

DAFTAR ISI

COVER.....	i
KATA PENGANTAR.....	iii
DAFTAR ISI	iv
DAFTAR GAMBAR	vi
DAFTAR TABEL.....	vii
BAB 1 PENDAHULUAN	1
1.1 Latar Belakang	1
1.2 Identifikasi Masalah	2
1.3 Batasan Masalah	2
1.4 Rumusan Masalah	2
1.5 Tujuan Penelitian.....	2
BAB 2 KAJIAN PUSTAKA	4
2.1 Komposit.....	4
2.1.1 Klasifikasi Komposit	6
2.2 Matriks.....	6
2.3 <i>Reinforcement</i>	7
2.4 Bambu	7
2.4.1 Bambu Apus.....	8
2.4.2 Sifat Bambu Apus	8
2.5 Turbin Angin	9
2.5.1 Sudu Turbin Angin NACA 4412	10
2.6 <i>Fiber Reinforced</i>	10
2.7 <i>Glass Fiber Reinforced Polymer (GFRP)</i>	11
2.8 <i>Carbon Fiber Reinforced Polymer (CFRP)</i>	12
2.9 Metode Manufaktur	12
2.9.1 <i>Spray Up</i>	12
2.9.2 <i>Hand Lay Up</i>	13
2.9.3 <i>Vacuum Bagging</i>	14

2.10	Perlakuan Alkali	14
2.11	Pola Anyaman.....	15
2.12	<i>Autodesk Fusion 360</i>	15
2.13	Tegangan <i>Von Mises</i>	16
2.14	Polupropylene (PP).....	16
BAB 3 METODELOGI PENELITIAN		18
3.1	Studi Literatur dan Analisa	18
3.2	Diagram Alir Penelitian.....	19
3.3	Bahan dan Peralatan	20
3.3.1	Bahan.....	20
3.3.2	Peralatan.....	20
3.4	Metode Penelitian dan Penyajian Data.....	20
3.4.1	Proses Pembuatan Gambar 3D	21
3.4.2	Proses Simulasi	23
BAB 4 HASIL DAN PEMBAHASAN		26
4.1	Hasil Simulasi.....	26
4.2	Hasil Simulasi <i>Safety Factor</i>	26
4.3	Hasil Simulasi <i>Von Mises</i>	27
4.4	Hasil Simulasi <i>1st Principal</i>	29
4.5	Hasil Simulasi <i>3rd Principal</i>	31
4.6	Hasil Simulasi <i>Displacement</i>	32
BAB 5 KESIMPULAN		35
DAFTAR PUSTAKA.....		viii

DAFTAR GAMBAR

Gambar 2.1 Ilustrasi komposit berdasarkan penguatnya	Error! Bookmark not defined.
Gambar 2.2 Klasifikasi Komposit.....	Error! Bookmark not defined.
Gambar 2.3 Bambu	Error! Bookmark not defined.
Gambar 2.4 Bambu Apus	Error! Bookmark not defined.
Gambar 2.5 Berbagai Jenis Turbin Angin.....	Error! Bookmark not defined.
Gambar 2.6 Penampang Sudu Turbin NACA 4412.....	Error! Bookmark not defined.
Gambar 2.7 Metode <i>Spray Up</i>	Error! Bookmark not defined.
Gambar 2.8 Metode <i>Hand Lay Up</i>	Error! Bookmark not defined.
Gambar 2.9 Metode <i>Vacuum Bagging</i>	Error! Bookmark not defined.
Gambar 2.10 Bentuk Anyaman <i>Plain Wave</i>	Error! Bookmark not defined.
Gambar 3.1 Jawal Pelaksanaan Penelitian.....	Error!
	Bookmark not defined.
Gambar 3.2 Flowchart Penelitian.....	Error! Bookmark not defined.
Gambar 3.3 Ikon Menu <i>Sketch</i>	Error! Bookmark not defined.
Gambar 3.4 Gambar Dimensi Turbin Angin	28
Gambar 3.5 Mengunduh Dimensi Airofill	Error! Bookmark not defined.
Gambar 3.6 Memasukkan Data Pada Jarak Antar Sisi	Error! Bookmark not defined.
	defined.
Gambar 3.7 Menyambungkan Setiap Dimensi dengan Loft	Error! Bookmark not defined.
	defined.
Gambar 3.8 Menyamakan Sudu-Sudu Turbin	Error! Bookmark not defined.
Gambar 3.9 Gambar 3D Sudu Turbin Angin	Error! Bookmark not defined.
Gambar 3.10 <i>Constraints</i>	Error! Bookmark not defined.
Gambar 3.11 <i>Force</i>	Error! Bookmark not defined.
Gambar 4.1 Diagram <i>Safety Factor</i>	
	Error! Bookmark not defined.
Gambar 4.2 Diagram <i>Von Mises</i>	Error! Bookmark not defined.

Gambar 4.3 Diagram <i>1st Principal</i>	Error! Bookmark not defined.
Gambar 4.4 Diagram <i>3rd Principle</i>	Error! Bookmark not defined.
Gambar 4.5 Diagram <i>Displacement</i>	Error! Bookmark not defined.

DAFTAR TABEL

Tabel 2.1 Sifat Mekanik Bambu Apus	Error! Bookmark not defined.
Tabel 2.2 Sifat Fisi Bambu Apus	Error! Bookmark not defined.
Tabel 2.3 Sifat Mekanis <i>Glass Fiber Reinforced Polymer</i> (GFRP)	Error! Bookmark not defined.
Tabel 3.1 Sifat Mekanik Komposit Bambu	Error! Bookmark not defined.
Tabel 4.1 Hasil Simulasi <i>Safety Factor</i>	Error! Bookmark not defined.
Tabel 4.2 Hasil Simulasi <i>Von Mises</i>	Error! Bookmark not defined.
Tabel 4.3 Hasil Simulasi <i>1st Principal</i>	Error! Bookmark not defined.
Tabel 4.4 Hasil Simulasi <i>3rd Principal</i>	Error! Bookmark not defined.
Tabel 5.1 Hasil Simulasi <i>Displacement</i>	Error! Bookmark not defined.

