

Helix Tech

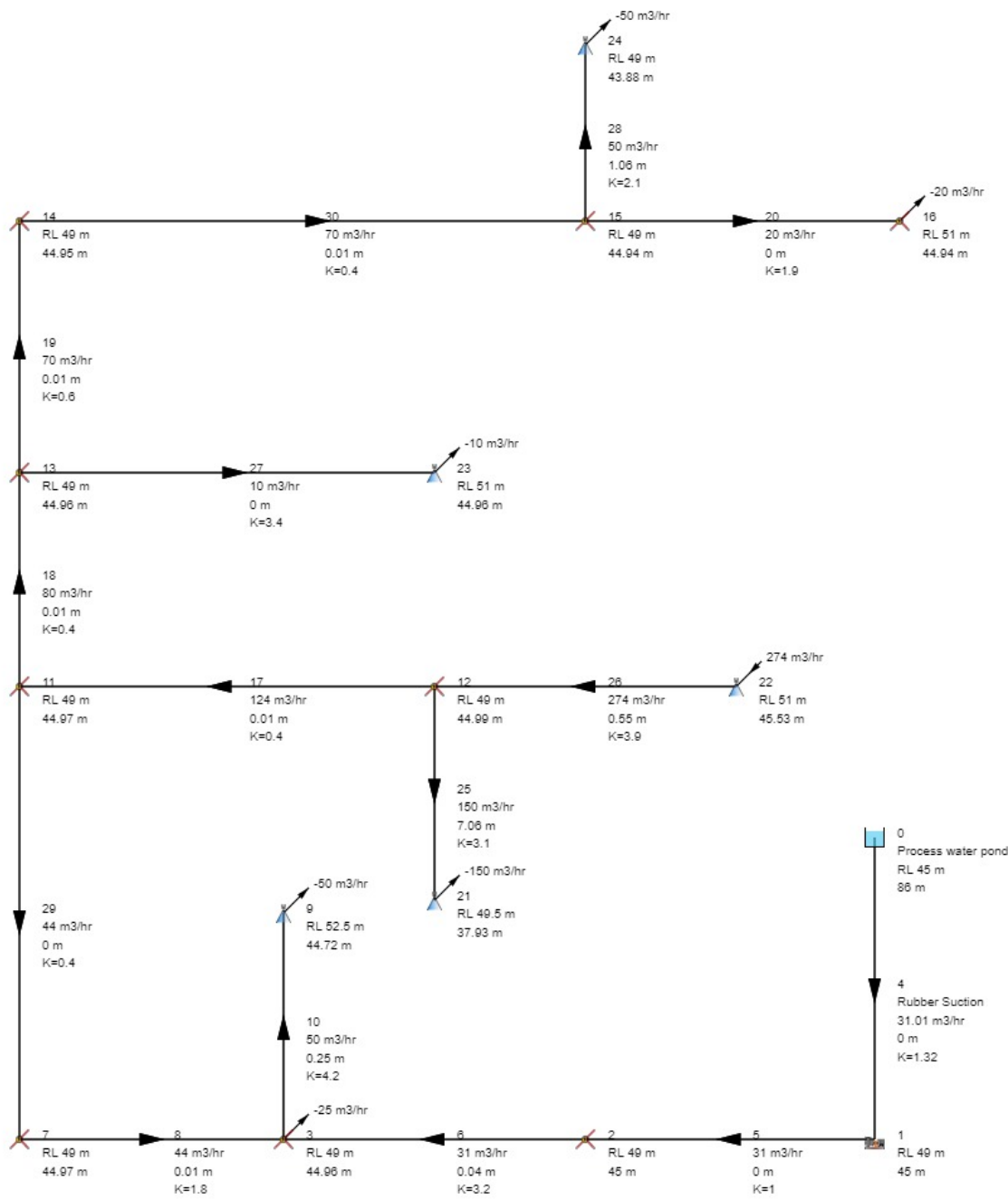
Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Network Type	Liquid	Calc. Method	Darcy
Description	CD Tank Area - nom - rev1		

Small Process water system.

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Project Concentrator
Project No. DS03179
Category Demo Process Water
Description CD Tank Area - nom - rev1

Client ABC Resources Ltd.
Design Date 23/01/2016
Atmos. Press 0 kPa



CD Tank Area - nom - rev1

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	4	From node to node	0 - 1
Description	Rubber Suction	Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Rubber Suction	Pipe Class	Class 12
Nominal Diameter	400 mm	Inside Diameter	351 mm
Outside Diameter	400 mm	Pipe Length	40 m
Pipe Roughness	0.3 mm	Allowable Press.	1 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	1.32	Total Fittings kf	0
Flow Rate	31.01 m3/hr	Velocity	0.09 m/s
Friction Loss	0 m	Fitting Losses	0 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0 m	Total Pressure Drop	0.02 kPa
Entry Total Head	45 m	Exit Total Head	45 m
Entry Gauge Head	41 m	Exit Gauge Head	37 m
Reynolds No.	30941.05	Friction Factor	0.0255 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	5	From node to node	1 - 2
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	400 mm	Inside Diameter	352 mm
Outside Diameter	400 mm	Pipe Length	5 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	1	Total Fittings kf	0
Flow Rate	31 m3/hr	Velocity	0.09 m/s
Friction Loss	0 m	Fitting Losses	0 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0 m	Total Pressure Drop	0.01 kPa
Entry Total Head	45 m	Exit Total Head	45 m
Entry Gauge Head	-4 m	Exit Gauge Head	-4 m
Reynolds No.	30839.35	Friction Factor	0.02335 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	6	From node to node	2 - 3
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	315 mm	Inside Diameter	277 mm
Outside Diameter	315 mm	Pipe Length	390 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	3.2	Total Fittings kf	0
Flow Rate	31 m3/hr	Velocity	0.14 m/s
Friction Loss	0.03 m	Fitting Losses	0 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0.04 m	Total Pressure Drop	0.35 kPa
Entry Total Head	45 m	Exit Total Head	44.96 m
Entry Gauge Head	-4 m	Exit Gauge Head	-4.04 m
Reynolds No.	39189.36	Friction Factor	0.02211 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	8	From node to node	3 - 7
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	280 mm	Inside Diameter	246 mm
Outside Diameter	280 mm	Pipe Length	2.5 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	1.8	Total Fittings kf	0
Flow Rate	44 m3/hr	Velocity	0.26 m/s
Friction Loss	0 m	Fitting Losses	0.01 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0.01 m	Total Pressure Drop	0.07 kPa
Entry Total Head	44.97 m	Exit Total Head	44.96 m
Entry Gauge Head	-4.04 m	Exit Gauge Head	-4.04 m
Reynolds No.	62633.09	Friction Factor	0.01993 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	10	From node to node	3 - 9
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	160 mm	Inside Diameter	140 mm
Outside Diameter	160 mm	Pipe Length	14 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	4.2	Total Fittings kf	0
Flow Rate	50 m3/hr	Velocity	0.9 m/s
Friction Loss	0.07 m	Fitting Losses	0.17 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0.25 m	Total Pressure Drop	2.41 kPa
Entry Total Head	44.96 m	Exit Total Head	44.72 m
Entry Gauge Head	-4.04 m	Exit Gauge Head	-7.78 m
Reynolds No.	125062.82	Friction Factor	0.01731 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	17	From node to node	11 - 12
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	280 mm	Inside Diameter	246 mm
Outside Diameter	280 mm	Pipe Length	2.2 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	0.4	Total Fittings kf	0
Flow Rate	124 m3/hr	Velocity	0.72 m/s
Friction Loss	0 m	Fitting Losses	0.01 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0.01 m	Total Pressure Drop	0.14 kPa
Entry Total Head	44.99 m	Exit Total Head	44.97 m
Entry Gauge Head	-4.03 m	Exit Gauge Head	-4.04 m
Reynolds No.	176511.43	Friction Factor	0.01612 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	18	From node to node	11 - 13
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	280 mm	Inside Diameter	246 mm
Outside Diameter	280 mm	Pipe Length	7.3 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	0.4	Total Fittings kf	0
Flow Rate	80 m3/hr	Velocity	0.47 m/s
Friction Loss	0.01 m	Fitting Losses	0 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0.01 m	Total Pressure Drop	0.1 kPa
Entry Total Head	44.97 m	Exit Total Head	44.96 m
Entry Gauge Head	-4.03 m	Exit Gauge Head	-4.04 m
Reynolds No.	113878.34	Friction Factor	0.01758 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	19	From node to node	13 - 14
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	280 mm	Inside Diameter	246 mm
Outside Diameter	280 mm	Pipe Length	2.7 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	0.6	Total Fittings kf	0
Flow Rate	70 m3/hr	Velocity	0.41 m/s
Friction Loss	0 m	Fitting Losses	0.01 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0.01 m	Total Pressure Drop	0.07 kPa
Entry Total Head	44.96 m	Exit Total Head	44.95 m
Entry Gauge Head	-4.04 m	Exit Gauge Head	-4.05 m
Reynolds No.	99643.55	Friction Factor	0.01807 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	20	From node to node	15 - 16
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	280 mm	Inside Diameter	246 mm
Outside Diameter	280 mm	Pipe Length	2.8 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	1.9	Total Fittings kf	0
Flow Rate	20 m3/hr	Velocity	0.12 m/s
Friction Loss	0 m	Fitting Losses	0 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0 m	Total Pressure Drop	0.01 kPa
Entry Total Head	44.94 m	Exit Total Head	44.94 m
Entry Gauge Head	-4.06 m	Exit Gauge Head	-6.06 m
Reynolds No.	28469.58	Friction Factor	0.02381 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	25	From node to node	12 - 21
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	110 mm	Inside Diameter	96 mm
Outside Diameter	110 mm	Pipe Length	7.7 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	3.1	Total Fittings kf	0
Flow Rate	150 m3/hr	Velocity	5.76 m/s
Friction Loss	1.82 m	Fitting Losses	5.24 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	7.06 m	Total Pressure Drop	69.19 kPa
Entry Total Head	44.99 m	Exit Total Head	37.93 m
Entry Gauge Head	-4.01 m	Exit Gauge Head	-11.57 m
Reynolds No.	547149.83	Friction Factor	0.01341 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	26	From node to node	12 - 22
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	280 mm	Inside Diameter	246 mm
Outside Diameter	280 mm	Pipe Length	5.3 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	3.9	Total Fittings kf	0
Flow Rate	274 m3/hr	Velocity	1.6 m/s
Friction Loss	0.04 m	Fitting Losses	0.51 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0.55 m	Total Pressure Drop	5.39 kPa
Entry Total Head	45.53 m	Exit Total Head	44.99 m
Entry Gauge Head	-4.01 m	Exit Gauge Head	-6.56 m
Reynolds No.	390033.31	Friction Factor	0.01392 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	27	From node to node	13 - 23
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	280 mm	Inside Diameter	246 mm
Outside Diameter	280 mm	Pipe Length	6.5 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	3.4	Total Fittings kf	0
Flow Rate	10 m3/hr	Velocity	0.06 m/s
Friction Loss	0 m	Fitting Losses	0 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0 m	Total Pressure Drop	0.01 kPa
Entry Total Head	44.96 m	Exit Total Head	44.96 m
Entry Gauge Head	-4.04 m	Exit Gauge Head	-6.04 m
Reynolds No.	14234.79	Friction Factor	0.0282 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	28	From node to node	15 - 24
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	110 mm	Inside Diameter	96 mm
Outside Diameter	110 mm	Pipe Length	21 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	2.1	Total Fittings kf	0
Flow Rate	50 m3/hr	Velocity	1.92 m/s
Friction Loss	0.66 m	Fitting Losses	0.39 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	1.06 m	Total Pressure Drop	10.38 kPa
Entry Total Head	44.94 m	Exit Total Head	43.88 m
Entry Gauge Head	-4.06 m	Exit Gauge Head	-5.12 m
Reynolds No.	182383.28	Friction Factor	0.01616 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	29	From node to node	7 - 11
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	280 mm	Inside Diameter	246 mm
Outside Diameter	280 mm	Pipe Length	3.3 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	0.4	Total Fittings kf	0
Flow Rate	44 m3/hr	Velocity	0.26 m/s
Friction Loss	0 m	Fitting Losses	0 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0 m	Total Pressure Drop	0.02 kPa
Entry Total Head	44.97 m	Exit Total Head	44.97 m
Entry Gauge Head	-4.03 m	Exit Gauge Head	-4.03 m
Reynolds No.	62633.09	Friction Factor	0.01993 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Pipe No	30	From node to node	14 - 15
Description		Equipment No	
Liquid	Process Water	Viscosity	1.01 cp
Temperature	20 C	Density	1000 kg/m3
Vapour Pressure	1.6 kPa		
Pipe Description	Polyethylene PE80 AS4130	Pipe Class	PN8
Nominal Diameter	280 mm	Inside Diameter	246 mm
Outside Diameter	280 mm	Pipe Length	12.7 m
Pipe Roughness	0.003 mm	Allowable Press.	800 kPa
Orifice Plate Dia	-	Non Return Valve	No
Total Fittings k	0.4	Total Fittings kf	0
Flow Rate	70 m3/hr	Velocity	0.41 m/s
Friction Loss	0.01 m	Fitting Losses	0 m
Slurry Losses	0 m	Orifice Losses	0 m
Fixed Head Loss	0 m	Booster Pump Head	0 m
Total Head Loss	0.01 m	Total Pressure Drop	0.11 kPa
Entry Total Head	44.95 m	Exit Total Head	44.94 m
Entry Gauge Head	-4.05 m	Exit Gauge Head	-4.06 m
Reynolds No.	99643.55	Friction Factor	0.01807 (Darcy f)

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	0	Node Type	Tank
Description	Process water pond	Equipment No	
Rel. Level (RL)	45 m	Pressure Input	0 kPa
Nozzle K value	-	Ext Flow (+In/-Out)	-
Int.(Gauge) Head	-	Int.(Gauge) Pressure	-
Total Node Head	86 m		

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		
Node No	1	Node Type	Pump
Description		Equipment No	G01-004
Rel. Level (RL)	49 m	Pressure Input	0 kPa
Nozzle K value	-	Ext Flow (+In/-Out)	-
Int.(Gauge) Head	-	Int.(Gauge) Pressure	-
Total Node Head	45 m		
Pump Head	0 m	Pump Flow Rate	31.01 m3/hr
Pump / Fan Efficiency	70 %	Pump Absorbed Power	0 kW
Casing Pressure	-39.24 kPa		
Pump NPSH required	0 m	Pump NPSH available	-4.16 m

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	2	Node Type	Junction
Description		Equipment No	
Rel. Level (RL)	49 m	Pressure Input	0 kPa
Nozzle K value	-	Ext Flow (+In/-Out)	0 m3/hr
Int.(Gauge) Head	-4 m	Int.(Gauge) Pressure	-39.25 kPa
Total Node Head	45 m		

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	3	Node Type	Junction
Description		Equipment No	
Rel. Level (RL)	49 m	Pressure Input	0 kPa
Nozzle K value	-	Ext Flow (+In/-Out)	-25 m3/hr
Int.(Gauge) Head	-4.04 m	Int.(Gauge) Pressure	-39.6 kPa
Total Node Head	44.96 m		

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	7	Node Type	Junction
Description		Equipment No	
Rel. Level (RL)	49 m	Pressure Input	0 kPa
Nozzle K value	-	Ext Flow (+In/-Out)	0 m3/hr
Int.(Gauge) Head	-4.03 m	Int.(Gauge) Pressure	-39.53 kPa
Total Node Head	44.97 m		

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	9	Node Type	Nozzle
Description		Equipment No	Cyclone feed hopper
Rel. Level (RL)	52.5 m	Pressure Input	0 kPa
Nozzle K value	0	Ext Flow (+In/-Out)	-50 m3/hr
Int.(Gauge) Head	-7.78 m	Int.(Gauge) Pressure	-76.34 kPa
Total Node Head	44.72 m		

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	11	Node Type	Junction
Description		Equipment No	
Rel. Level (RL)	49 m	Pressure Input	0 kPa
Nozzle K value	-	Ext Flow (+In/-Out)	0 m3/hr
Int.(Gauge) Head	-4.03 m	Int.(Gauge) Pressure	-39.51 kPa
Total Node Head	44.97 m		

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	12	Node Type	Junction
Description		Equipment No	
Rel. Level (RL)	49 m	Pressure Input	0 kPa
Nozzle K value	-	Ext Flow (+In/-Out)	0 m3/hr
Int.(Gauge) Head	-4.01 m	Int.(Gauge) Pressure	-39.37 kPa
Total Node Head	44.99 m		

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	13	Node Type	Junction
Description		Equipment No	
Rel. Level (RL)	49 m	Pressure Input	0 kPa
Nozzle K value	-	Ext Flow (+In/-Out)	0 m3/hr
Int.(Gauge) Head	-4.04 m	Int.(Gauge) Pressure	-39.61 kPa
Total Node Head	44.96 m		

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	14	Node Type	Junction
Description		Equipment No	
Rel. Level (RL)	49 m	Pressure Input	0 kPa
Nozzle K value	-	Ext Flow (+In/-Out)	0 m3/hr
Int.(Gauge) Head	-4.05 m	Int.(Gauge) Pressure	-39.68 kPa
Total Node Head	44.95 m		

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	15	Node Type	Junction
Description		Equipment No	
Rel. Level (RL)	49 m	Pressure Input	0 kPa
Nozzle K value	-	Ext Flow (+In/-Out)	0 m3/hr
Int.(Gauge) Head	-4.06 m	Int.(Gauge) Pressure	-39.79 kPa
Total Node Head	44.94 m		

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Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	16	Node Type	Junction
Description		Equipment No	Crossover
Rel. Level (RL)	51 m	Pressure Input	0 kPa
Nozzle K value	-	Ext Flow (+In/-Out)	-20 m3/hr
Int.(Gauge) Head	-6.06 m	Int.(Gauge) Pressure	-59.42 kPa
Total Node Head	44.94 m		

Helix Tech

Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	21	Node Type	Nozzle
Description		Equipment No	To cyclone feed pump
Rel. Level (RL)	49.5 m	Pressure Input	0 kPa
Nozzle K value	0	Ext Flow (+In/-Out)	-150 m3/hr
Int.(Gauge) Head	-11.57 m	Int.(Gauge) Pressure	-113.46 kPa
Total Node Head	37.93 m		

Helix Tech

Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	22	Node Type	Nozzle
Description		Equipment No	CD tank
Rel. Level (RL)	51 m	Pressure Input	0 kPa
Nozzle K value	0	Ext Flow (+In/-Out)	274 m3/hr
Int.(Gauge) Head	-5.47 m	Int.(Gauge) Pressure	-53.6 kPa
Total Node Head	45.53 m		

Helix Tech

Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	23	Node Type	Nozzle
Description		Equipment No	To primary feed pump
Rel. Level (RL)	51 m	Pressure Input	0 kPa
Nozzle K value	0	Ext Flow (+In/-Out)	-10 m3/hr
Int.(Gauge) Head	-6.04 m	Int.(Gauge) Pressure	-59.23 kPa
Total Node Head	44.96 m		

Helix Tech

Project	Concentrator	Client	ABC Resources Ltd.
Project No.	DS03179	Design Date	23/01/2016
Category	Demo Process Water	Atmos. Press	0 kPa
Description	CD Tank Area - nom - rev1		

Node No	24	Node Type	Nozzle
Description		Equipment No	To decoupling bleed
Rel. Level (RL)	49 m	Pressure Input	0 kPa
Nozzle K value	0	Ext Flow (+In/-Out)	-50 m3/hr
Int.(Gauge) Head	-5.12 m	Int.(Gauge) Pressure	-50.17 kPa
Total Node Head	43.88 m		