

# Orifice 孔板

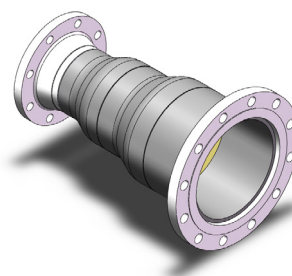
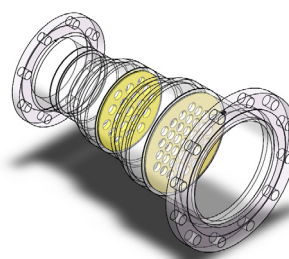
An orifice plate is a type of flow meter that is used to limit flow or reduce pressure in the process pipeline. It is usually installed downstream behind the control valve. The total pressure drop of the system is assigned to the control valve and orifice plate. Hence, the control valve works in a relatively small differential pressure range, which greatly reduces the noise in operating, and also reduces the trim damage caused by fluid flushing, extending the service life.

孔板设置在工艺管道中用于限制流体的流量或降低流体的压力，通常安装在调节阀下游。系统总压降分别分配给调节阀和孔板上，调节阀在比较小的差压范围内进行调节，极大的减少了调节阀在调节过程中产生的噪声，也减小了流体对阀内件的冲刷，延长调节阀的使用寿命。

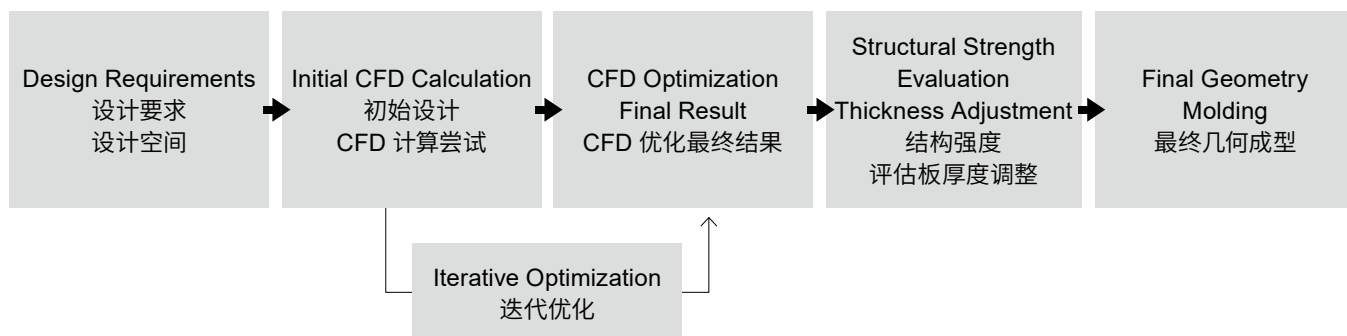


## Technical Specification 技术规格

■ Design 设计	ISO 5167
■ Service 适用介质	Gas, Mixed gas, Gas-liquid fluid 液体 / 气体、混合气体 / 气体、 混合气体 / 气 - 液两相流体
■ Structural forms 限流 ( 降噪 ) 孔板 结构形式	Single-stage single-hole & multi-hole, multi-stage multi-hole 单级单孔 / 单级多孔 多级偏心单孔 / 多级多孔
■ Pressure 公称压力	PN6 ~ PN320(Mpa) 150LB ~ 2500LB
■ Size 公称通径	DN10 ~ DN1200(mm) NPS1 ~ NPS48
■ Temperature 介质温度	-20°C ~ 600°C
■ Connection 过程连接	Flange, Welded, Clamping 法兰连接式 / 焊接连接式 夹持连接式



# Procedure Overview 设计流程总览



## Type 类型

### ■ Service 介质

Water gas 水煤气

Adiabatic index 绝热指数  $k=1.4$

Molecular weight 分子量  $M=19.59$

Temperature 工作温度  $T=237.3^{\circ}\text{C}$

### ■ Flow 流量

Max, 331869Nm<sup>3</sup>/h

Norm, 250516Nm<sup>3</sup>/h

Min, 125258Nm<sup>3</sup>/h

### ■ Pressure 压力

Outlet 出口

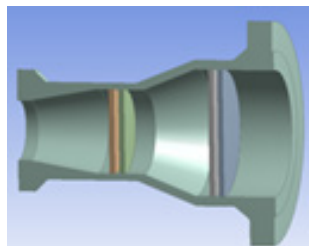
0.4Mpa

Inlet 入口要求

Max, 3.97Mpa

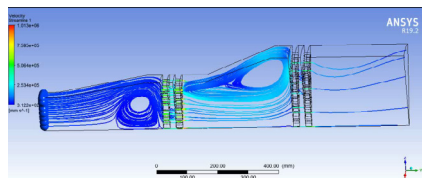
Norm, 3Mpa

Min, 1.52Mpa

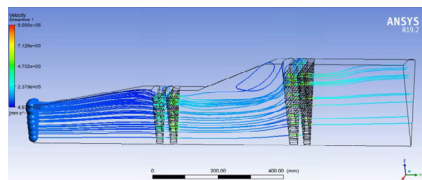


Design Space  
设计空间

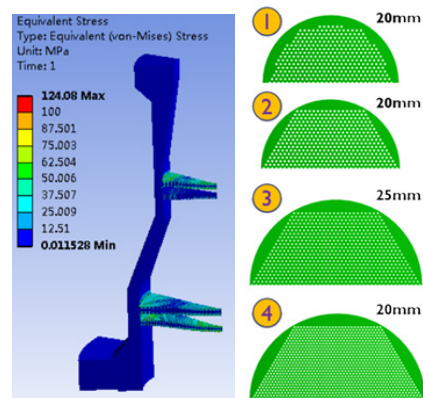
### Initial design, blocking flow 初始设计, 阻塞流



### Optimized design 最终优化设计



### $\sigma_s=205\text{MPa}$ 钢板屈服强度 205Mpa



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