

新型内外管差压流量计湿气测量模型研究

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摘要：

针对湿气的在线不分离测量，提出了一种新型内外管差压式流量计，并且进行了湿气的实验测试。对本装置湿气测量虚高值进行了预测，预测结果显示“比松模型”预测效果最佳。鉴于经典模型-半经验公式的局限性，内外管差压流量计的原则，建立湿气虚高值与其特性参数之间的非线性关系式。误差分析验证表明，新测量模型平均误差在1.6%以内，生产中湿气的测量要求。

关键词：内外管差压流量计；湿气；虚高；经典测量模型；数据融合

The study of wet gas measurement model for new inside and outside tube differential

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Abstract:

It has proposed a new type of the inner and outer tubes differential pressure flowmeter, mainly for the online measurement of wet gas. An experimental test was conducted. For the study of this device wet measuring model, at first, it predicted over-reading values of this device. Results show that the prediction of the "Buisson model" is the optimum. In view of the limitations of the classical model semi-new measuring model for wet gas of new inside and outside tube differential pressure flowmeter in this paper, referring to the non-linear relationship formula between wet gas over-reading value and its characteristic parameters. Through error analysis, the new measurement model is less than 1.6%, simultaneously its error volatility is smaller and relatively stable. So the new measurement of the wet gas in the industrial production.

Keywords: inside and outside tube differential pressure flowmeter; wet gas; over-reading; classic measurement models; data fusion

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