Initial material temp	150.000	Deg C
Initial material mass (Moving mass)	80000.000	Kg/hr
Ambient temp	40.000	Deg c
Compressor pressure	3.000	Bar
Comp pressure drop upto usage pt	1.000	Bar
Ambient pressure	1.000	Bar
Initial ash temp	150	Deg C
Initial air temp	50	Deg C
Material sp heat	1.04125	Kj/kg
Air sp heat	0.9996	Kj/kg
Considered heat resistance HeatRestFactPipeWall	0.1032	Kcal/hr/ Deg C/m2

	PRESSURE DROP CALCULATION											TEMP DROP CALCULATION											
Node	Nodal length (m)	Pipe ID(mm)	flow at start node m3/hr	flow at end node m3/sec	Node starting Pr (" HGA)	Node end Pr (" HGA)	Air pr.drop (bar)	Pr.drop with material in horz. line(bar)	Pr.drop with material in vert. line(bar)	Total Pr.drop in bend(bar)	Total pr. drop across the node(bar)	Abs press	T air at start	dT air	T air at end	Temp mix begin	dheat kj/hr	dTempAirHeatMat deg c	Temp mix end	Temp diff at start	Temp diff at end	dTempdiff st start	dTempdiff st end	**Final Temp at end of node deg c**
10	50.00	304.90	2578.38	2702.46	56.27	53.43	0.0023	0.07	0.00	0.02	0.09	3.00	50.00	-2.954	47.05	144.66	500322.35	6.01	150.67	104.66	110.67	0.03	0.03	**110.64**

Note:-

1) In above algoritm , please note that I have not considered dt (time increment) , hence the calculation may not yield the exact figure , but perhabs will approximate my value
2) In above algoritm , there is no sediment mass , as the algoritm is in attempt to keep th ematerial in suspension form
3) Pressure drop calculateion is approx and without time increment
4) Air density is considered to arrive Tempmix , and is hidden from this sheet