|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **耳式支座强度校核** | | | 计算单位 |  | | | |
| 计算所依据的标准 | | | | **NB/T 47003.1-2009** | | | |
| **计 算 条 件** | | | | **支 座 简 图** | | | |
| 耳座设计温度, t | | °C | **$$001** | $15  $15  $16  $14  $20  $22  $19  $24  $23  $18  $17 | | | |
| 容 器 | 操作重量, m0 | kg | **$$002** |
| 容器总高, H0 | mm | **$$003** |
| 壳体内直径, Di | mm | **$$004** |
| 壳体名义厚度, δsn | mm | **$$005** |
| 外直径(含保温层), Do | mm | **$$006** |
| 垫板厚度, δ3 | mm | **$$025** |
| 10m高度处基本风压值, q0 | | N/m2 | **$$007** |
| 风压高度变化系数, fi | | / | **$$008** |
| 地震影响系数, u | | g | **$$009** |
| 耳式支座 | 数量, n | / | **$$010** |
| 材料标准号 | **$$011** | |
| 材料名称/牌号 | **$$012** | |
| 腐蚀裕量, C2 | mm | **$$013** |
| 筋 板 | 筋板与底板的夹角, α | ° | **$$014** |
| 名义厚度, δcn | mm | **$$015** |
| 高度, h | mm | **$$016** |
| 宽度, b | mm | **$$020** |
| 间距, b2 | mm | **$$017** |
| 底板 | 名义厚度, δbn | mm | **$$018** |
| 长度, a | mm | **$$019** |
| 到设备质心垂直距离, H | mm | **$$021** |
| 距离, d | mm | **$$022** |
| 盖板 | 名义厚度, δan | mm | **$$023** |
| 宽度, c | mm | **$$024** |
| 偏心载荷, Ge | | kg | **$$026** |
| 偏心距, Se | | mm | **$$027** |
| **材 料 特 性** | | | | | | | |
| 筋 板 | 密度, ρc | kg/m³ | **$$028** | 底 板 | 密度，ρb | kg/m³ | **$$029** |
| 材料负偏差, Cc1 | mm | **$$030** | 材料负偏差，Cb1 | mm | **$$031** |
| 设计温度许用应力, [σ]ct | MPa | **$$032** | 设计温度许用应力，[σ]bt | MPa | **$$033** |
| 盖 板 | 密度，ρa | kg/m³ | **$$034** | / | | | |
| 设计温度许用应力, [σ]at | MPa | **$$035** |
| 材料负偏差，Ca1 | mm | **$$036** |
| **过 程 参 数** | | | | | | | |
| 重力加速度, g | | m/s2 | g = 9.8 | | | | **9.8** |
| 不均匀系数, k | | / | k = 1, n <= 3; k = 0.83, n > 3 | | | | **$$038** |
| 安 装 尺 寸 计 算 | | | | | | | |
| 支座安装尺寸, D | | mm |  | | | | **$$039** |
| 水 平 力 计 算 | | | | | | | |
| 水平风载荷, Pw | | N | Pw = 1.2×fi×q0×Do×H0×10-6 | | | | **$$040** |
| 水平地震力, Pe | | N | Pe = um0g | | | | **$$041** |
| 水平力, P | | N | P = max{Pw, Pe+0.25Pw} | | | | **$$042** |
| 单 个 耳 座 载 荷 计 算 | | | | | | | |
| 单个支耳载荷, F | | N |  | | | | **$$043** |
| **筋 板 校 核** | | | | | | | |
| 厚度附加量, Cc | | mm | Cc = Cc1 + C2 | | | | **$$044** |
| 有效厚度, δce | | mm | δce = δcn – Cc | | | | **$$045** |
| 筋板惯性半径, r | | mm | r = 0.289×δce | | | | **$$046** |
| 筋板长度, L2 | | mm | L2 = h / sinα | | | | **$$047** |
| 许用压缩应力, [σ]cmax | | MPa |  | | | | **$$048** |
| 沿中性轴载荷, FR | | N |  | | | | **$$049** |
| 底板与壳体交点  到筋板斜边距离, L1 | | mm | L1 = b×sinα | | | | **$$050** |
| 偏心力臂, e | | mm |  | | | | **$$051** |
| 最大压缩应力, σcmax | | MPa |  | | | | **$$052** |
| 筋板压缩应力校核 | | / | σcmax <= [σ]cmax | | | | **$$053** |
| **底 板 校 核** | | | | | | | |
| 厚度附加量, Cb | | mm | Cb = Cb1 + C2 | | | | **$$054** |
| 有效厚度, δbe | | mm | δbe = δbn – Cb | | | | **$$055** |
| a/b | | / | a/b | | | | **$$056** |
| 系数, β | | mm | 查表 7-1 | | | | **$$057** |
| 底板最大应力, σb | | MPa |  | | | | **$$058** |
| 底板应力校核 | | / | σb <= [σ]bt | | | | **$$059** |
| **盖 板 校 核** | | | | | | | |
| 厚度附加量, Ca | | mm | Ca = Ca1 + C2 | | | | **$$060** |
| 有效厚度, δae | | mm | δae = δan – Ca | | | | **$$061** |
| 盖板最大应力, σa | | MPa |  | | | | **$$062** |
| 盖板许用弯曲应力, [σ]a | | MPa | [σ]a = 1.5×[σ]at | | | | **$$063** |
| 盖板应力校核 | | / | σa <= [σ]a | | | | **$$064** |