|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **大锥角不带折边锥形封头内压校核** | | | | 计算单位 |  | | | |
| 计算所依据的标准 | | | | | **HG/T 20582-2011** | | | |
| **计 算 条 件** | | | | | **简 图** | | | |
| 设计压力, Pd | | | MPa | **$$001** | $07  $06  $13  $12 | | | |
| 设计温度, t | | | ℃ | **$$002** |
| 介质静压力, Ps | | | MPa | **$$003** |
| 筒 体 | 材料标准号 | | **$$004** | |
| 材料牌号/名称 | | **$$005** | |
| 内直径, Dsi | | mm | **$$006** |
| 名义厚度, δsn | | mm | **$$007** |
| 焊接接头系数, Φs | | / | **$$008** |
| 腐蚀裕量, Cs2 | | mm | **$$009** |
| 封 头 | 材料标准号 | | **$$010** | |
| 材料牌号/名称 | | **$$011** | |
| 半顶角, α | | ° | **$$012** |
| 名义厚度, δcn | | mm | **$$013** |
| 腐蚀裕量, Cc2 | | mm | **$$014** |
| 焊接接头系数, Φc | | / | **$$015** |
| 压力试验类型 | | | **液压试验** | |
| **材 料 特 性** | | | | | | | | |
| 筒 体 | 密度, ρs | | kg/m³ | **$$017** | 封 头 | 密度, ρc | kg/m³ | **$$023** |
| 材料负偏差, Cs1 | | mm | **$$018** | 材料负偏差, Cc1 | mm | **$$024** |
| 设计温度许用应力, [σ]st | | MPa | **$$019** | 设计温度许用应力, [σ]ct | MPa | **$$025** |
| 试验温度许用应力, [σ]s | | MPa | **$$020** | 试验温度许用应力, [σ]c | MPa | **$$026** |
| 试验温度下屈服点, RseL | | MPa | **$$021** | 试验温度下屈服点, RceL | MPa | **$$027** |
| 抗拉/屈服控制应力, [σ]st1 | | MPa | **$$022** | 抗拉/屈服控制应力, [σ]ct1 | MPa | **$$028** |
| **过 程 参 数** | | | | | | | | |
| 计算压力, Pc | | MPa | | Pc = Pd + Ps | | | | **$$029** |
| 筒体 | 厚度附加量, Cs | | mm | Cs = Cs1 + Cs2 | | | | **$$030** |
| 有效厚度, δse | | mm |  | | | | **$$031** |
| 封头 | 厚度附加量, Cc | | mm | Cc = Cc1 + Cc2 | | | | **$$032** |
| 有效厚度, δce | | mm |  | | | | **$$033** |
| **封 头 计 算 及 校 核** | | | | | | | | |
| 系数, β | | | / |  | | | | **$$034** |
| 系数, β1 | | | / |  | | | | **$$035** |
| 厚度, δ2 | | | mm |  | | | | **$$036** |
| 厚度, δ1 | | | mm |  | | | | **$$037** |
| 厚度, δk | | | mm |  | | | | **$$038** |
| 厚度, δp | | | mm |  | | | | **$$039** |
| 封头计算厚度, δcc | | | mm |  | | | | **$$040** |
| 封头设计厚度, δcd | | | mm | δcd = δcc + Cc2 | | | | **$$041** |
| 封头厚度校核 | | | / | δcn ≥ δcd + Cc1 | | | | **$$042** |
| **筒 体 计 算 及 校 核** | | | | | | | | |
| 筒体计算厚度, δsc | | | mm |  | | | | **$$043** |
| 筒体设计厚度, δsd | | | mm | δsd = δsc + Cs2 | | | | **$$044** |
| 筒体厚度校核 | | | / | δsn ≥ δsd + Cs1 | | | | **$$045** |
| **压 力 试 验** | | | | | | | | |
| 封头试验压力值, PcT | | | MPa | PcT = 1.25×Pd×[σ]c/max{[σ]ct , [σ]ct1} | | | | **$$046** |
| 筒体试验压力值, PsT | | | MPa | PsT = 1.25×Pd×[σ]s/max{[σ]st , [σ]st1} | | | | **$$047** |
| 取用试验压力值, PT | | | MPa | PT = min{PcT, PsT} | | | | **$$048** |
| **MAWP** | | | | | | | | |
| 压力, [P]k | | | MPa |  | | | | **$$049** |
| 压力, [P]2 | | | MPa |  | | | | **$$050** |
| 压力, [P]P | | | MPa |  | | | | **$$051** |
| 封头, MAWPc | | | MPa |  | | | | **$$052** |
| 筒体, MAWPs | | | MPa |  | | | | **$$053** |
| 取用MAWP | | | MPa | MAWP = min{MAWPs, MAWPc} | | | | **$$054** |