INSULATED PIPE HEAT LOSS CALCULATOR

Project: Utility line heat loss	Calc no: CALC TH 001 Rev: 0

Yellow cells: enter data. Grey cells: calculated automatically. Free template from instrumentationblog.in

Common data			
Outer surface coefficient h (W/m²K)	10	**Operating hours per year**	8000

Lines

Line	Pipe OD (mm)	Insulation (mm)	k (W/mK)	Fluid T (°C)	Ambient (°C)	Length (m)	Loss (W/m)	Surface T (°C)	Line loss (kW)	Energy (MWh/yr)	Bare pipe (W/m)	Remarks
Steam 4"	114.3	50	0.040	180	25	50	58.5	33.7	2.93	23.4	557	
Condensate 2"	60.3	40	0.040	120	25	30	26.5	31.0	0.79	6.4	180	
Hot oil 3"	88.9	75	0.045	250	25	40	62.0	33.3	2.48	19.8	628	
										Total loss (kW)	**6.20**	
										Total energy (MWh/yr)	**49.6**	

h about 10 W/m²K suits still air indoors; use higher values for wind. Bare pipe loss uses the same h and ignores radiation, so it is a low estimate.

Prepared by	Checked by
Name:	Name:
Signature:	Signature:
Date:	Date: