

Table calculation

Client:

Filepath: Quick modeling

Product: Cement

Convey distance horizontal: 800 m

Convey distance vertical: 30 m

Total conveying length: 830 m

Number of Bends: 6

Pipe diameter begin: 243 mm

Pipe diameter end: 293 mm

Pump displacement: 0,833 m3/sec

Booster displacement: 0 m3/sec at 2.5 bar

Gas volume end: 0,9062 m3/sec

Pressure conveying

Pressure bar	pipe line capacity tons/hr	system capacity tons/hr	Number of kettles/hr	< Kettle range>	Solid Loading Ratio SLR	gas velocity begin m/sec	gas velocity end m/sec	energy consumption kWh/ton	residence time seconds	sediment
2.5	99.9	82	5	>capacity	28.1	5.8	12.4	2.43	112.56	No sedimentation
2.4	98.7	81	4.9	>capacity	27.7	5.9	12.4	2.38	110.53	No sedimentation
2.3	97.3	81	4.9	>capacity	27.2	6.1	12.5	2.31	108.47	No sedimentation
2.2	95.9	80	4.8	>capacity	26.7	6.3	12.5	2.26	106.38	No sedimentation
2.1	94.4	79	4.8	>capacity	26.2	6.5	12.6	2.22	104.26	No sedimentation
2	92.8	78	4.7	>capacity	25.7	6.7	12.6	2.17	102.11	No sedimentation
1.9	91	77	4.6	>capacity	25.1	6.9	12.6	2.12	99.92	No sedimentation
1.8	89.2	76	4.6	>capacity	24.5	7.1	12.7	2.06	97.7	No sedimentation
1.7	87.2	74	4.5	>capacity	23.9	7.4	12.7	2.04	95.45	No sedimentation
1.6	85	73	4.4	>capacity	23.2	7.6	12.8	1.98	93.16	No sedimentation
1.5	82.7	71	4.3	>capacity	22.5	7.9	12.8	1.96	90.83	No sedimentation
1.4	80.2	70	4.2	>capacity	21.7	8.2	12.9	1.9	88.46	No sedimentation
1.3	77.5	68	4.1	>capacity	20.9	8.6	12.9	1.86	86.05	No sedimentation
1.2	74.5	65	3.9	>capacity	20	9	12.9	1.86	83.6	No sedimentation
1.1	71.2	63	3.8	>capacity	19	9.4	13	1.82	81.09	No sedimentation
1	67.5	60	3.6	>capacity	17.9	9.8	13	1.81	78.54	No sedimentation
0.9	63.4	57	3.4	>capacity	16.8	10.3	13.1	1.8	75.92	No sedimentation
0.8	58.7	53	3.2	>capacity	15.4	10.9	13.2	1.82	73.23	No sedimentation
0.7	53.3	49	2.9	>capacity	13.9	11.5	13.2	1.85	70.46	No sedimentation
0.6	46.7	43	2.6	>capacity	12.1	12.2	13.3	1.97	67.59	No sedimentation
0.5	38.8	36	2.2	>capacity	10	13.1	13.3	2.18	64.6	No sedimentation

Empty pipeline system pressure drop: 2020 mmWC

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