|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **折边锥壳小端内压设计** | | | 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 | **$$001** | $06  $07  $09  $08  $10 | | |
| 设计温度, t | | °C | **$$002** |
| 介质静压力, Ps | | MPa | **$$003** |
| 锥 壳 | 材料标准号 | **$$004** | |
| 材料牌号/名称 | **$$005** | |
| 大端内直径, Dbi | mm | **$$006** |
| 小端内直径, Dsi | mm | **$$007** |
| 名义厚度, δn | mm | **$$008** |
| 半顶角, α | ° | **$$009** |
| 折边半径, r | mm | **$$010** |
| 腐蚀裕量, C2 | mm | **$$011** |
| 焊接接头系数, φ | / | **$$012** |
| 压力试验类型 | | **气压试验** | |
| **材 料 特 性** | | | | | | |
| 密度, ρ | | kg/m³ | **$$014** | 设计温度许用应力, [σ]t | MPa | **$$017** |
| 试验温度屈服点, ReL | | MPa | **$$015** | 试验温度许用应力, [σ] | MPa | **$$018** |
| 材料负偏差, C1 | | mm | **$$016** | 抗拉/屈服控制应力, [σ]t1 | MPa | **$$019** |
| **过 程 参 数 计 算** | | | | | | |
| 计算压力, Pc | | MPa | Pc = Pd + Ps | | | **$$020** |
| 厚度附加量, C | | mm | C = C1 + C2 | | | **$$021** |
| 有效厚度, δe | | mm |  | | | **$$022** |
| 小端折边中面半径, Rsm | | mm | Rsm = (Dsi+δn)/2 | | | **$$023** |
| **折 边 锥 壳 计 算 及 校 核** | | | | | | |
| 小端直边段计算厚度, δsc | | mm |  | | | **$$024** |
| 连接锥壳计算厚度, δcc | | mm |  | | | **$$025** |
| 折边过渡段 | 系数, δsc /Rsm | / | δsc /Rsm | | | **$$026** |
| 应力增值系数, Q2 | / | 根据α和max{δsc/Rsm, 0.002}  查图5-14(α≤45°)或图5-15(α>45°) | | | **$$027** |
| 计算厚度, δrc | mm |  | | | **$$028** |
| 设计厚度, δd | | mm |  | | | **$$029** |
| 厚度校核 | | / | δn ≥ δd + C1 | | | **$$030** |
| 连接锥壳段最小长度, Lrc | | mm |  | | | **$$031** |
| 小端直边段最小长度, Lrs | | mm |  | | | **$$032** |
| **压 力 试 验** | | | | | | |
| 锥壳试验压力, PT | | MPa | PT = 1.10×Pd×[σ]/max{[σ]t , [σ]t1} | | | **$$033** |