

Technical Specifications

ZY6113

Plenum Cable

Steiner Tunnel Furnace



Scope of Application	For plenum testing of CMP-rated electrical cables and optical fiber cables.
Standards Compliance	UL910 / NFPA 262
Air Inlet Chamber	Composed of L-shaped stainless steel plates and stainless steel components
Rectangular opening	H298.5mm × W464 mm
Combustion Chamber Size	Length 7.62m
Observation Window	Double-layer 6mm heat-resisting glass; Size: 75 × 280 mm
Burner	Dual-port elbow burner nozzle with a nozzle diameter of 19 mm
Igniter	High-voltage electronic ignition system with remote computer control.
Gas	Methane with a purity of over 98%.
Cable Specimen Mounting	Ladder-type cable tray with a total assembly length of 7.32 m ± 51 mm and a support point height of 165 mm
Exhaust Transition Section	Double-layer structure made of SUS304 stainless steel, consisting of an exhaust section and a reducer.
Exhaust Section Dimensions	902 × 686 × 438 mm
Reducer Dimensions	Length 457 mm, transitioning from a 686 × 438 mm rectangular opening to a Φ406 mm circular pipe
Exhaust Pipe Length	5.0 m (from Φ406 mm reducer centerline to smoke density system).
Exhaust Pipe Material	Double-layer SUS304 SS with 50 mm ceramic fiber insulation
Wind Speed Measurement	Bidirectional probe & micro-differential pressure gauge; Range: 0.25 ~ 100 Pa
Temperature Sensor	Ni-Al alloy Type K thermocouple Measurement Range: 0 ~ 1000 °C Resolution: 1.0 °C Response Time: T90 time ≤ 5 s
Smoke Density Measurement	Consists of a transmitter and a receiver. The distance between the light source and the receiver is 914 mm ± 51 mm.
Motorized Exhaust Valve	Located 1.68 ± 0.15 m downstream of smoke density system
Exhaust Fan Power	3 kW, AC 380V, 50Hz
Chamber Temp. Measurement	Ni-Cr (Type K) thermocouple; Wire diameter: 1.0 mm.
Analytical Instrument	Analytical Instrument
Oxygen Measurement	paramagnetic measurement
Carbon Dioxide (CO ₂) Analyzer	NDIR (Non-Dispersive Infrared) analyzer
Carbon Monoxide (CO) Analyzer	NDIR (Non-Dispersive Infrared) analyzer
Data Acquisition System	Advantech digital acquisition module.
Data Acquisition Frequency	2 times/s
Temperature Accuracy	±0.5°C
Control System	LC programming, Human-Machine Interface (HMI), and computer control