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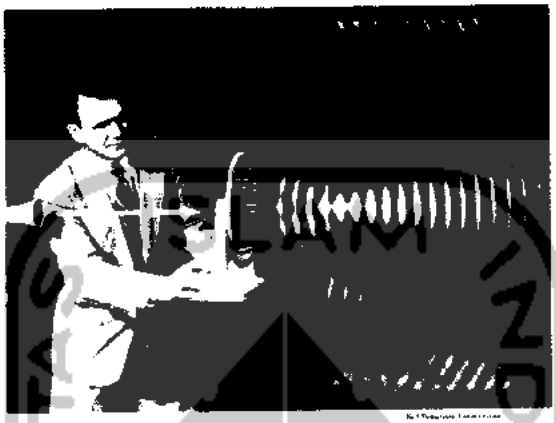
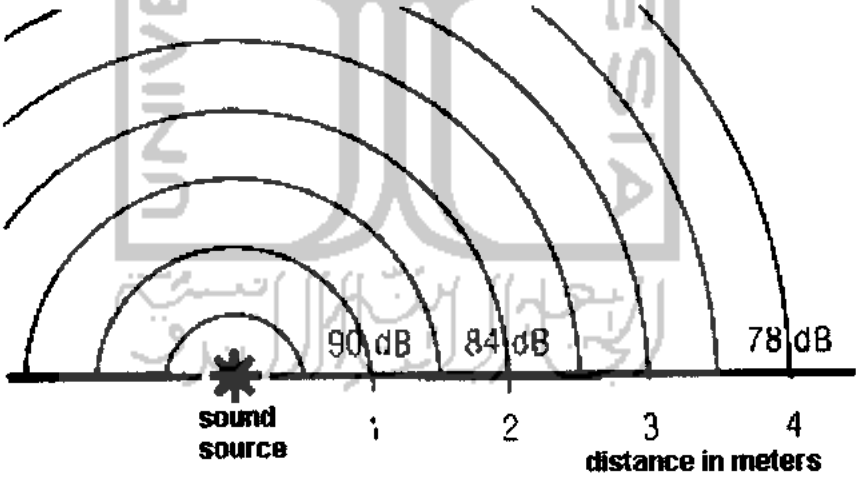
LAMPIRAN

Lampiran 1. Sifat Tingkat Tekanan Bunyi

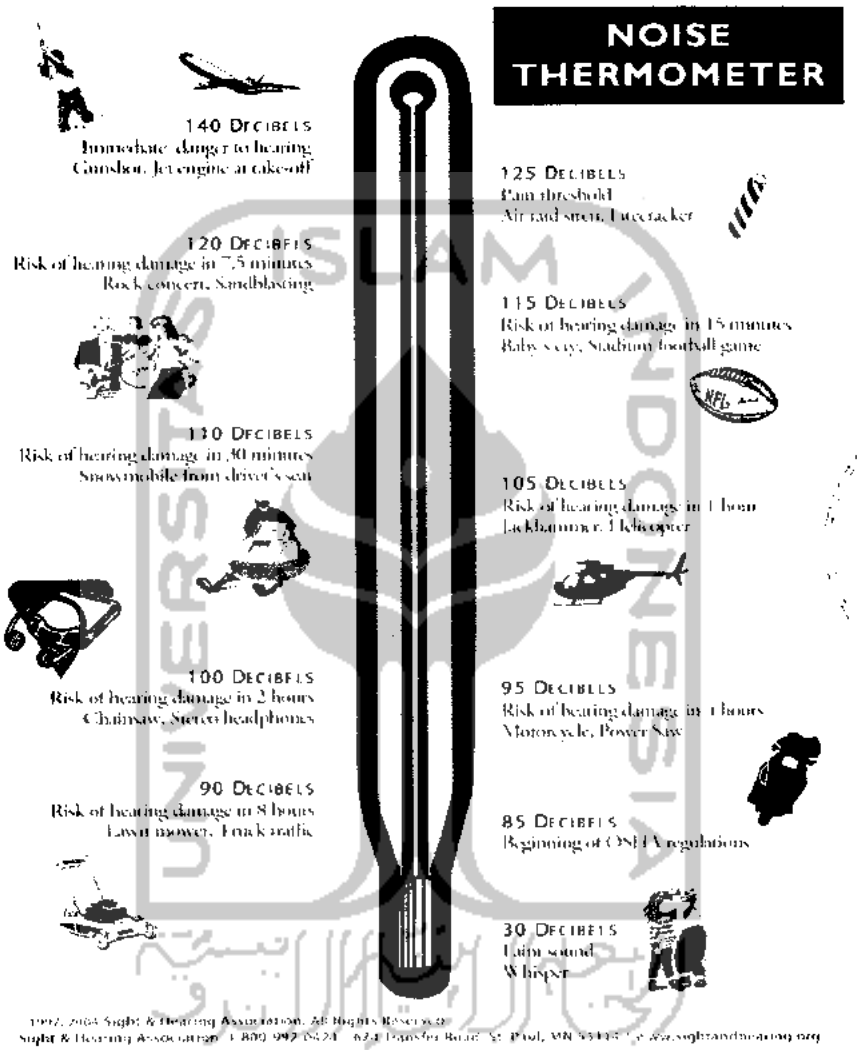


Gambar L1.1. Bentuk Pemendaran Bunyi

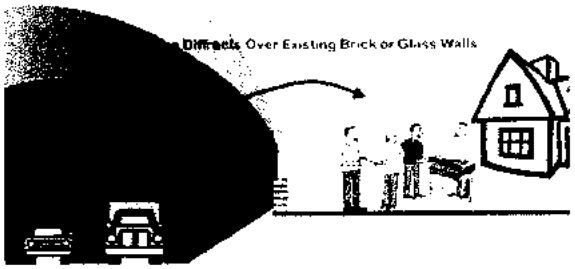


Gambar L1.2. Terjadi penurunan nilai Tingkat Tekanan Bunyi terhadap jarak

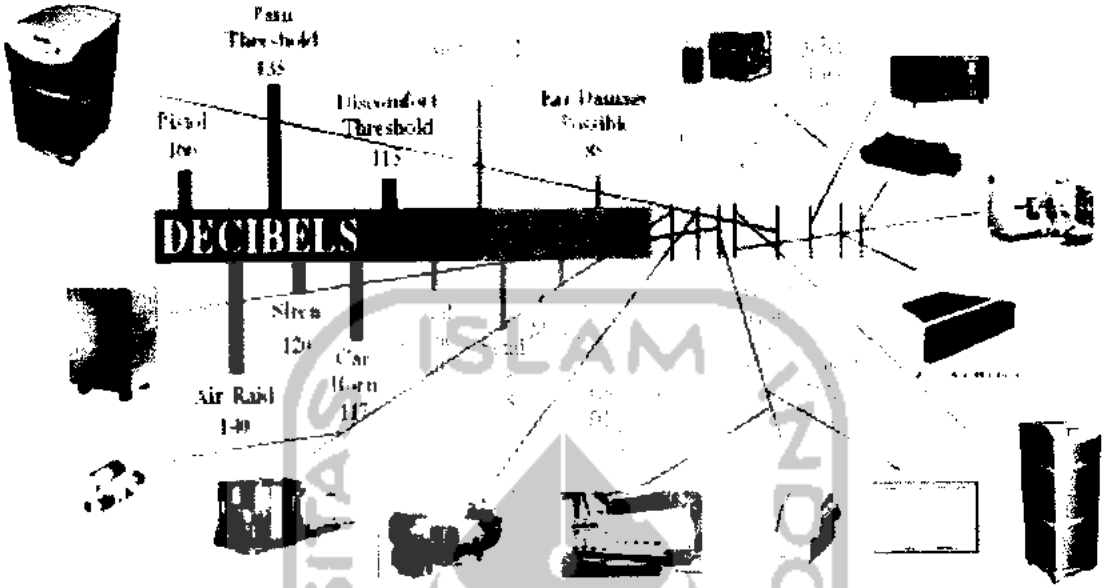
Lampiran 2. Nilai Tingkat Tekanan Bunyi dari Sumber Suara



Gambar L2.1. Nilai Tingkat Tekanan Bunyi dari sumber suara dan dampaknya bagi pendengaran manusia



Gambar L2.2. Contoh Difraksi bunyi yang terbendung sehingga didapatkan lokasi yang bebas dari suara yang mengganggu



Gambar L2.3. Nilai Tingkat Tekanan Bunyi dari berbagai sumber suara dalam sebuah kota (fasilitas publik).

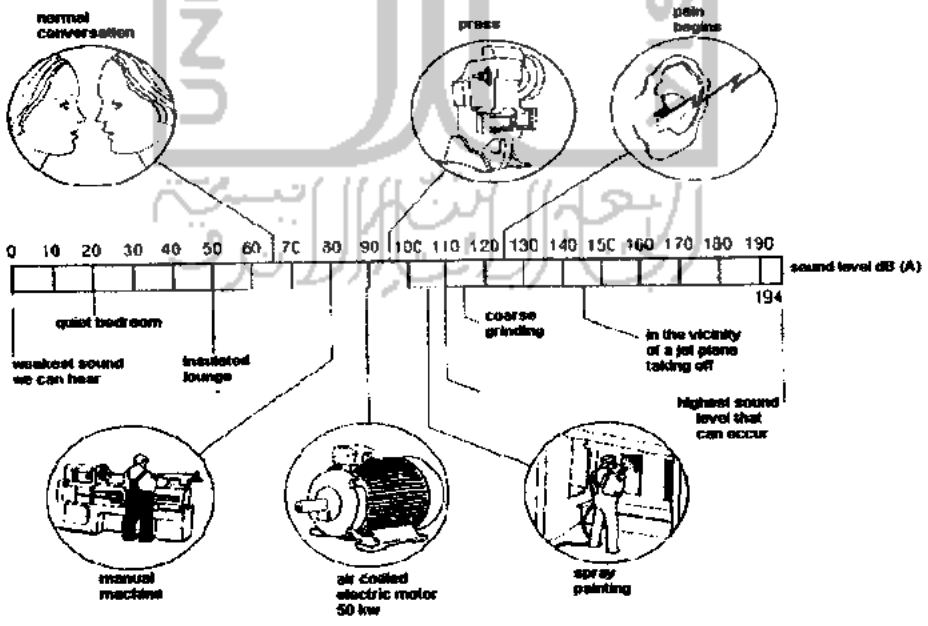


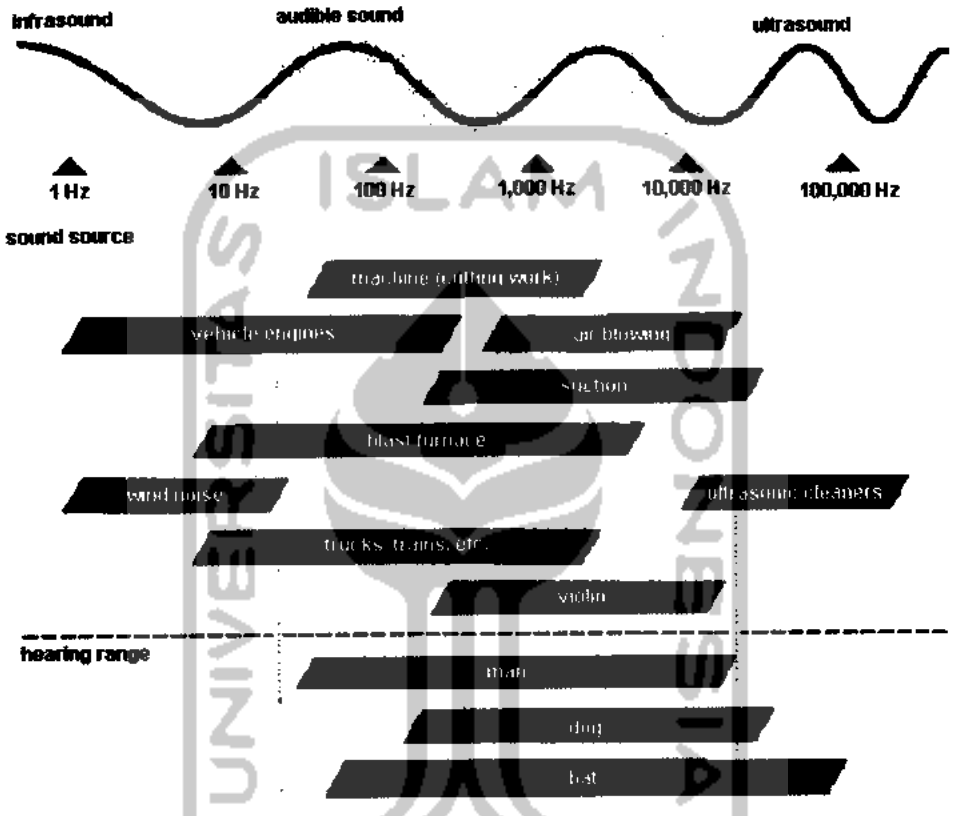
Figure 7.

Gambar L2.4. Nilai Tingkat Tekanan Bunyi dari berbagai sumber suara pada sebuah pabrik produksi.

Lampiran 3. Arah Lengkungan Kayu Akibat Penyusutan Kadar Air

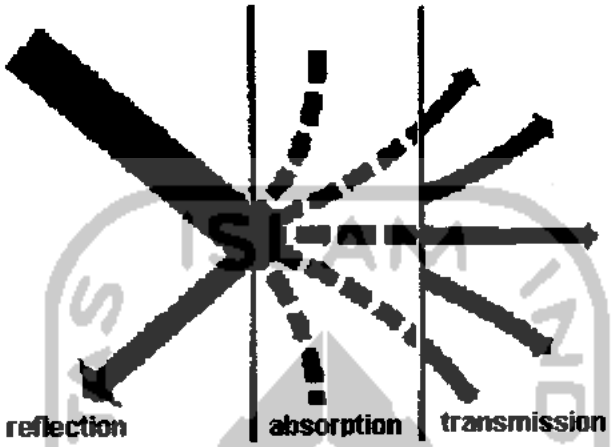
Gambar L3.1. Arah lengkungan kayu akibat penyusutan kadar air

Lampiran 4. Sound Source and Hearing Sound

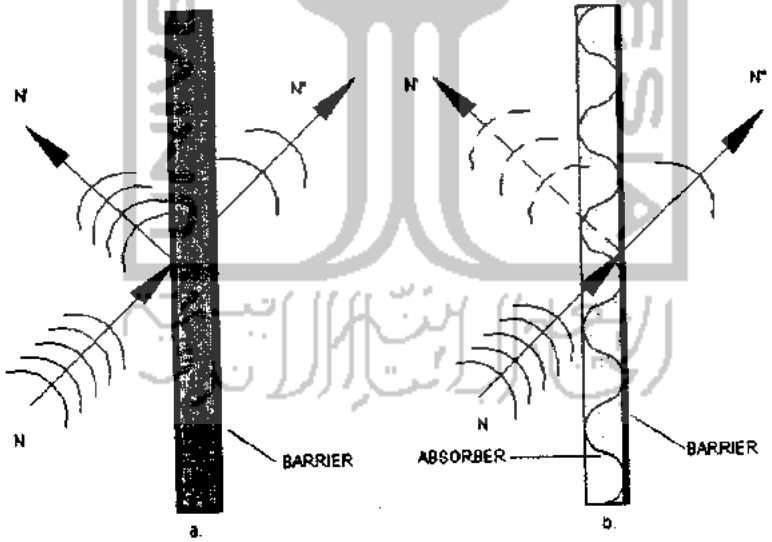


Gambar L4.1. Klasifikasi sumber suara dan daya pendengaran (Frekuensi)

Lampiran 5. Arah Bunyi setelah Menumbuk Panel atau Dinding Pembatas



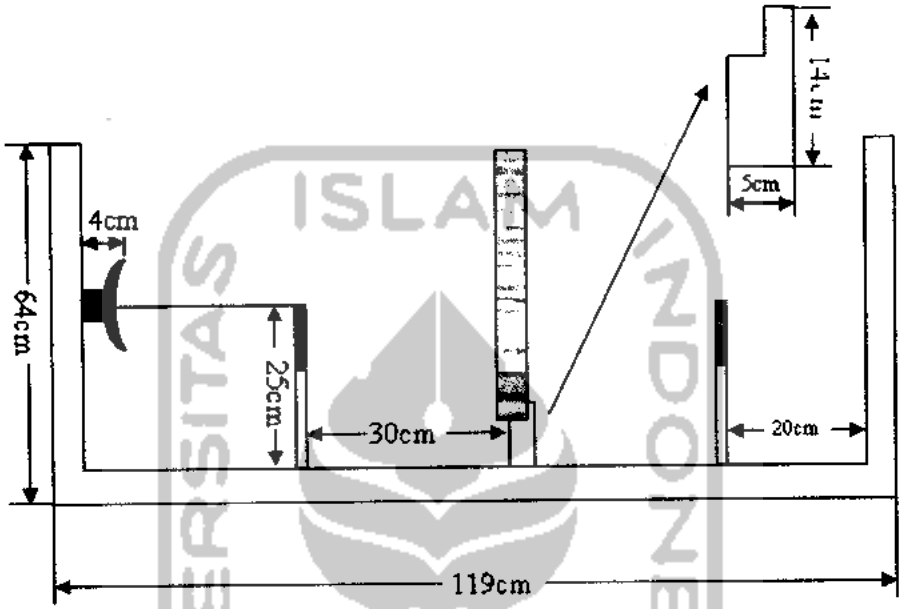
Gambar L5.1. Definisi pantulan, serapan, dan transmisi



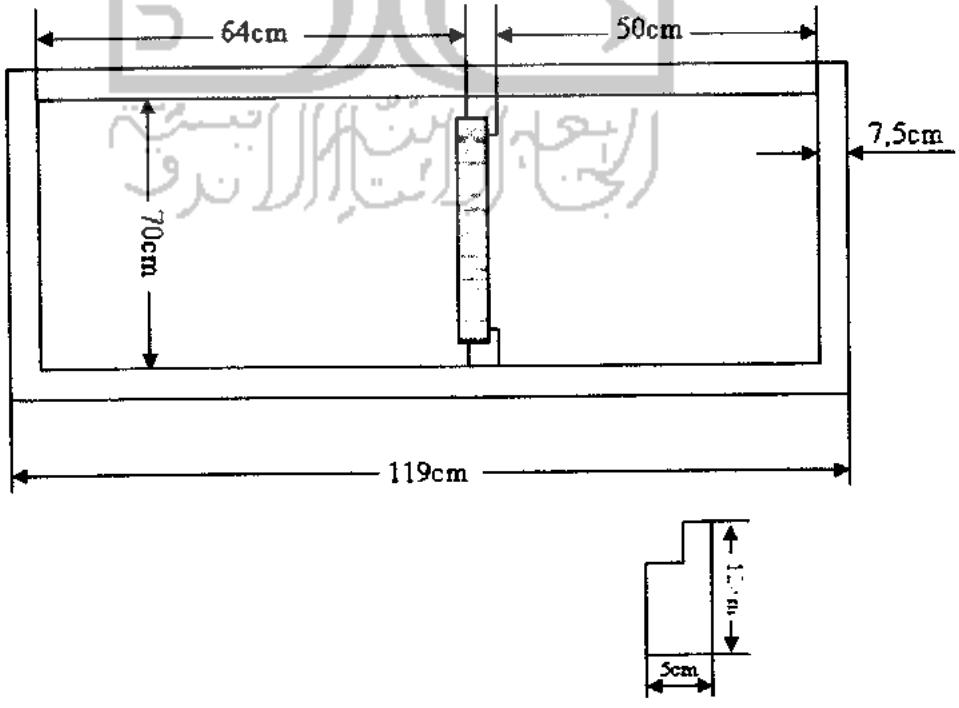
Gambar L5.2. Karakteristik *noise absorber*

Lampiran 6. Dimensi *Anechoic Chamber*

TAMPAK SAMPING

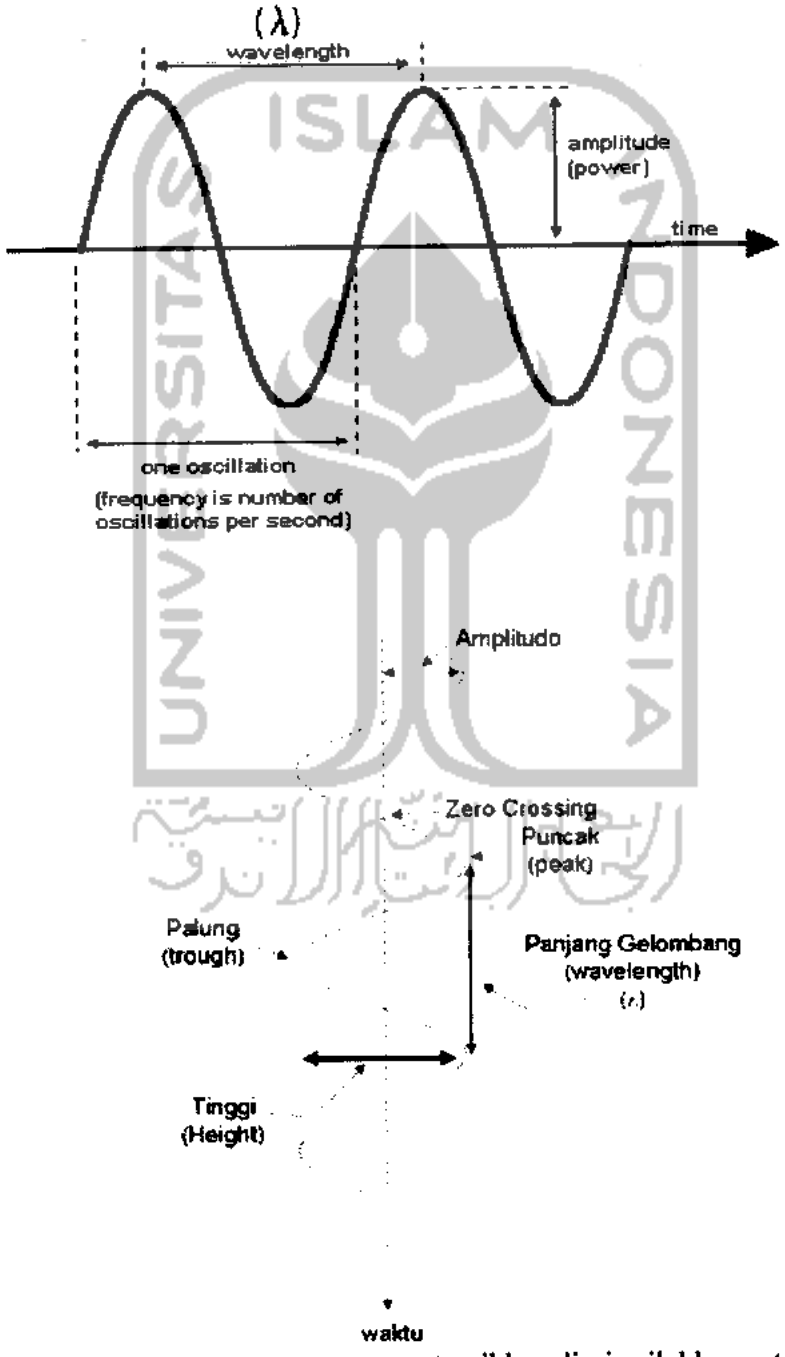


TAMPAK ATAS



Lampiran 7. Komponen Gelombang Suara

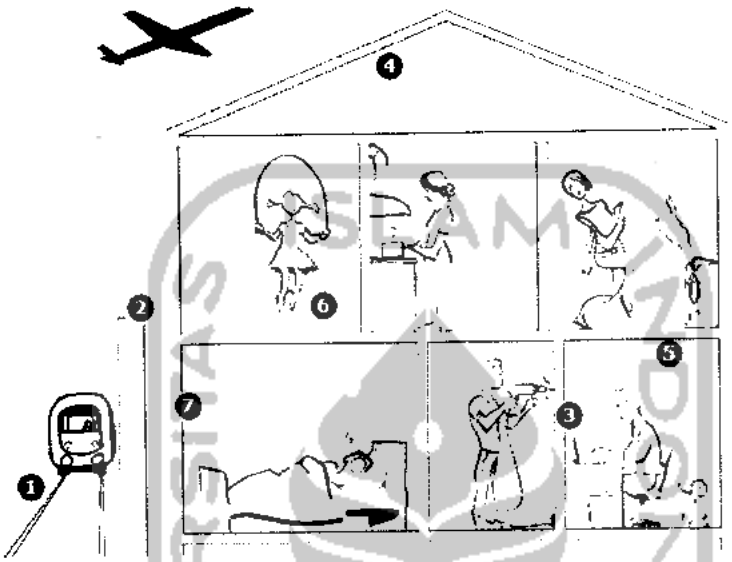
Amplitude
The amplitude is the power of a signal. The greater the amplitude, the greater the energy carried and usually measured in decibels.
(The Computer Language Company Inc., 2007)



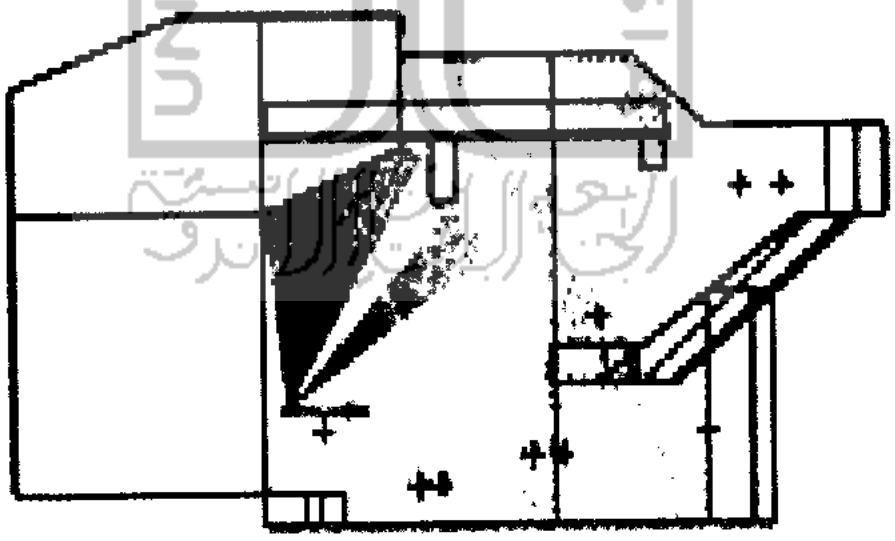
(ensiklopediseismik.blogspot.com/2007)

Gambar L7.1. Definisi Komponen Gelombang (Amplitudo)

Lampiran 8. Kebutuhan Nilai Serapan di Dalam Ruangan



Gambar L8.1. Kebutuhan nilai serapan berbeda pada tiap lokasinya

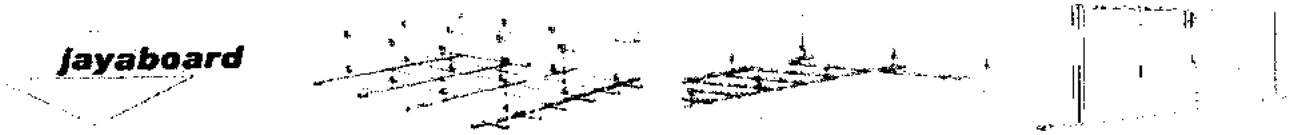


Gambar L8.2. Penempatan panel akustik perlu diperhatikan berkaitan dengan arah pantulan sumber suara sehingga didapatkan serapan yang terbaik

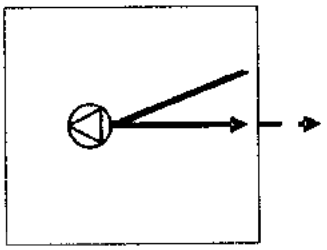
Gambar L8.3. Penempatan panel akustik perlu diperhatikan berkaitan dengan arah sumber suara fokus sehingga didapatkan serapan yang terbaik

Gambar L8.4. Penempatan panel akustik perlu diperhatikan berkaitan dengan arah sumber suara menyebar

Lampiran 9. Contoh Produk Panel Akustik

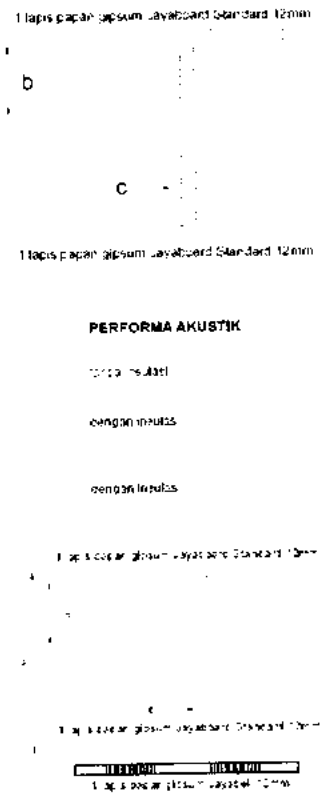


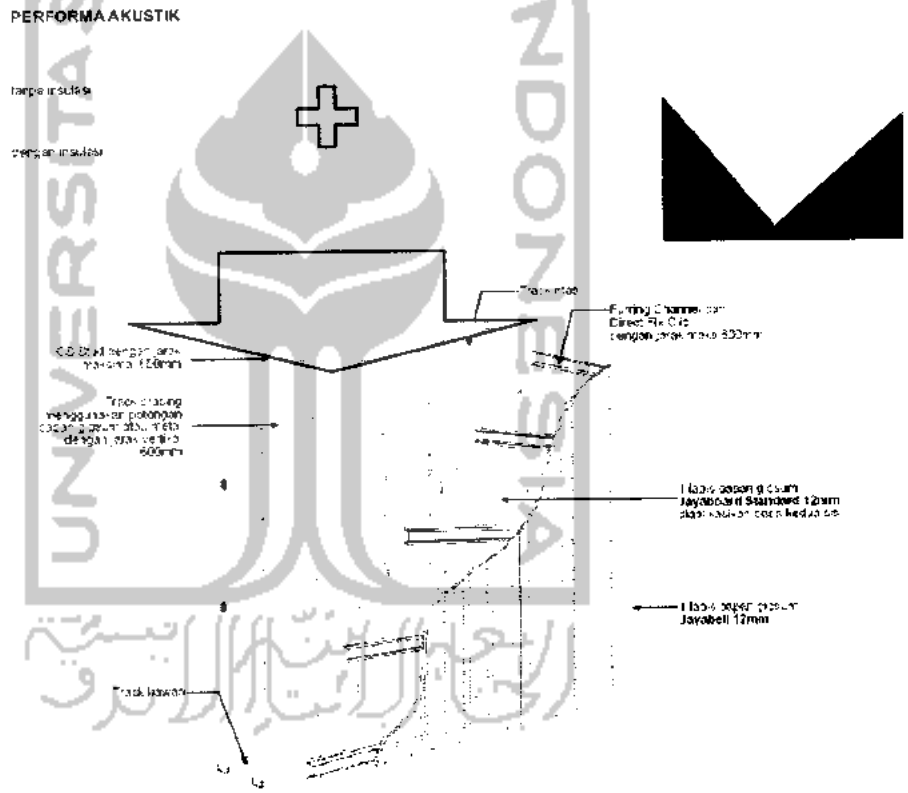
this month's topic :



Nilai STC (Sound Insulation) tinggi : menghambat perambatan ara/bising ke ruang lain

Nilai NRC (Sound Absorption) tinggi : mengatur waktu dengung (TR) tuk mengendalikan gema (echo) di dalam ruang sehingga memaksimalkan alitas akustik suara di dalam ruang





Contoh kasus : · **NRC** dari **dinding gipsum standar = 0.1** · **NRC** dari pelapis **Jayabell = 0.8**
· asumsi luas dinding medium = **10 m²**

maka **level suara dari sumber** di dalam ruang akan berkurang sebesar **10 log (10m²*(0.8-0.1) = 8.5 dB** akhirnya akan terjadi pengurangan sebesar **8.5 dB** pada suara yang ditransmisikan ke ruang lain (penerima)

apisan **Jayabell** dapat diganti dengan **JayaAkustik Ceiling Panels**, nilai **performa absorpsi akan bervariasi (lebih endah)**, dengan konsekuensi **metode instalasi dan penyambungan yang lebih rumit.**

ampiran 10. Data Hasil Pengujian dengan 5 Pengambilan Data pada Tiap Pengujian

anel dengan accoustic fill CV 15
=6mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	99.7	26.9	0.630
	72.8	100.3	27.5	0.622
	72.8	97.3	24.5	0.663
	72.8	101.2	28.4	0.610
	72.8	97.2	24.4	0.665
				0.638
125	80	106.3	26.3	0.671
	80	105.9	25.9	0.676
	80	104.8	24.8	0.690
	80	104.2	24.2	0.698
	80	105.3	25.3	0.684
				0.684
250	80	99.5	19.5	0.756
	80	99.5	19.5	0.756
	80	100.1	20.1	0.749
	80	100	20	0.750
	80	99.7	19.7	0.754
				0.753
500	94	112	18	0.809
	94	112.7	18.7	0.801
	94	112.6	18.6	0.802
	94	112.3	18.3	0.805
	94	112.2	18.2	0.806
				0.805
1000	104	120.1	16.1	0.845
	104	120.4	16.4	0.842
	104	119.6	15.6	0.850
	104	120.8	16.8	0.838
	104	120.5	16.5	0.841
				0.843
2000	110	126.3	16.3	0.852
	110	127.2	17.2	0.844
	110	125.7	15.7	0.857
	110	126.3	16.3	0.852
	110	126.8	16.8	0.847
				0.850
4000	104.8	121.3	16.5	0.843
	104.8	121.6	16.8	0.840
	104.8	121.5	16.7	0.841
	104.8	121.3	16.5	0.843
	104.8	121.8	17	0.838
				0.841
8000	92.8	112.6	19.8	0.787
	92.8	112.7	19.9	0.786
	92.8	112.8	20	0.784
	92.8	112.4	19.6	0.789
	92.8	112.3	19.5	0.790
				0.787

Panel dengan accoustic fill CV 15
d=8mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	98.9	26.1	0.641
	72.8	98.3	25.5	0.650
	72.8	100.1	27.3	0.625
	72.8	98.3	25.5	0.650
	72.8	97.9	25.1	0.655
				0.644
125	80	105.7	25.7	0.679
	80	106.5	26.5	0.669
	80	106.8	26.8	0.665
	80	106.1	26.1	0.674
	80	107.1	27.1	0.661
				0.670
250	80	102	22	0.725
	80	103.1	23.1	0.711
	80	102.3	22.3	0.721
	80	102.5	22.5	0.719
	80	102.2	22.2	0.723
				0.720
500	94	111.1	17.1	0.818
	94	112.2	18.2	0.806
	94	111.5	17.5	0.814
	94	112	18	0.809
	94	111	17	0.819
				0.813
1000	104	120.1	16.1	0.845
	104	120.3	16.3	0.843
	104	119.8	15.8	0.848
	104	119.7	15.7	0.849
	104	119.9	15.9	0.847
				0.847
2000	110	126.7	16.7	0.848
	110	126.5	16.5	0.850
	110	126.7	16.7	0.848
	110	125.9	15.9	0.855
	110	126.3	16.3	0.852
				0.851
4000	104.8	121.3	16.5	0.843
	104.8	121.6	16.8	0.840
	104.8	122.2	17.4	0.834
	104.8	120.2	15.4	0.853
	104.8	121.6	16.8	0.840
				0.842
8000	92.8	110.7	17.9	0.807
	92.8	110.8	18	0.806
	92.8	111	18.2	0.804
	92.8	110.9	18.1	0.805
	92.8	110.5	17.7	0.809
				0.806

ampiran 11. Data Hasil Pengujian dengan 5 Pengambilan Data pada Tiap Pengujian

anel dengan accoustic fill CV 15
=10mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	98	25.2	0.654
	72.8	98.6	25.8	0.646
	72.8	98.5	25.7	0.647
	72.8	98.3	25.5	0.650
	72.8	98.4	25.6	0.648
				0.649
125	80	107.1	27.1	0.661
	80	108.1	28.1	0.649
	80	105.1	25.1	0.686
	80	106.2	26.2	0.673
	80	105.9	25.9	0.676
				0.669
250	80	103.2	23.2	0.710
	80	100.8	20.8	0.740
	80	100.5	20.5	0.744
	80	98.3	18.3	0.771
	80	99.8	19.8	0.753
				0.744
500	94	109.8	15.8	0.832
	94	110	16	0.830
	94	110.3	16.3	0.827
	94	110.7	16.7	0.822
	94	109.9	15.9	0.831
				0.828
1000	104	119.7	15.7	0.849
	104	118.9	14.9	0.857
	104	119.9	15.9	0.847
	104	119.3	15.3	0.853
	104	119.6	15.6	0.850
				0.851
2000	110	125.6	15.6	0.858
	110	126	16	0.855
	110	125.8	15.8	0.856
	110	126.1	16.1	0.854
	110	125.3	15.3	0.861
				0.857
4000	104.8	121.9	17.1	0.837
	104.8	120.9	16.1	0.846
	104.8	121.1	16.3	0.844
	104.8	121.5	16.7	0.841
	104.8	121.3	16.5	0.843
				0.842
8000	92.8	110.8	18	0.806
	92.8	111.7	18.9	0.796
	92.8	111.1	18.3	0.803
	92.8	110.9	18.1	0.805
	92.8	111.4	18.6	0.800
				0.802

Panel dengan accoustic fill CV 20
d = 6 mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	97.5	24.7	0.661
	72.8	96.9	24.1	0.669
	72.8	97.2	24.4	0.665
	72.8	97.8	25	0.657
	72.8	98	25.2	0.654
				0.661
125	80	102.8	22.8	0.715
	80	102.9	22.9	0.714
	80	103.5	23.5	0.706
	80	102.9	22.9	0.714
	80	102.3	22.3	0.721
				0.714
250	80	98.3	18.3	0.771
	80	98.4	18.4	0.770
	80	97.3	17.3	0.784
	80	98.6	18.6	0.768
	80	98.8	18.8	0.765
				0.772
500	94	110.9	16.9	0.820
	94	110.1	16.1	0.829
	94	110.2	16.2	0.828
	94	110.5	16.5	0.824
	94	110.3	16.3	0.827
				0.826
1000	104	119.5	15.5	0.851
	104	119.5	15.5	0.851
	104	120	16	0.846
	104	119.7	15.7	0.849
	104	119	15	0.856
				0.851
2000	110	125.8	15.8	0.856
	110	126	16	0.855
	110	126.6	16.6	0.849
	110	126.8	16.8	0.847
	110	126.5	16.5	0.850
				0.851
4000	104.8	120.7	15.9	0.848
	104.8	120.8	16	0.847
	104.8	121.1	16.3	0.844
	104.8	120.7	15.9	0.848
	104.8	120.4	15.6	0.851
				0.848
8000	92.8	111.2	18.4	0.802
	92.8	111.6	18.8	0.797
	92.8	111.8	19	0.795
	92.8	111.7	18.9	0.796
	92.8	111.8	19	0.795
				0.797

ampiran 12. Data Hasil Pengujian dengan 5 Pengambilan Data pada Tiap Pengujian

anel dengan accoustic fill CV 20
l=8mm

rekuensi	TTB	X1	Ir	Alpha
63	72.8	97.5	24.7	0.661
	72.8	96	23.2	0.681
	72.8	97.9	25.1	0.655
	72.8	97.5	24.7	0.661
	72.8	96.2	23.4	0.679
				0.667
125	80	102.9	22.9	0.714
	80	104	24	0.700
	80	103.2	23.2	0.710
	80	103.8	23.8	0.703
	80	103.4	23.4	0.708
				0.707
250	80	95.2	15.2	0.810
	80	95.1	15.1	0.811
	80	95.8	15.8	0.803
	80	95.6	15.6	0.805
	80	95.8	15.8	0.803
				0.806
500	94	109.1	15.1	0.839
	94	108.4	14.4	0.847
	94	108.7	14.7	0.844
	94	108.3	14.3	0.848
	94	108.7	14.7	0.844
				0.844
1000	104	119.4	15.4	0.852
	104	119.5	15.5	0.851
	104	119.9	15.9	0.847
	104	119.8	15.8	0.848
	104	120	16	0.846
				0.849
2000	110	125.8	15.8	0.856
	110	125.7	15.7	0.857
	110	125.3	15.3	0.861
	110	125.7	15.7	0.857
	110	126	16	0.855
				0.857
4000	104.8	122	17.2	0.836
	104.8	121.5	16.7	0.841
	104.8	121.3	16.5	0.843
	104.8	121.1	16.3	0.844
	104.8	121.8	17	0.838
				0.840
8000	92.8	110.9	18.1	0.805
	92.8	112	19.2	0.793
	92.8	111.4	18.6	0.800
	92.8	111.2	18.4	0.802
	92.8	112.3	19.5	0.790
				0.798

Panel dengan accoustic fill CV 20
d=10mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	97	24.2	0.668
	72.8	96.9	24.1	0.669
	72.8	96	23.2	0.681
	72.8	96.1	23.3	0.680
	72.8	97.8	25	0.657
				0.671
125	80	103.5	23.5	0.706
	80	104.2	24.2	0.698
	80	103.6	23.6	0.705
	80	103.9	23.9	0.701
	80	104	24	0.700
				0.702
250	80	95	15	0.813
	80	95.6	15.6	0.805
	80	95.1	15.1	0.811
	80	95.5	15.5	0.806
	80	95	15	0.813
				0.810
500	94	108	14	0.851
	94	108.4	14.4	0.847
	94	107.8	13.8	0.853
	94	108.1	14.1	0.850
	94	107.9	13.9	0.852
				0.851
1000	104	119.5	15.5	0.851
	104	118.7	14.7	0.859
	104	118.5	14.5	0.861
	104	119	15	0.856
	104	118.8	14.8	0.858
				0.857
2000	110	125.3	15.3	0.861
	110	124.9	14.9	0.865
	110	124.7	14.7	0.866
	110	125.1	15.1	0.863
	110	125	15	0.864
				0.864
4000	104.8	120.7	15.9	0.848
	104.8	120.3	15.5	0.852
	104.8	121.6	16.8	0.840
	104.8	120.9	16.1	0.846
	104.8	120.3	15.5	0.852
				0.848
8000	92.8	110.9	18.1	0.805
	92.8	111.3	18.5	0.801
	92.8	111	18.2	0.804
	92.8	110.8	18	0.806
	92.8	110.5	17.7	0.809
				0.805

ampiran 13. Data Hasil Pengujian dengan 5 Pengambilan Data pada Tiap Pengujian

anel dengan accoustic fill CV 25
= 6 mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	92.8	20	0.725
	72.8	93.2	20.4	0.720
	72.8	93.7	20.9	0.713
	72.8	92.6	19.8	0.728
	72.8	94.5	21.7	0.702
				0.718
125	80	100.1	20.1	0.749
	80	99.7	19.7	0.754
	80	100.8	20.8	0.740
	80	99.9	19.9	0.751
	80	100.3	20.3	0.746
				0.748
250	80	96	16	0.800
	80	95.7	15.7	0.804
	80	95.3	15.3	0.809
	80	96.1	16.1	0.799
	80	95.9	15.9	0.801
				0.803
500	94	108.9	14.9	0.841
	94	109.3	15.3	0.837
	94	108.9	14.9	0.841
	94	109.5	15.5	0.835
	94	108.5	14.5	0.846
				0.840
1000	104	118.7	14.7	0.859
	104	118.9	14.9	0.857
	104	119	15	0.856
	104	119.2	15.2	0.854
	104	118.9	14.9	0.857
				0.856
2000	110	124.9	14.9	0.865
	110	125.6	15.6	0.858
	110	125.3	15.3	0.861
	110	125.4	15.4	0.860
	110	125.3	15.3	0.861
				0.861
4000	104.8	120.3	15.5	0.852
	104.8	120.8	16	0.847
	104.8	120.7	15.9	0.848
	104.8	120.6	15.8	0.849
	104.8	119.5	14.7	0.860
				0.851
8000	92.8	110.6	17.8	0.808
	92.8	110.7	17.9	0.807
	92.8	110.1	17.3	0.814
	92.8	110.7	17.9	0.807
	92.8	110.9	18.1	0.805
				0.808

Panel dengan accoustic fill CV 25
d=8mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	93.1	20.3	0.721
	72.8	93	20.2	0.723
	72.8	93.8	21	0.712
	72.8	92.7	19.9	0.727
	72.8	93.8	21	0.712
				0.719
125	80	98.7	18.7	0.766
	80	99.4	19.4	0.758
	80	99.4	19.4	0.758
	80	99.1	19.1	0.761
	80	98.9	18.9	0.764
				0.761
250	80	94	14	0.825
	80	94.6	14.6	0.818
	80	94.1	14.1	0.824
	80	94.8	14.8	0.815
	80	94.5	14.5	0.819
				0.820
500	94	109.1	15.1	0.839
	94	108.2	14.2	0.849
	94	108.5	14.5	0.846
	94	108	14	0.851
	94	108.2	14.2	0.849
				0.847
1000	104	118.1	14.1	0.864
	104	118.2	14.2	0.863
	104	118.3	14.3	0.863
	104	118.5	14.5	0.861
	104	118.7	14.7	0.859
				0.862
2000	110	125.1	15.1	0.863
	110	124.9	14.9	0.865
	110	125.3	15.3	0.861
	110	125.1	15.1	0.863
	110	124.9	14.9	0.865
				0.863
4000	104.8	121.9	17.1	0.837
	104.8	121.7	16.9	0.839
	104.8	121.6	16.8	0.840
	104.8	120.3	15.5	0.852
	104.8	121.1	16.3	0.844
				0.842
8000	92.8	111.5	18.7	0.798
	92.8	111.7	18.9	0.796
	92.8	111.5	18.7	0.798
	92.8	111.3	18.5	0.801
	92.8	111.2	18.4	0.802
				0.799

ampiran 14. Data Hasil Pengujian dengan 5 Pengambilan Data pada Tiap Pengujian

anel dengan accoustic fill CV 25
l=10mm

rekuensi	TTB	X1	Ir	Alpha
63	72.8	93	20.2	0.723
	72.8	92.2	19.4	0.734
	72.8	92.8	20	0.725
	72.8	93.2	20.4	0.720
	72.8	92.9	20.1	0.724
				0.725
125	80	98.8	18.8	0.765
	80	98.2	18.2	0.773
	80	99.1	19.1	0.761
	80	98.9	18.9	0.764
	80	98.8	18.8	0.765
				0.766
250	80	94.3	14.3	0.821
	80	93.9	13.9	0.826
	80	94.2	14.2	0.823
	80	94.2	14.2	0.823
	80	93.9	13.9	0.826
				0.824
500	94	107	13	0.862
	94	106.2	12.2	0.870
	94	107.9	13.9	0.852
	94	107.9	13.9	0.852
	94	107.2	13.2	0.860
				0.859
1000	104	117.5	13.5	0.870
	104	117.9	13.9	0.866
	104	117.9	13.9	0.866
	104	118	14	0.865
	104	117.5	13.5	0.870
				0.868
2000	110	124.1	14.1	0.872
	110	124.2	14.2	0.871
	110	123.9	13.9	0.874
	110	123.8	13.8	0.875
	110	124.4	14.4	0.869
				0.872
4000	104.8	120.6	15.8	0.849
	104.8	120.1	15.3	0.854
	104.8	120.7	15.9	0.848
	104.8	120.8	16	0.847
	104.8	120	15.2	0.855
				0.851
8000	92.8	110.5	17.7	0.809
	92.8	110.4	17.6	0.810
	92.8	110.9	18.1	0.805
	92.8	110.1	17.3	0.814
	92.8	110.4	17.6	0.810
				0.810

Panel Tanpa accoustic fill CV 15
d=6 mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	115.6	42.8	0.412
	72.8	112.7	39.9	0.452
	72.8	113	40.2	0.448
	72.8	114.2	41.4	0.431
	72.8	113.3	40.5	0.444
				0.437
125	80	106.5	26.5	0.669
	80	105.5	25.5	0.681
	80	107.6	27.6	0.655
	80	105.3	25.3	0.684
	80	105.5	25.5	0.681
				0.674
250	80	102	22	0.725
	80	103.5	23.5	0.706
	80	102	22	0.725
	80	103.6	23.6	0.705
	80	102	22	0.725
				0.717
500	94	113	19	0.798
	94	113.3	19.3	0.795
	94	112.9	18.9	0.799
	94	112.5	18.5	0.803
	94	113.8	19.8	0.789
				0.797
1000	104	122.3	18.3	0.824
	104	122.5	18.5	0.822
	104	123.2	19.2	0.815
	104	123	19	0.817
	104	123.6	19.6	0.812
				0.818
2000	110	127.9	17.9	0.837
	110	127.2	17.2	0.844
	110	127.6	17.6	0.840
	110	127.4	17.4	0.842
	110	127.6	17.6	0.840
				0.841
4000	104.8	126.4	21.6	0.794
	104.8	126.2	21.4	0.796
	104.8	126.5	21.7	0.793
	104.8	126.8	22	0.790
	104.8	126.3	21.5	0.795
				0.794
8000	92.8	112.6	19.8	0.787
	92.8	112.5	19.7	0.788
	92.8	112.2	19.4	0.791
	92.8	113.2	20.4	0.780
	92.8	112.7	19.9	0.786
				0.786

ampiran 15. Data Hasil Pengujian dengan 5 Pengambilan Data pada Tiap Pengujian

anel Tanpa accoustic fill CV 15
l=8 mm

rekuensi	TTB	X1	Ir	Alpha
63	72.8	111.2	38.4	0.473
	72.8	112.7	39.9	0.452
	72.8	111.1	38.3	0.474
	72.8	111.2	38.4	0.473
	72.8	111.5	38.7	0.468
				0.468
125	80	103.2	23.2	0.710
	80	104.9	24.9	0.689
	80	103.8	23.8	0.703
	80	103.4	23.4	0.708
	80	103.5	23.5	0.706
				0.703
250	80	100.1	20.1	0.749
	80	99.9	19.9	0.751
	80	100.2	20.2	0.748
	80	100.1	20.1	0.749
	80	99.9	19.9	0.751
				0.750
500	94	112	18	0.809
	94	112.3	18.3	0.805
	94	111.6	17.6	0.813
	94	112.7	18.7	0.801
	94	111.9	17.9	0.810
				0.807
1000	104	121.6	17.6	0.831
	104	121.6	17.6	0.831
	104	121.5	17.5	0.832
	104	121.7	17.7	0.830
	104	121.9	17.9	0.828
				0.830
2000	110	127	17	0.845
	110	127.1	17.1	0.845
	110	127	17	0.845
	110	127.2	17.2	0.844
	110	127	17	0.845
				0.845
4000	104.8	123.2	18.4	0.824
	104.8	123.4	18.6	0.823
	104.8	122.9	18.1	0.827
	104.8	122.8	18	0.828
	104.8	122.7	17.9	0.829
				0.826
8000	92.8	112.8	20	0.784
	92.8	112.3	19.5	0.790
	92.8	113.1	20.3	0.781
	92.8	113.6	20.8	0.776
	92.8	113.7	20.9	0.775
				0.781

Panel Tanpa accoustic fill CV 15
d=10 mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	105.6	32.8	0.549
	72.8	106.5	33.7	0.537
	72.8	106	33.2	0.544
	72.8	104.3	31.5	0.567
	72.8	105.3	32.5	0.554
				0.550
125	80	102.8	22.8	0.715
	80	101.3	21.3	0.734
	80	101.3	21.3	0.734
	80	101.9	21.9	0.726
	80	101.6	21.6	0.730
				0.728
250	80	98.7	18.7	0.766
	80	98.6	18.6	0.768
	80	99	19	0.763
	80	97	17	0.788
	80	99.9	19.9	0.751
				0.767
500	94	110.3	16.3	0.827
	94	110.5	16.5	0.824
	94	109.9	15.9	0.831
	94	108.9	14.9	0.841
	94	109	15	0.840
				0.833
1000	104	121.2	17.2	0.835
	104	119.2	15.2	0.854
	104	121.5	17.5	0.832
	104	119.5	15.5	0.851
	104	121.1	17.1	0.836
				0.841
2000	110	126	16	0.855
	110	125.5	15.5	0.859
	110	125.8	15.8	0.856
	110	125.4	15.4	0.860
	110	126.1	16.1	0.854
				0.857
4000	104.8	121.6	16.8	0.840
	104.8	120.8	16	0.847
	104.8	120.6	15.8	0.849
	104.8	121.3	16.5	0.843
	104.8	119.6	14.8	0.859
				0.848
8000	92.8	111.7	18.9	0.796
	92.8	110.9	18.1	0.805
	92.8	111.6	18.8	0.797
	92.8	111.4	18.6	0.800
	92.8	111.5	18.7	0.798
				0.799

ampiran 16. Data Hasil Pengujian dengan 5 Pengambilan Data pada Tiap Pengujian

nel Tanpa accoustic fill CV 20
=6 mm

rekuensi	TTB	X1	Ir	Alpha
63	72.8	106.5	33.7	0.537
	72.8	106.2	33.4	0.541
	72.8	105.4	32.6	0.552
	72.8	105.9	33.1	0.545
	72.8	107	34.2	0.530
				0.541
125	80	105.4	25.4	0.683
	80	105.6	25.6	0.680
	80	105.3	25.3	0.684
	80	105.1	25.1	0.686
	80	105.2	25.2	0.685
				0.684
250	80	99.3	19.3	0.759
	80	99.6	19.6	0.755
	80	99.7	19.7	0.754
	80	99.2	19.2	0.760
	80	99.5	19.5	0.756
				0.757
500	94	113.3	19.3	0.795
	94	113.6	19.6	0.791
	94	113.8	19.8	0.789
	94	112.9	18.9	0.799
	94	113.5	19.5	0.793
				0.793
1000	104	124.6	20.6	0.802
	104	124.3	20.3	0.805
	104	124.5	20.5	0.803
	104	124.9	20.9	0.799
	104	125.1	21.1	0.797
				0.801
2000	110	129	19	0.827
	110	129.5	19.5	0.823
	110	129.4	19.4	0.824
	110	129.5	19.5	0.823
	110	129.8	19.8	0.820
				0.823
4000	104.8	124.7	19.9	0.810
	104.8	124.2	19.4	0.815
	104.8	124.5	19.7	0.812
	104.8	125.1	20.3	0.806
	104.8	124.5	19.7	0.812
				0.811
8000	92.8	111.9	19.1	0.794
	92.8	112	20.2	0.782
	92.8	112.3	20.5	0.779
	92.8	112.2	20.3	0.781
	92.8	111.8	20	0.784
				0.784

Panel Tanpa accoustic fill CV 20
d=8 mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	102.8	30	0.588
	72.8	102	29.2	0.599
	72.8	104.4	31.6	0.566
	72.8	104.9	32.1	0.559
	72.8	106	33.2	0.544
				0.571
125	80	103.2	23.2	0.710
	80	103	23	0.713
	80	103.1	23.1	0.711
	80	104.5	24.5	0.694
	80	104.5	24.5	0.694
				0.704
250	80	101.2	18.3	0.771
	80	101.1	18.4	0.770
	80	100.8	17.3	0.784
	80	101.5	18.6	0.768
	80	100.5	18.8	0.765
				0.772
500	94	110.7	16.7	0.822
	94	109.4	15.4	0.836
	94	108.5	14.5	0.846
	94	110.2	16.2	0.828
	94	109.8	15.8	0.832
				0.833
1000	104	119	15	0.856
	104	118.3	14.3	0.863
	104	119	15	0.856
	104	119.4	15.4	0.852
	104	119.2	15.2	0.854
				0.856
2000	110	127	17	0.845
	110	127.1	17.1	0.845
	110	126.6	16.6	0.849
	110	126.7	16.7	0.848
	110	127	17	0.845
				0.847
4000	104.8	122.1	17.3	0.835
	104.8	122.6	17.8	0.830
	104.8	122.4	17.6	0.832
	104.8	121.9	17.1	0.837
	104.8	122.6	17.8	0.830
				0.833
8000	92.8	111.2	18.4	0.802
	92.8	111	20.2	0.782
	92.8	111.4	20.5	0.779
	92.8	111	20.3	0.781
	92.8	111.2	20	0.784
				0.786

ampiran 17. Data Hasil Pengujian dengan 5 Pengambilan Data pada Tiap Pengujian

anel Tanpa accoustic fill CV 20
=10 mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	101.2	28.4	0.610
	72.8	100.9	28.1	0.614
	72.8	101.1	28.3	0.611
	72.8	100.3	27.5	0.622
	72.8	100.3	27.5	0.622
				0.616
125	80	101.8	21.8	0.728
	80	101.9	21.9	0.726
	80	103	23	0.713
	80	102.5	22.5	0.719
	80	102.8	22.8	0.715
				0.720
250	80	100	18.3	0.771
	80	100.1	18.4	0.770
	80	99.6	17.3	0.784
	80	101.2	18.6	0.768
	80	101.1	18.8	0.765
				0.772
500	94	109.2	15.2	0.838
	94	109.7	15.7	0.833
	94	108.1	14.1	0.850
	94	109.1	15.1	0.839
	94	108.5	14.5	0.846
				0.841
1000	104	118.5	14.5	0.861
	104	119.6	15.6	0.850
	104	118.2	14.2	0.863
	104	118.3	14.3	0.863
	104	119.2	15.2	0.854
				0.858
2000	110	125.5	15.5	0.859
	110	124.3	14.3	0.870
	110	124.8	14.8	0.865
	110	125.4	15.4	0.860
	110	125.6	15.6	0.858
				0.863
4000	104.8	121.1	16.3	0.844
	104.8	120.9	16.1	0.846
	104.8	120.9	16.1	0.846
	104.8	121	16.2	0.845
	104.8	121.5	16.7	0.841
				0.845
8000	92.8	111.4	18.6	0.800
	92.8	111.1	20.2	0.782
	92.8	111.3	20.5	0.779
	92.8	112	20.3	0.781
	92.8	112.3	20	0.784
				0.785

Panel Tanpa accoustic fill CV 25
d=6 mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	101	28.2	0.613
	72.8	101.6	28.8	0.604
	72.8	100.9	28.1	0.614
	72.8	101.1	28.3	0.611
	72.8	101	28.2	0.613
				0.611
125	80	103.6	23.6	0.705
	80	103.4	23.4	0.708
	80	103.8	23.8	0.703
	80	103.1	23.1	0.711
	80	103.2	23.2	0.710
				0.707
250	80	100.3	20.3	0.746
	80	100.1	20.1	0.749
	80	101.1	21.1	0.736
	80	100.9	20.9	0.739
	80	100.8	20.8	0.740
				0.742
500	94	111.2	17.2	0.817
	94	112.6	18.6	0.802
	94	111.3	17.3	0.816
	94	112.3	18.3	0.805
	94	111.9	17.9	0.810
				0.810
1000	104	121.5	17.5	0.832
	104	121.2	17.2	0.835
	104	120.6	16.6	0.840
	104	121.8	17.8	0.829
	104	121.6	17.6	0.831
				0.833
2000	110	126	16	0.855
	110	126.1	16.1	0.854
	110	125.9	15.9	0.855
	110	126.1	16.1	0.854
	110	125.9	15.9	0.855
				0.855
4000	104.8	121.8	17	0.838
	104.8	120.9	16.1	0.846
	104.8	121.7	16.9	0.839
	104.8	121.2	16.4	0.844
	104.8	121.1	16.3	0.844
				0.842
8000	92.8	112.8	20	0.784
	92.8	111.7	20.2	0.782
	92.8	112	20.5	0.779
	92.8	112.3	20.3	0.781
	92.8	112.8	20	0.784
				0.782

ampiran 18. Data Hasil Pengujian dengan 5 Pengambilan Data pada Tiap Pengujian

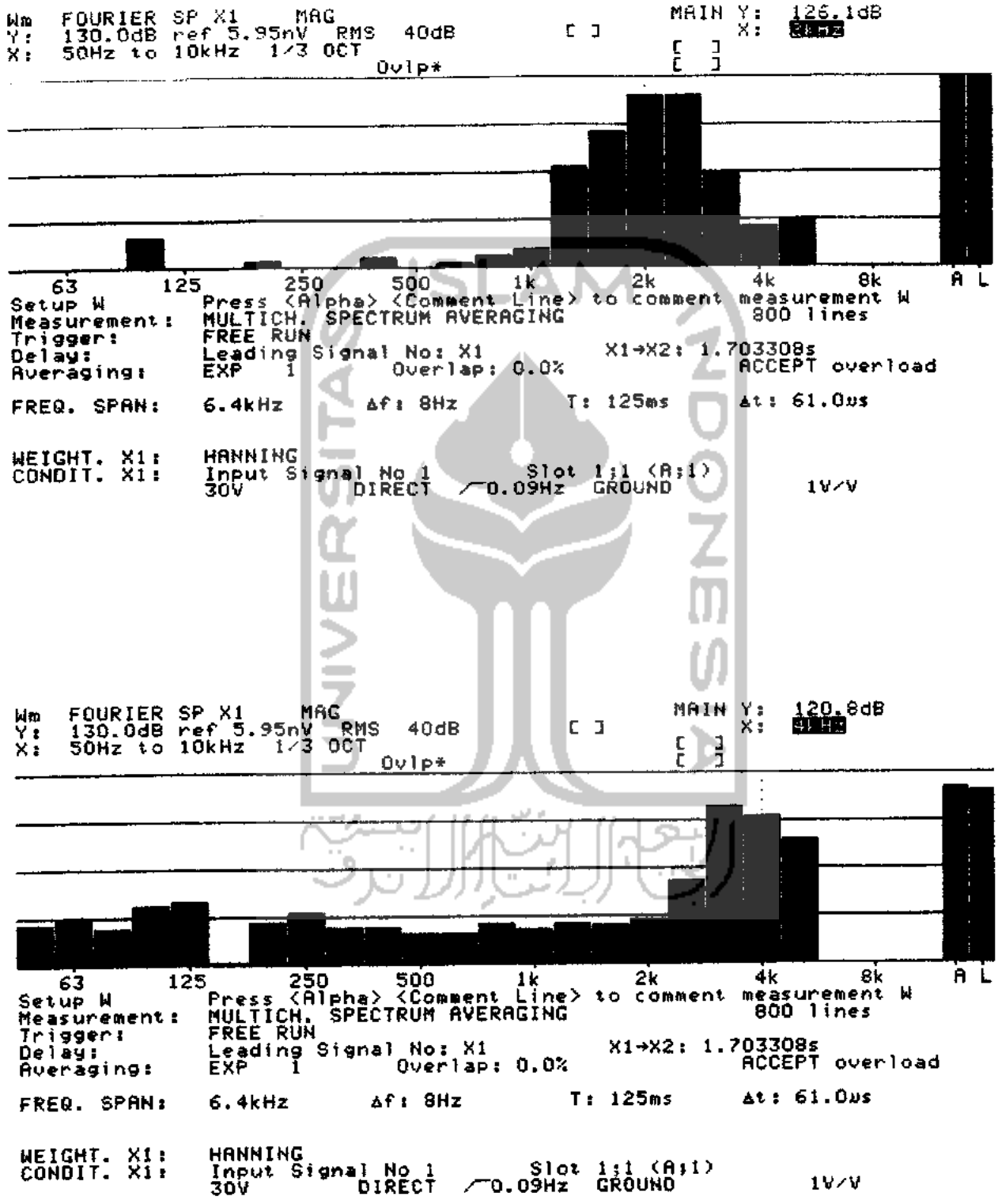
anel Tanpa accoustic fill CV 25
=8 mm

rekuensi	TTB	X1	Ir	Alpha
63	72.8	99.3	26.5	0.636
	72.8	98.8	26	0.643
	72.8	99.6	26.8	0.632
	72.8	101.3	28.5	0.609
	72.8	99.7	26.9	0.630
				0.630
125	80	101.9	21.9	0.726
	80	101.5	21.5	0.731
	80	101.3	21.3	0.734
	80	102.2	22.2	0.723
	80	101.9	21.9	0.726
				0.728
250	80	97.2	17.2	0.785
	80	97.2	17.2	0.785
	80	96.8	16.8	0.790
	80	98.7	18.7	0.766
	80	98.1	18.1	0.774
				0.780
500	94	111.5	17.5	0.814
	94	111.3	17.3	0.816
	94	111	17	0.819
	94	111.1	17.1	0.818
	94	111.3	17.3	0.816
				0.817
1000	104	120.8	16.8	0.838
	104	119.1	15.1	0.855
	104	119.4	15.4	0.852
	104	120.6	16.6	0.840
	104	119.1	15.1	0.855
				0.848
2000	110	126.8	16.8	0.847
	110	127.7	17.7	0.839
	110	126	16	0.855
	110	127.1	17.1	0.845
	110	127.4	17.4	0.842
				0.845
4000	104.8	122.1	17.3	0.835
	104.8	121.9	17.1	0.837
	104.8	121.7	16.9	0.839
	104.8	121.4	16.6	0.842
	104.8	121.6	16.8	0.840
				0.838
8000	92.8	111.2	18.4	0.802
	92.8	111	20.2	0.782
	92.8	111.3	20.5	0.779
	92.8	112	20.3	0.781
	92.8	111.9	20	0.784
				0.786

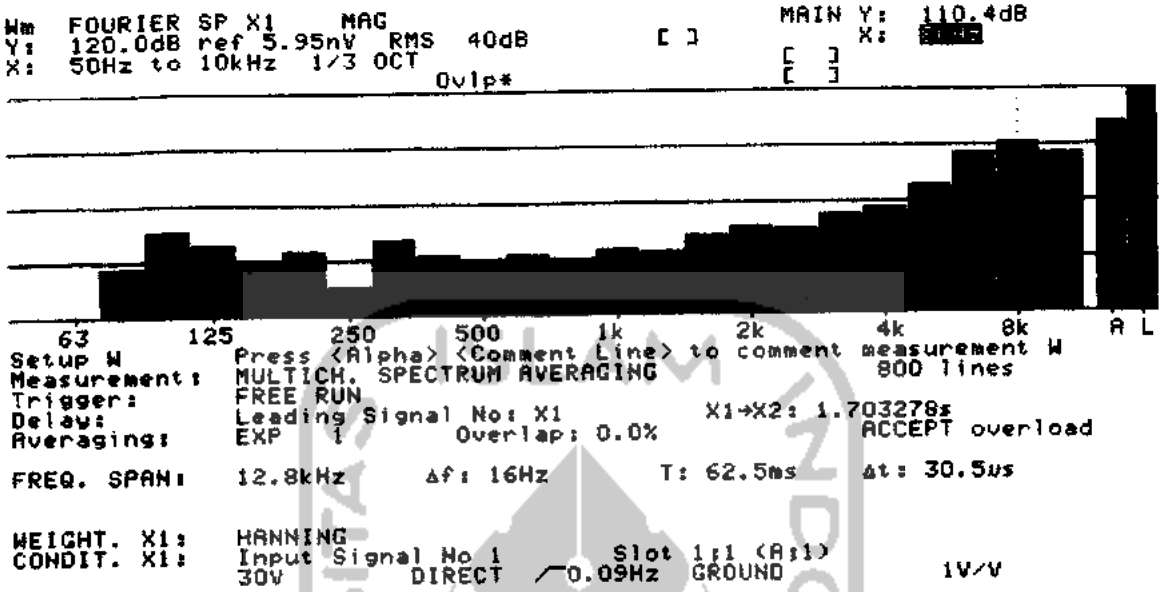
Panel Tanpa accoustic fill CV 25
d=10 mm

Frekuensi	TTB	X1	Ir	Alpha
63	72.8	97.2	24.4	0.665
	72.8	96.1	23.3	0.680
	72.8	100.2	27.4	0.624
	72.8	99.2	26.4	0.637
	72.8	97.6	24.8	0.659
				0.653
125	80	99.5	19.5	0.756
	80	100.2	20.2	0.748
	80	100.7	20.7	0.741
	80	100.2	20.2	0.748
	80	100.4	20.4	0.745
				0.748
250	80	97.2	17.2	0.785
	80	97.3	17.3	0.784
	80	97.5	17.5	0.781
	80	97.7	17.7	0.779
	80	97.9	17.9	0.776
				0.781
500	94	108.1	14.1	0.850
	94	108.7	14.7	0.844
	94	108.6	14.6	0.845
	94	108.7	14.7	0.844
	94	108.6	14.6	0.845
				0.845
1000	104	120.5	16.5	0.841
	104	119	15	0.856
	104	120.3	16.3	0.843
	104	119.9	15.9	0.847
	104	119.2	15.2	0.854
				0.848
2000	110	125.2	15.2	0.862
	110	125.1	15.1	0.863
	110	124.4	14.4	0.869
	110	124.9	14.9	0.865
	110	124.7	14.7	0.866
				0.865
4000	104.8	121.6	16.8	0.840
	104.8	120.4	15.6	0.851
	104.8	120.7	15.9	0.848
	104.8	121.8	17	0.838
	104.8	121.7	16.9	0.839
				0.843
8000	92.8	111.6	18.8	0.797
	92.8	111.1	20.2	0.782
	92.8	110.6	20.5	0.779
	92.8	111.5	20.3	0.781
	92.8	111.7	20	0.784
				0.785

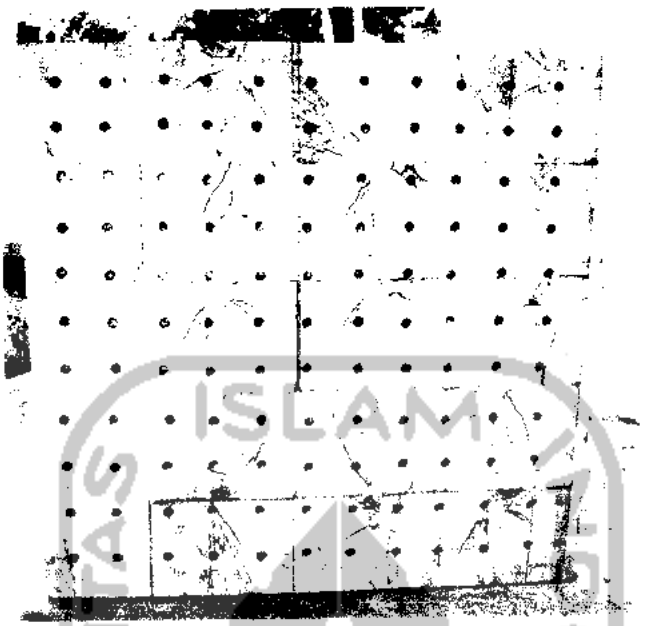
Lampiran 19. Hasil Print Pengujian Pada FFT *Analyzer* (2kHz dan 4kHz)



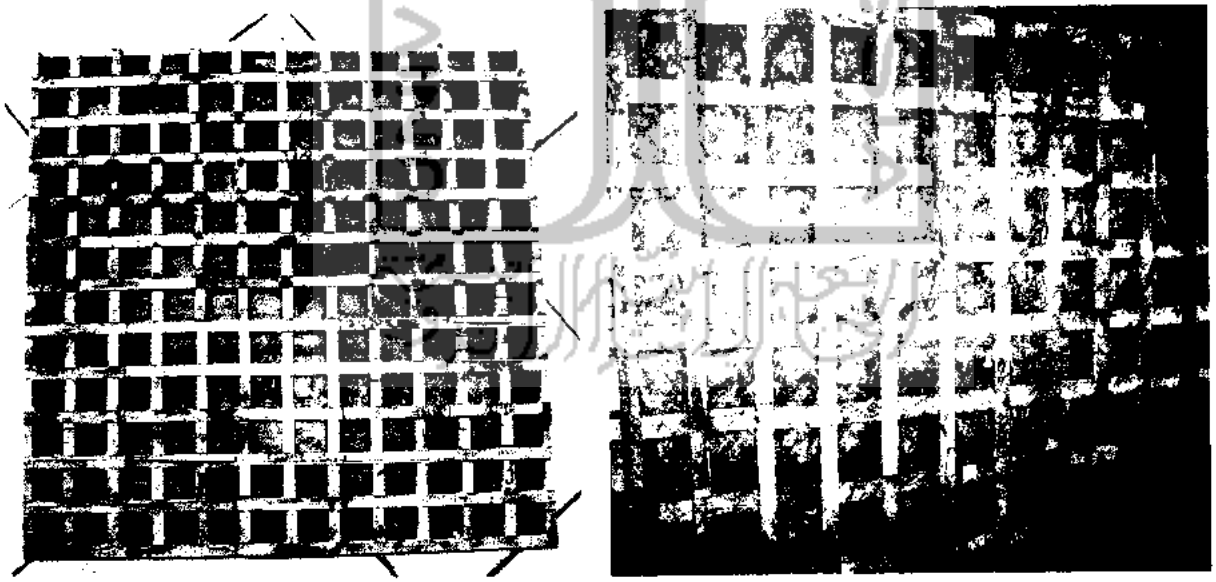
Lampiran 20. Hasil Print Pengujian Pada FFT *Analyzer* (8kHz)



Lampiran 12. Hasil Produk Panel Akustik Dari Bahan Kayu Sengon Laut



Gambar L12.1. Produk Panel Akustik Dari Bahan Kayu sengon Laut dengan *Acoustic fill* kenaf, diameter lubang resonator 10, *Cavity Depth* 25 Dimensi : 50cm x 50cm (Nilai serapan lebih dari 0.8)



a. Tanpa *Acoustic fill* kenaf b. Dengan *Acoustic fill* kenaf

Gambar L12.2. Rongga Resonator Panel Akustik Dari Bahan Kayu sengon Laut dengan dan tanpa *Acoustic fill* kenaf