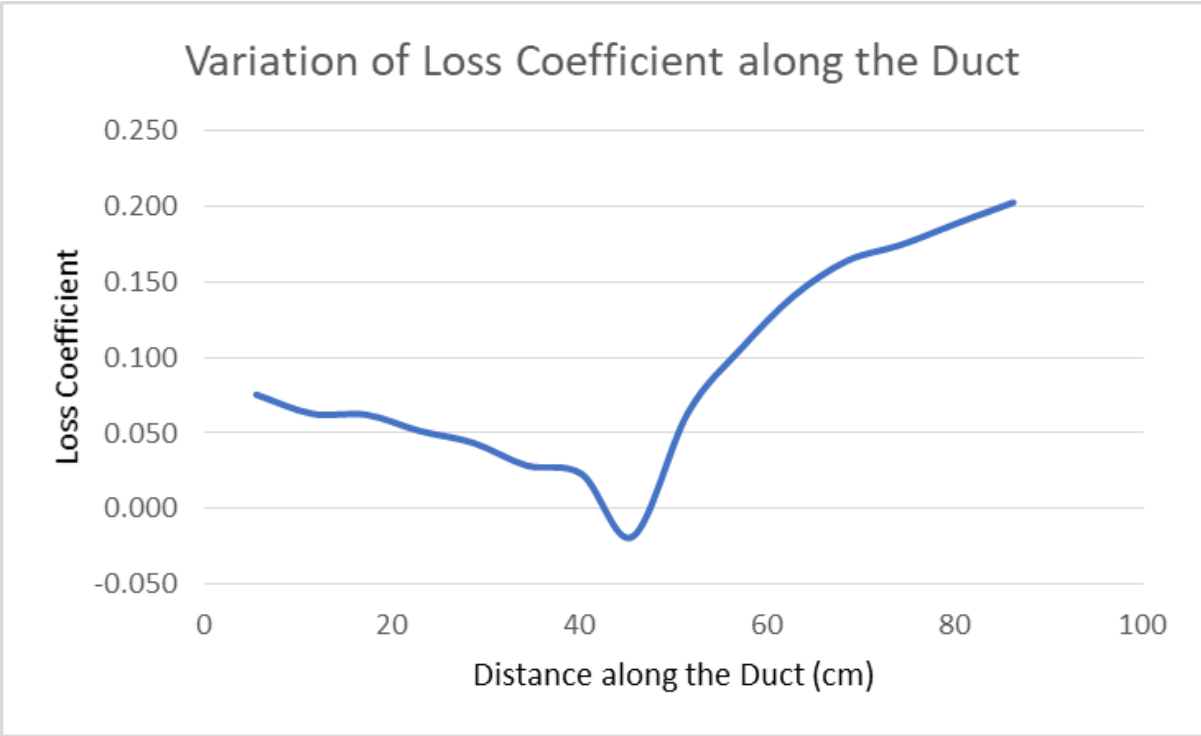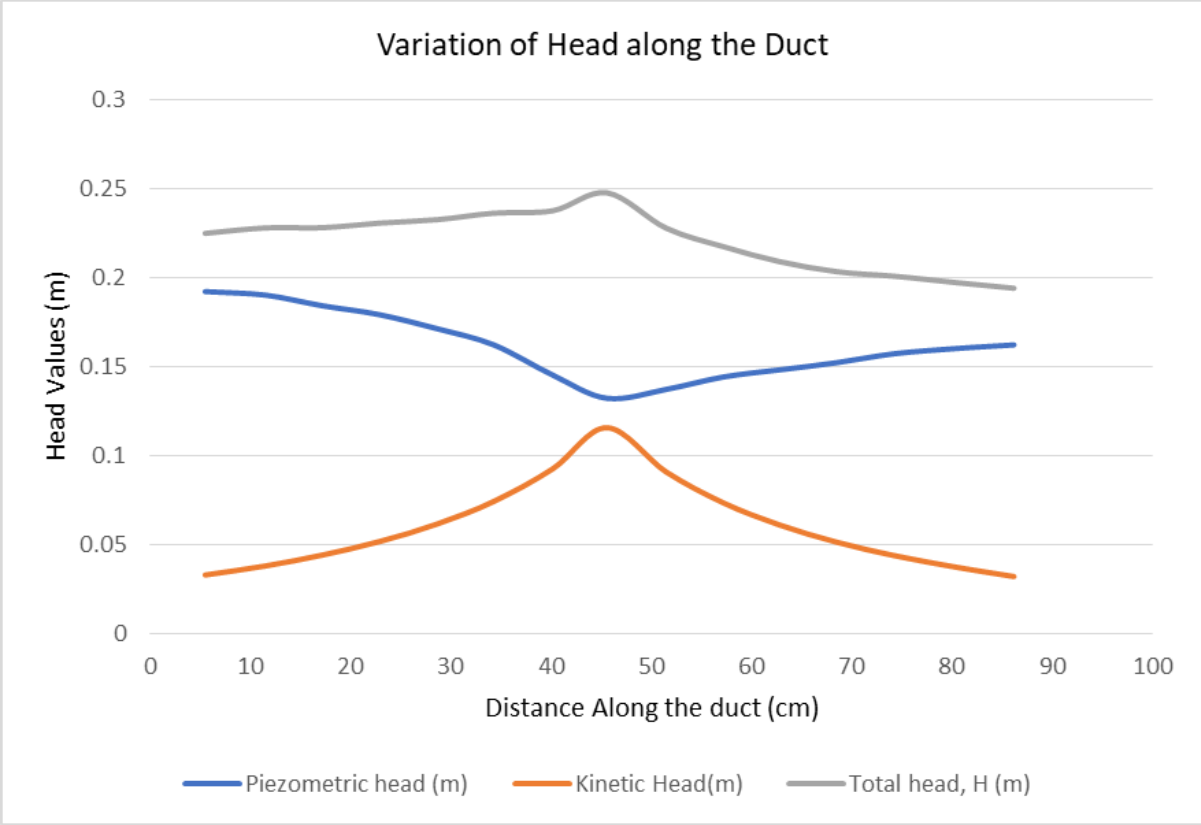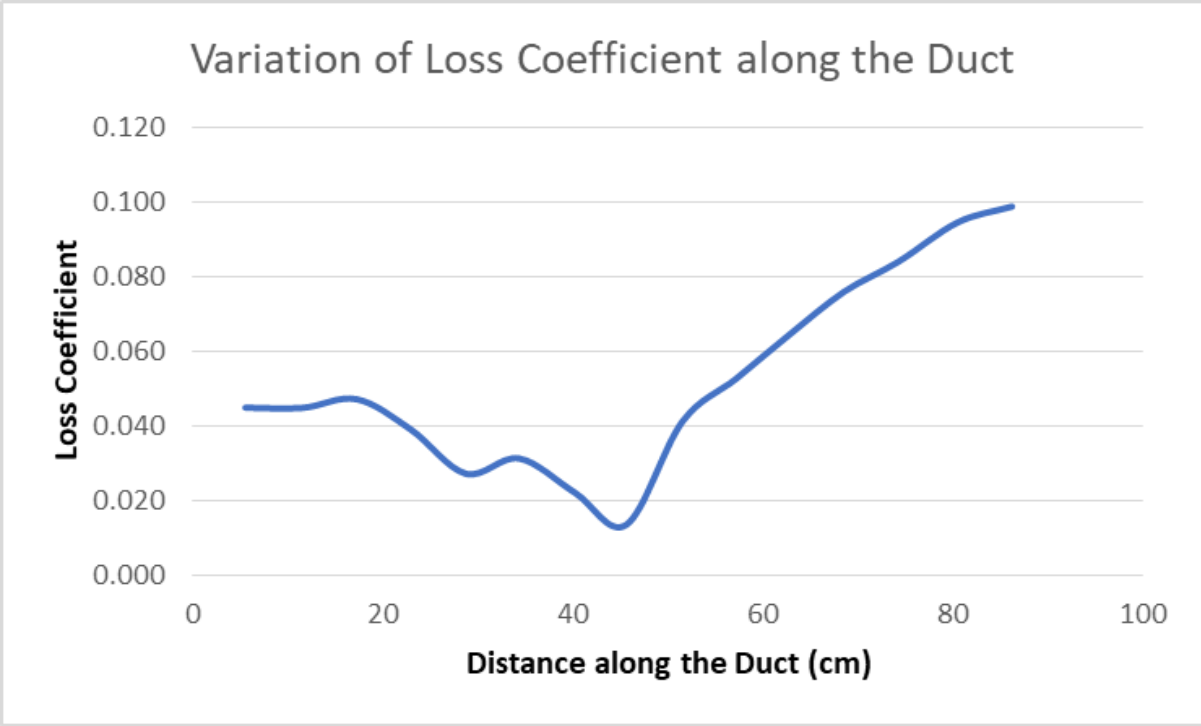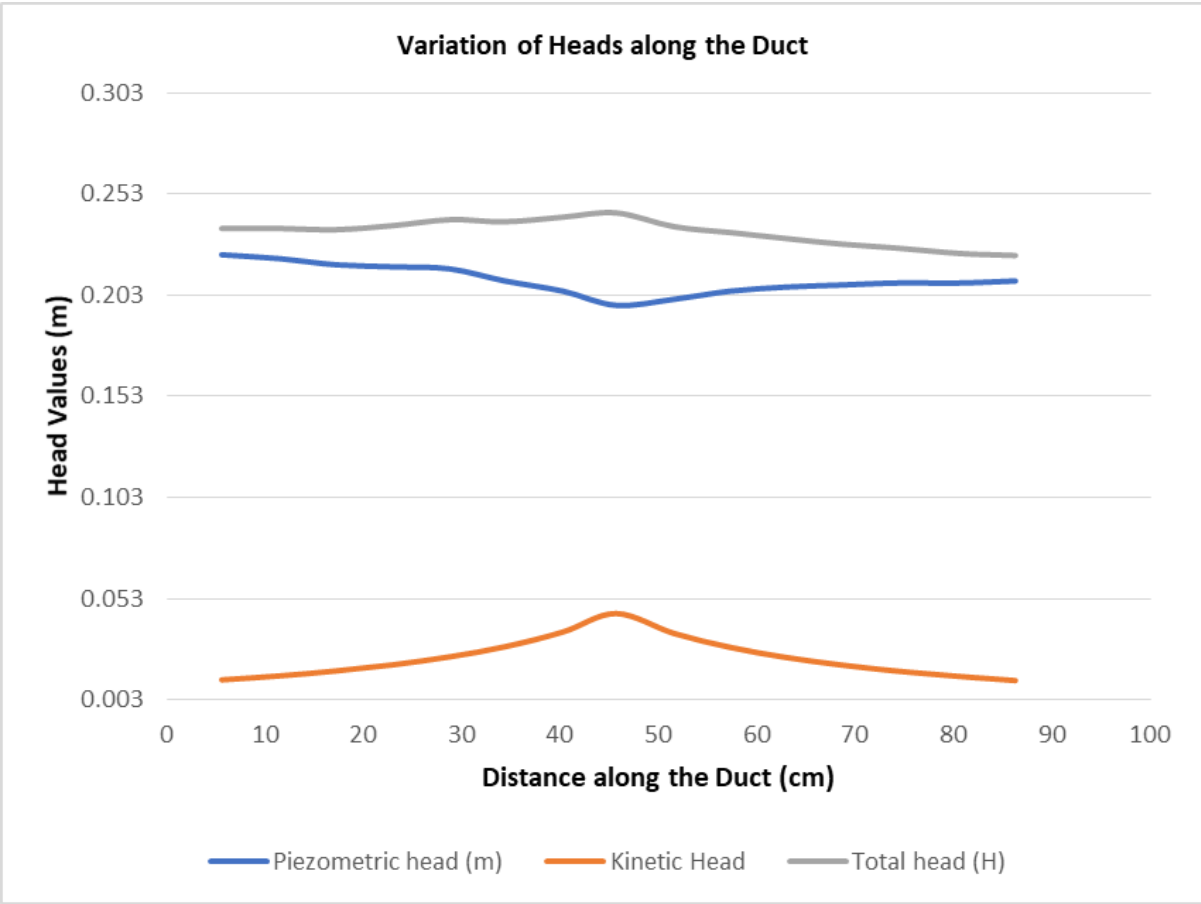Flow 1:

Tube No	Dist from tank (cm)	Cross sect area (cm²)	Piezometric head (m)	Flow vel. (m/s)	Kinetic Head(m)	Total head, H (m)	Loss coeff
1	5.5	8.46	0.192	0.80067	0.03267	0.22467	0.07541
2	11.5	7.87	0.19	0.86070	0.03776	0.22776	0.06273
3	17.2	7.3	0.184	0.92790	0.04388	0.22788	0.06221
4	22.9	6.74	0.179	1.00500	0.05148	0.23048	0.05153
5	28.7	6.17	0.171	1.09784	0.06143	0.23243	0.04350
6	34.3	5.62	0.162	1.20528	0.07404	0.23604	0.02863
7	40.2	5.03	0.145	1.34665	0.09243	0.23743	0.02292
8	45.6	4.5	0.132	1.50526	0.11548	0.24748	-0.01846
9	51.5	5.08	0.137	1.33340	0.09062	0.22762	0.06329
10	57.2	5.65	0.144	1.19888	0.07326	0.21726	0.10594
11	62.8	6.2	0.148	1.09253	0.06084	0.20884	0.14059
12	68.5	6.76	0.152	1.00202	0.05117	0.20317	0.16389
13	74.2	7.32	0.157	0.92536	0.04364	0.20064	0.17430
14	80.5	7.95	0.16	0.85203	0.03700	0.19700	0.18930
15	86.2	8.57	0.162	0.79039	0.03184	0.19384	0.20230

Variation of Head along the Duct

Piezometric head (m) — Kinetic Head(m) — Total head, H (m)

Variation of Loss Coefficient along the Duct

Flow 2:

Tube No	Dist from tank (cm)	Cross sect area(cm2)	Piezometric head (m)	Flow velo v(m/s)	Kinetic Head	Total head (H)	Loss coeff
1	5.5	8.46	0.223	0.50358	0.01293	0.23593	0.04484
2	11.5	7.87	0.221	0.54133	0.01494	0.23594	0.04479
3	17.2	7.3	0.218	0.58360	0.01736	0.23536	0.04713
4	22.9	6.74	0.217	0.63209	0.02036	0.23736	0.03901
5	28.7	6.17	0.216	0.69048	0.02430	0.24030	0.02713
6	34.3	5.62	0.21	0.75805	0.02929	0.23929	0.03122
7	40.2	5.03	0.205	0.84697	0.03656	0.24156	0.02201
8	45.6	4.5	0.198	0.94673	0.04568	0.24368	0.01343
9	51.5	5.08	0.201	0.83863	0.03585	0.23685	0.04111
10	57.2	5.65	0.205	0.75403	0.02898	0.23398	0.05272
11	62.8	6.2	0.207	0.68714	0.02407	0.23107	0.06451
12	68.5	6.76	0.208	0.63022	0.02024	0.22824	0.07594
13	74.2	7.32	0.209	0.58200	0.01726	0.22626	0.08395
14	80.5	7.95	0.209	0.53588	0.01464	0.22364	0.09459
15	86.2	8.57	0.21	0.49711	0.01260	0.22260	0.09880

Variation of Heads along the Duct

Variation of Loss Coefficient along the Duct

Error Analysis:
Flow 1:

$\triangle Q$ 1.40955E-05

$\triangle t$ 0.01

$\triangle A$ 0

$\triangle g$ 0

$\triangle Ho$ 0.001

$\triangle$ Piezo. Head	$\triangle$ v	$\triangle$ Kinetic head	$\triangle$ Total Head	$\triangle$ Loss coeff.
0.001	0.01666	0.00136	0.00236	0.00110
0.001	0.01791	0.00157	0.00257	0.00096
0.001	0.01931	0.00183	0.00283	0.00102
0.001	0.02091	0.00214	0.00314	0.00091
0.001	0.02285	0.00256	0.00356	0.00084
0.001	0.02508	0.00308	0.00408	0.00061
0.001	0.02802	0.00385	0.00485	0.00056
0.001	0.03132	0.00481	0.00581	-0.00051
0.001	0.02775	0.00377	0.00477	0.00158
0.001	0.02495	0.00305	0.00405	0.00240
0.001	0.02273	0.00253	0.00353	0.00295
0.001	0.02085	0.00213	0.00313	0.00319
0.001	0.01926	0.00182	0.00282	0.00315
0.001	0.01773	0.00154	0.00254	0.00321
0.001	0.01645	0.00133	0.00233	0.00325

Flow 2:

△Q	8.73737E-06
△t	0.01
△A	0
△g	0
△Ho	0.001

△Piezo. Head	△v	△Kinetic head	△Total Head	△Loss coeff.
0.001	0.01033	0.00053	0.00153	0.00047
0.001	0.01110	0.00061	0.00161	0.00049
0.001	0.01197	0.00071	0.00171	0.00053
0.001	0.01296	0.00084	0.00184	0.00046
0.001	0.01416	0.00100	0.00200	0.00034
0.001	0.01555	0.00120	0.00220	0.00041
0.001	0.01737	0.00150	0.00250	0.00032
0.001	0.01942	0.00187	0.00287	0.00021
0.001	0.01720	0.00147	0.00247	0.00060
0.001	0.01546	0.00119	0.00219	0.00071
0.001	0.01409	0.00099	0.00199	0.00082
0.001	0.01293	0.00083	0.00183	0.00092
0.001	0.01194	0.00071	0.00171	0.00097
0.001	0.01099	0.00060	0.00160	0.00106
0.001	0.01020	0.00052	0.00152	0.00107