Project Name:

test777b

Client Name:

t

Capacity:

t

### 1. Belt Conveyor

### Sec01: Inputs

|  |  |
| --- | --- |
| Field | Value |
| Belt Length | 1403 |
| Belt Width | 51635 |
| Drum Diameter | 51321 |
| Friction | 213 |
| Velocity | 516 |
| Factor of Safety | 21 |
| Belt weight per meter | 32 |

### Sec02: Outputs

|  |  |
| --- | --- |
| Field | Value |
| Weight | 103.42 |
| Power | 89431034031.03 |
| Speed | 0 |

### 2. Basket screens

### Sec01: Inputs

|  |  |
| --- | --- |
| Field | Value |
| Bar Diameter (mm) | 50 |
| Bar Spacing (mm) | 45 |
| Screen Height (mm) | 53654 |
| Screen Width (mm) | 543 |
| Screen Length (mm) | 45 |
| Plate Thickness (mm) | 63 |

### Sec02: Outputs

|  |  |
| --- | --- |
| Field | Value |
| Bars Weight (KG) | 3896.71 |
| Plate Weight (KG) | -4.03 |
| Total Weight (KG) | 3888.66 |

### 3. Circular Tanks

### Sec01: Inputs

|  |  |
| --- | --- |
| Field | Value |
| Tank Diameter (mm) | 543534 |
| Tank Height (mm) | 4634534 |

### Sec02: Outputs

|  |  |
| --- | --- |
| Field | Value |
| Tank Weight (KG) | 33353061626598.0 |
| Tank Volume (m3) | 1074803721.0 |
| Shell Th (mm) | 512074 |
| Base Th (mm) | 512076 |
| Shell Weight (KG) | 32402994655727.0 |
| Base Weight (KG) | 950052264405.0 |
| Base UPN Weight (KG) | 3574693.0 |
| Cover Weight (KG) | 11131773.0 |

### 4. Gritremoval

### Sec01: Inputs

|  |  |
| --- | --- |
| Field | Value |
| N of Channels | 8 |
| Channel Width | 9 |
| Civil Width | 1 |
| Bridge Length | 3 |
| Wheel Diameter | 0.50 |
| Friction | 0.7 |
| Velocity | 0.5 |
| Safety Factor | 2 |

### Sec02: Outputs

|  |  |
| --- | --- |
| Field | Value |
| Weight Total (kg) | 10928.00 |
| Driving Power (kW) | 109280.00 |
| Driving Motor Speed (rpm) | 19.11 |
| Weight steel | 848.00 |
| Weight St.St | 10080.00 |
| Lifting Power (kW) | 5425.92 |

### 5. Mechanical Screen

### Sec01: Inputs

|  |  |
| --- | --- |
| Field | Value |
| Channel Height (mm) | 452 |
| Screen Width (mm) | 452563 |
| Belt Height (mm) | 65346 |
| Water Level (mm) | 46 |
| Bar Spacing (mm) | 366 |
| Bar Th (mm) | 5485 |
| Bar Width (mm) | 25 |
| Inclination Degree (Deg) | 5436 |
| Sprocket Diameter (mm) | 643 |
| Velocity (m/s) | 1 |
| Safety Factor | 3 |

### Sec02: Outputs

|  |  |
| --- | --- |
| Field | Value |
| Weight of Screen (kg) | 81908.62 |
| Power Required (Wat) | 160595.21 |
| Speed of motor (RPM) | 29.72 RPM. |

### 6. Primary Sedimentation

### Sec01: Inputs

|  |  |
| --- | --- |
| Field | Value |
| Walkway Length | 60 |
| Friction Coefficient | 0.39 |
| Velocity (m/s) | 0.058 |
| FOS | 2 |

### Sec02: Outputs

|  |  |
| --- | --- |
| Field | Value |
| Total Weight (kg) | 13280.0 |
| Power Required (kW) | 7509.84 |
| Motor Speed (rpm) | 0 |
| Steel Weight (kg) | 8600.0 |
| St.St. Weight (kg) | 4680.0 |

### 7. Screw Conveyor

### Sec01: Inputs

|  |  |
| --- | --- |
| Field | Value |
| Density (Kg/m3) | 852 |
| Length (mm) | 43563 |
| Diameter (mm) | 42345 |
| RequiredFlow (m3/h) | 45 |
| FillingRatio | 1 |
| SafetyFactor | 3 |
| MotorEff | 5 |
| ShaftDiameter (mm) | 834 |

### Sec02: Outputs

|  |  |
| --- | --- |
| Field | Value |
| Pitch (mm) | 33876.0 |
| Speed (RPM) | 0.0 |
| Motor Power (Wat) | 2783.68 |
| ScrewWeight (Kg) | 175787.75 |
| FrameWeight (Kg) | 379575.18 |

### 8. Sludge Thickener

### Sec01: Inputs

|  |  |
| --- | --- |
| Field | Value |
| Diameter | 20 |
| N of Arms | 5 |
| Velocity (m/s) | 0.5 |
| FOS | 3 |

### Sec02: Outputs

|  |  |
| --- | --- |
| Field | Value |
| Total Weight (kg) | 5685.0 |
| Power Required (kW) | 28125.0 |
| Motor Speed (rpm) | 0 |
| Recommended Pipe Diameter | 0 |
| Pinion Teeth | 0 |

### 9. Rectangular Mixers

### Sec01: Inputs

|  |  |
| --- | --- |
| Field | Value |
| Length (m) | 3 |
| Width (m) | 5 |
| Water Depth (m) | 8 |
| Tank Depth (m) | 7 |
| Impeller Coefficient | 9 |
| Velocity Gradient | 520 |
| I D Factor | 1 |
| Safety Factor | 3 |

### Sec02: Outputs

|  |  |
| --- | --- |
| Field | Value |
| Total Weight (kg) | 0 |
| Power Required (kW) | Power: 171253.33 Wat |
| Motor Speed (rpm) | Speed: 8.23 RPM |
| Impeller Diameter (mm) | ImpellerDiameter: 4.37 Meter |
| Shaft Length (M) | 3.80 |
| Shaft D (mm) | 352.44 |
| Type | Rec |

### 10. Channel Penstocks

### Sec01: Inputs

|  |  |
| --- | --- |
| Field | Value |
| Channel Height | 365432 |
| Frame Height Over Channel | 542 |
| Channel Width | 452 |
| Gate Margin Width | 64 |
| Water Level | 525 |
| Gate Margin Over Water Lv | 5520 |
| Gate Th | 6 |
| Gate Other PLs | 10 |
| HeadStock | 15 |
| Frame Weight Per M | 12.5 |

### Sec02: Outputs

|  |  |
| --- | --- |
| Field | Value |
| Frame Perimeter | 733304.0 |
| Frame Weight (KG) | 9166.3 |
| Gate PL Weight | 149.72256000000002 |
| Gate Stiffener N | 24.0 |
| Gate Stiffener Weight | 34.83648 |
| Gate Weight (KG) | 194.55904 |
| Total Weight (KG) | 10313.44 |

### 11. Manual Screen

### Sec01: Inputs

|  |  |
| --- | --- |
| Field | Value |
| Chanel Height (m) | 5 |
| Channel Width (m) | 2 |
| Water Level (m) | 3 |
| Water Level Margin (m) | 1 |
| Bar Spacing (m) | 0.5 |
| Bar Thickness (m) | 0.6 |
| Bar Width (m) | 0.9 |
| Angle | 100 |

### Sec02: Outputs

|  |  |
| --- | --- |
| Field | Value |
| Weight (KG) | 35171.4 |