

ÖMERLİ KASKAT HAVALANDIRMA VE ON OZON TEMAS TANKI

Q total 100000.00 m<sup>3</sup>/day 11.57 m<sup>3</sup>/sec

A. Boru yük kayıpları

1. Dağıtım Yapısı - Orhaniye

Tesis Giriş Kotu=	137.50 m
Q1=	5.79
tC	25.00 C
nH=	9.068E-07 m <sup>3</sup> /sec
L=	600.00 m
D=	2000.00 mm
V=	1.84 m/s
eps=	0.00030
Re=	4.06497E+06
f=	0.017
V2/(2*g)=	0.17
friction	0.90 m
Kgiris=	0.50
Kkiris=	1.00
β of pipe	2.00
Qpipe=	5.79 m <sup>3</sup> /s
Dpipe=	2.00 m
Vpipe=	1.84 m/s
K for Butterfly	0.70
K for Gate Valve	0.19
Chosen K for the valve	0.19
Valve HL	0.29 m

2.00 m

1. Dağıtım Yapısı - Muradiye

Tesis Giriş Kotu=	138.87 m
Q1=	5.79
tC	25 C
nH=	9.068E-07 m <sup>3</sup> /s
L=	600 m
D=	2000 mm
V=	1.84 m/s
eps=	0.00030
Re=	4.06497E+06
f=	0.017
V2/(2*g)=	0.17
friction	0.90 m

2.00 m

B.Ön Ozon Temas Tankı

t	6.22 min
Volume	4319.44 m <sup>3</sup>
β of tanks	3.00
Q per tank	333333 m <sup>3</sup> /day
Volume of each tank	1440 m <sup>3</sup>
Height of water	6.00 m
Clear Space above water	1.50 m
Height of tank	0.00 m
Area of the tank	240 m <sup>2</sup>
L/W ratio	1.62
Width of the tank	12.18 m
Length of the tank	19.70 m

3.86 m<sup>3</sup>/sec

12.00 m

20.00 m

RUN

Head Loss Calculations

Free Fall HL

Elevation at the effluent channel	139.77 m
Distance of free fall	0.15 m
Effluent weir level	139.92 m
Critical depth	21.92 cm

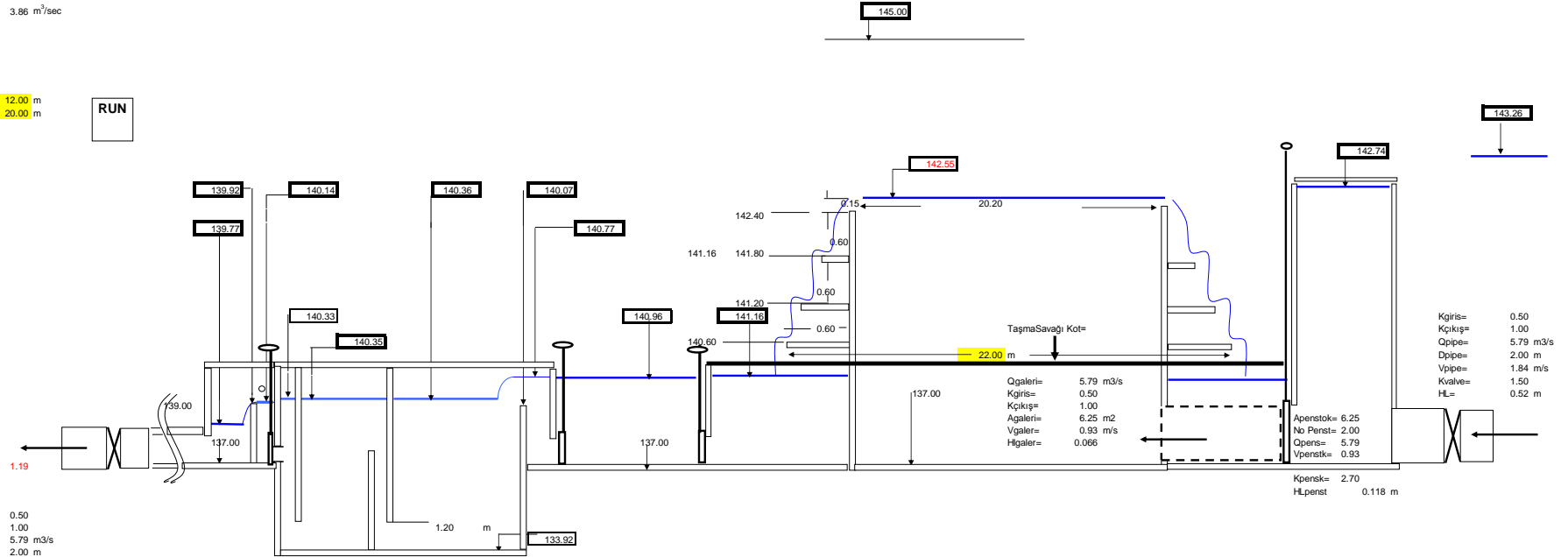
Penstock HL

Penstock K	2.70
penstock size m <sup>3</sup> W=H	1.80 m
Penstock Area	3.24 m <sup>2</sup>
velocity tru penstock	1.19 m/s
V2/2g=	0.07 m
HL penstock=	0.20 m

Baffle H.L.s

Flow Area	1.20 m
Flow area under baffle	14.40 m <sup>2</sup>
Velocity through the baffle	0.27 m/sec
Head Loss tru Submerged Orifice	0.01 m
Head loss due to direction change	0.01 m
Total baffle HL	0.02
HL due to submerged weir	0.40 m
Total head loss=	1.19 m
Ozon Chamber Entrance Elevatin	140.96 m

Kgiris= 0.50  
Kkiris= 1.00  
Qpipe= 5.79 m<sup>3</sup>/s  
Dpipe= 2.00 m  
Vpipe= 1.84 m/s  
Kvalve= 0.19  
HL= 0.29 m



Kgiris= 0.50  
Kkiris= 1.00  
Qpipe= 5.79 m<sup>3</sup>/s  
Dpipe= 2.00 m  
Vpipe= 1.84 m/s  
Kvalve= 1.50  
HL= 0.52 m

Apenstok= 6.25  
Ka Penst= 2.00  
Qpenst= 5.79  
Vpenst= 0.93  
Kprens= 2.70  
HLpenst= 0.118 m