|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 荷载效应 | | 方向 | 计算值(kN) | 力臂(m) | 力矩(kNm) |
| 自重 | *W*1 | ↓ | 5670.18 |  |  |
| *W*2 | ↓ | 26.629 |  |  |
| 静水压力 | *P*h1 | → | 0.000 |  |  |
| *P*h2 | ← | 21.303 |  |  |
| *P*v1 | ↓ | 678.862 |  |  |
| *P*v2 | ↓ | 255.580 |  |  |
| 扬压力 | *U*1 | ↑ | 354.935 |  |  |
| *U*2 | ↑ | 1004.830 |  |  |
|  | *U*3 | ↑ | 1.536 |  |  |
| *U*4 | ↑ | 1526.550 |  |  |
| 浪压力 | *P*l | → | 5670.18 |  |  |
| 泥沙压力 | *Ps* | → | 26.629 |  |  |
| 地震惯性力 | *F1* | → | 105.52 |  |  |
| *F2* | → | 138.51 |  |  |
| 地震动水压力 | *P*0 | → | 92.14 | -18.36 |  |

B坝底=29.7

B 坝顶=6

H 上游水深=34

H 下游水深=2.33

m=0.8

B1=3

B2=26.7

H 浪高=0.236 m

H 泥沙=26.89  
力臂计算公式如下表

|  |  |
| --- | --- |
| 相应荷载 | 力臂计算公式 |
| *W*1 | （*B*坝底/2）-（*B*坝顶/2） |
| *W*2 | （*B*坝底/2）-（（*B*坝底-*B*坝顶）/3+*B*坝顶） |
| *P*h1 | *H*上游水深/3 |
| *P*h2 | *H*下游水深/3 |
| *P*v1 | ― |
| *P*v2 | （*B*坝底/2）-（*H*下游水深*m*）/3 |
| *U*1 | （*B*坝底/2）-（*B*坝底/2） |
| *U*2 | （*B*坝底/2）-（*B*1/2） |
| *U*3 | （*B*坝底/2）-（2/3 *B*1） |
| *U*4 | （*B*坝底/2）-（（*B*2/3）+*B*1） |
| *P*l | *H*上游水深+（*H*浪高/3） |
| *Ps* | H泥沙/3 |

| **荷载效应** | **荷载效应** | **方向** | **计算值 (kN)** | **力臂 (m)** | **力矩 (kN・m)** |
| --- | --- | --- | --- | --- | --- |
| 自重 | W1 | ↓ | 5670.18 | 11.85 | 67,191.63 |
|  | W2 | ↓ | 26.629 | 0.95 | 25.29 |
| 静水压力 | Ph1 | → | 0.000 | -11.333 | 0.00 |
|  | Ph2 | ← | 21.303 | 0.777 | 16.55 |
|  | Pv1 | ↓ | 678.862 | 0 | 0.00 |
|  | Pv2 | ↓ | 255.580 | 14.073 | 3,597.93 |
| 扬压力 | U1 | ↑ | 354.935 | 0 | 0.00 |
|  | U2 | ↑ | 1004.830 | -13.35 | -13,414.48 |
|  | U3 | ↑ | 1.536 | -12.85 | -19.74 |
|  | U4 | ↑ | 1526.550 | -2.95 | -4,503.32 |
| 浪压力 | Pl | → | 5670.18 | -34.079 | -193,234.06 |
| 泥沙压力 | Ps | → | 26.629 | -8.963 | -238.78 |
| 地震动水压力 | P0 | → | 92.14 | -18.36 | -1,692.69 |