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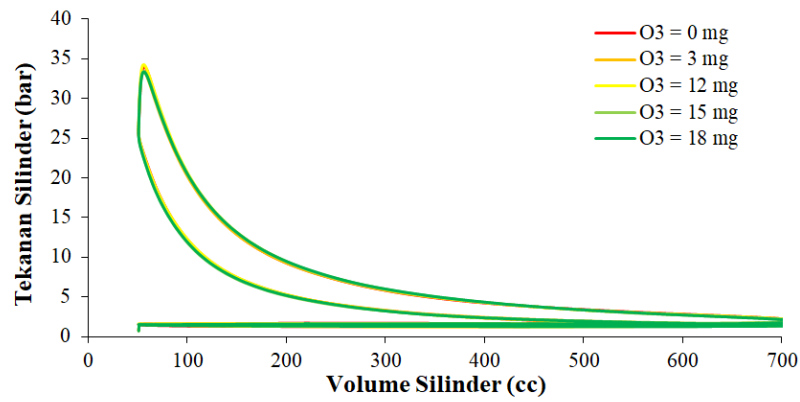
LAMPIRAN

Tabel Perhitungan Performa Mesin

Ozon 0 mg										
Rasio Kompresi	Beban (kg)	Putaran (rpm)	Torsi (Nm)	BP (Kw)	FC (kg/h)	SFC (kg/kW.h)	Ma (kg/h)	Mth (kg/h)	AFR	ηvo (%)	ηth (%)
rasio 14	1	1508	1,86	0,29358	0,5178	1,76376	26,3175	34,9926	50,8256	75,2089	5,60479
	3	1480	5,6	0,86748	0,62136	0,71628	25,2529	34,3428	40,6413	73,5318	13,8011
	5	1475	9,03	1,39408	0,67314	0,48286	24,8313	34,2268	36,8887	72,5493	20,473
	7	1461	12,74	1,94818	0,7767	0,39868	24,0208	33,9019	30,9268	70,8538	24,7955
	9	1448	16,25	2,46281	0,98382	0,39947	22,9854	33,6003	23,3634	68,4083	24,7465
rasio 16	1	1511	2,04	0,32263	0,5178	1,60494	26,9478	35,0622	52,0429	76,8573	6,15941
	3	1502	5,77	0,9071	0,56958	0,62791	26,1928	34,8533	45,9862	75,1516	15,7434
	5	1489	9,38	1,46186	0,62136	0,42505	25,3322	34,5517	40,769	73,3169	23,2574
	7	1472	12,96	1,99674	0,72492	0,36305	24,6028	34,1572	33,9386	72,0281	27,2289
	9	1449	16,45	2,49484	0,88026	0,35283	23,5682	33,6235	26,7742	70,0946	28,0175
rasio 18	1	1487	2,03	0,31595	0,46602	1,47499	25,5893	34,5053	54,9103	74,1606	6,70207
	3	1470	5,78	0,88931	0,5178	0,58225	24,8121	34,1108	47,9184	72,7399	16,9781
	5	1461	9,17	1,40226	0,56958	0,40619	24,1807	33,9019	42,4536	71,3255	24,3373
	7	1458	12,73	1,94265	0,72492	0,37316	23,5973	33,8323	32,5516	69,7479	26,4913
	9	1451	16,62	2,5241	0,82848	0,32823	23,2525	33,6699	28,0665	69,0603	30,1178

Ozon 3 mg										
Rasio Kompresi	Beban (kg)	Putaran (rpm)	Torsi (Nm)	BP (Kw)	FC (kg/h)	SFC (kg/kW.h)	Ma (kg/h)	Mth (kg/h)	AFR	ηvo (%)	ηth (%)
rasio 14	1	1479	1,84	0,28484	0,46602	1,6361	25,4632	34,3196	54,6396	74,1942	6,0421
	3	1507	5,78	0,91169	0,56958	0,62475	25,5687	34,9693	44,8904	73,1174	15,8232
	5	1476	9,17	1,41665	0,67314	0,47516	24,7909	34,25	36,8287	72,3821	20,8045
	7	1459	12,75	1,94704	0,7767	0,39891	24,0076	33,8555	30,9098	70,912	24,781
	9	1449	16,46	2,49636	0,88026	0,35262	23,1661	33,6235	26,3173	68,8986	28,0346
rasio 16	1	1517	2,07	0,32867	0,46602	1,41788	26,8163	35,2014	57,5432	76,1796	6,97201
	3	1497	5,61	0,87901	0,5178	0,58907	25,9316	34,7373	50,0802	74,6504	16,7814
	5	1467	9,18	1,40955	0,62136	0,44082	24,7504	34,0412	39,8326	72,7072	22,4252
	7	1463	12,76	1,9539	0,72492	0,37101	24,1086	33,9483	33,2569	71,0155	26,6447
	9	1446	16,42	2,48513	0,88026	0,35421	23,1068	33,5539	26,2499	68,8647	27,9085
rasio 18	1	1490	1,84	0,28695	0,41424	1,44358	29,6864	34,5749	71,6648	85,8613	6,84792
	3	1469	5,6	0,86103	0,5178	0,60137	29,1046	34,0876	56,2081	85,3818	16,4382
	5	1455	9,16	1,39498	0,62136	0,44543	28,4831	33,7627	45,8399	84,3625	22,1933
	7	1456	12,67	1,93084	0,67314	0,34863	27,9838	33,7859	41,5721	82,8269	28,3556
	9	1448	16,82	2,54919	0,7767	0,30468	27,2168	33,6003	35,0416	81,0018	32,445

Ozon 12 mg										
Rasio Kompresi	Beban (kg)	Putaran (rpm)	Torsi (Nm)	BP (Kw)	FC (kg/h)	SFC (kg/kW.h)	Ma (kg/h)	Mth (kg/h)	AFR	ηvo (%)	ηth (%)
rasio 14	1	1509	1,84	0,29061	0,41424	1,4254	26,2653	35,0158	63,406	75,01	6,93524
	3	1502	5,6	0,88037	0,5178	0,58816	25,7477	34,8533	49,7251	73,8744	16,8075
	5	1468	9,4	1,44432	0,67314	0,46606	24,697	34,0644	36,6892	72,501	21,2107
	7	1459	12,77	1,95009	0,7767	0,39829	24,0779	33,8555	31,0003	71,1196	24,8199
	9	1445	16,63	2,51518	0,93204	0,37057	23,182	33,5307	24,8724	69,1369	26,6767
rasio 16	1	1504	2,02	0,31799	0,46602	1,46554	27,0944	34,8997	58,1399	77,6349	6,7453
	3	1495	5,59	0,8747	0,56958	0,65117	26,3936	34,6909	46,3387	76,0823	15,1812
	5	1488	9,36	1,45776	0,62136	0,42624	25,378	34,5285	40,8427	73,4989	23,1922
	7	1458	12,75	1,9457	0,72492	0,37258	24,2243	33,8323	33,4166	71,6012	26,5329
	9	1451	16,26	2,46943	0,88026	0,35646	23,4515	33,6699	26,6415	69,6512	27,7322
rasio 18	1	1491	2,03	0,3168	0,46602	1,47103	30,2746	34,5981	64,9641	87,5036	6,7201
	3	1476	5,6	0,86513	0,5178	0,59852	29,3178	34,25	56,62	85,5995	16,5165
	5	1460	9,18	1,40283	0,62136	0,44293	28,5108	33,8787	45,8846	84,1556	22,3182
	7	1456	12,73	1,93998	0,72492	0,37367	27,8533	33,7859	38,4227	82,4407	26,4549
	9	1447	16,44	2,48988	0,82848	0,33274	27,1702	33,5771	32,7953	80,919	29,7095

Ozon 15 mg										
Rasio Kompresi	Beban (kg)	Putaran (rpm)	Torsi (Nm)	BP (Kw)	FC (kg/h)	SFC (kg/kW.h)	Ma (kg/h)	Mth (kg/h)	AFR	ηvo (%)	ηth (%)
rasio 14	1	1492	2,03	0,31701	0,41424	1,30671	25,9132	34,6213	62,5561	74,8477	7,56519
	3	1470	5,48	0,84315	0,56958	0,67554	24,8929	34,1108	43,7039	72,9765	14,6336
	5	1495	9,19	1,43802	0,62136	0,43209	24,9119	34,6909	40,0926	71,8112	22,8781
	7	1457	12,86	1,96114	0,7767	0,39604	23,8244	33,8091	30,6739	70,4675	24,9605
	9	1448	16,24	2,46129	0,88026	0,35764	23,1729	33,6003	26,3251	68,9665	27,6408
rasio 16	1	1485	1,85	0,28755	0,41424	1,44061	26,4655	34,4588	63,8894	76,8033	6,86203
	3	1494	5,62	0,87881	0,56958	0,64813	25,5873	34,6677	44,923	73,8072	15,2524
	5	1461	8,98	1,3732	0,62136	0,45249	24,6113	33,9019	39,6088	72,5957	21,8469
	7	1472	12,94	1,99366	0,72492	0,36361	24,3266	34,1572	33,5576	71,2194	27,1868
	9	1451	16,46	2,4998	0,88026	0,35213	23,2956	33,6699	26,4645	69,1883	28,0733
rasio 18	1	1488	2,11	0,32862	0,46602	1,41811	30,1977	34,5285	64,7992	87,4575	6,97088
	3	1479	5,76	0,89166	0,5178	0,58071	29,4794	34,3196	56,9321	85,8967	17,023
	5	1470	9,16	1,40936	0,62136	0,44088	28,6733	34,1108	46,1461	84,0594	22,4221
	7	1458	12,92	1,97164	0,67314	0,34141	27,7907	33,8323	41,2852	82,1426	28,9549
	9	1448	16,64	2,52191	0,82848	0,32851	27,0026	33,6003	32,593	80,3643	30,0917

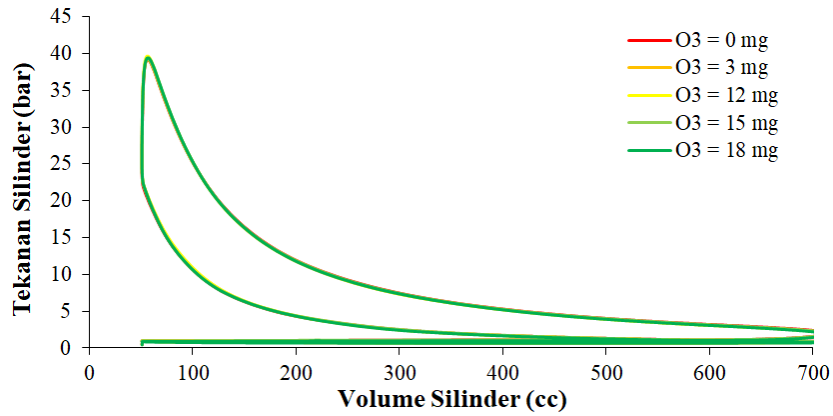| Ozon 18 mg										
Rasio Kompresi	Beban (kg)	Putaran (rpm)	Torsi (Nm)	BP (Kw)	FC (kg/h)	SFC (kg/kW.h)	Ma (kg/h)	Mth (kg/h)	AFR	ηvo (%)	ηth (%)
rasio 14	1	1478	2,01	0,31094	0,46602	1,49874	25,9783	34,2964	55,7451	75,7465	6,59588
	3	1480	5,6	0,86748	0,56958	0,65659	25,6141	34,3428	44,9701	74,5835	15,0557
	5	1460	9,16	1,39977	0,62136	0,4439	24,8632	33,8787	40,0141	73,3887	22,2696
	7	1469	12,92	1,98652	0,7767	0,39099	24,4845	34,0876	31,5237	71,8281	25,2835
	9	1448	16,44	2,4916	0,82848	0,33251	23,5929	33,6003	28,4773	70,2163	29,73
rasio 16	1	1504	1,84	0,28965	0,46602	1,60891	26,2653	34,8997	56,3609	75,2593	6,14424
	3	1505	5,8	0,91364	0,56958	0,62342	25,958	34,9229	45,5739	74,3294	15,8568
	5	1480	9,2	1,42514	0,67314	0,47233	25,0198	34,3428	37,1688	72,853	20,9291
	7	1468	12,95	1,98978	0,7767	0,39035	24,2701	34,0644	31,2477	71,2477	25,325
	9	1448	16,25	2,46281	0,88026	0,35742	23,2866	33,6003	26,4542	69,3047	27,6578
rasio 18	1	1500	2,02	0,31714	0,41424	1,30617	30,3442	34,8069	73,2528	87,1787	7,56828
	3	1491	5,78	0,90202	0,5178	0,57405	29,5831	34,5981	57,1323	85,5051	17,2207
	5	1469	9,16	1,4084	0,56958	0,40442	28,6273	34,0876	50,2603	83,9815	24,4438
	7	1456	12,76	1,94456	0,67314	0,34617	27,6956	33,7859	41,1439	81,9738	28,5571
	9	1446	16,43	2,48665	0,7767	0,31235	26,6484	33,5539	34,3098	79,4198	31,6489

Gambar L.1 Perbandingan tekanan silinder terhadap volume silinder pada beban
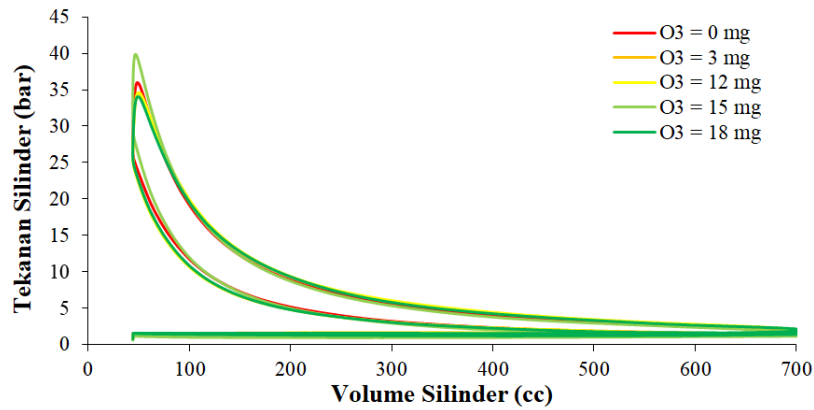1 kg rasio kompresi 14

Gambar L.2 Perbandingan tekanan silinder terhadap volume silinder pada beban
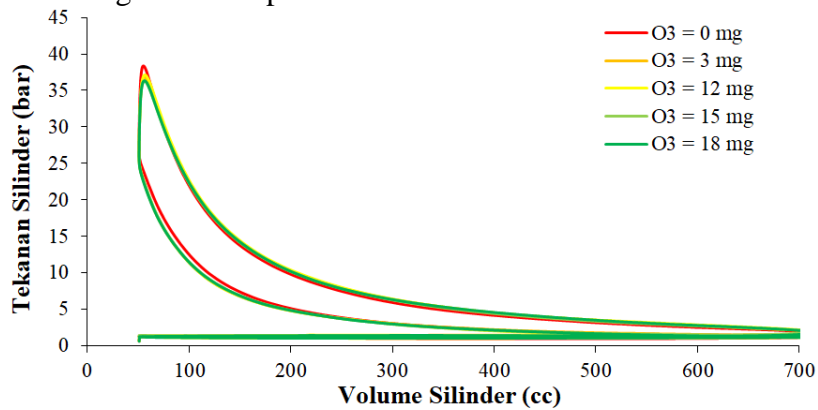3 kg rasio kompresi 14

Gambar L.3 Perbandingan tekanan silinder terhadap volume silinder pada beban
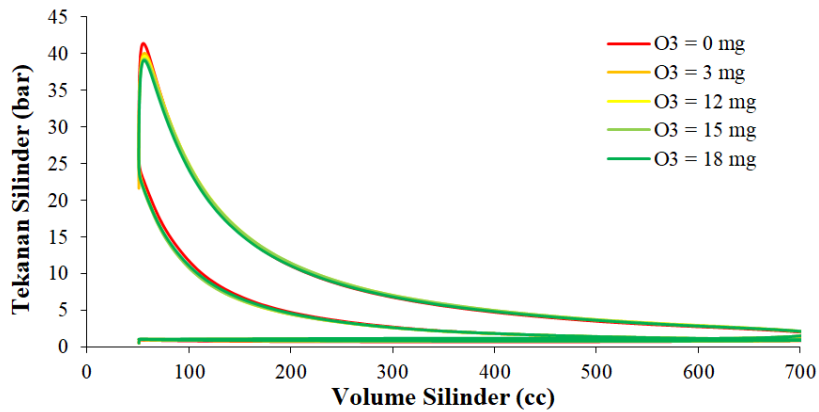7 kg rasio kompresi 14

Gambar L.4 Perbandingan tekanan silinder terhadap volume silinder pada beban
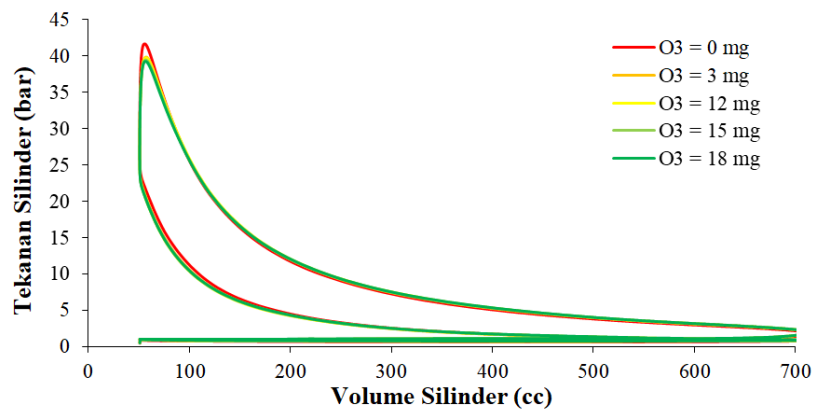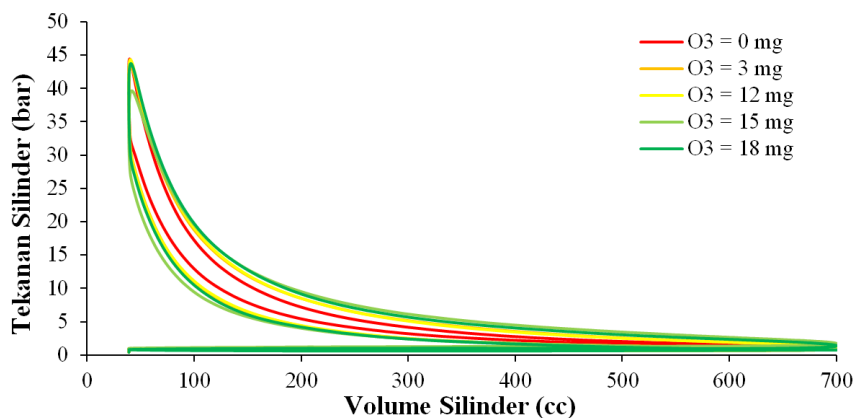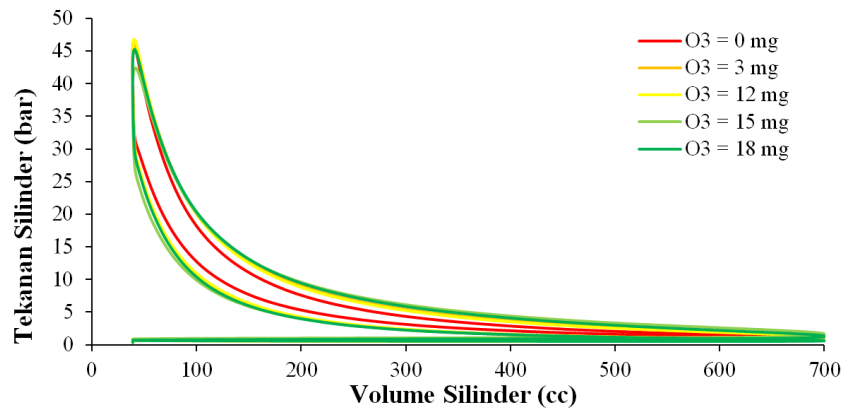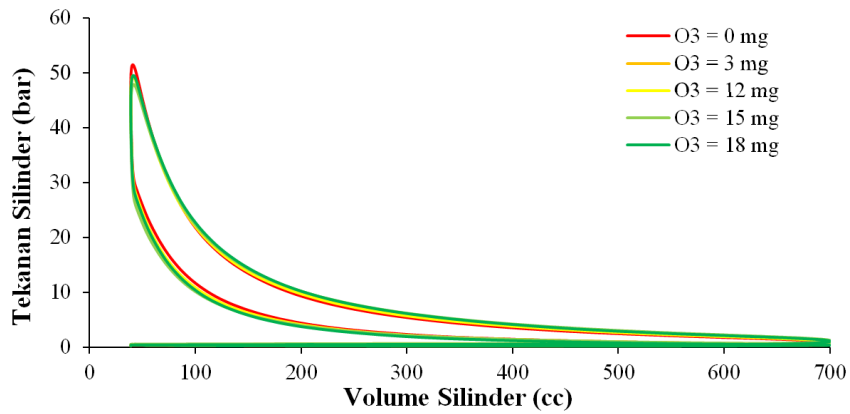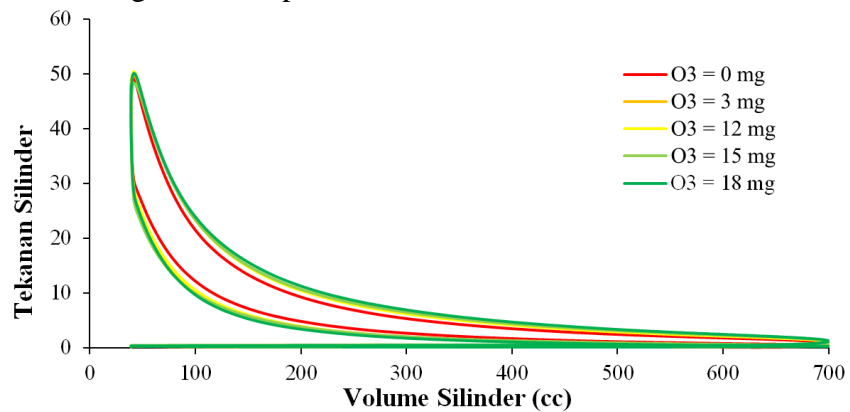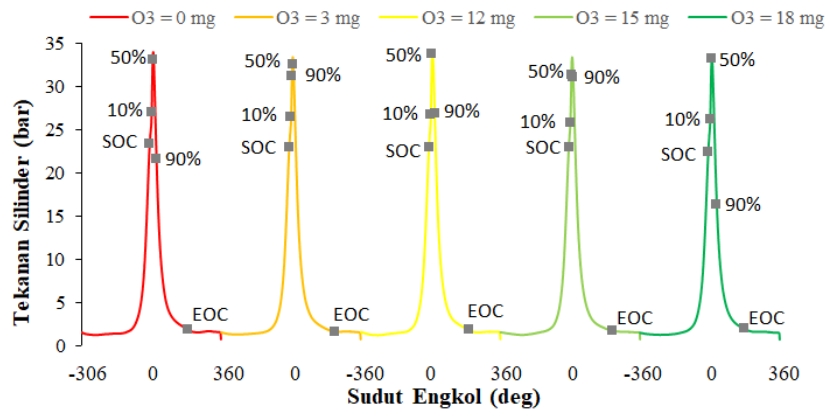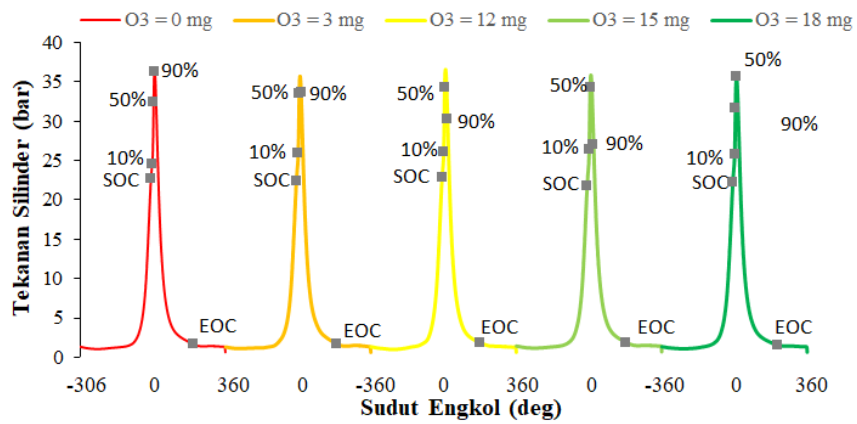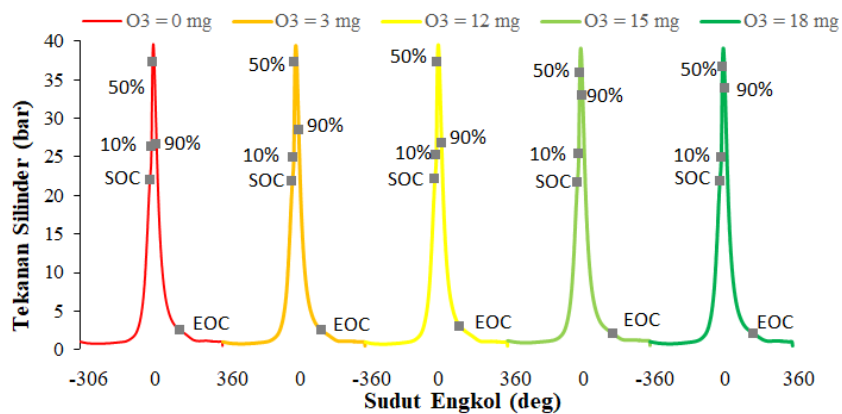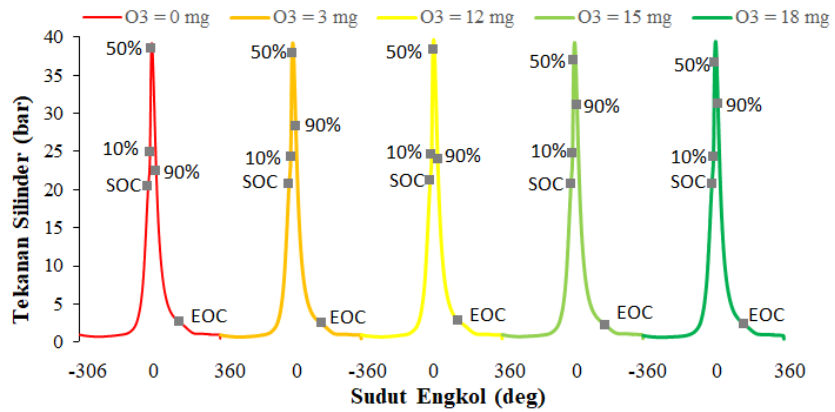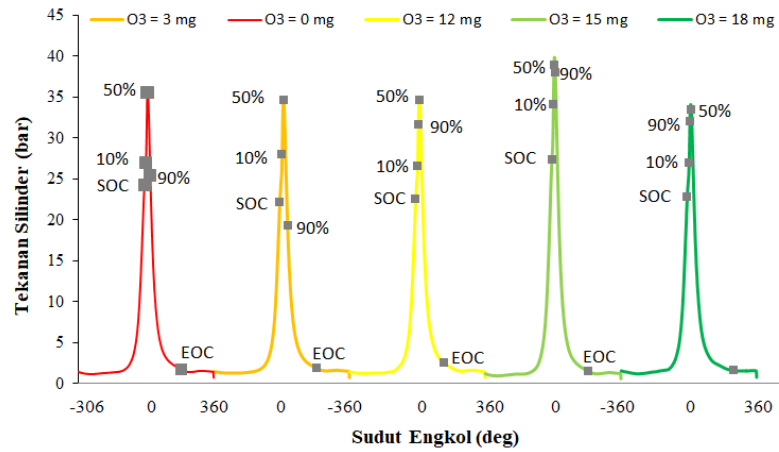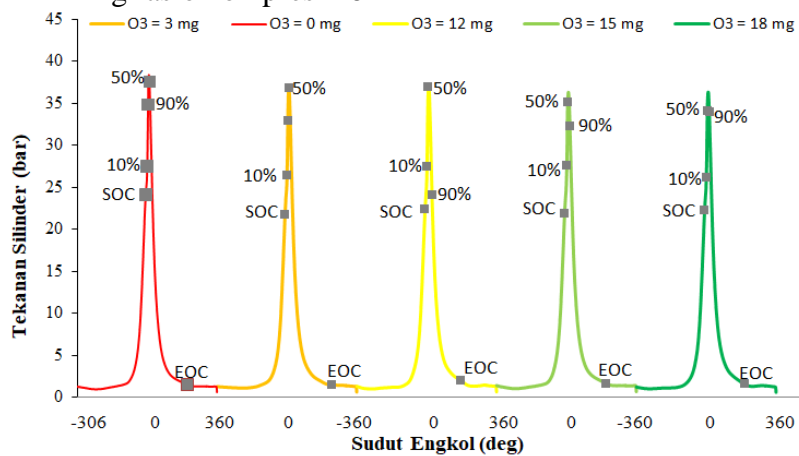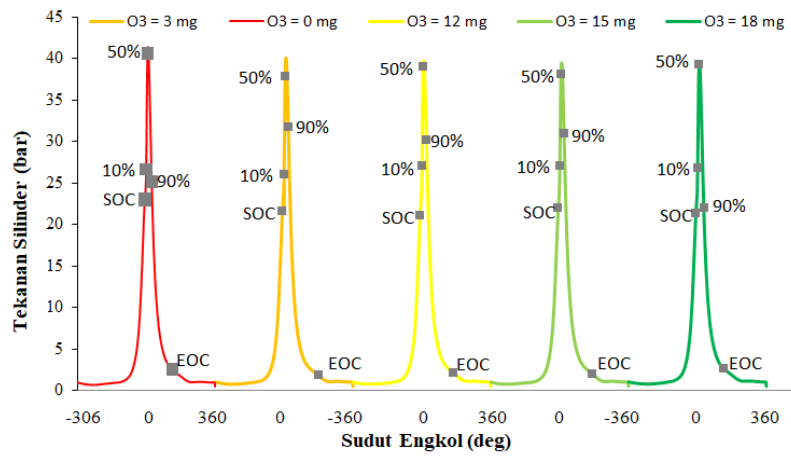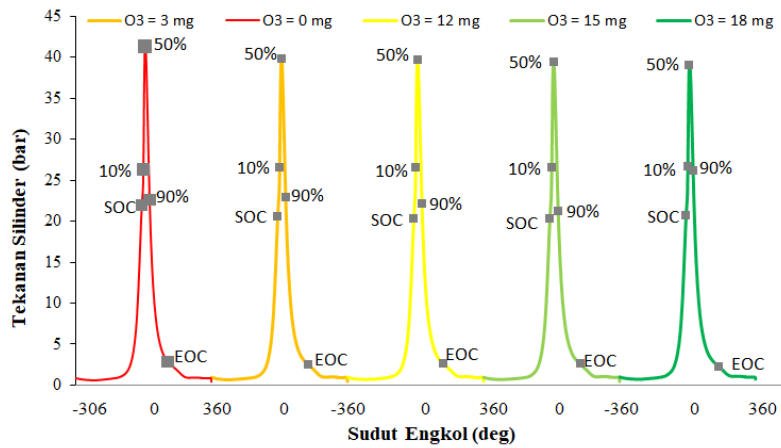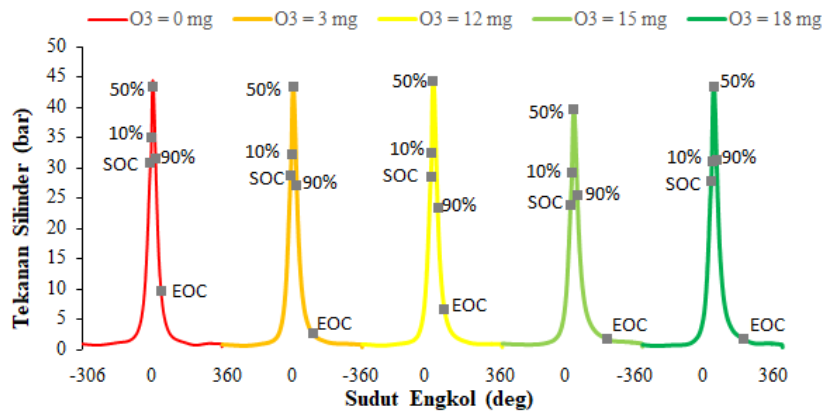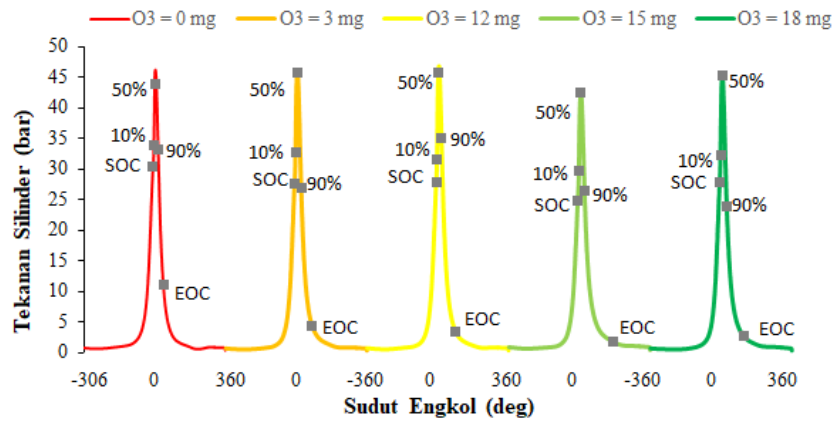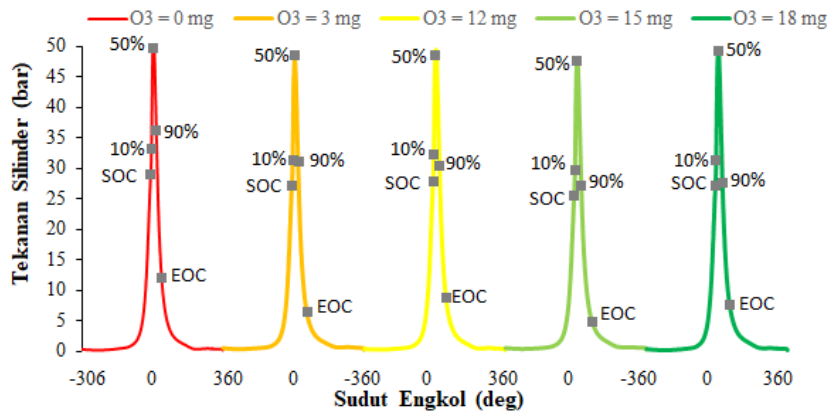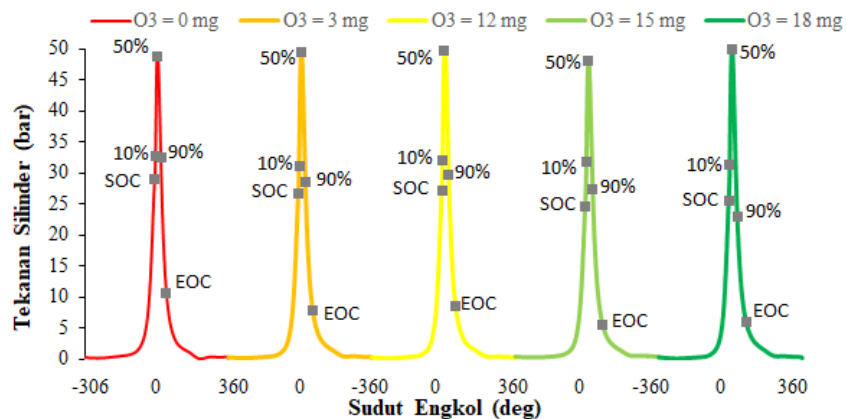9 kg rasio kompresi 14

Gambar L.5 Perbandingan tekanan silinder terhadap volume silinder pada beban
1 kg rasio kompresi 16

Gambar L.6 Perbandingan tekanan silinder terhadap volume silinder pada beban
3 kg rasio kompresi 16

Gambar L.7 Perbandingan tekanan silinder terhadap volume silinder pada beban 7 kg rasio kompresi 16

Gambar L.8 Perbandingan tekanan silinder terhadap volume silinder pada beban 9 kg rasio kompresi 16

Gambar L.9 Perbandingan tekanan silinder terhadap volume silinder pada beban 1 kg rasio kompresi 18

Gambar L.10 Perbandingan tekanan silinder terhadap volume silinder pada beban 3 kg rasio kompresi 18

Gambar L.11 Perbandingan tekanan silinder terhadap volume silinder pada beban 7 kg rasio kompresi 18

Gambar L.12 Perbandingan tekanan silinder terhadap volume silinder pada beban 9 kg rasio kompresi 18

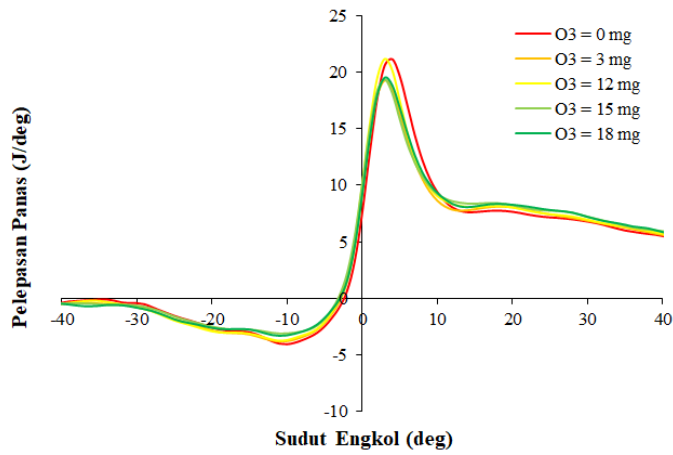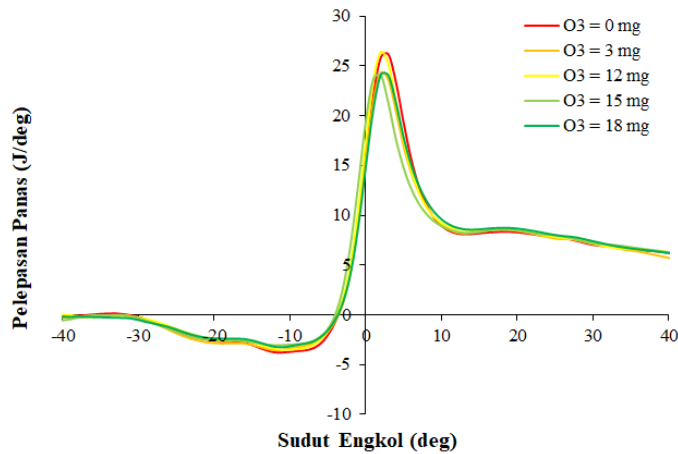Gambar L.13 Perbandingan tekanan silinder terhadap sudut engkol pada beban 1kg rasio kompresi 14

Gambar L.14 Perbandingan tekanan silinder terhadap sudut engkol pada beban 3kg rasio kompresi 14

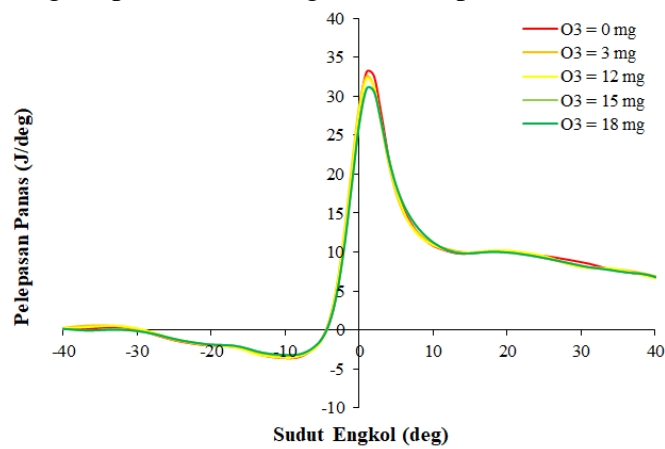Gambar L.15 Perbandingan tekanan silinder terhadap sudut engkol pada beban 7kg rasio kompresi 14

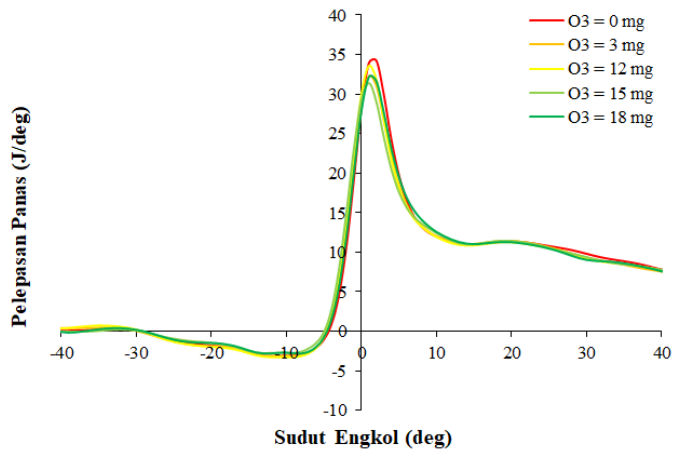Gambar L.16 Perbandingan tekanan silinder terhadap sudut engkol pada beban 9kg rasio kompresi 14

Gambar L.17 Perbandingan tekanan silinder terhadap sudut engkol pada beban 1kg rasio kompresi 16

Gambar L.18 Perbandingan tekanan silinder terhadap sudut engkol pada beban 3kg rasio kompresi 16

Gambar L.19 Perbandingan tekanan silinder terhadap sudut engkol pada beban 7kg rasio kompresi 16

Gambar L.20 Perbandingan tekanan silinder terhadap sudut engkol pada beban 9kg rasio kompresi 16

Gambar L.21 Perbandingan tekanan silinder terhadap sudut engkol pada beban 1kg rasio kompresi 18

Gambar L.22 Perbandingan tekanan silinder terhadap sudut engkol pada beban 3kg rasio kompresi 18

Gambar L.23 Perbandingan tekanan silinder terhadap sudut engkol pada beban 7kg rasio kompresi 18

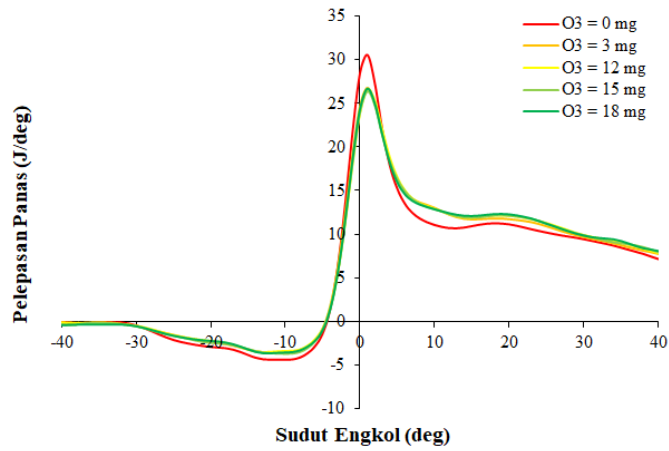Gambar L.24 Perbandingan tekanan silinder terhadap sudut engkol pada beban 9kg rasio kompresi 18

Gambar L.25 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban 1 kg rasio kompresi 14

Gambar L.26 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban 3 kg rasio kompresi 14
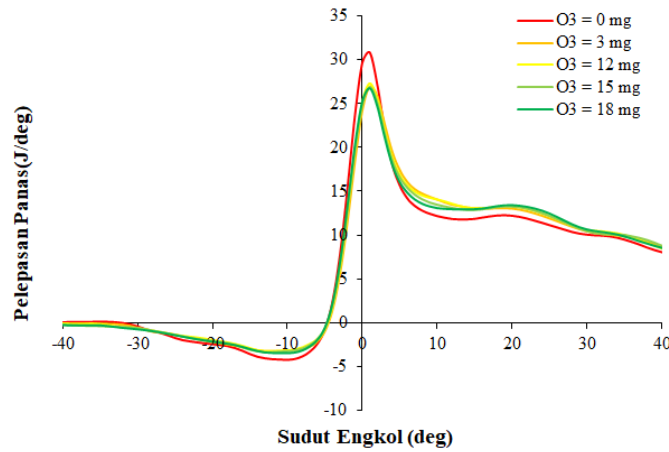

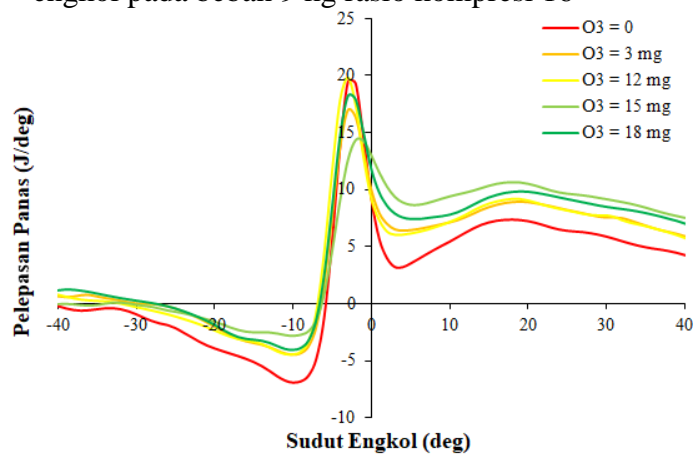Gambar L.27 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban 7 kg rasio kompresi 14

Gambar L.28 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban 9 kg rasio kompresi 14

Gambar L.29 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban 1 kg rasio kompresi 16

Gambar L.30 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban 3 kg rasio kompresi 16
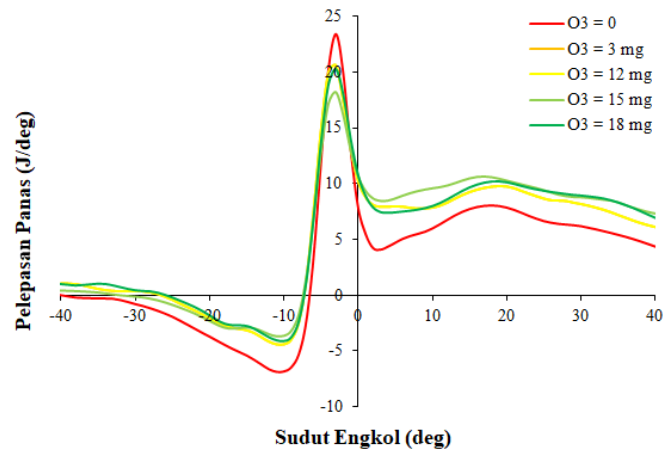
Gambar L.31 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban 7 kg rasio kompresi 16
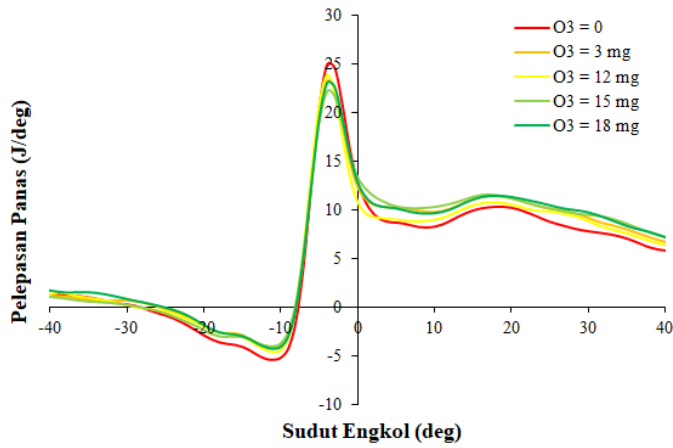

Gambar L.32 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban 9 kg rasio kompresi 16
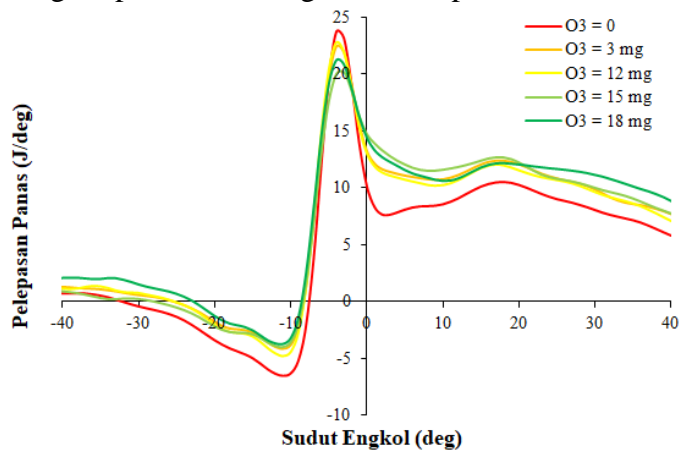

Gambar L.33 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban 1 kg rasio kompresi 18

Gambar L.34 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban3 kg rasio kompresi 18

Gambar L.35 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban7 kg rasio kompresi 18

Gambar L.36 Perbandingan pelepasan panas (*net heat release*) terhadap sudut engkol pada beban9 kg rasio kompresi 18