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شركة الزهراء
للمقاولات الهندسية
والتوريدات

EIZAHRAA FOR ENGINEERING CONTRACTING AND Supplying

Project Report: TTTT

Project Details

Project Name:

TTTT

Client Name:

t

Capacity:

t



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1. Circular Tanks□

Sec01: Inputs

| Field | Value |
|--------------------|-------|
| Tank Diameter (mm) | 5000 |
| Tank Height (mm) | 5000 |

Sec02: Outputs

| Field | Value |
|----------------------|--------|
| Tank Weight (KG) | 4698.0 |
| Tank Volume (m3) | 98.0 |
| Shell Th (mm) | 4 |
| Base Th (mm) | 6 |
| Shell Weight (KG) | 2512.0 |
| Base Weight (KG) | 942.0 |
| Base UPN Weight (KG) | 302.0 |
| Cover Weight (KG) | 942.0 |



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2. Mechanical Screen

Sec01: Inputs

| Field | Value |
|--------------------------|-------|
| Channel Height (mm) | 1000 |
| Screen Width (mm) | 1000 |
| Belt Height (mm) | 1000 |
| Water Level (mm) | 600 |
| Bar Spacing (mm) | 25 |
| Bar Th (mm) | 10 |
| Bar Width (mm) | 50 |
| Inclination Degree (Deg) | 70 |
| Sprocket Diameter (mm) | 320 |
| Velocity (m/s) | 0.06 |
| Safety Factor | 1.5 |

Sec02: Outputs

| Field | Value |
|-----------------------|-----------|
| Weight of Screen (kg) | 496.62 |
| Power Required (Wat) | 138.86 |
| Speed of motor (RPM) | 3.58 RPM. |



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3. Basket screens

Sec01: Inputs

| Field | Value |
|----------------------|-------|
| Bar Diameter (mm) | 20 |
| Bar Spacing (mm) | 25 |
| Screen Height (mm) | 1100 |
| Screen Width (mm) | 700 |
| Screen Length (mm) | 500 |
| Plate Thickness (mm) | 16 |

Sec02: Outputs

| Field | Value |
|-------------------|--------|
| Bars Weight (KG) | 94.5 |
| Plate Weight (KG) | 41.86 |
| Total Weight (KG) | 178.22 |



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4. Gritremoval

Sec01: Inputs

| Field | Value |
|----------------|-------|
| N of Channels | 2 |
| Channel Width | 2.5 |
| Civil Width | 0.4 |
| Bridge Length | 6 |
| Wheel Diameter | 0.25 |
| Friction | 0.3 |
| Velocity | 0.05 |
| Safety Factor | 1.5 |

Sec02: Outputs

| Field | Value |
|---------------------------|---------|
| Weight Total (kg) | 1956.00 |
| Driving Power (kW) | 628.71 |
| Driving Motor Speed (rpm) | 3.82 |
| Weight steel | 1256.00 |
| Weight St.St | 700.00 |
| Lifting Power (kW) | 282.60 |



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5. Rectangular Mixers

Sec01: Inputs

| Field | Value |
|----------------------|-------|
| Length (m) | 1.5 |
| Width (m) | 1.5 |
| Water Depth (m) | 1.5 |
| Tank Depth (m) | 2 |
| Impeller Coefficient | 1.36 |
| Velocity Gradient | 600 |
| I D Factor | 0.5 |
| Safety Factor | 1.5 |

Sec02: Outputs

| Field | Value |
|------------------------|------------------------------|
| Total Weight (kg) | 0 |
| Power Required (kW) | Power: 3206.25 Wat |
| Motor Speed (rpm) | Speed: 79.73 RPM |
| Impeller Diameter (mm) | ImpellerDiameter: 0.85 Meter |
| Shaft Length (M) | 1.40 |
| Shaft D (mm) | 43.90 |
| Type | Rec |



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6. Channel Penstocks

Sec01: Inputs

| Field | Value |
|---------------------------|-------|
| Channel Height | 1700 |
| Frame Height Over Channel | 900 |
| Channel Width | 650 |
| Gate Margin Width | 150 |
| Water Level | 475 |
| Gate Margin Over Water Lv | 200 |
| Gate Th | 6 |
| Gate Other PLs | 10 |
| HeadStock | 15 |
| Frame Weight Per M | 12.5 |

Sec02: Outputs

| Field | Value |
|-----------------------|--------|
| Frame Perimeter | 7150.0 |
| Frame Weight (KG) | 89.375 |
| Gate PL Weight | 25.92 |
| Gate Stiffener N | 3.0 |
| Gate Stiffener Weight | 7.776 |
| Gate Weight (KG) | 43.696 |
| Total Weight (KG) | 162.88 |



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7. Primary Sedimentation

Sec01: Inputs

| Field | Value |
|----------------------|-------|
| Walkway Length | 10 |
| Friction Coefficient | 0.3 |
| Velocity (m/s) | 0.05 |
| FOS | 1.5 |

Sec02: Outputs

| Field | Value |
|---------------------|---------|
| Total Weight (kg) | 2580.0 |
| Power Required (kW) | 725.625 |
| Motor Speed (rpm) | 0 |
| Steel Weight (kg) | 1800.0 |
| St.St. Weight (kg) | 780.0 |



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8. Screw Conveyor

Sec01: Inputs

| Field | Value |
|---------------------|-------|
| Density (Kg/m3) | 1600 |
| Length (mm) | 5000 |
| Diameter (mm) | 300 |
| RequiredFlow (m3/h) | 5 |
| FillingRatio | 0.4 |
| SafetyFactor | 1.5 |
| MotorEff | 0.7 |
| ShaftDiameter (mm) | 50 |

Sec02: Outputs

| Field | Value |
|-------------------|--------|
| Pitch (mm) | 240.0 |
| Speed (RPM) | 12.64 |
| Motor Power (Wat) | 238.1 |
| ScrewWeight (Kg) | 121.51 |
| FrameWeight (Kg) | 337.25 |



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9. Sludge Thickener

Sec01: Inputs

| Field | Value |
|----------------|-------|
| Diameter | 10 |
| N of Arms | 3 |
| Velocity (m/s) | 0.05 |
| FOS | 1.5 |

Sec02: Outputs

| Field | Value |
|---------------------------|---------|
| Total Weight (kg) | 2625.0 |
| Power Required (kW) | 421.875 |
| Motor Speed (rpm) | 0 |
| Recommended Pipe Diameter | 0 |
| Pinion Teeth | 0 |



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10. Manual Screen

Sec01: Inputs

| Field | Value |
|------------------------|-------|
| Chanel Height (m) | 1.2 |
| Channel Width (m) | 0.8 |
| Water Level (m) | 0.75 |
| Water Level Margin (m) | 0.1 |
| Bar Spacing (m) | 0.025 |
| Bar Thickness (m) | 0.01 |
| Bar Width (m) | 0.025 |
| Angle | 45 |

Sec02: Outputs

| Field | Value |
|-------------|-------|
| Weight (KG) | 80.76 |



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11. Belt Conveyor

Sec01: Inputs

| Field | Value |
|-----------------------|-------|
| Belt Length | 7000 |
| Belt Width | 800 |
| Drum Diameter | 250 |
| Friction | 0.3 |
| Velocity | 0.4 |
| Factor of Safety | 1.5 |
| Belt weight per meter | 15 |

Sec02: Outputs

| Field | Value |
|--------|--------|
| Weight | 396.33 |
| Power | 539.14 |
| Speed | 0 |