

CYCLIC CORROSION TEST CHAMBER



SESS

Sri Easwari Scientific Solution (SESS)

Sri Easwari Scientific Solution, known fondly among customers as SESS, a leading solution based organization in Environmental test solutions, has been at the forefront of cutting edge technology ever since its inception from the Year 2010. Over the years we have acquired expertise by closely working with customers and specialized in many Areas. But, above all it's because of our deep commitment to our core values and principles which are more focused towards customer centric makes us stand out.

Our products are capable of testing small as well as large components, assemblies and finished products by simulating a wide range of temperature and humidity environment and can be used for direct testing and also as a controlled storage versatile laboratory environment for conducting test procedures in the telecommunication, defense, aerospace, pharmaceutical, automotive and electronic industries.

CYCLIC CORROSION TEST CHAMBER (CCT)

The Cyclic Corrosion or salt spray test (also known as salt fog or salt mist) has been the bench-mark corrosion test in many industries for decades. With such a long history, so much test data and many international test standards written around it, it remains a very popular choice as a relatively quick comparative test, to check whether test samples corrode or not, in accordance with the expectations. Its main application is therefore to audit the effectiveness of a production process

Standard salt spray test chambers meet the requirements of basic and continuous salt spray tests conducted at a single temperature only, based on ASTM B117 and similar international test standards, and may be used with pH neutral salt solutions (NSS) or those acidified by the addition of Acetic Acid (ASS) or Cupric Acid (CASS).

SESS CYCLIC CORROSION TEST CHAMBERS are designed to be flexible enough to comply with as many different CCT specifications as possible. As standard they come with the ability to create 4 distinct climates: which may be programmed to occur in any sequence and be repeated automatically. By choosing from a wide range of optional accessories, these climates may be added to as required to further extend the number of climates and conditions that can be created.

1. Salt spray
2. Condensation humidity (wetting)
3. Air drying
4. Controlled humidity

SESS Cyclic Corrosion Test Chamber (CCT) complies with International Standards like

- ▶ IS9000
- ▶ ASTM B117
- ▶ UNICHEM
- ▶ CASS TEST ASTM B 368
- ▶ IS5528
- ▶ JIS 2371
- ▶ DIN ISO V9227

SESS CYCLIC CORROSION TEST CHAMBER ADVANTAGES

FRP/Plastic execution

Cyclic Corrosion Test (CCT) systems are completely made of FRP, anti-corrosive materials. The test compartment has been moulded from a single FRP to ensure long-life and perfect seal. External panels are completely removable for easy maintenance.

Heating

Shell-type heating system insulated with self-extinguishing glass wool

Access hood

- ▶ Completely transparent poly carbonate hood
- ▶ Reversed V-form to allow a better inspection of the test environment and a better

flowing of condensation drops to prevent them from falling onto the specimens under test

- ▶ Servo assisted opening/closing by means of small gas pistons to make the hood lighter
- ▶ Full-tight silicon gasket for perfect seal between the access hood and the test compartment

Air humidification

- ▶ By blowing compressed air into a thermo-regulated bath
- ▶ Humidifier made of stainless steel 304
- ▶ Indicator showing relative humidity

Salt solution tank

- ▶ Made of anti-corrosive FRP
- ▶ Capacity: 50 liters (according to most standards)
- ▶ Possible connection to an external tank (optional)

conducted automatically. In the first case, the humidification of compressed air is commanded automatically; in the second case, it is automatically switched off (dry air).

sprayed inside the test chamber through an adjustable universal nozzle made of acrylic (an anti-corrosive material), mounted on a flexp glass support. It is possible to adjust the intensity and precision of the spray by adjusting the speed of the membrane pump (automization). At the end of

tests, it is also possible to reduce the fumes inside the chamber by means of compressed air so as to discharge all residual fumes before opening the hood.

Automatic tests

All tests are performed either with continuous or alternate salt spray; they may be also

Salt solution automation design

The The salt solution is

Control and regulation system

Based on a PLC structure, it has a control panel consisting of on screen keyboard allowing the setting of the necessary parameters to

perform automatic and cyclical tests. The following parameters may be set and displayed on the control panel:

- ▶ Temperature
- ▶ Number of cycles

- ▶ Test duration
- ▶ Membrane pump (on/off)

Output data are saved by the PLC and displayed on the monitor.

Alert and warning functions are also available to ensure

the correct chamber operation. Few of the alerts & warnings are,

- ▶ DM water low
- ▶ Compressed air low
- ▶ Salt solution low

TECHNICAL SPECIFICATIONS

Chamber Body	Fully Moulded FRP/SS316	Alarm output	Buzzer output
Temperature range	Above Ambient temperature +5 deg C to +55 deg C $\pm 1^{\circ}\text{C}$ (optional refrigeration system)	Cycling test	Available
Humidity	95% to 100%	Profile	10 profile and each profile will have 20 Segments
Fog collection	Between 0.5 to 2 ml per hour	cycle Repitation test	Available Max 999 Repitation
Controller System	Omron/watlow PLC with 7.0-inch Wide TFT, 65,536 colours, WVGA 800 x 480 pixels COM I/F x 2,USB A/mini-B I/F, DC24V,	Fog vent	Available
specimen racks	Specimen mounting Adjustable Rack	Dry Air purging system	Available
Lid	Fully polycarbonate sheet plain	Non Humidifier spray system	Available
Parameters on the HMI Display	Temp, RH , PH	Calibration offset (HMI)	Available For Temp, RH , PH,
Air regulator	Available (Air regulator, Pressure gauge)	Data logging	Through USB from HMI available (in excel format)
Alarm output	AST water low Level, solution low level, wet bulb wick tank low level, Chamber over temperature alarm, Humidifier over temperature Alarm, low air pressure alarm, Door open alarm	Graph	Available
		PC software	Optional

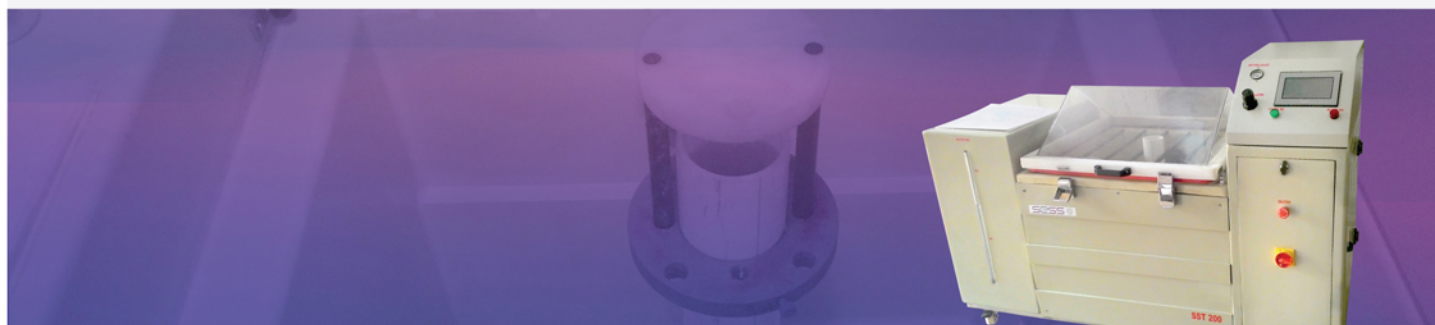
Safety protection

- ▶ Back up fuses protection for mains and individual circuit.
- ▶ Over temperature safety cut off thermostat with audio visual alarm.
- ▶ Water level controller with automatic refilling arrangement for air saturator tower.
- ▶ Solution low level indicator with alarm
- ▶ Air compressor low pressure indicator with alarm
- ▶ Door open close indicator with alarm

ORDERING INFORMATION

CHAMBER BODY MATERIAL	MODEL	INTERNAL SIZE (MM)				POW KW	VOLTAGE V/HZ**	OPTIONAL REFRIGERATION SYSTEM
		W	D	H	H*			
FRP	SST 200	700	600	500	750	3.5	230/50/1+G	
FRP	SST 600	900	640	810	1100	4.5	230/50/1+G	YES
FRP	SST 1200	1700	640	810	1100	5.5	230/50/1+G	YES
INNER FRP / OUTER SS316	SST 2300	2000	1000	1000	1300	7.5	415/50/3/N+G	YES

H* height is inclusive of hood *** voltage tolerance + or - 10%, G - Ground and N - Neutral



CORROSION TEST RESULT



MAIN DISPLAY



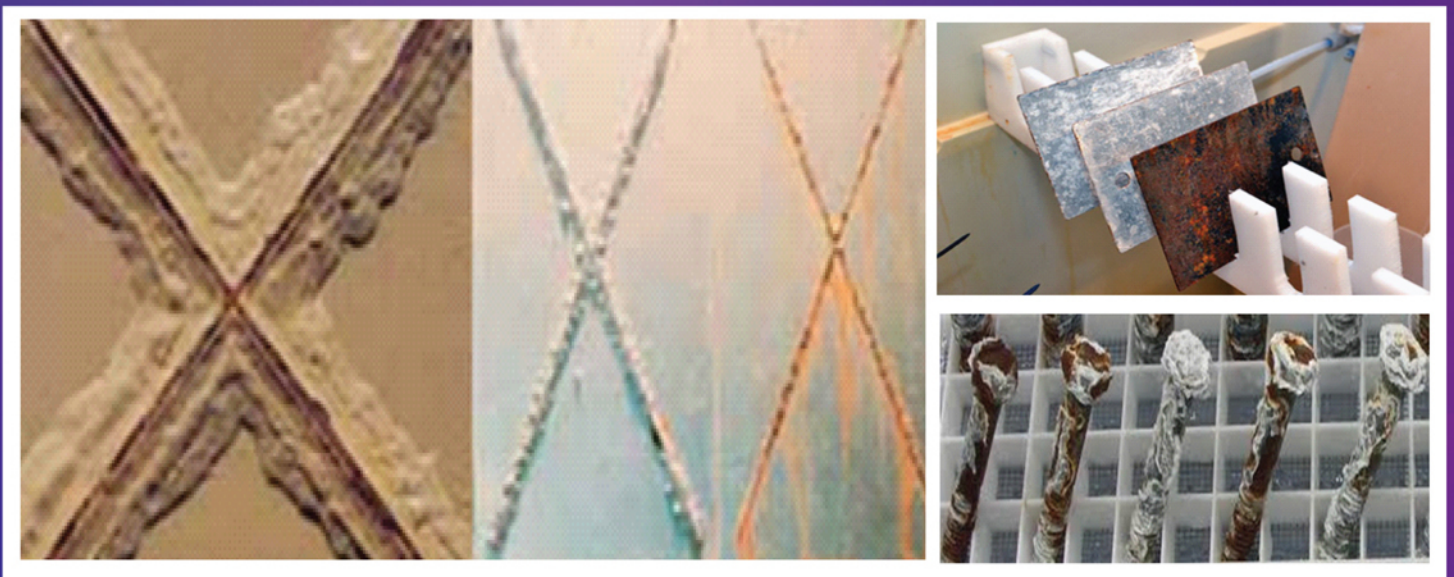
MANUAL MODEL DISPLAY



PROFILE DISPLAY PAGE



DATA LOGIN



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