

LAMPIRAN 1

TRANSHIP II (0.26 m/s)

L _{OA}	Length Over All	=	63,2	m		
L _{PP}	Length Between Perpendicular	=	58,2	m		
L _{WL}	Length of Water Line	=	60,528	m		
T	Summer Draft	=	3,6	m		
B	Breadth	=	11,8	m		
DWT	Deadweight	=	641,4	DWT		
D	Displacement	=	2063,8908	Ton	2013,552	m ³
Berthing Energies Parameters						
ρ	Density of water	=	1,025	Ton/m ³		
C _M	Hydrod. Mass Coef	=	1,64	PIANC	Shigeru Ueda Equation	
C _B	Block Coef	=	0,75			
BA	Berthing Angle	=	10	Degree		
V	Berthing Speed	=	0,26	m/s	PIANC	Section 4.2.3, Figure 4.2.1
x	Distance Bow - Pol	=	15,132	m		
K	Radius Gyration of ship	=	15,96	m		
R	Distance CoG - Pol	=	16,24	m		
γ	angle	=	67,98	Degree		
C _e	Eccentricity Coef.	=	0,56	PIANC	Section 4.2.4	
C _s	Softness Coef	=	1	PIANC	Section 4.2.6	
C _c	Berth Configuration Coef	=	0,9	PIANC	Section 4.2.7	
E	Normal Berthing Energy	=	57,64	kN.m	PIANC	Section 4.2.1
FoS	Factors of Safety	=	2	PIANC	Section 4.2.8, Table No 4.2.5	
E _A	Berthing Energy	=	115,28	kN.m	Abnormal Berthing Energy	
	Energy Absorption	=	111			
Force	Force	=	274,6883764	kN		
			274688,3764	N		

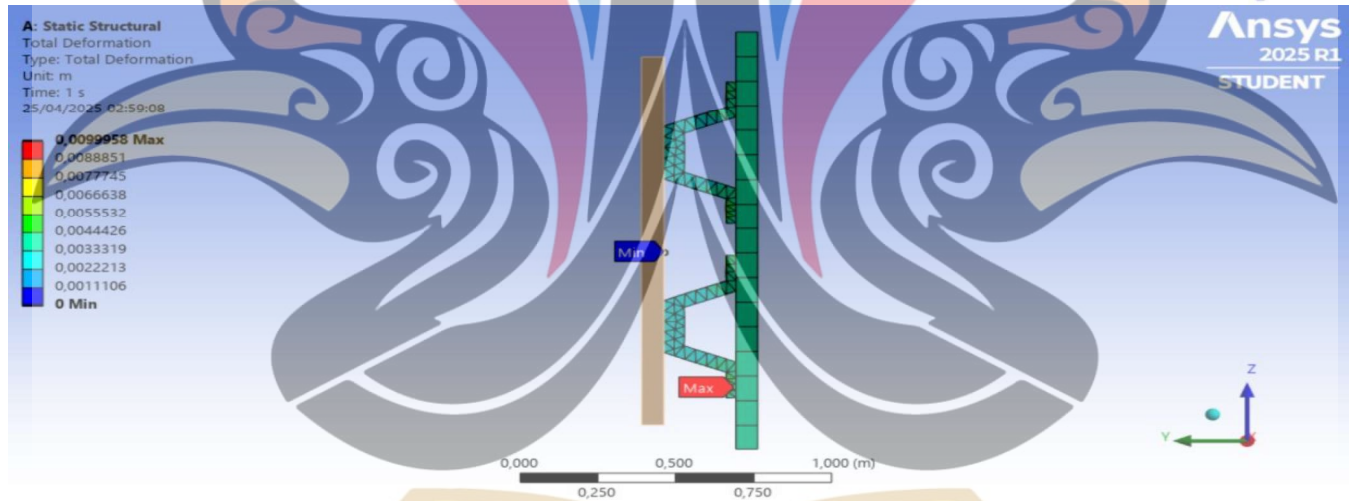
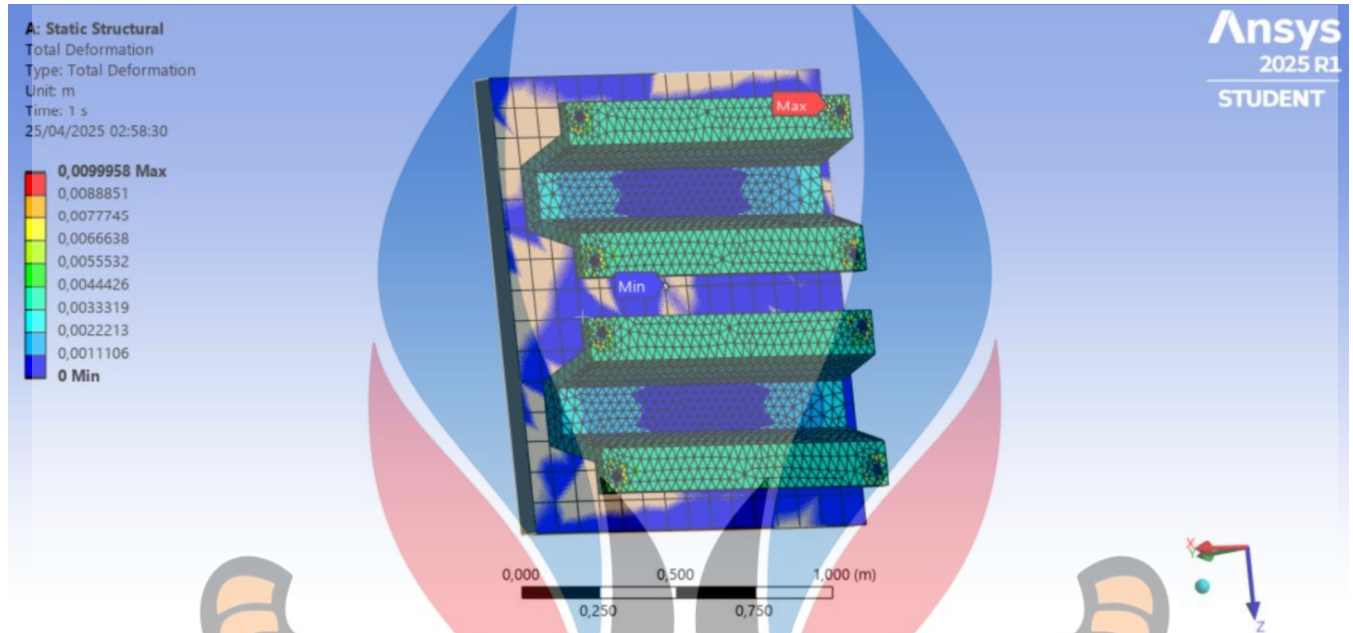
SELAT MADURA II (0,2 m/s)

L _{QA}	Length Over All	=	37,6 m			
L _{pp}	Length Between Perpendicular	=	29,79 m			
L _{WL}	Length of Water Line	=	30,9816 m			
T	Summer Draft	=	1,981 m			
B	Breadth	=	10,02 m			
DWT	Deadweight	=	183 DWT			
D	Displacement	=	573,7532661 Ton	559,75928 m ³		
Berthing Energies Parameters						
ρ	Density of water	=	1,025 Ton/m ³			
C _M	Hydrod. Mass Coef	=	1,41	PIANC		Shigeru Ueda Equation
C _B	Block Coef	=	0,75			
BA	Berthing Angle	=	10 Degree			
V	Berthing Speed	=	0,2 m/s	PIANC		Section 4.2.3, Figure 4.2.1
x	Distance Bow - Pol	=	7,7454 m			
K	Radius Gyration of ship	=	9,49 m			
R	Distance CoG - Pol	=	9,22 m			
y	angle	=	67,98 Degree			
C _e	Eccentricity Coef.	=	0,59	PIANC		Section 4.2.4
C _s	Softness Coef	=	1	PIANC		Section 4.2.6
C _c	Berth Configuration Coef	=	0,9	PIANC		Section 4.2.7
E	Normal Berthing Energy	=	8,57 kN.m	PIANC		Section 4.2.1
FoS	Factors of Safety	=	2	PIANC		Section 4.2.8, Table No 4.2.5
E _A	Berthing Energy	=	17,13 kN.m	Abnormal Berthing Energy		
Energy Absorption			=	113,5		
Force			=	41,51364917 kN		
				41513,64917 N		

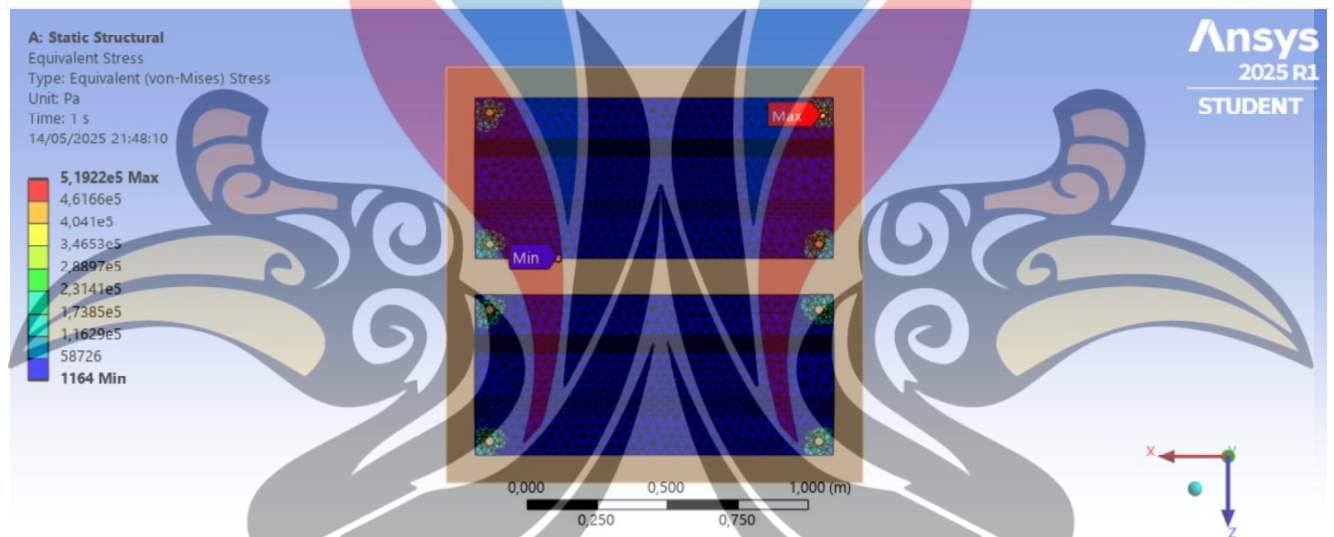
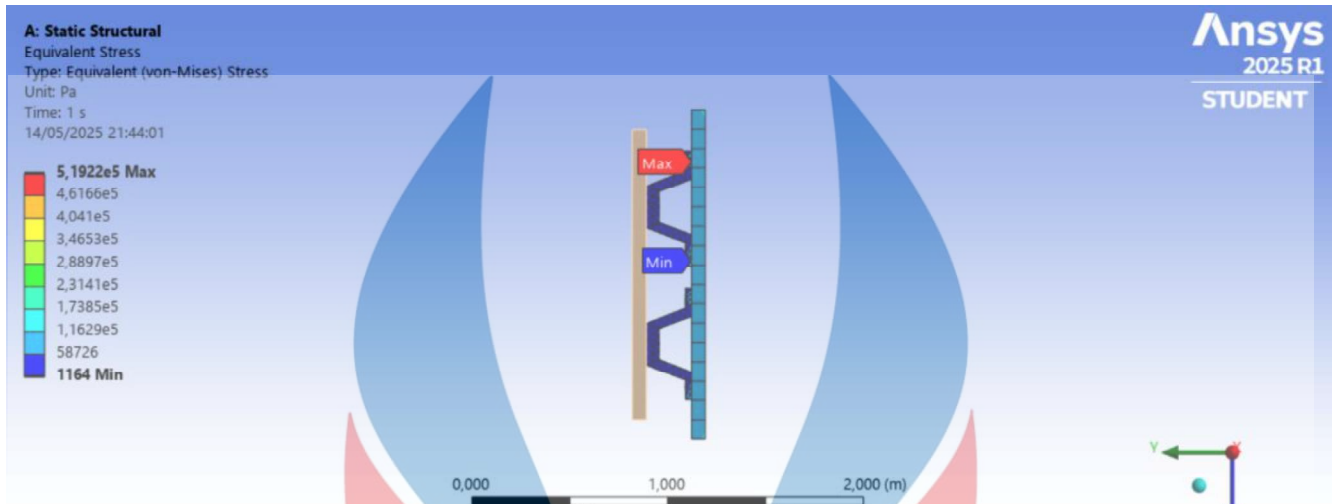
LAMPIRAN 2

NO	NAMA KAPAL	TIPE KAPAL	IMO NUMBER	TANDA SELAR	CALL SIGN	BENDERA	GT (meter)	DIMENSI (meter)			TAJUK PEMBUATAN	KONTRUKSI	MESIN INDUK		KAPASITAS		PEMILIK	LINTASAN	NHKODA
								LBP	B	D			MERK	DAYA	PENUMPANG	KENDARAAN			
1	Laskar Pelang Eas Good Sygri I	Roro / Kapal Motor Penyeberangan	7922651	GT 1001 No.842/Ka	PMSR	Indonesia	1001	57	12,8	2,6	1998	BAJA	NIGATA 6WG 25BX	2 x 1200 HP	193	28	PT. LENYAHAN NUSANTARA	Karangau - Mamuju	SUNARTO
2	Swarna Kalika	Roro / Kapal Motor Penyeberangan	9196405	GT 691 No.1118/Ga	POOX	Indonesia	691	53,30	12,8	1,6	1999	BAJA	NIGATA 6WG 25 CXE	2 x 1300 HP				Karangau - Tapa (Palu)	I KETUT ASTAWA
3	Swarna Nanti	Roro / Kapal Motor Penyeberangan	9204257	GT 323 No.2916/Ka	JZTP	Indonesia	323	41	34,76	11,1	1983	BAJA	YANMAR M 220-LNA	1070 HP	71	31 Unit Mobil		Karangau - Perajam	SUMITO
4	Sikandi Nusantara Eks Under Grace	Roro / Kapal Motor Penyeberangan	6874763	GT 476 No.303/Ga	YB 5167	Indonesia	476	38,8	38,7	10	2.175	BAJA	NIGATA 6WG22BX	600 HP	116	12 Truk + 6 Unit Mobil		Karangau - Perajam	WARSONO
5	Selat Madira I	Roro / Kapal Motor Penyeberangan	6013302	GT 205 No.845/Ka	YB 3176	Indonesia	209	37,8	29,76	10,02	206	BAJA	MITSUBISHI 3K60 OAI	2 x 400 HP	171	10 Truk / 20 Unit Mobil	PT ASDP INDONESIA FERRY (PERSERO)	Karangau - Perajam	ARIFIN
6	Selat Madira II	Roro / Kapal Motor Penyeberangan	8302484	GT 209 No.849/Ka	YB 5177	Indonesia	209	37,8	29,76	10,02	1.981	BAJA	MITSUBISHI 3K60-TA2	2 x 480 HP	155			Karangau - Perajam	SUMIGNYO HP
7	Goropa	Roro / Kapal Motor Penyeberangan	867444	GT 547 No.530/Ga	Y GEG	Indonesia	547	43,35	36,5	12	2	BAJA	NIGATA 6NSD					Karangau - Perajam	SYAFRIDDIN
8	Kambantu	Roro / Kapal Motor Penyeberangan	8872382	GT 549 No.1720/Ga	Y EZ M	Indonesia	549	45,35	36,7	12	2	BAJA	NIGATA 6NSD-M					Karangau - Perajam	MISWAN
9	Porcan Mele	Roro / Kapal Motor Penyeberangan	8873570	GT 621 No.177/Ka	Y EZ U	Indonesia	621	45	48	11	1,9	BAJA	NIGATA 6NSD-M				PT DHARMA LAUTAN UTAMA	Karangau - Perajam	BAHARUDIN MAMING
10	Dnyelis	Roro / Kapal Motor Penyeberangan	8892637	GT 404 No.2457/Ka	Y HP F	Indonesia	404	39,5	33,9	10,5	1,8	BAJA	YANMAR 6LA4-LTE	2 x 530 HP	200	12 Campuran		Karangau - Perajam	SENOSIVANTO
11	Dharma Baito Eks Inosilina No.7	Roro / Kapal Motor Penyeberangan	8694012	GT 239 No.832/Ka	YB 5123	Indonesia	239	34,71	31,14	12	1,75	BAJA	KUBOTA 6K20 DHC5	600 HP	150	10 Truk		Karangau - Perajam	SOEHARTONO
12	Dharma Ferry Eks Dharma Ferry	Roro / Kapal Motor Penyeberangan	8330285	GT 342 No.2499/Ka	Y GH D	Indonesia	342	33,5	31	13,6	3	BAJA	YANMAR 6 LA4-GTE	530 HP	400	15 Campuran		Karangau - Perajam	SUHAROTRI RUSMANWANTO
13	Lilin Ferry	Roro / Kapal Motor Penyeberangan	8003261	GT 244 No.148/Ka	YB 5183	Indonesia	244	41	33,16	10	1,47	BAJA	YANMAR 6 LA4-THE	4 X 340 HP	178	25 Campuran	PT PELAYARAN SUDENA MITRA BHARI	Karangau - Perajam	TELO SUPRYONO
14	Muchlita	Roro / Kapal Motor Penyeberangan	7830462	GT 725 No.454/La	Y FHM	Indonesia	725	42,7	40,6	11,5	3,7	BAJA	DAIHATSU 6 PS-HTCM	2 x 150 HP	250	23 Campuran		Karangau - Perajam	RAMLAN
15	Samudera Indonesia	Roro / Kapal Motor Penyeberangan	9694495	GT 670 No.6257/Ilk	P OT M	Indonesia	670	61,38	54,16	11	3,39	BAJA	MITSUBISHI R883	2 x 600 HP	150	28 Campuran		Karangau - Perajam	ADE AGUS IRAWAN
16	Kinirel	Roro / Kapal Motor Penyeberangan	7507459	GT 531 No.981/Ka	Y BOL	Indonesia	531	41,5	34	11	8,2	BAJA	NIGATA 6WG22BX	800 HP	250	20 Campuran		Karangau - Perajam	HENDRI AGUS IRAWAN
17	Bintang Balikpapan	Roro / Kapal Motor Penyeberangan	8706751	GT 627 No.1205/Id	P O C D	Indonesia	621	53	47	12,8	4,5	BAJA	HAUSHIN BLB26G	2 x 100 PS	250	30 Campuran	PT PASADIANA SUNDARI	Karangau - Perajam	SUDARMAN
18	Tanes	Roro / Kapal Motor Penyeberangan	8013326	GT 270 No.648/Ka	YB 4111	Indonesia	270	38,4	30,34	10	1.521	BAJA	NISSAN DIESEL					Karangau - Perajam	MEI SUPRASTYO
19	Tuni Pradama Jaya 2886	Roro / Kapal Motor Penyeberangan	8694306	GT 707 No.1474/Id	J Z Q V	Indonesia	707	60,2	51,5	11,5	3,3	BAJA	CATERPILAR	2 x 805 HP	180			Karangau - Perajam	YHOGA PUTRA SUSANTO
20	Manggali	Roro / Kapal Motor Penyeberangan	8893307		Y BZ C	Indonesia						BAJA	NIGATA					Karangau - Perajam	
21	Tranship II	Roro / Kapal Motor Penyeberangan	8348296	GT 1056 No.1301/Ka	Y O G U 2	Indonesia	1058	63,2	56,2	11,8	3,6	BAJA	WEICHAH	2 x 120 KW	300	28 Campuran	PT TRANSHIP INDONESIA	Karangau - Perajam	MUSTAFA

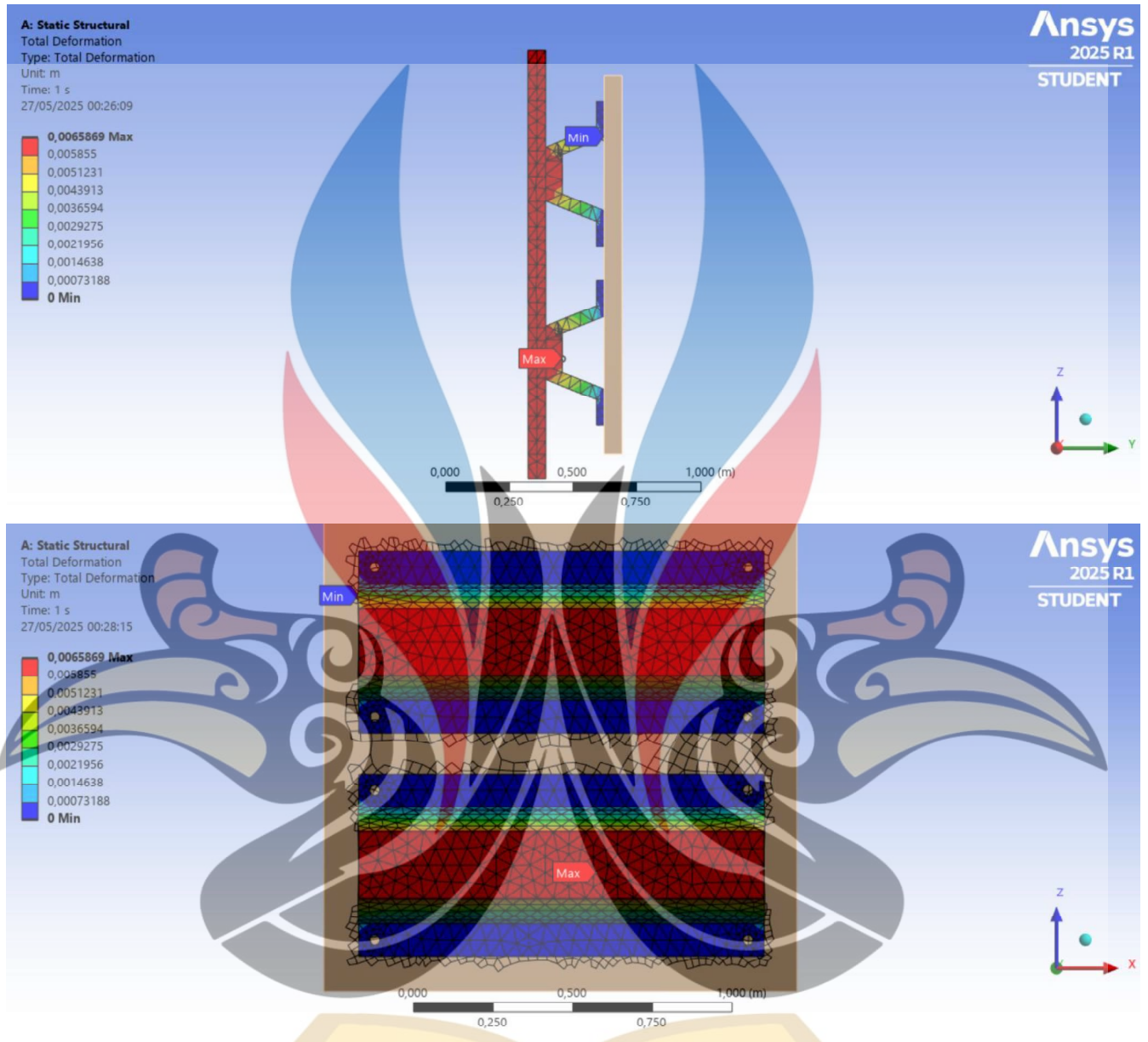
LAMPIRAN 3



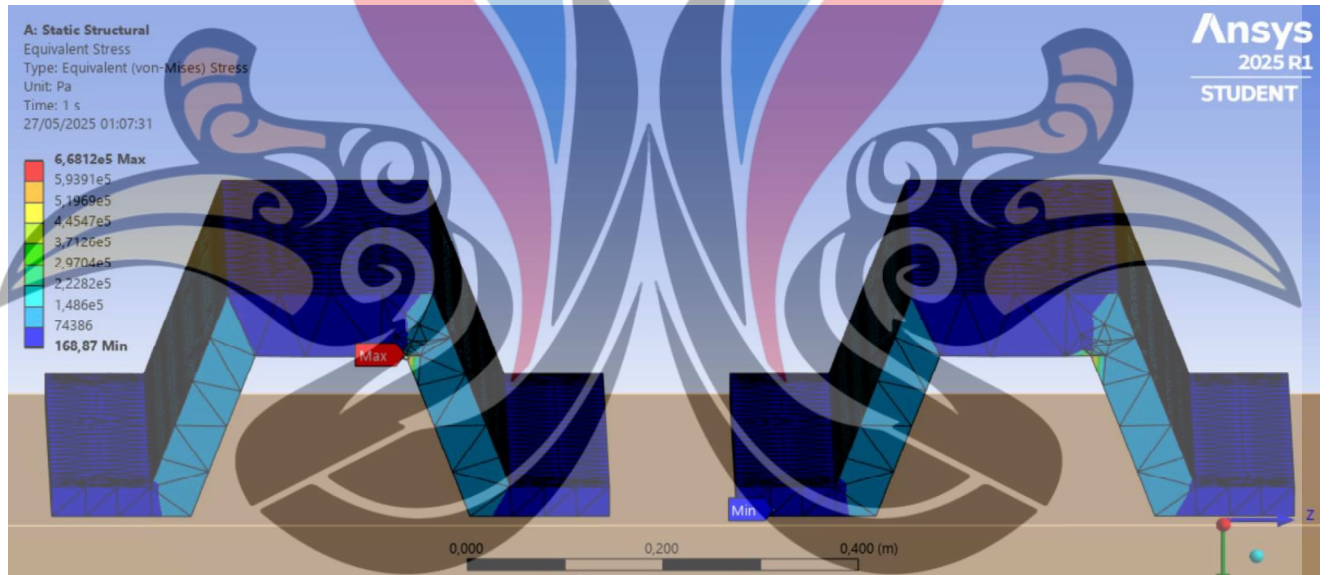
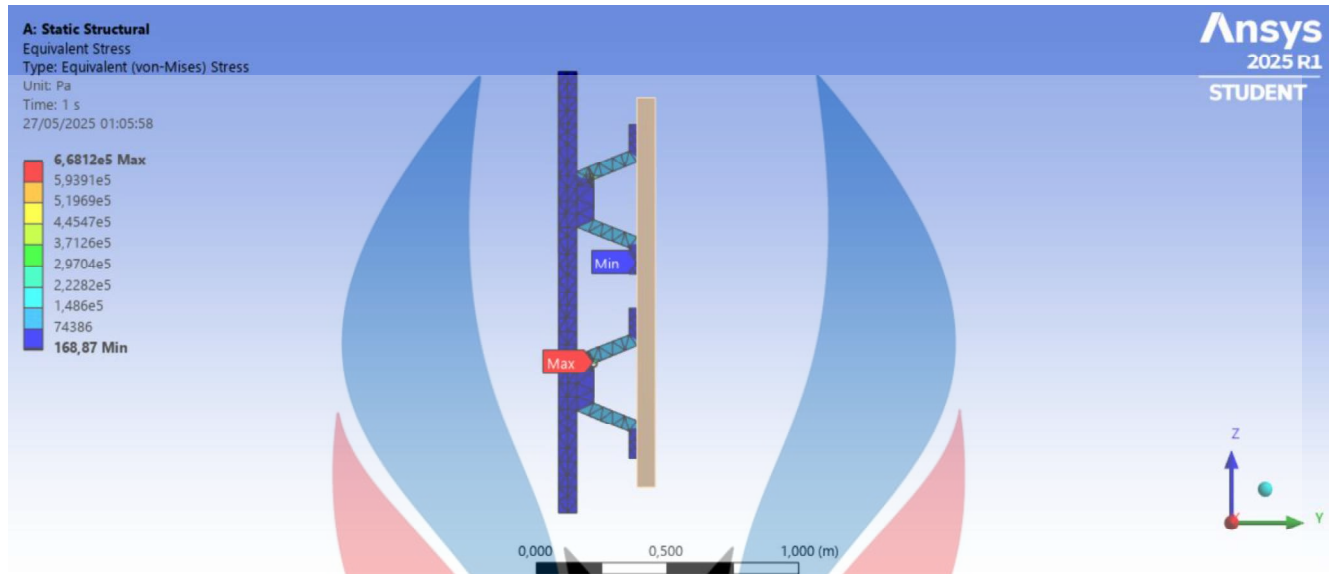
Deformasi *Fender Existing* 0,26 m/s



Equivalent Stress Fender Existing 0,26 m/s



Deformasi Alternatif *fender* 0,26 m/s



Equivalent Stress Alternatif Fender 0,26 m/s

