

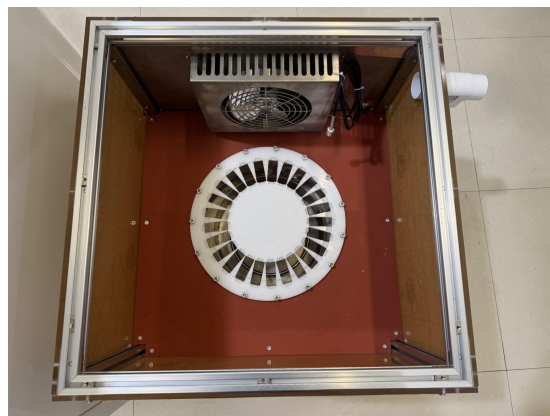


XD-NSGFS-F1

# 耐蚀钢气氛试验箱

Corrosion-resistant steel atmosphere test chamber mainly evaluates the corrosion resistance of corrosion-resistant steel base material and welding material in high temperature and high sulfur atmosphere by simulating the atmospheric corrosion condition of the upper deck of cargo oil tank of crude oil tanker, so as to ensure that corrosion-resistant steel meets the technical requirements of atmosphere test in IMO MSC.289(87).

The equipment consists of electric control system, refrigeration system, heating system, gas mixing system, alarm system, man-machine interaction system, etc. The inner container is welded with titanium plate.



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## Technical Specification

| Type                      | XD-NSGFS-F1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inner cabinet material    | Polymethyl methacrylate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Freezer size              | 590*590*310                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Inner cabinet top cover   | φ 400mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Structure of test cabin   | Aluminum alloy support frame                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Water tank material       | Titanium alloy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Gas component             | Separate control of nitrogen, carbon dioxide, oxygen, hydrogen sulfide and sulfur dioxide; The concentration ratio of the five gases can be adjusted, among which, it is required that the concentration composition injected into the test chamber after mixing can achieve (4 1)% O <sub>2</sub> , (13 2)% CO <sub>2</sub> , (100 10) μg/GSO <sub>2</sub> , (500 50) μg/GH <sub>2</sub> S and (83 2)% N <sub>2</sub> . The control accuracy of hydrogen sulfide and sulfur dioxide is 10μg/gso <sub>2</sub> and 50μg/gh <sub>2</sub> s. |
| Instrument resolution     | 0.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Temperature fluctuation   | ±0.5°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Thermal balance mode      | Electric heating, PID+SCR Balance regulation control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Temperature uniformity    | ≤1.5°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Temperature sensor        | PT100 Magnetic attraction sensor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Control instrument        | Delta thermostat DTK series                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Power regulating assembly | Solid-state relay SSR 40A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| PLC                       | Siemens SMART 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |



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# Matching projects for users

## Facility request

|              |                                                                               |
|--------------|-------------------------------------------------------------------------------|
| Power Supply | Power Supply : AC220V 50Hz                                                    |
|              | Maximum load capacity : 4KW                                                   |
|              | Maximum current : 5A                                                          |
|              | Power switch capacity : 32A                                                   |
|              | Titanium alloy                                                                |
| Supply water | Please use pure water or distilled water,<br>electrical conductivity≤10μS/cm2 |

## Moving-in condition

|                                                                                                            |                                                                                                          |
|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Please meet the conditions<br>on the right when moving in<br>the components and parts<br>of our laboratory | Height of path passage and door: above 2200mm                                                            |
|                                                                                                            | Width of path passage and door: above 1500mm                                                             |
|                                                                                                            | When using the elevator; In addition to the above dimensions,<br>the following requirements must be met. |
|                                                                                                            | Depth: more than 2300mm; Load capacity: more than 1000Kg                                                 |
|                                                                                                            | ※If the above conditions cannot be met,<br>please be sure to contact our company in advance.             |

# Ordering information

| Type        | Name                                          |
|-------------|-----------------------------------------------|
| XD-NSGFS-F1 | Corrosion-resistant steel atmosphere test box |

