|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **大端、小端带折边锥壳内压设计** | | | | 计算单位 |  | | |
| 计算所依据的标准 | | | | | **GB/T 150.3-2011** | | |
| **计 算 条 件** | | | | | **锥 壳 简 图** | | |
| 设计压力, Pd | | | MPa | **$$001** | $07  $06  $11  $08  $10  $09 | | |
| 设计温度, t | | | ℃ | **$$002** |
| 介质静压力, Ps | | | MPa | **$$003** |
| 锥 壳 | 材料标准号 | | **$$004** | |
| 材料牌号/名称 | | **$$005** | |
| 大端直边段内直径, Dsi | | mm | **$$006** |
| 小端直边段内直径, Dpi | | mm | **$$007** |
| 名义厚度, δn | | mm | **$$008** |
| 大端过渡段内半径, rs | | mm | **$$009** |
| 小端过渡段内半径, rp | | mm | **$$010** |
| 半顶角, α | | ° | **$$011** |
| 腐蚀裕量, C2 | | mm | **$$012** |
| 焊接接头系数, φ | | / | **$$013** |
| 压力试验类型 | | | **$$014** | |
| **材 料 特 性** | | | | | | | |
| 密度, ρ | | | kg/m³ | **$$015** | 设计温度许用应力, [σ]t | MPa | **$$018** |
| 试验温度屈服点, ReL | | | MPa | **$$016** | 试验温度许用应力, [σ] | MPa | **$$019** |
| 材料负偏差, C1 | | | mm | **$$017** | 抗拉/屈服强度控制应力, [σ]t1 | MPa | **$$020** |
| **过 程 参 数 计 算** | | | | | | | |
| 计算压力, Pc | | | MPa | Pc = Pd + Ps | | | **$$021** |
| 锥 壳 | 厚度附加量, C | | mm | C = C1 + C2 | | | **$$022** |
| 有效厚度, δe | | mm |  | | | **$$023** |
| 参数, rs/Dsi | | / | rs/Dsi | | | **$$024** |
| 小端中面半径, Rpm | | mm | Rpm = (Dpi+δn)/2 | | | **$$025** |
| **锥 壳 内 压 计 算 及 校 核** | | | | | | | |
| 大端直边段计算厚度, δsc | | mm | |  | | | **$$026** |
| 小端直边段计算厚度, δpc | | mm | |  | | | **$$027** |
| 大端折边 | 系数, K | | / | 根据α和rs/Dsi查表5-6 | | | **$$028** |
| 计算厚度, δsrc | | mm |  | | | **$$029** |
| 锥段 | 系数, f | | / |  | | | **$$030** |
| 计算厚度, δcc | | mm |  | | | **$$031** |
| 小端折边 | 系数, δpc /Rpm | | / | δpc /Rpm | | | **$$032** |
| 应力增值系数, Q2 | | / | 根据α和max{δpc/Rpm, 0.002}  查图5-14(α≤45°)或图5-15(α>45°) | | | **$$033** |
| 计算厚度, δprc | | mm |  | | | **$$034** |
| 连接锥段最小长度, Lprc | | mm |  | | | **$$035** |
| 小端直边最小长度, Lprs | | mm |  | | | **$$036** |
| 锥壳设计厚度, δd | | | mm |  | | | **$$037** |
| 锥壳厚度校核 | | | / | δn ≥ δd + C1 | | | **$$038** |
| **压 力 试 验** | | | | | | | |
| 系数, η | | / | |  | | | **$$039** |
| 试验压力, PT | | | MPa |  | | | **$$040** |