

SYD-2801I Automatic Penetrometer



Summary

1. The instrument is designed and made as per the standards GB/T4509 Standard Test Method for Penetration of Bitumen, T0604 Bitumen Penetration Test in the standard JTJ052-2000 Specifications and Test Methods of Bitumen and Bituminous Mixtures for Highway Engineering and ASTM D5.
2. The instrument is suitable to determine the penetration of highway bitumen, modified asphalt, as well as liquid petroleum asphalt or residue of emulsified asphalt after evaporation.
3. The penetration of bituminous materials is expressed as the distance that a $100\text{ g}\pm 0.05\text{ g}$ standard needle vertically penetrates into the sample without measurable fraction in 5 s at a constant temperature bath of $25\pm 0.1\text{ }^{\circ}\text{C}$. It is used for evaluating the consistency of asphalt. The larger the penetration is; the thinner and softer the asphalt is.
4. The instrument can also be used for inspecting industry materials such as a solid granule, powder, colloid, as well as food materials such as cream, glycine, etc. It has been widely used in the field of food industry, highway and traffic departments and other departments.

I. Main technical specifications

1. Measurement range: 0 penetration \sim 600 penetrations;
2. Resolution: 0.1 penetration;
3. Timing range: 0s \sim 60 s, and the error is less than $\pm 0.1\text{ s}$.
4. Heating power: 200 W;
5. Temperature controlling accuracy: $25\pm 0.1\text{ }^{\circ}\text{C}$ (Note: the ambient temperature should not be higher than 20°C);
6. Data saved: 30 groups;
7. Constant temperature bath: harden glass container;
8. Stirrer: a magnetic stirrer;
9. Standard needle: $2.5\pm 0.05\text{ g}$ and it conforms to the requirements of GB/T4509 and T0604.
10. Shifting holder: It has two ways to adjust the height of standard needle, so it is convenient to let the needle tip just touch the sample surface.
11. Power supply: AC 220 V $\pm 10\%$, 50 Hz.