

ONLY PUMP 020 ON

CHANGES FOR NEXT SIMULATION (Change Number = 2)

Pipe ~@Pump-010 is CLOSED  
 Pipe Pump-020 is OPENED

RESULTS OBTAINED AFTER 5 TRIALS: ACCURACY = 0.00000

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE #1	NODE #2	FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL+ML/1000 (ft/ft)	HL/1000 (ft/ft)
FM-010	O-Pump-010	N-011	0.00	0.00	0.00	0.00	0.00	0.00
FM-011	N-011	N-012	0.00	0.00	0.00	0.00	0.00	0.00
FM-012	N-012	N-013	1502.33	1.81	0.22	2.40	1.49	1.33
FM-013	N-013	N-014	1502.33	1.15	0.15	2.40	1.50	1.33
FM-014	N-014	FGN-1	1502.33	2.66	0.34	2.40	1.50	1.33
FM-020	O-Pump-020	N-021	1502.33	0.31	1.83	4.26	42.85	6.25
FM-021	N-021	N-022	1502.33	7.01	2.27	4.26	7.14	5.39
FM-022	N-022	N-012	1502.33	9.66	0.39	2.40	1.38	1.33
FM-030	O-Pump-030	N-031	0.00	0.00	0.00	0.00	0.00	0.00
FM-031	N-031	N-022	0.00	0.00	0.00	0.00	0.00	0.00

PUMP/LOSS ELEMENT RESULTS

NAME	FLOWRATE (gpm)	INLET HEAD (ft)	OUTLET HEAD (ft)	PUMP HEAD (ft)	EFFIC-ENCY (%)	USEFUL POWER (Hp)	INCREMENTL COST (\$)	TOTAL COST (\$)	#PUMPS PARALLEL	#PUMPS SERIES	NPSH Avail. (ft)
Device "Pump-010" is closed											
Pump-010	0.00	3.00	85.47	0.0	75.00	0.	0.0	0.0	**	**	36.2
Pump-020	1502.33	3.00	106.94	103.9	75.00	0.	0.0	0.0	**	**	36.2
Device "Pump-030" is closed											
Pump-030	0.00	3.00	95.52	0.0	75.00	0.	0.0	0.0	**	**	36.2

NODE RESULTS

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
FGN-1		----	87.15	26.00	61.15	26.50
N-011		0.00	93.47	26.00	67.47	29.24
N-012		0.00	93.47	26.00	67.47	29.24
N-013		0.00	91.44	6.00	85.44	37.03
N-014		0.00	90.15	26.00	64.15	27.80
N-021		0.00	112.80	26.00	86.80	37.61
N-022		0.00	103.52	26.00	77.52	33.59
N-031		0.00	103.52	26.00	77.52	33.59
O-Pump-010		----	93.47	8.00	85.47	37.04
O-Pump-020		----	114.94	8.00	106.94	46.34
O-Pump-030		----	103.52	8.00	95.52	41.39

ONLY PUMP 020 ON

M A X I M U M   A N D   M I N I M U M   V A L U E S

P R E S S U R E S

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
O-Pump-020	46.34	FGN-1	26.50
O-Pump-030	41.39	N-014	27.80
N-021	37.61	N-011	29.24
O-Pump-010	37.04	N-012	29.24
N-013	37.03	N-022	33.59

V E L O C I T I E S

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
FM-020	4.26	FM-012	2.40
FM-021	4.26	FM-013	2.40
FM-014	2.40	FM-014	2.40
FM-022	2.40	FM-022	2.40

H L + M L / 1 0 0 0

PIPE NUMBER	MAXIMUM HL+ML/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL+ML/1000 (ft/ft)
FM-020	42.85	FM-022	1.38
FM-021	7.14	FM-012	1.49
FM-014	1.50	FM-013	1.50

H L / 1 0 0 0

PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
FM-020	6.25	FM-012	1.33
FM-021	5.39	FM-022	1.33
FM-013	1.33	FM-013	1.33
FM-014	1.33	FM-014	1.33

S U M M A R Y   O F   I N F L O W S   A N D   O U T F L O W S

(+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES  
 (-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
FGN-1	-1502.33	
Pump-020	1502.33	

NET SYSTEM INFLOW = 1502.33  
 NET SYSTEM OUTFLOW = -1502.33  
 NET SYSTEM DEMAND = 0.00