

## 插入式静电传感器空间滤波法流速测量

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摘要：

由插入式静电传感器的点电荷数学模型得到了流速的空间滤波测量原理，同时在实时测量流速的过程中采用了“3dB”原则获取信号的截止频率。通过实验验证了插入式静电传感器空间滤波原理的可行性，并在流速为2—7m/s时，分别进行了实验验证。

关键词： 插入式静电传感器；空间滤波；测速；截止频率

## The flow velocity measurement with Spatial filter principle based on the electrostatic sensor inserted

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**Abstract:**

The spatial filter measurement principle of flow velocity is obtained by point charge mathematical model of the electrostatic sensor inserted, and signal cut-off frequency is acquired with “3dB” principle during real-time measuring flow velocity. Experiments prove that the spatial filter measurement velocity principle of inducement probe is feasible, and experiments separately examine the flow velocity with this measurement priciple in range of 2-7m/s.

**Keywords:** The electrostatic sensor inserted; The spatial filter; Measuring velocity; Cut-off frequency

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