

LAMPIRAN

Lampiran 1 Pehitungan koefisien discharge pada pipa 1 “

No	Debit	ΔP rata-rata (N/m ²)	V (N/m ²)	Re	\dot{V} ideal	Cd
1	1	799.98	0.02747	763.595	0.00001968	0.8473
2	1.5	1506.629	0.04120	1145.393	0.00002700	0.9261
3	2	2826.596	0.05493	1527.191	0.00003698	0.9015
4	2.5	4999.875	0.06867	1908.988	0.00004919	0.8473
5	3	8026.466	0.08240	2290.786	0.00006232	0.8024
6	3.5	10519.737	0.09614	2672.584	0.00007135	0.8177
7	4	14932.96	0.10987	3054.381	0.00008501	0.7844
8	4.5	16946.243	0.12360	3436.179	0.00009056	0.8284
9	5	19892.836	0.13734	3817.977	0.00009811	0.8495
10	5.5	23772.739	0.15107	4199.774	0.00010726	0.8548
11	6	28119.297	0.16480	4581.572	0.00011665	0.8574
12	6.5	32812.513	0.17854	4963.370	0.00012601	0.8599
13	7	37732.39	0.19227	5345.167	0.00013513	0.8636
14	7.5	43545.578	0.20601	5726.965	0.00014516	0.8613
15	8	49812.088	0.21974	6108.763	0.00015526	0.8590
16	8.5	56691.916	0.23347	6490.560	0.00016563	0.8555

Lampiran 2 Perhitungan koefisien discharge pada pipa 1/2"

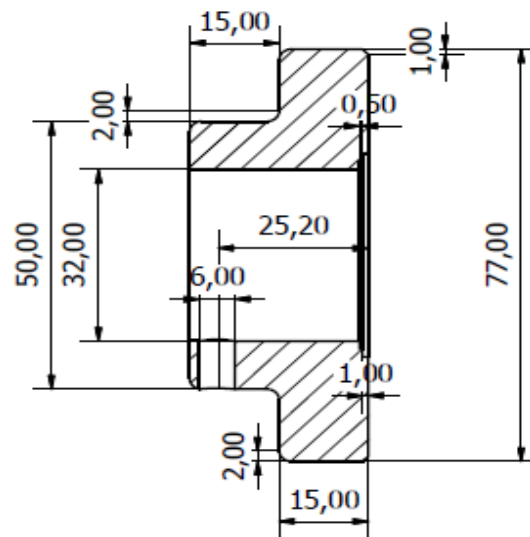
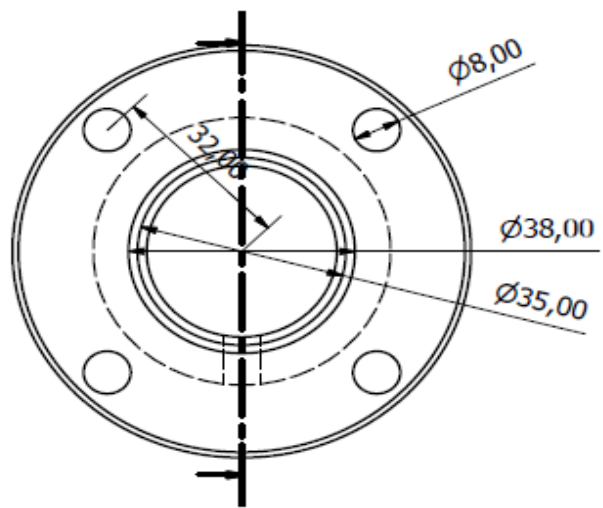
No	Debit (LPM)	ΔP rata-rata (N/m ²)	V (N/m ²)	Re	\dot{V} ideal	Cd
1	1	2906.594	0.0607	1135.21	0.00001693	0.984
2	1.5	6679.833	0.0911	1702.82	0.00002567	0.974
3	2	11786.372	0.1214	2270.42	0.00003410	0.978
4	2.5	19759.506	0.1518	2838.03	0.00004415	0.944
5	3	30719.232	0.1821	3405.63	0.00005505	0.908
6	3.5	41052.307	0.2125	3973.24	0.00006364	0.917
7	4	55438.614	0.2428	4540.84	0.00007395	0.902
8	4.5	69878.253	0.2732	5108.45	0.00008303	0.904
9	5	86251.177	0.3035	5676.06	0.00009224	0.904

Lampiran 3 Perhitungan debit orifice pipa 1”

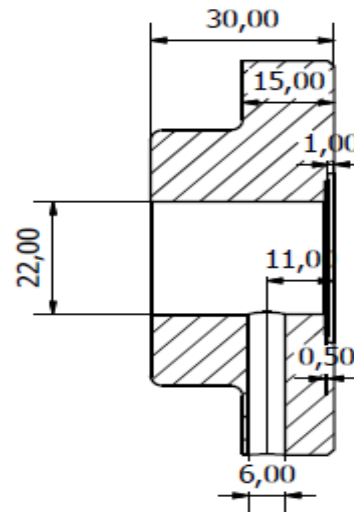
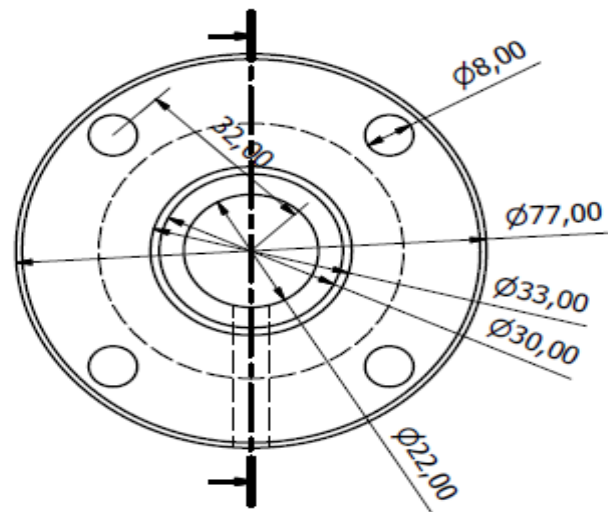
No	Debit (LPM)	ΔP rata-rata (N/m ²)	V ideal	debit (m ³ /s)	Re		Cd	Q orifice	Q orifice (Lpm)
1	1	799.98	0.0000192	0.00001667	1.956287	815.1197	0.882882	0.0000170	1.018594528
2	1.5	1506.629	0.0000264	0.000025005	2.507809	1044.921	0.876254	0.0000231	1.387370899
3	2	2826.596	0.0000362	0.00003334	3.347915	1394.964	0.867377	0.0000314	1.88104421
4	2.5	4999.875	0.0000481	0.000041675	4.448078	1853.366	0.857975	0.0000413	2.474648549
5	3	8026.466	0.0000609	0.00005001	5.677977	2365.824	0.85045	0.0000518	3.107921936
6	3.5	10519.737	0.0000697	0.000058345	6.538791	2724.496	0.847057	0.0000591	3.543843534
7	4	14932.96	0.0000831	0.00006668	7.856098	3273.374	0.844855	0.0000702	4.211281986
8	4.5	16946.243	0.0000885	0.000075015	8.394861	3497.859	0.844996	0.0000748	4.486942243
9	5	19892.836	0.0000959	0.00008335	9.131052	3804.605	0.846166	0.0000812	4.868140694
10	5.5	23772.739	0.0001048	0.000091685	10.02462	4176.927	0.849103	0.0000890	5.340222441
11	6	28119.297	0.0001140	0.00010002	10.9455	4560.625	0.853871	0.0000974	5.840548505
12	6.5	32812.513	0.0001232	0.000108355	11.86511	4943.798	0.860395	0.0001060	6.357360196
13	7	37732.39	0.0001321	0.00011669	12.76257	5317.738	0.868461	0.0001147	6.881236339
14	7.5	43545.578	0.0001419	0.000125025	13.75203	5730.012	0.879298	0.0001248	7.484576548
15	8	49812.088	0.0001518	0.00013336	14.74848	6145.198	0.892273	0.0001354	8.123146602
16	8.5	56691.916	0.0001619	0.000141695	15.77378	6572.407	0.907783	0.0001470	8.816613963

Lampiran 4 Perhitungan debit orifice pipa ½”

No	Debit (LPM)	ΔP rata-rata (N/m ²)	V (m/s)	\dot{V} ideal	Re		Cd	Q orifice (m ³ /s)	Q orifice (LPM)
1	1	2906.594	0.060706	0.0000159	6.809367	1215.958	0.988716	0.0000157	0.944804107
2	1,5	6679.833	0.09106	0.0000241	9.659147	1724.848	0.969258	0.0000234	1.40410665
3	2	11786.372	0.121413	0.0000321	12.45278	2223.71	0.952194	0.0000305	1.832286664
4	2,5	19759.506	0.151766	0.0000415	15.80726	2822.725	0.934335	0.0000388	2.327922331
5	3	30719.232	0.182119	0.0000518	19.4577	3474.59	0.918162	0.0000475	2.852345956
6	3,5	41052.307	0.212473	0.0000599	22.33957	3989.21	0.907795	0.0000543	3.26012547
7	4	55438.614	0.242826	0.0000696	25.80431	4607.913	0.898136	0.0000625	3.748228687
8	4,5	69878.253	0.273179	0.0000781	28.85458	5152.603	0.892167	0.0000697	4.180181376
9	5	86251.177	0.303532	0.0000868	31.95377	5706.031	0.888534	0.0000771	4.625239947



	Skala : 1:1	Digambar : Muhamad Marwan M	
	Satuan : mm	NIM : 20140130251	
	12-05-18	Dilihat :	
TEKNIK MESIN UMY		ORIFICE FLANGE 1"	



	Skala : 1:1	Digambar : Muhamad Marwan M	
	Satuan : mm	NIM : 20140130251	
	12-05-18	Dilihat :	
TEKNIK MESIN UMY		ORIFICE FLANGE 1/2 "	

