

LAMPIRAN 1

BIODATA PENULIS



MULYONO adalah penulis tugas akhir ini yang lahir di Bojonegoro, 29 November 1997 dari pasangan suami istri Bapak Ngatiman Dan Ibu Martini, dan pada tahun 2010 Lulus SD Negeri 2 Malingmati, Tahun 2013 Lulus dari SMP Negeri 1 Ngambon, Pada tahun 2016 Lulus dari SMA Negeri 1 Tambakrejo, Bojonegoro Dan Pada tahun yang sama masuk di Universitas Muhammadiyah Surabaya (UM-Surabaya) yang Insyallah Tahun ini mengantarkan penulis untuk mendapatkan gelar Sarjana Strata Satu.

Trimakasih

LAMPIRAN 2

BERITA ACARA BIMBINGAN

SIPIL, S-1 TEKNIK PERKAPALAN, S-1 TEKNIK ELEKTRO, D-3 TEKNIK KOMPUTER
 Alamat : Jalan Sutorejo 59 Surabaya
 Telp./Fax 031-3811966 ext.138

Nama Muliono
 NIM 20161331023
 Judul Skripsi Modifikasi Alat Uji Rangkaian Berbasis Arduino
 Pembimbing Pendamping Hadi Kusnanto, S.T.M.T.
 Mulai Bimbingan

No.	Tgl	Materi	Paraf Pembimbing		Paraf Mahasiswa
			I	II	
1		Bab I			
2		Tinjauan pustaka			
3		Penerapan alat uji			
4	13-11-19	Bab II			
5	17-11-19	Tabel hasil uji daya kerja dan sebaran			
6	23-11-19	Cat. Analisis antara bab I dengan data analisis bab II untuk komparasi alat yg dipakai			
7	05-12-19	Penulisan dan bab III			
8	12-12-19	Rubah grafik bab III			
9	19-12-19	Bab IV			
10					
11					
12					
13					
14					

Bimbingan dinyatakan selesai

Surabaya,

Pembimbing Utama Ditandatangani ketika skripsi/TA tuntas (.....)	Pembimbing Pendamping Ditandatangani ketika skripsi/TA tuntas (.....)
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Daftar Tabel

Data uji 6 kilogram

waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo
7:43:54	2.00	7:44:14	0.00	7:44:34	34.00
7:43:55	0.00	7:44:15	0.00	7:44:35	0.00
7:43:56	0.00	7:44:16	6.00	7:44:36	6.00
7:43:57	26.00	7:44:17	0.00	7:44:37	39.00
7:43:58	5.00	7:44:18	11.00	7:44:38	0.00
7:43:59	10.00	7:44:19	0.00	7:44:39	36.00
7:44:00	0.00	7:44:20	0.00	7:44:40	12.00
7:44:01	47.00	7:44:21	0.00	7:44:41	0.00
7:44:02	0.00	7:44:22	26.00	7:44:42	0.00
7:44:03	5.00	7:44:23	0.00	7:44:43	0.00
7:44:04	0.00	7:44:24	0.00	7:44:44	0.00
7:44:05	36.00	7:44:25	0.00	7:44:45	10.00
7:44:06	8.00	7:44:26	0.00	7:44:46	0.00
7:44:07	0.00	7:44:27	21.00	7:44:47	0.00
7:44:08	0.00	7:44:28	0.00	7:44:48	0.00
7:44:09	9.00	7:44:29	0.00	7:44:49	0.00
7:44:10	18.00	7:44:30	15.00	7:44:50	0.00
7:44:11	6.00	7:44:31	0.00		
7:44:12	0.00	7:44:32	0.00		
7:44:13	7.00	7:44:33	0.00		

Data uji 7 kilogram

waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo
11:44:39	0.00	11:44:59	7.00	11:45:19	8.00
11:44:40	0.00	11:45:00	6.00	11:45:20	16.00
11:44:41	5.00	11:45:01	0.00	11:45:21	0.00
11:44:42	0.00	11:45:02	0.00	11:45:22	5.00
11:44:43	0.00	11:45:03	0.00	11:45:23	0.00
11:44:44	0.00	11:45:04	17.00	11:45:24	0.00
11:44:45	1.00	11:45:05	0.00	11:45:25	10.00
11:44:46	10.00	11:45:06	0.00	11:45:26	0.00
11:44:47	0.00	11:45:07	0.00	11:45:27	0.00
11:44:48	15.00	11:45:08	10.00	11:45:28	2.00
11:44:49	1.00	11:45:09	0.00	11:45:29	13.00
11:44:50	0.00	11:45:10	0.00	11:45:30	12.00
11:44:51	7.00	11:45:11	44.00	11:45:31	0.00
11:44:52	0.00	11:45:12	0.00	11:45:32	4.00
11:44:53	2.00	11:45:13	2.00	11:45:33	10.00
11:44:54	5.00	11:45:14	15.00	11:45:34	0.00
11:44:55	0.00	11:45:15	7.00	11:45:35	0.00
11:44:56	0.00	11:45:16	0.00		
11:44:57	0.00	11:45:17	20.00		
11:44:58	30.00	11:45:18	5.00		

Data uji 8 kilogram

waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo
12:49:15	0.00	12:49:35	11.00	12:49:55	2.00
12:49:16	0.00	12:49:36	0.00	12:49:56	0.00
12:49:17	0.00	12:49:37	15.00	12:49:57	6.00
12:49:18	2.00	12:49:38	0.00	12:49:58	0.00
12:49:19	0.00	12:49:39	1.00	12:49:59	0.00
12:49:20	5.00	12:49:40	0.00	12:50:00	4.00
12:49:21	0.00	12:49:41	3.00	12:50:01	0.00
12:49:22	42.00	12:49:42	0.00	12:50:02	0.00
12:49:23	4.00	12:49:43	0.00	12:50:03	2.00
12:49:24	9.00	12:49:44	0.00	12:50:04	0.00
12:49:25	0.00	12:49:45	11.00	12:50:05	21.00
12:49:26	5.00	12:49:46	0.00	12:50:06	5.00
12:49:27	0.00	12:49:47	0.00	12:50:07	8.00
12:49:28	16.00	12:49:48	0.00	12:50:08	2.00
12:49:29	0.00	12:49:49	11.00	12:50:09	12.00
12:49:30	0.00	12:49:50	1.00	12:50:10	4.00
12:49:31	10.00	12:49:51	2.00	12:50:11	0.00
12:49:32	0.00	12:49:52	15.00		
12:49:33	0.00	12:49:53	12.00		
12:49:34	0.00	12:49:54	0.00		

Data uji 9 kilogram

waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo
10:29:57	3.00	10:30:17	0.00	10:30:37	8.00
10:29:58	0.00	10:30:18	7.00	10:30:38	1.00
10:29:59	2.00	10:30:19	9.00	10:30:39	2.00
10:30:00	3.00	10:30:20	1.00	10:30:40	0.00
10:30:01	0.00	10:30:21	0.00	10:30:41	0.00
10:30:02	6.00	10:30:22	9.00	10:30:42	2.00
10:30:03	0.00	10:30:23	8.00	10:30:43	7.00
10:30:04	9.00	10:30:24	0.00	10:30:44	0.00
10:30:05	0.00	10:30:25	8.00	10:30:45	0.00
10:30:06	14.00	10:30:26	8.00	10:30:46	4.00
10:30:07	0.00	10:30:27	3.00	10:30:47	3.00
10:30:08	40.00	10:30:28	0.00	10:30:48	0.00
10:30:09	0.00	10:30:29	0.00	10:30:49	9.00
10:30:10	10.00	10:30:30	5.00	10:30:50	0.00
10:30:11	7.00	10:30:31	0.00	10:30:51	9.00
10:30:12	0.00	10:30:32	0.00	10:30:52	0.00
10:30:13	8.00	10:30:33	7.00	10:30:53	0.00
10:30:14	0.00	10:30:34	9.00		
10:30:15	7.00	10:30:35	0.00		
10:30:16	5.00	10:30:36	0.00		

Data uji 10 kilogram

waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo
10:39:52	3.00	10:40:12	0.00	10:40:32	10.00
10:39:53	0.00	10:40:13	0.00	10:40:33	0.00
10:39:54	0.00	10:40:14	3.00	10:40:34	6.00
10:39:55	0.00	10:40:15	0.00	10:40:35	0.00
10:39:56	18.00	10:40:16	5.00	10:40:36	7.00
10:39:57	38.00	10:40:17	8.00	10:40:37	0.00
10:39:58	0.00	10:40:18	2.00	10:40:38	6.00
10:39:59	8.00	10:40:19	0.00	10:40:39	0.00
10:40:00	0.00	10:40:20	0.00	10:40:40	7.00
10:40:01	3.00	10:40:21	6.00	10:40:41	8.00
10:40:02	0.00	10:40:22	0.00	10:40:42	0.00
10:40:03	0.00	10:40:23	8.00	10:40:43	7.00
10:40:04	8.00	10:40:24	1.00	10:40:44	0.00
10:40:05	0.00	10:40:25	0.00	10:40:45	2.00
10:40:06	15.00	10:40:26	5.00	10:40:46	3.00
10:40:07	10.00	10:40:27	4.00	10:40:47	0.00
10:40:08	0.00	10:40:28	0.00	10:40:48	1.00
10:40:09	9.00	10:40:29	0.00		
10:40:10	0.00	10:40:30	5.00		
10:40:11	9.00	10:40:31	0.00		

Data uji 12 kilogram

waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo
10:57:54	0.00	10:58:14	0.00	10:58:34	0.00
10:57:55	8.00	10:58:15	0.00	10:58:35	5.00
10:57:56	35.00	10:58:16	0.00	10:58:36	19.00
10:57:57	0.00	10:58:17	0.00	10:58:37	0.00
10:57:58	6.00	10:58:18	11.00	10:58:38	5.00
10:57:59	17.00	10:58:19	0.00	10:58:39	4.00
10:58:00	0.00	10:58:20	3.00	10:58:40	0.00
10:58:01	15.00	10:58:21	0.00	10:58:41	0.00
10:58:02	0.00	10:58:22	5.00	10:58:42	5.00
10:58:03	0.00	10:58:23	9.00	10:58:43	0.00
10:58:04	0.00	10:58:24	0.00	10:58:44	5.00
10:58:05	3.00	10:58:25	9.00	10:58:45	0.00
10:58:06	0.00	10:58:26	5.00	10:58:46	0.00
10:58:07	0.00	10:58:27	6.00	10:58:47	8.00
10:58:08	0.00	10:58:28	0.00	10:58:48	0.00
10:58:09	3.00	10:58:29	0.00	10:58:49	0.00
10:58:10	4.00	10:58:30	0.00	10:58:50	0.00
10:58:11	0.00	10:58:31	9.00		
10:58:12	2.00	10:58:32	2.00		
10:58:13	9.00	10:58:33	2.00		

Data uji 14 kilogram.

waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo
11:08:13	0.00	11:08:33	10.00	11:08:53	0.00
11:08:14	7.00	11:08:34	5.00	11:08:54	0.00
11:08:15	33.00	11:08:35	0.00	11:08:55	0.00
11:08:16	0.00	11:08:36	1.00	11:08:56	0.00
11:08:17	15.00	11:08:37	6.00	11:08:57	2.00
11:08:18	0.00	11:08:38	0.00	11:08:58	1.00
11:08:19	12.00	11:08:39	0.00	11:08:59	0.00
11:08:20	3.00	11:08:40	10.00	11:09:00	3.00
11:08:21	0.00	11:08:41	0.00	11:09:01	0.00
11:08:22	4.00	11:08:42	6.00	11:09:02	0.00
11:08:23	11.00	11:08:43	0.00	11:09:03	3.00
11:08:24	0.00	11:08:44	4.00	11:09:04	8.00
11:08:25	2.00	11:08:45	0.00	11:09:05	4.00
11:08:26	0.00	11:08:46	0.00	11:09:06	1.00
11:08:27	18.00	11:08:47	4.00	11:09:07	0.00
11:08:28	0.00	11:08:48	0.00	11:09:08	6.00
11:08:29	7.00	11:08:49	7.00	11:09:09	0.00
11:08:30	0.00	11:08:50	0.00		
11:08:31	2.00	11:08:51	0.00		
11:08:32	1.00	11:08:52	6.00		

Data uji 16 kilogram.

waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo
11:19:54	0.00	11:20:14	8.00	11:20:34	8.00
11:19:55	8.00	11:20:15	0.00	11:20:35	0.00
11:19:56	0.00	11:20:16	0.00	11:20:36	0.00
11:19:57	15.00	11:20:17	4.00	11:20:37	0.00
11:19:58	0.00	11:20:18	0.00	11:20:38	0.00
11:19:59	0.00	11:20:19	4.00	11:20:39	7.00
11:20:00	12.00	11:20:20	0.00	11:20:40	0.00
11:20:01	0.00	11:20:21	9.00	11:20:41	0.00
11:20:02	9.00	11:20:22	0.00	11:20:42	4.00
11:20:03	0.00	11:20:23	1.00	11:20:43	0.00
11:20:04	0.00	11:20:24	8.00	11:20:44	5.00
11:20:05	9.00	11:20:25	0.00	11:20:45	8.00
11:20:06	0.00	11:20:26	10.00	11:20:46	0.00
11:20:07	0.00	11:20:27	0.00	11:20:47	0.00
11:20:08	0.00	11:20:28	9.00	11:20:48	5.00
11:20:09	31.00	11:20:29	0.00	11:20:49	2.00
11:20:10	0.00	11:20:30	0.00	11:20:50	0.00
11:20:11	9.00	11:20:31	0.00		
11:20:12	4.00	11:20:32	5.00		
11:20:13	0.00	11:20:33	0.00		

Data uji 17 kilogram.

waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo	waktu (DETIK)	amplitudo
11:30:05	0.00	11:30:25	0.00	11:30:45	6.00
11:30:06	27.00	11:30:26	12.00	11:30:46	1.00
11:30:07	0.00	11:30:27	0.00	11:30:47	0.00
11:30:08	0.00	11:30:28	6.00	11:30:48	0.00
11:30:09	0.00	11:30:29	8.00	11:30:49	3.00
11:30:10	10.00	11:30:30	0.00	11:30:50	0.00
11:30:11	0.00	11:30:31	0.00	11:30:51	0.00
11:30:12	0.00	11:30:32	0.00	11:30:52	7.00
11:30:13	0.00	11:30:33	0.00	11:30:53	0.00
11:30:14	2.00	11:30:34	16.00	11:30:54	0.00
11:30:15	0.00	11:30:35	0.00	11:30:55	0.00
11:30:16	8.00	11:30:36	14.00	11:30:56	9.00
11:30:17	0.00	11:30:37	0.00	11:30:57	0.00
11:30:18	8.00	11:30:38	17.00	11:30:58	9.00
11:30:19	0.00	11:30:39	0.00	11:30:59	0.00
11:30:20	12.00	11:30:40	0.00	11:31:00	0.00
11:30:21	0.00	11:30:41	0.00	11:31:01	0.00
11:30:22	0.00	11:30:42	0.00		
11:30:23	4.00	11:30:43	8.00		
11:30:24	0.00	11:30:44	0.00		

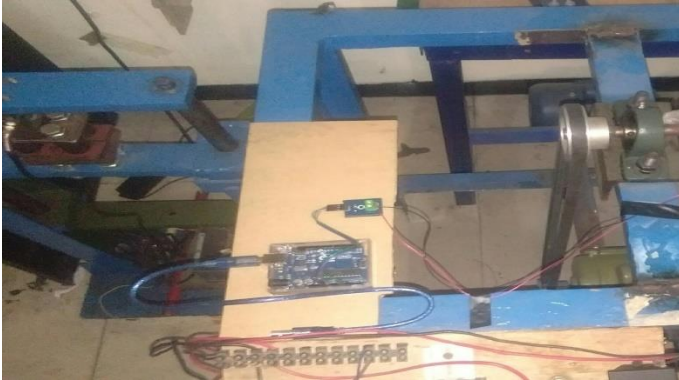
DAFTAR FOTO



Gambar 1. Pemasangan sensor di alat uji.



Gambar 2. Sensor getar diatas *bearing*.



Gambar 3. Penempatan arduino dan modul.



Gambar 4. Material uji Al-6061.



Gambar 5. Patahnya material uji.



Gambar 6. Material setelah pengujian.