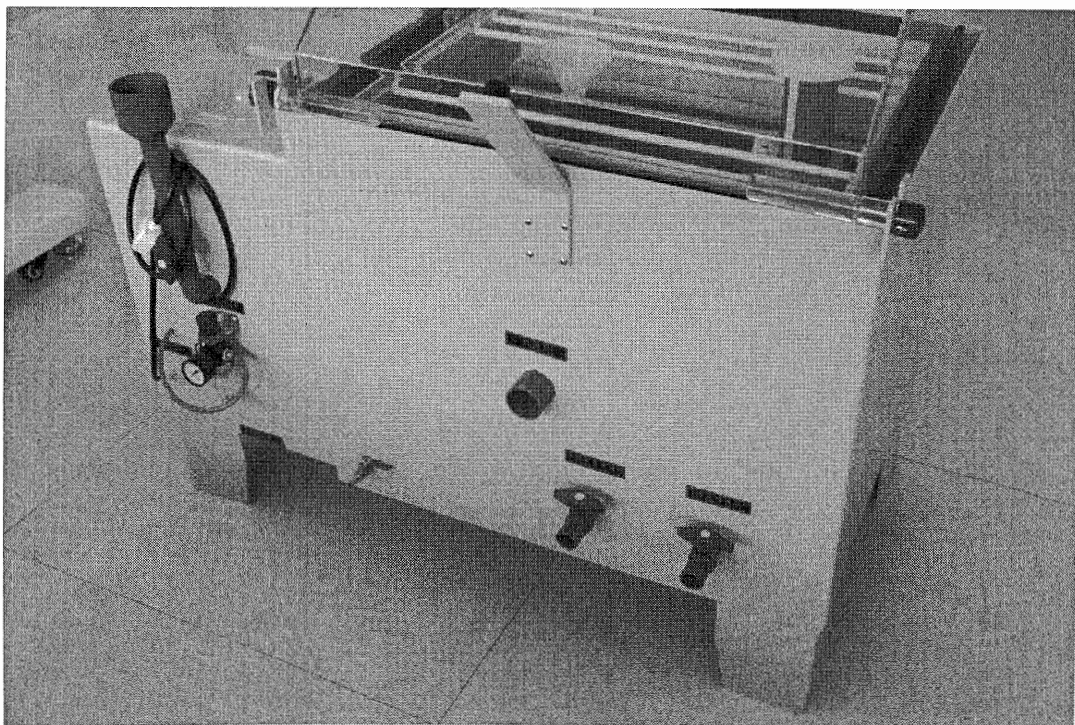


Method of Salt Spray (Fog) Test for Surface Finishing



✧ Scope of application:

This product is used to test the corrosion resistance of the electrodeposited coating of many kinds of metallic materials.

✧ Test procedure:

Use the salt spray test machine to spray the Sodium Chloride Solution onto the surface of electric coating to achieve the purpose of detection.

✧ Main test conditions:

project	During dispensing	During experiments	remarks
Concentration of Sodium Chloride Solution (g/L)	50	40~60	①
PH	6.5	6.5~7.2	②
Compressed air pressure(kgf/cm ²)	...	1.00±0.01	③
Spray amount(ml/80cm ² /h)	.....	1.0~2.0	④
Pressure barrel temperature(°C)	.....	47±1	
Salt water bucket temperature(°C)	.....	35±1	
Laboratory temperature(°C)		35±1	⑤
Relative humidity of testing chamber	.....	More than 85%	⑥
Test time			⑦

- ①Best to calibrate the concentration once a day.
- ②Test the PH value of experiments after collection.
- ③Continuously, cannot interrupt.
- ④Collect once per hour for at least 16 hours, mean the average value.
- ⑤Test at least twice a day, interval seven hours every time.
- ⑥Other humidity required by the seller and the buyer agreement.
- ⑦Continuous time from the beginning to the end.

✧ Preparation of test solution :

Dissolve some reagent grade sodium chloride in distilled water to compound the test solution with a concentration of 5%, PH value should be 6.5~7.3. And reagent solution cannot contain solid suspensions before testing.

Notes:

1. Sodium chloride cannot contain impurity of nickel mixed in. The content of sodium iodide in solid should be less than 0.1%. Because the impurities may contain corrosion inhibitors, the impurity amount should be less than 0.3%.
2. Specific gravity of the test liquid should be 1.0258~1.0402 if the temperature is 33 ~ 35C, if the temperature is about 25C, the range should be 1.0292~1.0443.
3. The PH value of test solution should be adjusted with reagent grade hydrochloric acid or sodium hydroxide solution, and measure with PH meter or other reliable methods.

✧ Equipment:

All equipment needed in the test: Spray nozzle, salt water barrel, test piece support, spray liquid collection container, test chamber, salt water, supply tank, pressure tank, supply equipment and exhaust equipment required for compressed air, the device is shown in Fig, and test as followed.

- ✓ Blunt material is required, it is required that the material itself cannot be corroded, and it can not affect the corrosion test.
- ✓ The fog nozzle cannot spray the test liquid directly to the sample, the solution at the top of the spraying chamber cannot drop on the test piece.
- ✓ The test liquid dropped from test piece cannot flow back to the salt bucket again for the test.
- ✓ The solution should not contain grease and dust, so the inlet air will need to pass through a filter.
- ✓ The surface area of the spray collector is 80 cm², the diameter is about 10 cm. Put the spray collector beside the test piece.
- ✓ Spray liquid should be collected for at least 16 hours, an hourly average can be collected of 2ml to 1ml solution. Use the final average to represent the amount of spray.
- ✓ The concentration of the Sodium Chloride Solution should be maintained at 40~60g/L.
- ✓ The temperature of the pressure barrel should be kept at 47+/-1 degree C, temperature of the brine barrel should be kept at 35+/-1 degree C.

✧ Sample:

✓ Placeholder:

Samples may be taken from the main surface of the product, or directly use the product as a sample. But if the product can't be used to test or judge, you can use a test piece instead, the test piece is required to stand in place of the product.

✓ Size:

The standard size of the test piece is 150*70mm or 100*65mm.

✓ Amount:

The amount of the test pieces depends on actual situation.

✓ Pretest treatment:

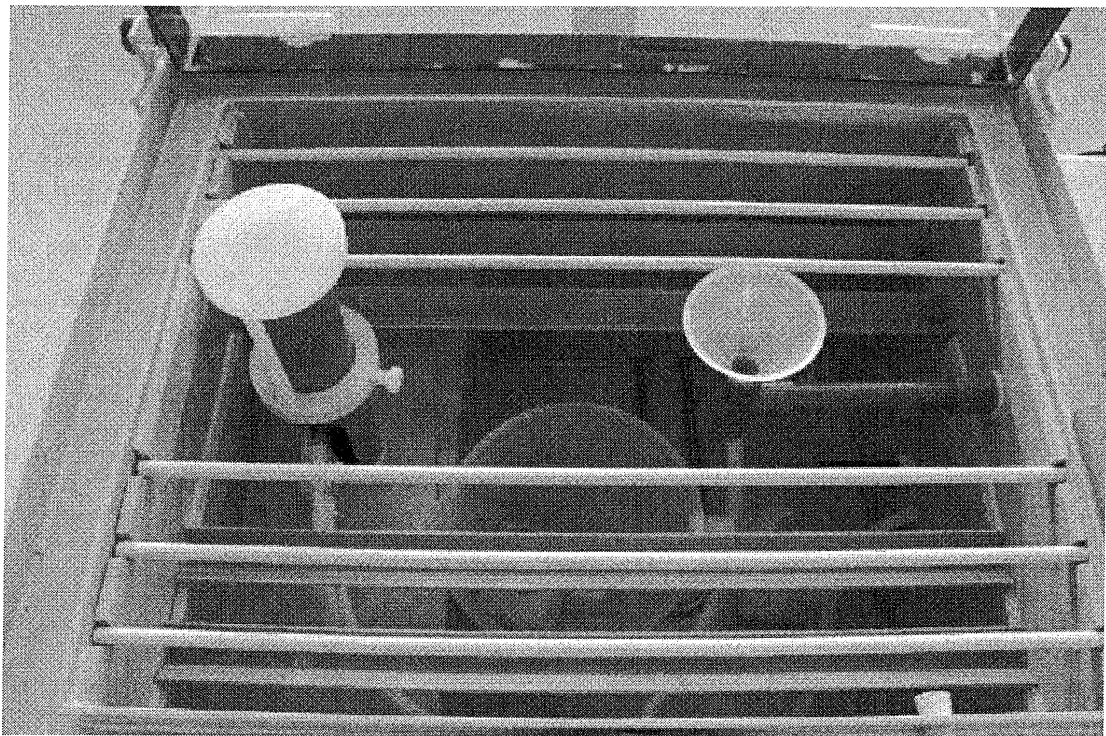
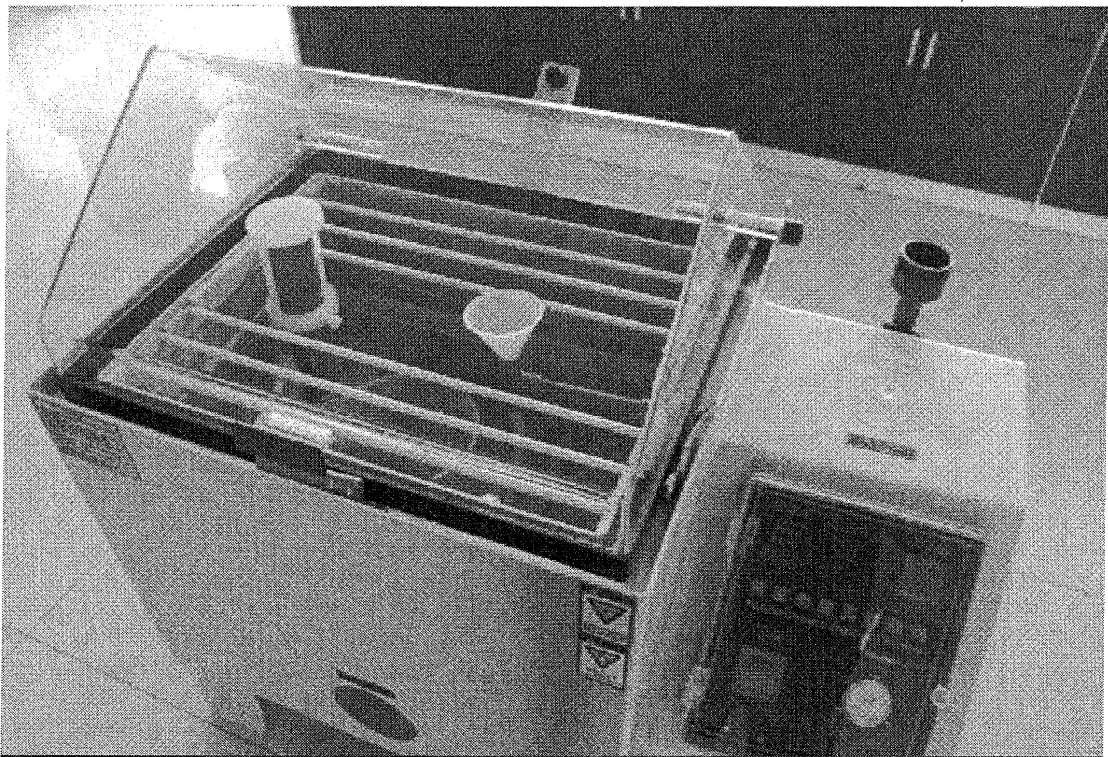
Some cleaning is required depended on the nature of the coating and the degree of cleanliness, the cleaning method should not damage the surface of the test piece.

Fingerprints may affect results of testing.

✧ Sample placement:

- ✓ If you need to test many pieces, make sure that every major surface can be reached by salt fog at the same time.
- ✓ Arrangement of samples: The spray should be free to drop on all the test pieces, allow enough room between pieces to prevent the situation of blocking the spray.
- ✓ Each sample cannot be in contact with each other.
- ✓ Salt spray can't drop from one test piece to another one.
- ✓ Sample identification mark should be marked on the bottom of the test piece.

$$\begin{array}{r} 5\% \text{ of } 15.30 \text{ kg} \\ = 0.765 \text{ kg} \\ = 765 \text{ g} \\ \text{weigh: } 400.13 \text{ g} \\ + 365.06 \text{ g} \\ \hline 765.19 \text{ g} \end{array}$$



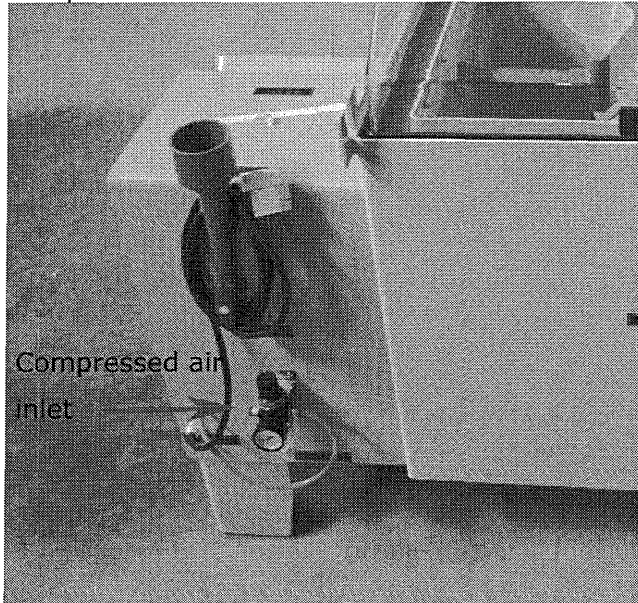
✧ Introduction of product structure:

Test barrel internal structure	
Spray tower	Has a built-in, internal misting nozzle, spraying up the guide tube. The spray is dispersed into the test chamber by a conical diffuser.
Spray regulator	Adjust the amount of the spray, increase or reduce
Collector	The spray collects on a funnel and falls into the cup, then flows through the catheter to the metering cup.
Placing rack	The rack is made of plastic steel, the focus of the weight of not more than 2 kg, if placed to withstand 10 kg.
Heating water tank	The heating water tank with U type heating pipe is used to hold the water heater to keep the temperature of the test chamber stable.
Metering Tube	Collect the amount of spray per test
Water seal tank	Water seal to avoid leakage of salt mist.
Pressure water tank	Warming and humidification of air, after the air is saturated, the air is ejected from the spray nozzle.
Test inlet	Automatic adding salt solution
Test cover	Used to cover the top of the test chamber
Pressure regulating valve	Used to adjust spray pressure, only when the spray switch is turned on can the machine be adjusted.
Pressure gauge	The pressure displayed by the pointer is that of the air heated by the pressure water tank at the nozzle.
exhaust pipe	When doing the experiment, it is best to connect a hose from the salt spray chamber to a bucket, cannot be blocked or seeped.
Test chamber drain valve	Open the valve when the test chamber water needs to be replaced.
Test chamber temperature controller	This controls the temperature of the test chamber.
Pressure tank temperature controller	The temperature safety set value should be 5 degrees higher than the actual temperature.
timer	Can set the time required for the test.
Salt spray test	Set test chamber temperature controller to 35 degrees, and pressure tank temperature controller to 47 degrees.
Corrosion resistance test	Set Chamber temperature controller to 50 degrees, and pressure tank temperature controller to 65 degrees.
Chamber water shortage light	When the chamber is short of water, the light comes on, indicating more water should be added.
Pressure tank water shortage light	When the pressure tank is short of water, the light turns on, indicating more water should be added.

1. (C) in ID
19 MOD

✧ Introduction of usage

1.Plug in 110 V supply, insert trachea (diameter 8mm) into the compressed air inlet.



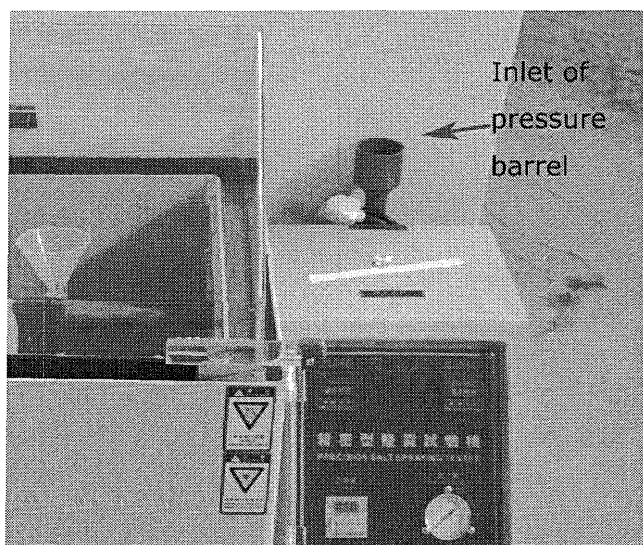
Notice: The inlet pressure is 2kg/cms.

2.Turn on the POWER switch. The operating board will display 3 lights. CHAMBER WATER SHORTAGE LACK BRINE PRESSURE WATER SHORTAGE.

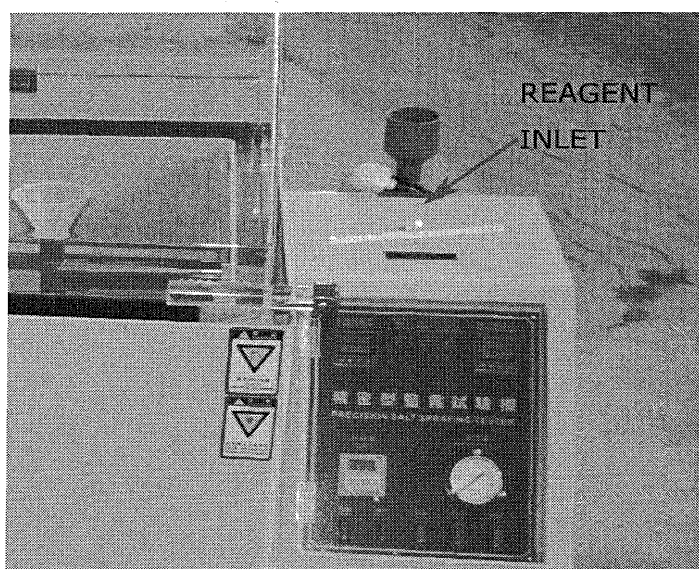


3. If CHAMBER WATER SHORTAGE is lit. Add water(tap water) into the chamber cabin until the red light turns off.

4. If PRESURE WATER SHORTAGE is lit. Add water (tap water) into the INLET until the red light turns off.

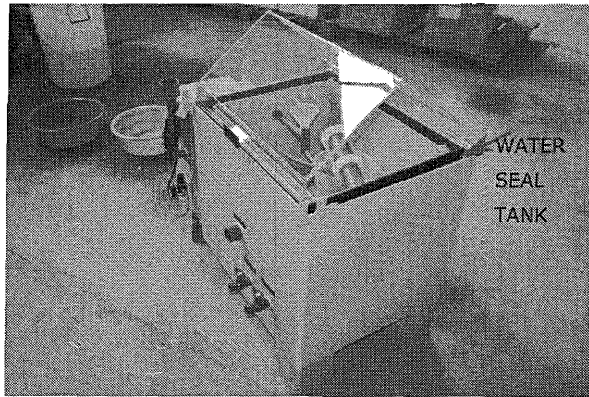


5. If LACK BRINE is lit. Add salt water into the REAGENT INLET until the red light turns off.



Notice: The proportion of Configuration brine : NaCl 500g, Water 9500ML.

6. Close the transparent lid, adding enough water into the WATER SEAL TANK to cover the lip completely.



7. Turn on the OPERATING switch, set the CHAMBER TMP and PRESSURE TMP. The CHAMBER TMP is 35C. PRESSURE TMP is 47C. Then put in the V shelf and the O Support rods. Putting the experimental object on the shelf.



8. Turn on the SPRAY switch. Adjust the PRESSURE VALVE to 1kg/cms



Do not set to more than 1kg/cms, or the high pressure will damage the pipe.

9. Set the TIMER and turn on the TIMER switch.