

Jinan Shoot Biological Engineering Co., Ltd.

Scheme design Product customization

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Electrolytic Salt Sodium Hypochlorite Generator

Sodium Hypochlorite Generator

Sodium hypochlorite generator is A new type of equipment for on-site production of sodium hypochlorite solution, which is suitable for a variety of occasions requiring chlorine-containing disinfection. The main technical indicators of our sodium hypochlorite generator have reached or exceeded the A-level indicators in China GB12176-1990 "Sodium hypochlorite generator".

Working Principle

Under the action of a certain electrode, a series of electrochemical reactions occurred in the electrolytic cell to produce sodium hypochlorite solution.

The chemical reaction process can be summarized as follows:

Anode reaction: $2\text{NaCl} \rightarrow 2\text{Na}^+ + \text{Cl} + 2\text{e}^-$ Cathode reaction: $2\text{H}_2\text{O} + 2\text{e}^- \rightarrow \text{H}_2 \uparrow + 2\text{OH}^-$

Interelectrode reaction: 2NaOH+CI, →NaCI 0+NaCI +H,0

Total reaction: NaCl + $H_2O \rightarrow NaCl O + H_2 \uparrow$

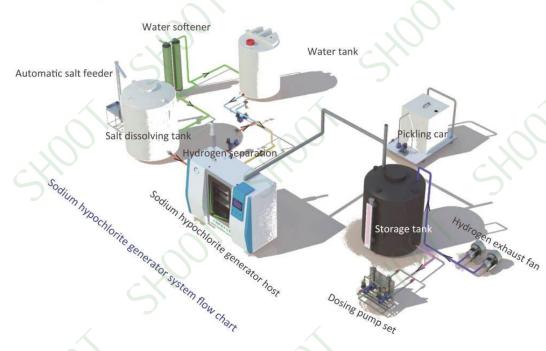
Because the molecular weight of NaCLO is 1.05 times that of CI_2 , and the charge transfer number of each NaCLO molecule is the same as that of CI_2 molecule during oxidation reaction, each gram of NaClO generated in the process of producing sodium hypochlorite through electrochemical reaction is equivalent to 0.952 grams of CI_2 .



Brine concentration: 2.5-3%

When used for water disinfection, raw salt should meet the requirements of the Chinese national standard GB2721 salt hygiene standard.

Sodium hypochlorite generator system flow chart



Sodium hypochlorite generator

System composition

Softened water system, dissolved salt system, proportioning system, electrolytic system, control system, storage system, hydrogen exhaust system, dosing system, safety monitoring system, electrode pickling system

Preparation technology NaCL+H,0→NaCL0+H,↑

Performance characteristics

- * The whole system adopts the patented technology of "modular sodium hypochlorite generator", which reduces the footprint, has high integration, and is easy to install, operate and maintain
- * The dissolved salt system is developed with unique patented technology, uniform brine concentration storage tank with backwash function, good dissolved salt effect, low energy consumption, automatic backwash to reduce products, extend service life.
- * The core electrode of the generator, the anode and cathode are all made of pure titanium as the substrate, and the anode is coated with 20 nm ruthenium-iridium precious metal electrode with a service life of more than 10 years.
- * The electrode groove is equipped with the "electrode pushing device" developed by unique patented technology. The electrolyte flows step by step according to the output and concentration requirements of the equipment to ensure the safe, efficient and stable electrolytic reaction.
- * The generator hydrogen exhaust system adopts the patented technology of "three-level safe hydrogen exhaust device" to discharge and dilute hydrogen in the process of electrolysis, storage, infusion pipeline, etc., to ensure the safety and reliability of the whole system.

Energy consumption index

Index content	Unit	National standard grade			CURVE : TE
		A	В	C	SHINE indicator
Electrolytic cell efficiency	%	>72	>65	>60	Superior to national
Dc power consumption	Kw. h/kg	<4.5	< 5. 0	≪6.5	4. 0
Ac power consumption	Kw. h/kg	<6.0	<7.0	<10	4.5
Salt consumption	kg/kg	<4.0	< 4.5	< 6.5	3. 2
Effective chlorine content	ppm				8000-10000

Field of application

It is suitable for medium and large municipal drainage company, industrial circulating water, oilfield reinjection water, printing and dyeing bleaching and other fields

Equipment parameter

Model number	Effective chlorine content (g/h)	Effective chlorine concentration (g/L)	Installed power(KW)	Main engine size ([*B*H)
ZYC-800	800	8-10	4.8	1100*700*1700
ZYC-1000	1000	8-10	6	1300*700*1800
ZYC-2000	2000	8-10	12	1300*700*1800
ZYC-3000	3000	8-10	18	1500*700*1800
ZYC-4000	4000	8-10	24	1500*700*1800
ZYC-5000	5000	8-10	30	1600*700*1800
ZYC-6000	6000	8-10	36	1600*700*1800
ZYC-7000	7000	8-10	42	1600*700*1800
ZYC-8000	8000	8-10	48	1600*800*2000
ZYC-10000	10000	8-10	60	1600*800*2000
ZYC-15000	15000	8-10	90	1600*1000*2000



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Sodium hypochlorite is widely used for disinfection of various water bodies, including tap water, water, industrial circulating water, swimming pool water, hospital sewage and so on. Sodium hypochlorite can also destroy cyanide ions and benzene rings, etc., used as advanced oxidation to treat cyanide-containing wastewater and some industrial heavy pollution wastewater, and can also be used for bleaching pulp.

Reference value of chlorine added to various water bodies

Application field		Dosage (mg/L)	Water treatment (m³)
Tap water	Underground water	1-2	By the maximum amount of water per hour
rap water	Surface water	2-4	By the maximum amount of water per hour
Secondary water supply		0.2-0.5	By the maximum amount of water per hour
Municipal sewage and reclaimed water reuse		8-12	By the maximum amount of water per hour
Hawital anna	Primary treatment	30-40	By the maximum amount of water per hour
Hospital sewage	Secondary treatment	20-30	By the maximum amount of water per hour
Livestock farm		8-10	As required on site
Fruits and vegetables, meat and other foods		1-2	As required on site
Cyanide-containing wastewater		8-10	By the maximum amount of water per hour
Bleach printing		1-2	By the maximum amount of water per hour
Field reinjection water		40-60	As required on site
Epidemic prevention (spraying, mopping, wiping, soaking)		Dilute about 20 times	As required on site





ON-SITE DEMONSTRATION OF EQUIPMENT



A water plant in Yunnan



A sewage plant in Jiangxi, China



A water plant in Zimbabwe



A water plant in kombocha, Ethiopia



A water plant in Zambia



A Libyan Sewage Treatment



Equipment physical exhibition

















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