|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **AP 型尾部吊耳强度校核** | | | 计算单位 |  | | | |
| 计算所依据的标准 | | | | **HG/T 21574-2008 附录 A** | | | |
| **计 算 条 件** | | | | **吊 耳 简 图** | | | |
| 吊 耳 板 | 材料标准号 | **$$001** | | $01  $02  $03  $04  $05  $06  载荷方向  $07  B  B  A  A | | | |
| 材料牌号/名称 | **$$002** | |
| 厚度, δdn | mm | **$$003** |
| 高度, Hd | mm | **$$004** |
| 倒角尺寸, b | mm | **$$005** |
| 吊孔直径, Dd | mm | **$$006** |
| 与壳体焊缝角高, a | mm | **$$007** |
| 腐蚀裕量, Cd2 | mm | **$$008** |
| 衬 板 | 材料标准号 | **$$009** | |
| 材料牌号/名称 | **$$010** | |
| 厚度, δcn | mm | **$$011** |
| 外直径, Dc | mm | **$$012** |
| 腐蚀裕量, Cc2 | mm | **$$013** |
| 单个吊耳吊重, m | | kg | **$$014** |
| **材 料 特 性** | | | | | | | |
| 吊耳板 | 密度, ρd | kg/m³ | **$$015** | 衬板 | 密度, ρc | kg/m³ | **$$016** |
| 材料负偏差, Cd1 | mm | **$$017** | 材料负偏差, Cc1 | mm | **$$018** |
| 常温屈服点, RdeL | MPa | **$$019** | 常温屈服点, RceL | MPa | **$$020** |
| **过 程 参 数** | | | | | | | |
| 吊耳板 | 厚度附加量, Cd | mm | Cd = Cd1 + Cd2 | | | | **$$021** |
| 有效厚度, δde | mm |  | | | | **$$022** |
| 许用拉应力, [σ]d | MPa | [σ]d = RdeL/1.6 | | | | **$$023** |
| 许用剪应力, [τ]d | MPa | [τ]d = 0.6×[σ]d | | | | **$$024** |
| 衬板 | 厚度附加量, Cc | mm | Cc = Cc1 + Cc2 | | | | **$$025** |
| 有效厚度, δce | mm |  | | | | **$$026** |
| 许用拉应力, [σ]c | MPa | [σ]c = RceL/1.6 | | | | **$$027** |
| 许用剪应力, [τ]c | MPa | [τ]c = 0.6×[σ]c | | | | **$$028** |
| 角焊缝系数, Φ | | / | Φ = 0.7 | | | | **0.7** |
| 综合影响系数, K | | / | 考虑动载荷冲击,多个吊耳吊装时的不均匀性, K = 1.65 | | | | **1.65** |
| **强 度 计 算** | | | | | | | |
| 竖向载荷, Fv | | N | FV = m×9.81×K | | | | **$$031** |
| B-B截面 | 拉应力, σL | MPa |  | | | | **$$032** |
| 许用拉应力, [σL] | MPa | [σL] = min{[σ]d, [σ]c } | | | | **$$033** |
| 拉应力校核 | / | σL ≤ [σL] | | | | **$$034** |
| A-A截面 | 剪应力, τL | MPa | τL = σL | | | | **$$035** |
| 许用剪应力, [τL] | MPa | [τL] =min{[τ]d, [τ]c} | | | | **$$036** |
| 剪应力校核 | / | τL ≤ [τL] | | | | **$$037** |
| 角焊缝 | 面积, A | mm2 |  | | | | **$$038** |
| 拉应力, σa | MPa | σa = FV/A | | | | **$$039** |
| 许用拉应力, [σa] | MPa | [σa] = Φ[σ]d | | | | **$$040** |
| 拉应力校核 | / | σa ≤ [σa] | | | | **$$041** |

注1：必要时，壳体尚应按 WRC-107 进行局部应力校核。

注2：焊缝强度校核时，只考虑吊耳与壳体的连接焊缝，盖板(如果有的话)及基础环板可以和吊耳相焊，也可以不焊。

注3：吊耳端部应焊于壳体上，壳体为锥形时，吊耳端部应与壳体吻合。

注4：吊耳长度可根据盖板和基础环板外伸长度确定，以方便吊装为原则。