

HST-L600 600KN Insulator Electromechanical Test Machine

(Includes supporting power frequency voltage test equipment, insulation test samples, and connecting hardware)



1. Introduction

HST-L series insulator Testing Machine is suitable for simultaneous mechanical load and high voltage testing of porcelain insulators, glass insulators and suspension insulators.

Based on the mechanical and electrical joint test standards and combined with actual operations, the difficulty of automatically conducting mechanical tests under the application of high voltage electricity was solved. Through the optimization of circuits and controls, automatic mechanical tests under 100KV high voltage were successfully completed (the highest voltage currently commonly used is 70KV), and High voltage and mechanical control are controlled on the same console. After setting the force value parameters and voltage parameters in the program, the mechanical load and voltage are automatically applied. Manual intervention is no longer required. The voltage parameters and mechanical parameters are displayed on the same program interface. The device will It is combined with mechanical control instead of being separated into two separate

devices.

The control system components use well-known components such as Schneider and Siemens, and are internally optimized for high-voltage interference to ensure stable and reliable data transmission.

The hydraulic system adopts imported Italian Athos servo valves and imported Italian Mazzucci high-pressure gear pumps in response to the application of high voltage, and uses insulation measures during assembly to ensure the working accuracy of the servo valves.

The main engine adopts a closed protective cover, with plexiglass installed on the front and sides and embedded steel mesh to facilitate observation and prevent porcelain from splashing. A fence (about 1.5 meters high) is set up around the main engine, hydraulic station and transformer to isolate the high-voltage source. If the fence door is opened, an interlock device is installed on the fence door, and all mechanical parts and high-voltage parts of the equipment that do not close the door cannot be started.

We are equipped with dedicated test products, ball head and ball socket connection hardware, and random maintenance tool boxes for each model.

2. Main Parameter on Main Host

1. Maximum test force: 600kN (60 tons)
2. Test force measurement range and accuracy: 10-600kN, test force accuracy: better than $\pm 1\%$ (equivalent to 4 levels)
3. Displacement measurement range and accuracy: 300mm; $\pm 0.5\%$
4. Maximum distance between stretching jaws (excluding piston stroke and clamp): 1100mm
5. Upper and lower pressure plate size: 204x204mm
6. Effective test space (distance) between left and right columns: not less than 830mm
7. Maximum piston stroke: 300mm
8. Stretching speed: 0-100mm/min
9. Microcomputer controlled tensile load rate: 15kN/min-600kN/min

10. Microcomputer controlled test force and other rate control range: 0.1~100%FS/min, control range: 2~100%FS

11. The host structure is an upper-mounted hydraulic cylinder, with microcomputer servo loading.

12. Technical parameters of microcomputer control:

12.1. Test force measurement display part:

(1).Measurement method: Use high-precision load cells to measure test force

(2).Test force display mode: microcomputer screen display

12.2 Displacement measurement display part:

(1).Measurement method: Use high-precision photoelectric sensor to measure piston displacement

(2).Displacement display mode: microcomputer screen

12.3 Automatic control part:

(1).Control mode: microcomputer closed-loop automatic control/manual open-loop control

(2). Automatic control valve: imported high-precision and high-bandwidth electro-hydraulic servo valve

(3).Control mode:

a.Constant rate piston stroke control

b. Constant rate test force control

c. Automatic tensile test control

High voltage part:

13. Equipment capacity: 25kVA

14. Maximum output voltage: 100kV

15. Transformer: dry type

16. Voltage accuracy: $\pm 1\%$

17. Connection method: M56*4 thread

18. Accessories: One special insulating test product, one set each of 16, 20, 24, 28, 32 ball heads and sockets (M56*4), a total of five sets

19. Total weight of equipment: about 5.5 tons

20. Equipment power: 5.5KW

3. Standards

1. GB/T 2611-2007 "General Technical Requirements for Testing Machines"

2. GB/T16491-2008 "Electronic Universal Testing Machine"

3. GB/T 775.3-2006 "Insulator test methods Part 3: Mechanical test methods"

4. GB/T21429-2008 "Hollow composite insulators for outdoor and indoor electrical equipment - Definition, test methods, acceptance criteria and design recommendations"

5. GB11032-2010 "AC gapless metal oxide arrester"

6. GB 8170-87 "Numerical Rounding Rules"

7. GB/T 1001.1-2003 "Overhead line insulators with a nominal voltage of 1000V - Part 1: Porcelain or glass insulator components for AC systems—Definitions, test methods and criteria"

8. GB/T2611 "General Technical Requirements for Testing Machines"

9. GB228 "Metallic Materials Room Temperature Tensile Test Method"

10. GB/T2317.1-2008 "Test Methods for Electric Power Fittings Part 1: Mechanical Test"

11. GB/T1179 "Round wire concentrically twisted overhead conductors"

HST GROUP Co., LTD.

NO. 4915, West Jingshi Road, Jinan 250012, PR CHINA.

Tel: +86-159 1008 1986

www.hssdgroup.com - e-mail: admin@hssdtest.com