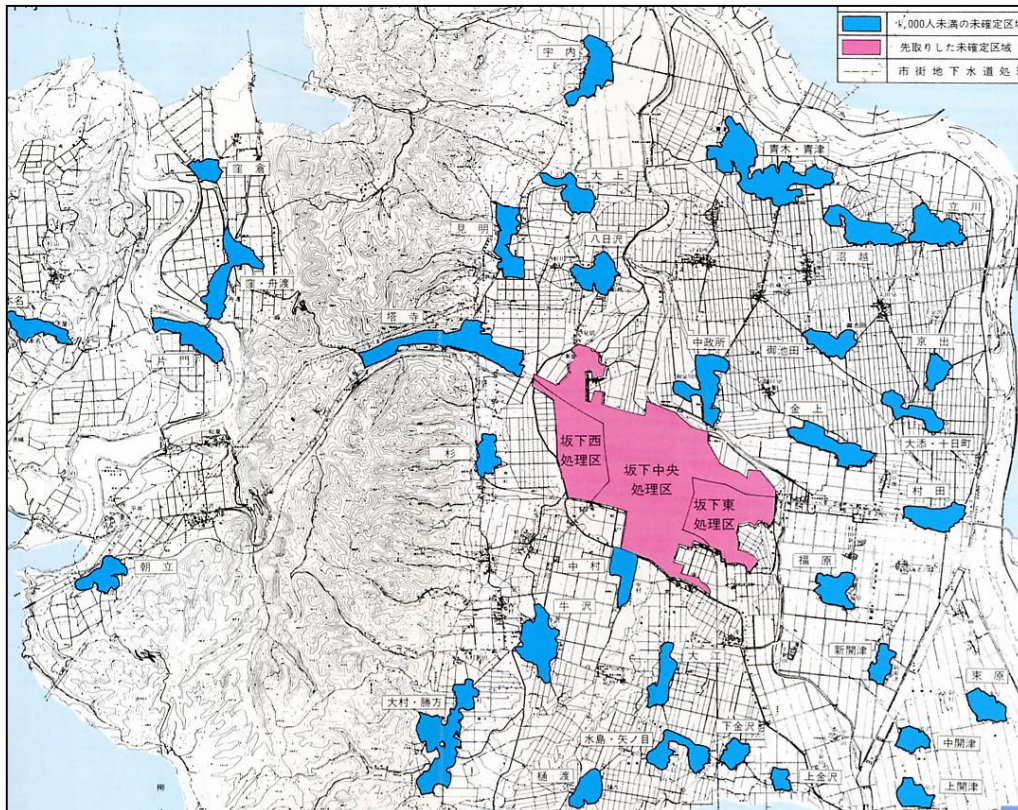
( 202.5m<sup>3</sup> /day )

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There are seven Niimi system in Nantan-city, Kyoto



## Sewer construction of 100%



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## We can construct sewer by [do-iyoka system]

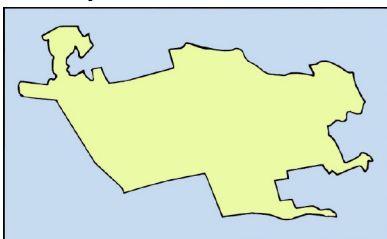


10,000 persons live in the center of the town.

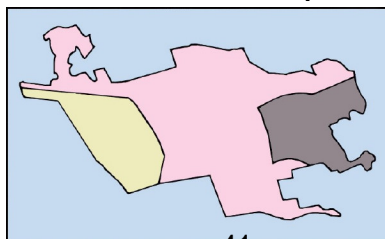
Center of AizuBangemachi was divided into three and built the sewer.

It adopted the second idea. The second ideas are three breakup plans.

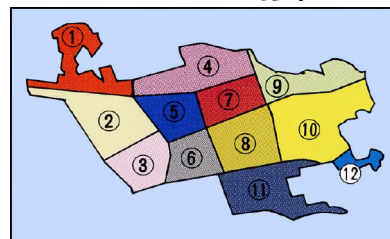
One-place concentration



It divides into three places



It divides into 12 places

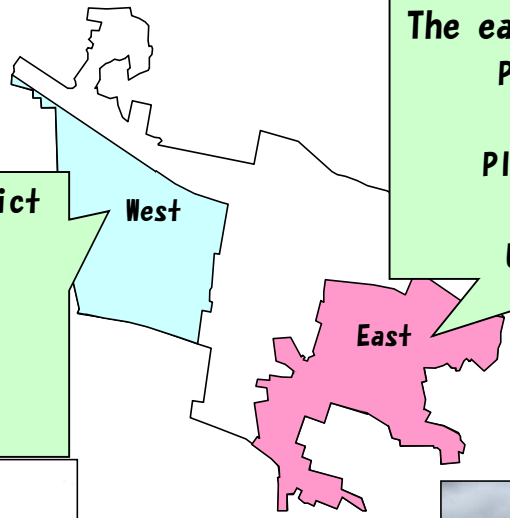


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**Outline of Bange west purification center and Bange east purification center**

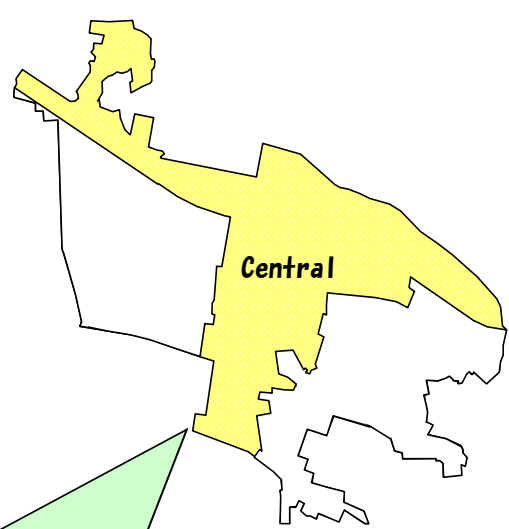
**The west processing district**  
 Planned population :  
 2,700 people  
 Plan volume of water :  
 1,400m<sup>3</sup> / day  
 Use beginning : 1993



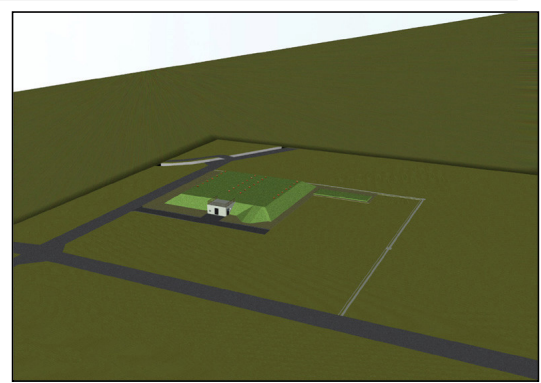
**The east processing district**  
 Planned population :  
 3,200 people  
 Plan volume of water :  
 1,400m<sup>3</sup> / day  
 Use beginning : 2004



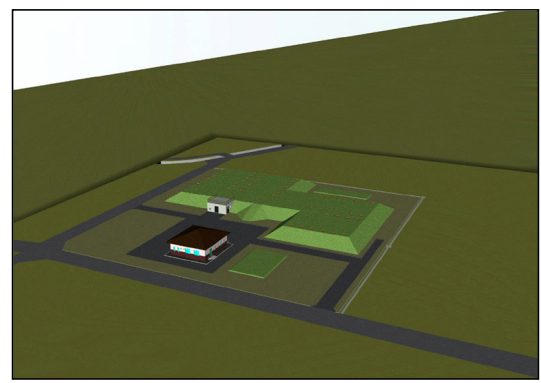
**Outline and construction situation at central purification center**



**The central processing district**  
 Planned population :  
 3,700 people  
 Plan volume of water :  
 1,600m<sup>3</sup> / day  
 Use beginning : 2013



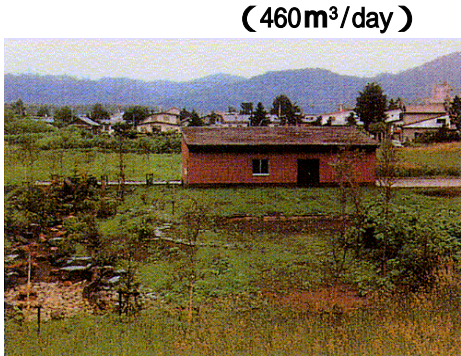
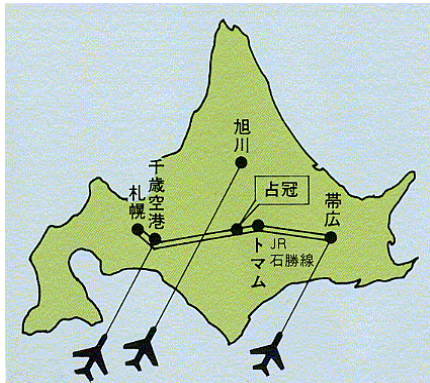
central purification center (The first Construction)



central purification center (Second stage Construction)



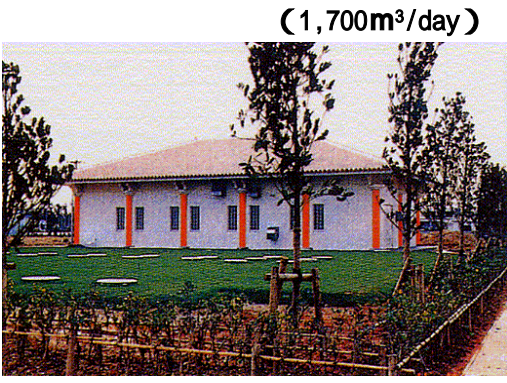
**[do-iyoka system] of Shimukappu, Hokkaido**



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Shimukappu becomes -30 degrees in winter. This facilities are used from 1990.

**[do-iyoka system] of Okinawa**



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The operation and maintenance of do-iyoka system is easy. Because the machine is few.



# Niimi systems of Korea



# Niimi systems of Jiangsu, China

Model facilities 1 in Taizhou



140m<sup>3</sup>/day

Model facilities 2 in Taizhou



40m<sup>3</sup>/day



**The sewage festival is held on the sewage disposal plant**



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**If it is such a way, we can build the sewer**

**I want such  
sewer early**



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