



innovative solutions

LABORATORY HOT SET TEST APPARATUS FOR XLPE CABLES. SSI 521 HSH As per IS: 10810 (Pt. 30) & IS: 7098 (Pt.1, 2 & 3)



An ISO 9001:2008 Company
GMP compliant

Laboratory Hot Set Test Apparatus is designed to determine the elongation & permanent set of insulation of armored and unarmored single, twin, three, four and multi-core cross linked Polyethylene (XLPE) insulated & PVC sheathed cables for electric supply and control purposes under specified conditions of load temperature and air flow, as specified in IS: 7098.

- A double walled cabinet with inside chamber of stainless steel and outside of mild steel duly painted. Inner dimensions of the chamber are 30 cm x 50 cm x 20 cm (W x H x D). The door is fitted with a full view glass to observe the specimen under test.
- Temp. Range of the oven is ambient to $250 \pm 2^{\circ}\text{C}$. at sensor point, controlled by PI digital temperature indicating controller. The test requirement as per IS: 7098 is $200 \pm 3^{\circ}\text{C}$ for 15 minutes.
- The **oven is designed to give 8 to 20 air changes per hour**. The air inlet is provided at the bottom in such a way that air flows over the surface of test pieces and leaves near the top of the oven. An digital air flow meter (from Omron Japan) is fitted to monitor the airflow rate. The air can be controlled using the needle valve provided on the panel.



(Actual instrument may differ from the photograph due to regular improvements)

S.S. INSTRUMENTS PVT. LTD.

TRIVENI COMPLEX, E-10-12, JAWAHAR PARK,
LAXMI NAGAR, DELHI 110 092

Ph: +91 (11) 2242 5415, Telefax: +91 (11) 2244 0417,

Email: info@ssinstruments.com, Web Site: www.ssinstruments.com



innovative solutions

LABORATORY HOT SET TEST APPARATUS FOR XLPE CABLES. SSI 521 HSH As per IS: 10810 (Pt. 30) & IS: 7098 (Pt.1, 2 & 3)



An ISO 9001:2008 Company
GMP compliant

- ✚ Grips are provided at the top of the oven to hang specimen/s. For each sample a set of suitable weights up to 1 kg are provided with provision to attach the weights to one end of the test pieces.
- ✚ For **measurement of elongation two dial gauge of 50 mm travel is provided which enables the operator to read elongation directly on the dial gauge from outside without opening the door**, i.e., by keeping the temperature \ air flow conditions same. (Model with one dial gauge (A rod with two arrow pointer is provided with one gauge models for measuring both samples with same gauge)or without the dial gauge is also available, (for elongation measurement, it is fitted with stainless steel scale). A blade is provided in the oven to cut the sample to remove the tensile force without opening the door.

Difference between Hot Air Oven and Hot Set Oven :

The test requirement is 8 to 20 air changes per hour, measured on a Flow Meter. According to IS standard, if the **Oven does not have a regulated air supply, the oven is then termed as a Hot Air Oven and not a Hot Set Oven** (as offered by some manufactures) and cannot be used for this kind of test

Also if normal oven is used for the test, the operator will have to open the front door to hang the samples, resulting in loss of temperature. As the test is only 15 mins, it will not be possible to regain the temperature. In our Hot Set oven, we use an **especially designed Top Hanger** which can be hanged from the top of the Hot Set Oven, without opening the front door. To achieve minimum loss of temperature, we provide two hanger assemblies. One is used as dummy that is used for achieving the desired temperature. In the meanwhile operator can assemble the sample, weights etc on the other hanger, which can be then put in the oven, just by replacing the dummy into the oven. This way the loss in temperature is not more than few degrees.

- Air source to provide 8-20 air changes per hour, a compressor \ compressed air line of 4 to 10 liters \ min. is required. If this facility is not already available, a suitable air compressor (Model SSI-502B.2) may be purchased from us.
- Sample Conditioning: The test specimens are required to be kept at a temperature of 27 ± 2 deg C for a period of 16 hours, immediately before the test. If the conditioning chamber is not available with you, the same (Model SSI-507A) can be purchased from us.

S.S. INSTRUMENTS PVT. LTD.

TRIVENI COMPLEX, E-10-12, JAWAHAR PARK,
LAXMI NAGAR, DELHI 110 092

Ph: +91 (11) 2242 5415, Telefax: +91 (11) 2244 0417,

Email: info@ssinstruments.com, Web Site: www.ssinstruments.com



innovative solutions

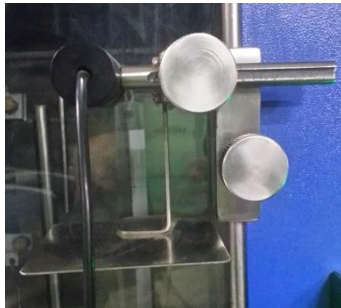
LABORATORY HOT SET TEST APPARATUS FOR XLPE CABLES. SSI 521 HSH As per IS: 10810 (Pt. 30) & IS: 7098 (Pt.1, 2 & 3)



An ISO 9001:2008 Company
GMP compliant



Weights



Laser Pointer System



Sample Hanging system



Extra Dummy Hanger



Grips

S.S. INSTRUMENTS PVT. LTD.

TRIVENI COMPLEX, E-10-12, JAWAHAR PARK,
LAXMI NAGAR, DELHI 110 092

Ph: +91 (11) 2242 5415, Telefax: +91 (11) 2244 0417,

Email: info@ssinstruments.com, Web Site: www.ssinstruments.com



innovative solutions

LABORATORY HOT SET TEST APPARATUS FOR XLPE CABLES. SSI 521 HSH

As per IS: 10810 (Pt. 30) & IS: 7098 (Pt.1, 2 & 3)



An ISO 9001:2008 Company
GMP compliant

Parameter Screen

Set Oven temprature (Deg. C)

Set Airflow (Use Needle Valve To Set The Airflow)

Temp Status Screen TIME Setting Remote Access Save Screen

Temperature Status

Present Temperature °C

Present Airflow LPM

Please prepare the sample assembly along with weights on the spare hanger. Please put small marks on the sample 20 mm apart.

Parameter Screen

Operator Screen

Company/Customer

Operator name

Sample No

Sample Discription

Input Test Duration MIN

Put the Sample along with Hanger in the Oven

Save Screen

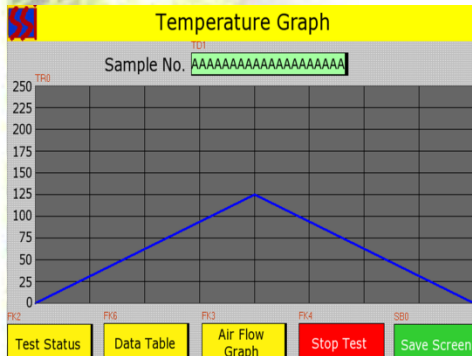
Test Status Screen

Present Temperature (Deg.C)

Present Air Flow (LPM)

Remaining Test Time (MM:SS)

Data Table Temperature Graph Stop Test Elongation Screen Save Screen



Measure the Elongation

Point Laser to the Marks on Sample

Left Sample	Right Sample
Input Initial Distance between Marks <input type="text" value="###.##"/>	Input Initial Distance between Marks <input type="text" value="###.##"/>
<input type="button" value="Please Wait!!!!"/>	<input type="button" value="Please Wait!!!!"/>
<input type="button" value="Please Wait!!!!"/>	<input type="button" value="Please Wait!!!!"/>
Final Elongation in mm <input type="text" value="###.##"/>	Final Elongation in mm <input type="text" value="###.##"/>

Test Status Test Results Save Screen

Test DataTable

Sample No.

Time	Temp	Air Flow	Time	Temp	Air Flow	Time	Temp	Air Flow
1	###.##	###.##	11	###.##	###.##	21	###.##	###.##
2	###.##	###.##	12	###.##	###.##	22	###.##	###.##
3	###.##	###.##	13	###.##	###.##	23	###.##	###.##
4	###.##	###.##	14	###.##	###.##	24	###.##	###.##
5	###.##	###.##	15	###.##	###.##	25	###.##	###.##
6	###.##	###.##	16	###.##	###.##	26	###.##	###.##
7	###.##	###.##	17	###.##	###.##	27	###.##	###.##
8	###.##	###.##	18	###.##	###.##	28	###.##	###.##
9	###.##	###.##	19	###.##	###.##	29	###.##	###.##
10	###.##	###.##	20	###.##	###.##	30	###.##	###.##

Test Status Temperature Graph Air Flow Graph Stop Test Save Screen

Test Result Screen

Sample No.

Test Time MIN

Average Temperature During Test °C

Average Air Flow During Test LPM

Elongation Sample 1 MM

Elongation Sample 2 MM

New Test Instrument Shutdown Elongation Screen Save Screen

S.S. INSTRUMENTS PVT. LTD.

TRIVENI COMPLEX, E-10-12, JAWAHAR PARK,
LAXMI NAGAR, DELHI 110 092
Ph: +91 (11) 2242 5415, Telefax: +91 (11) 2244 0417,
Email: info@ssinstruments.com, Web Site: www.ssinstruments.com