(　　　　　　　　　　　　　　　　　　　　　　　　　　　, 　200092)

4　　　　　　　　　　　　　　　, 　Ekama

　　　　　　　　　　　　　　　, 　4

,

　　　　　　　　　　　, 　　　　　　　MLVSS　　　, 　　　　　COD

COD　　　　　　　　　　　　　,COD　　　　　　　, 　　　　　　　　　COD

　　　　　　　　　　　　　　　, 　　　, 　　0. 45μm

COD　　　　　　　　　　S_{I0}[3]

　　　　　　　, 　　　　　　　　　　　　　　　(IAWQ)

[1]:　　　　　　　(S_I) ,　　　　　　　　　:　　　　　10 d

　　　　, 　　　　　　　　　　; 　　　　　　　, 　　　　　　　,

(X_I) ,　　　　　　　　　　　　　　　, 　COD

　, 　　　　　　　, 　　　　　　　, 　　COD

, 　　　　　　; 　　　　　　　　S_{I0}

(S_S) ,　　　　　　　　　　　1. 2

　, 　　　　　, 　　　　　;

(X_S) ,

　, 　　　　　　, 　　[4 ,5]　　　　　　,

(　　　　　　　S_{I0})　　, 　　　　(　　　　　　,

　　　　　　　) 　　　　　　　,

, 　　　　　　　　,

[6]

1　S_{I0}

[7]　　,

1. 1　　　　　　　　　　　　, 　　　　　　S_S ,

, 　　　　　　　　S_R　　　, 　　　,

, 　　　　　S_S　　　　,COD　　　　　　,

, 　　　　　　S_R　　S_{I0}

　　　S_{I0}　　　　　　　　:

Ekama[2]　1984　　　　　,

S_{I0}　　　　　　(MCRT)　3 d

$$\frac{\mathrm{d}S_R}{\mathrm{d}t} = K_H \frac{X_S/ X_A}{K_X + X_S/ X_A} X_A \qquad (1)$$

COD　　　1986　　　:S_R　　　　　　;t　　　　;

5 d　　　　　　　　;X_S　　　　　;X_A

:　　　　　　;K_H　K_X

· 395 ·

(1)　　　　　　，　　　　　　：

$$\frac{dS_R}{dt} = KX_A \qquad (2)$$

：$K = K_H \dfrac{X_S/X_A}{K_X + X_S/X_A} X_A$ ，

　　　　　S_R　　KX_A　t　　　　　　(3)

(3)　　　　，t　　　X_A　　　　　　　，

　　，　　　　t　　　　　，X_A

　　　Y_{obs}

$$X_A = X_{A0} + Y_{obs}(S_{S0} - S_S) \qquad (4)$$

：X_{A0}　　　　　　　　　　　；Y_{obs}

；S_{S0}　　　　　　　　；S_S

(4)　　　(3)

$$S_R = KX_{A0}\ t + K\ t Y_{obs}(S_{S0} - S_S) \qquad (5)$$

　　S_S　0 ，COD　　　　　　，

$$S_{RT} - mS_{S0} + n \qquad (6)$$

：S_{RT}　　　　　　　　　　　；$m =$
$K\ t Y_{obs}$ ；$n = K\ t X_{A0}$

　　(6)　　　，S_{RT}　　S_{S0}

　　　　　，n

0 ，　　　　　　　　：

$$S_{IT} = S_{RT} + S_{I0} = mS_{S0} + S_{I0} \qquad (7)$$

　S_{IT}

　　　　　　　　(

，　　　　　　10 mg/L) ，

　　　　　S_{S0}　　　　，

S_{IT}　　S_{S0}　　　　，

　　　　　　[8]　　　　　，

　　　　，　　S_{S0}

S_{I0}　　　，

　　　　　，

，

，

，

　　　　　，　　　　，

$S_{I0} + S_{RT}$ ，

　　　　　　S_{RT} ，

(S_{RT})　　(S_{RT})　　，　　　(8)

　　　　[8]

$$(S_{I0}) = (S_{I0} + S_{RT}) - (S_{RT}) \qquad (8)$$

2

　　　　　　　　　　　　　　　　，

　　COD　　　　　　　　　　　，

S_{I0}

，　　　　　　，　　　，

　　　　，　　　　　，

　　　　　3　4

　　　　　S_{S0}　，

　　　　，

　　，　　　，

3

　　　　　　　　，

　　　　　　，

　　　　S_{I0}　　　　　，

，

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by GC-MC. It was shown that the major composition of the wastewater have no change after ozonation , which are biore-fractory organics. Most of the materials , vanished , reduced or generated during ozonation , were proved as biodegradable organics.

Property comparison between lime and limestone as two SO₂ absorbent

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Lime and limestone are the most common wet SO_2 absorbent. Their property comparison is made in several aspects , such as reaction mechanism , control standard , liquid/gas ratio , chemical excessive ratio and so on. They are different in desulfurization mechnism and control standards. Reaction temperature has incoordinately influence on both systems. The liquid/gas ratio and chemical excessive ratio of limetone system are 10 and 1.25 1.60. The liquid/gas ratio and chemical excessive ratio of limetone system are 5.6 and 1.05 1.15 otherwise. The desulfurization efficiency of lime is better than that of limestone.

Comparison of two methods for determination of total nitrogen in aqua-plants

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The Aqua-plants play important roles in constructed wetland for sewage treatment. The review of total nitrogen and total phosphorus in the plants is a major index of sewage purification efficiency by constructed wetland. The total nitrogen(TN) in plant samples on constructed wetland was determined by the Kjeldahl with H_2SO_4-K_2SO_4 + $CuSO_4$ + Se and H_2SO_4-H_2O_2 digested method , respectively. The advantages and shortcomings of these methods were evaluated , and

SPSS was applied to analyze the testing data. The results showed that there was significant difference between the kjeldahl and H_2SO_4-H_2O_2 digested method. The suitable determination method should be selected to base demand of further research works.

Measurement of the initial soluble inert organic matter in wastewater

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Four methods are presented to measure the soluble inert organic matter in the influent wastewater. Some are direct measurements which are offered by Ekama and IAWQ , the others are indirect measurements which exclude the interference of soluble residua , meanwhile the advantages and disadvantages of each method are presented. Direct measurements can be used to municipal wastewater , however indirect measurements can be used to strong industrial wastewater.

Study on volatility and treatment strategy of 2 ,4-dichlorophenol solution

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Some factors such as temperature , pH value and aeration , which could affect the volatility of 2 ,4-dichlorophenol (2 ,4-DCP) , were investigated. The volatility of 2 ,4-DCP could be enhanced with higher temperature , lower pH value and large amount of aeration. The low treatment efficiency by direct-electrolysis was unacceptable. So some important viewpoints and treatment countermeasures were mentioned and raised according to its character.