DAFTAR REFERENSI

Arta, I. K. G. (2014). Analisis numerik sistem pengeringan daging alat pengering energi surya. *Jurnal Logic*, *14*(2), 112–116.

Emawati, F., Imanningsih, N., Nurjanah, N., Sahara, E., Sundari, D., Arifin, A. Y., & Prihatini, M. (2018). Nilai ph dan kualitas zat gizi makro daging beku, dingin dan segar pada pasar tradisional dan pasar swalayan. *The Journal of Nutrition and Food Research*, *41*(1), 1–64.

Fardi, A., Ariyadi, T., & Dewi, S. S. (2017). Profil protein daging sapi yang terinfeksi fasciola berbasis sds-page. *Skripsi*. Universitas Muhammadiyah Semarang, Semarang.

Hernando, D., Septinova, D., & Adhianto, K. (2015). Kadar air dan total mikroba pada daging sapi di tempat pemotongan hewan (tph) bandar lampung. *Jurnal Ilmiah Peternakan Terpadu*, *3*(1), 61–67.

Chambers IV, E., & Terry, T. (2016). *Collaborator II - Flavor of Ground Beef*, Kansas State University, pp. 1–9.

Khurmi, R. S., & Gupta, J. K. (2005). *A textbook of machine design*. (Fourteenth). New Delhi : Eurasia Publishing House (PVT.) Ltd.

Kurniawan, E., Darmawati, S., & Kartika, A. I. (2018). Profil protein daging sapi, kambing dan kerbau yang dilumuri serbuk daun mengkudu berbasis sds-page. *Skripsi*. Universitas Muhammadiyah Semarang, Semarang.

Liu, G. F., & Li, H. W. (2017). Design of stepper motor position control system based on dsp. *Advances in Engineering Research*, *138*, 207–211.

Mahardhika, L. P., Lestari, S. P., Bow, Y., Pengajar, S., Energi, T., & Negeri, P. (2016). Rancang bangun alat pengering tipe tray dengan media udara panas ditinjau dari lama waktu pengeringan terhadap exergi pada alat heat exchanger. *Jurnal Kinetika*, *7*, 5–9.

Satmalawati, M. E. M., Ledheng, L., Purwantiningsih, T. I., & Kia, K. M. (2017). Peningkatan kapasitas produksi dan kualitas dendeng di ud. ridwan s. kefamenanu. *Jurnal Pengabdian Masyarakat Peternakan*, *2*(1), 14–24.

Singh, A. P., Sahni, D. D., & Dubey, A. (2016). Experimental study of thermal effect of drying, heating, blowing machine with different stage. *International Journal of Research - Granthaalayah 4*(8), 104–109.

Spotts, M. F., & Shoup, T. E. (1998). *Design of machine elements*. (Seventh). New Jersey : Prentice-Hall International, Inc.

Sularso, & Suga, K. (2004). *Dasar Perencanaan dan Pemilihan Elemen Mesin*. (P. P. Paramita, Ed.) (Edisi ke-11). Bandung: PT. AKA.

Supu, I., Usman, B., Basri, S., & Sunarmi. (2016). Pengaruh suhu terhadap perpindahan panas pada material yang berbeda. *Jurnal Dinamika*, *07*(1), 62–73.

Von Gersdorff, G. J. E., Kirchner, S., Hensel, O., & Sturm, B. (2019). First steps towards smart drying of beef slices seasoned with different pre-treatments, pp. 1–6.

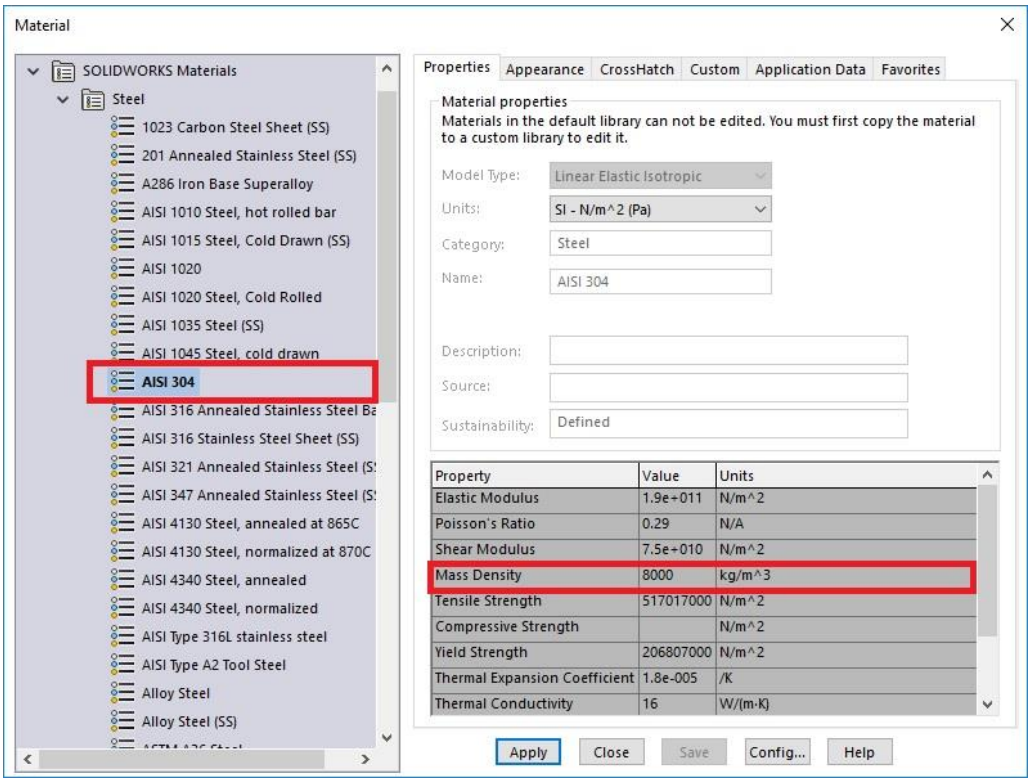
LAMPIRAN

Tabel 1 Diameter Poros (mm)

4	10	*22,4	40	100	*224	400
		24		(105)	240	
	11	25	42	110	250	420
					260	440
4,5	*11,2	28	45	*112	280	450
	12	30		120	300	460
		*31,5	48		*315	480
5	*12,5	32	50	125	320	500
				130	340	530
		35	55			
*5,6	14	*35,5	56	140	*355	560
	(15)			150	360	
6	16	38	60	160	380	600
	(17)			170		
*6,3	18		63	180		630
	19			190		
	20			200		
	22		65	220		
7			70			
*7,1			71			
			75			
8			80			
			85			
9			90			
			95			

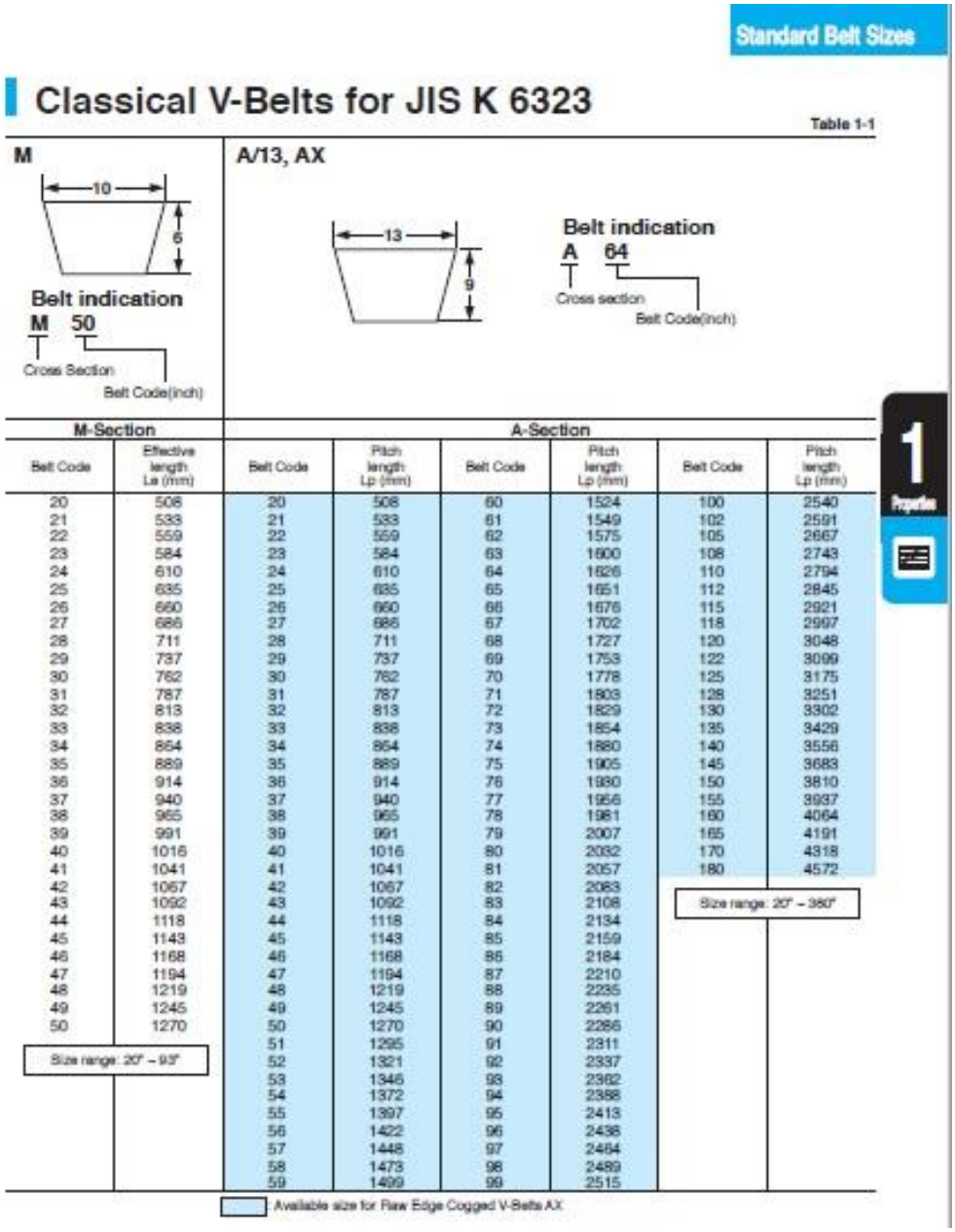
(Sumber : Sularso & Suga, 2004)

Tabel 2 *Mechanical Properties* AISI 304



(Sumber : Solidworks, 2017)

Tabel 3 Standar V-Belt JIS K 6323



Standard Belt Sizes

Classical V-Belts for JIS K 6323

Table 1-1

M

Belt indication
M 50
Cross Section
Belt Code(inch)

A/13, AX

Belt indication
A 64
Cross section
Belt Code(inch)

M-Section		A-Section					
Belt Code	Effective length Le (mm)	Belt Code	Pitch length Lp (mm)	Belt Code	Pitch length Lp (mm)	Belt Code	Pitch length Lp (mm)
20	508	20	508	60	1524	100	2540
21	533	21	533	61	1549	102	2591
22	559	22	559	62	1575	105	2667
23	584	23	584	63	1600	108	2743
24	610	24	610	64	1626	110	2794
25	635	25	635	65	1651	112	2845
26	660	26	660	66	1676	115	2921
27	686	27	686	67	1702	118	2997
28	711	28	711	68	1727	120	3048
29	737	29	737	69	1753	122	3099
30	762	30	762	70	1778	125	3175
31	787	31	787	71	1803	128	3251
32	813	32	813	72	1829	130	3302
33	838	33	838	73	1854	135	3429
34	864	34	864	74	1880	140	3556
35	889	35	889	75	1905	145	3683
36	914	36	914	76	1930	150	3810
37	940	37	940	77	1956	155	3937
38	965	38	965	78	1981	160	4064
39	991	39	991	79	2007	165	4191
40	1016	40	1016	80	2032	170	4318
41	1041	41	1041	81	2057	180	4572
42	1067	42	1067	82	2083		
43	1092	43	1092	83	2108	Size range: 20" – 360"	
44	1118	44	1118	84	2134		
45	1143	45	1143	85	2159		
46	1168	46	1168	86	2184		
47	1194	47	1194	87	2210		
48	1219	48	1219	88	2235		
49	1245	49	1245	89	2261		
50	1270	50	1270	90	2286		
		51	1295	91	2311		
Size range: 20" – 93"		52	1321	92	2337		
		53	1346	93	2362		
		54	1372	94	2388		
		55	1397	95	2413		
		56	1422	96	2438		
		57	1448	97	2464		
		58	1473	98	2489		
		59	1499	99	2515		

Available size for Raw Edge Cogged V-Belts AX

1 Properties

(Sumber : Mitsuboshi, 2014)

Tabel 4 *Variable Speed Pulleys*

Part Number	Belt	No.of Grooves	Pitch Dia.		Type	O.D.	H	L	Bore	
			Min	Max					Min	Max
1V072A087	Z/SPZ A/SPA	1	70 72	89 87	1	93	72	32	10	32
1V076A102	Z/SPZ A/SPA	1	74 76	93 102	1	108	80	38	10	40
1V088A114	Z/SPZ A/SPA	1	86 88	105 114	1	120	80	38	10	40
1V106A132	Z/SPZ A/SPA	1	104 106	123 132	1	138	88	38	12	48
1V128A154	Z/SPZ A/SPA	1	126 128	145 154	1	160	88	38	14	48
1V139B173	A/SPA B/SPB	1	137 139	163 173	1	180	96	44	16	56
1V159B193	A/SPA B/SPB	1	157 159	183 193	1	200	96	44	16	56
1V179B213	A/SPA B/SPB	1	177 179	203 213	1	220	96	44	20	56
1V199B233	A/SPA B/SPB	1	197 199	223 233	1	240	96	44	20	56
2V072A087	Z/SPZ A/SPA	2	70 72	89 87	2	93	72	60	10	32
2V076A102	Z/SPZ A/SPA	2	74 76	93 102	2	108	80	72	10	40
2V088A114	Z/SPZ A/SPA	2	86 88	105 114	2	120	80	72	10	40
2V106A132	Z/SPZ A/SPA	2	104 106	123 132	2	138	88	72	12	48
2V128A154	Z/SPZ A/SPA	2	126 128	145 154	2	160	88	72	14	48
2V139B173	A/SPA B/SPB	2	137 139	163 173	2	180	96	82	16	56
2V159B193	A/SPA B/SPB	2	157 159	183 193	2	200	96	82	16	56
2V179B213	A/SPA B/SPB	2	177 179	203 213	2	220	96	82	20	56
2V199B233	A/SPA B/SPB	2	197 199	223 233	2	240	96	82	20	56

(Sumber : Martin)

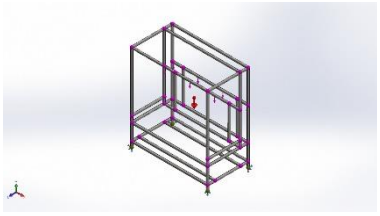
Tabel 5 *Study Properties*

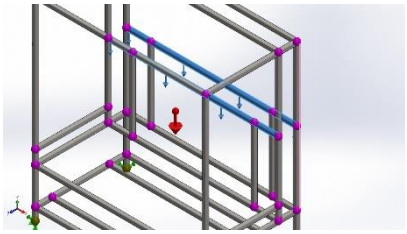
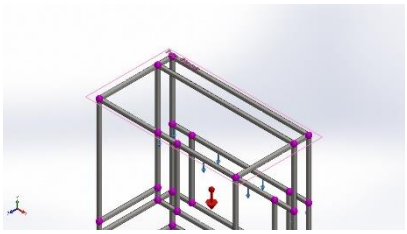
Study name	Static 1
Analysis type	Static
Mesh type	Beam Mesh
Solver type	Direct sparse solver
Inplane Effect:	Off
Soft Spring:	Off
Inertial Relief:	Off
Incompatible bonding options	Automatic
Large displacement	Off
Compute free body forces	On
Result folder	SOLIDWORKS document (D:\File Kuliah\Semester 8\TA\Design)

Tabel 6 *Units*

Unit system:	SI (MKS)
Length/Displacement	mm
Temperature	Kelvin
Angular velocity	Rad/sec
Pressure/Stress	N/m^2

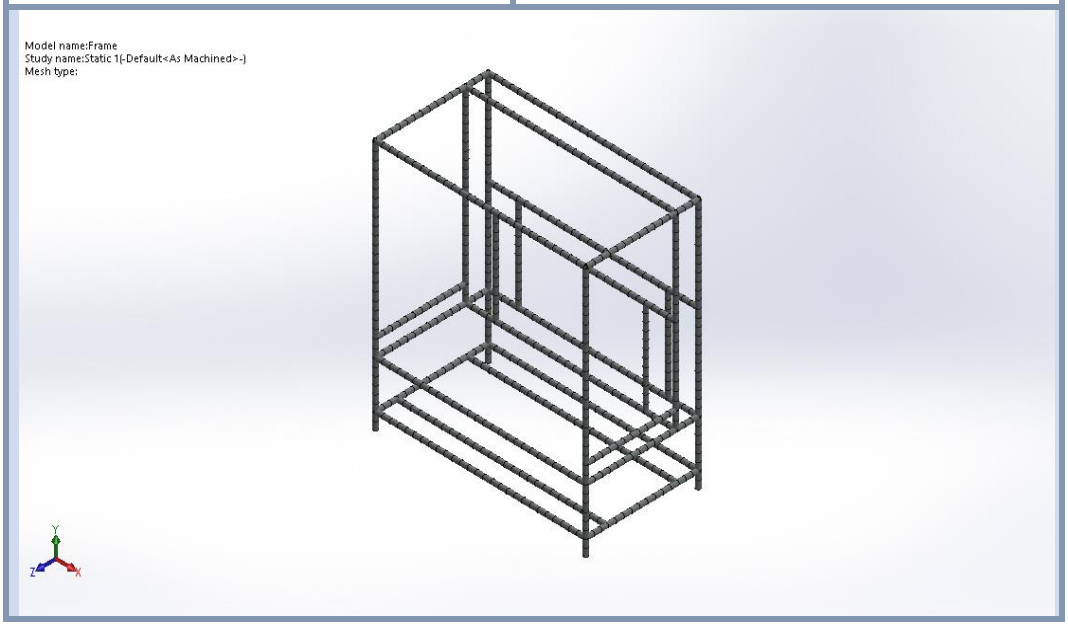
Tabel 7 *Loads and Fixtures*

Fixture name	Fixture Image	Fixture Details
Fixed-1		**Entities:** 4 Joint(s) **Type:** Fixed Geometry

Load name	Load Image	Load Details
Force-1		**Entities:** 2 Beam (s) **Reference:** Edge< 1 > **Type:** Apply force **Values:** ---, ---, -211 N **Moments:** ---, ---, --- N.m
Gravity-1		**Reference:** Top Plane **Values:** 0 0 -9.81 **Units:** m/s^2

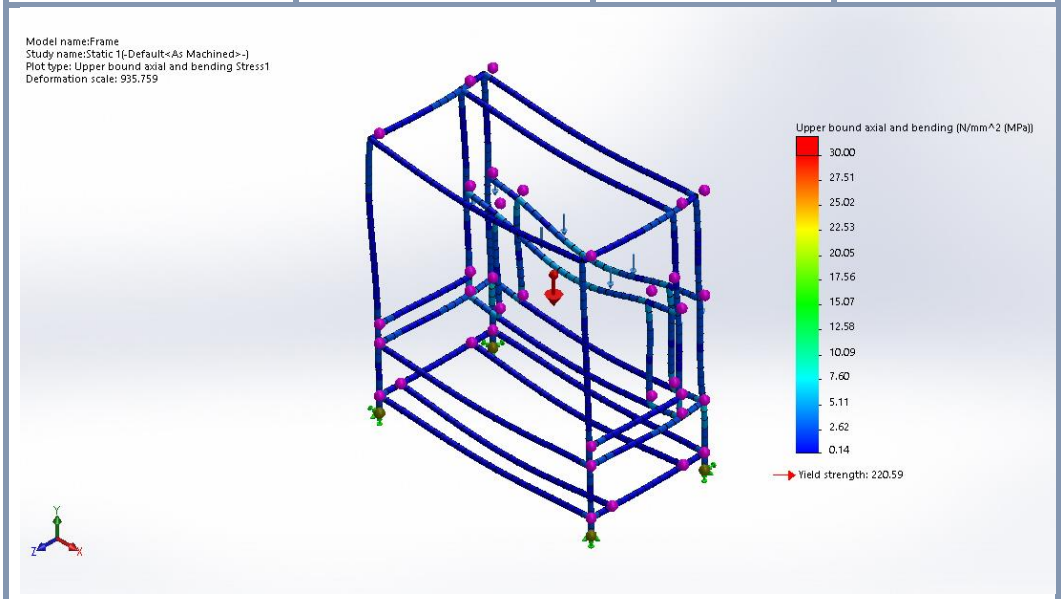
Tabel 8 *Mesh Information*

Total Nodes	667
Total Elements	658
Time to complete mesh(hh;mm;ss):	00:00:09
Computer name:	



Tabel 9 *Stress Information*

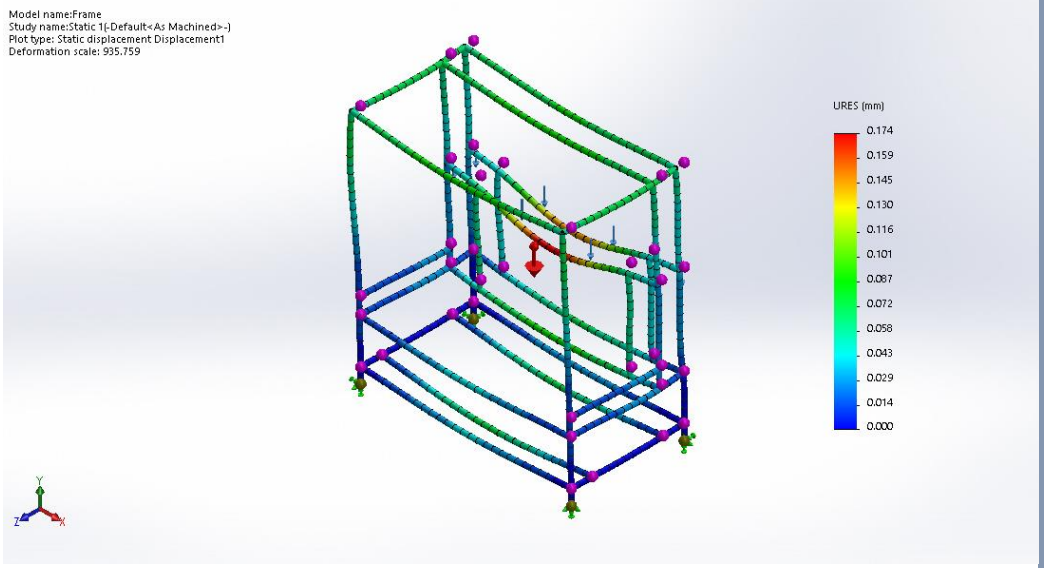
Name	Type	Min	Max
Stress1	Upper bound axial and bending	0.14 N/mm^2 (MPa) Element: 119	6.76 N/mm^2 (MPa) Element: 619



Frame-Static 1-Stress-Stress1

Tabel 10 *Displacement Information*

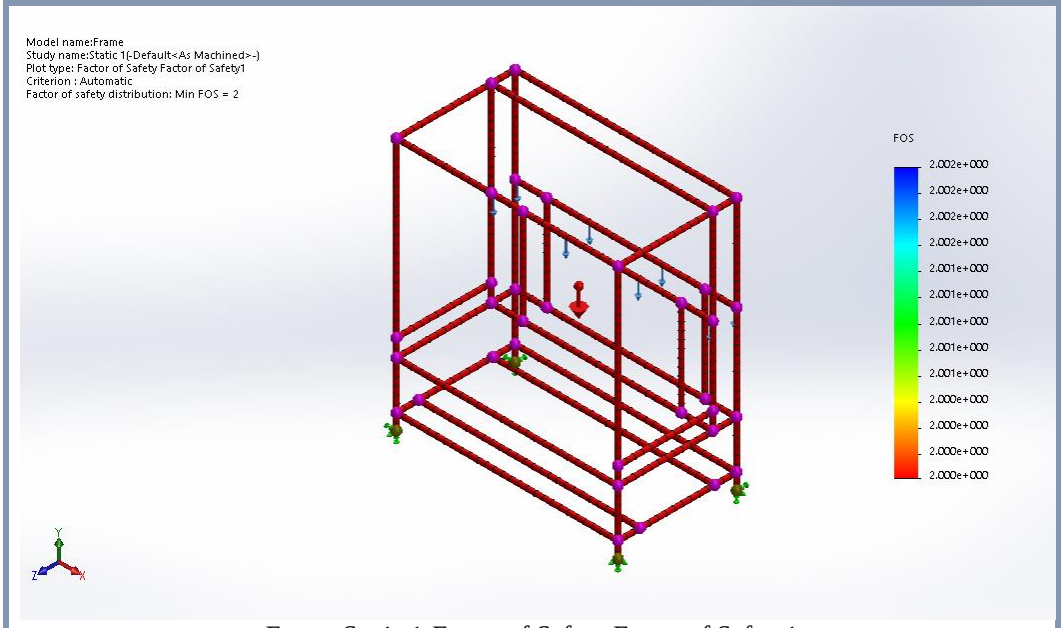
Name	Type	Min	Max
Displacement1	URES: Resultant Displacement	0.000 mm Node: 57	0.174 mm Node: 528



Frame-Static 1-Displacement-Displacement1

Tabel 11 *Factor of Safety*

Name	Type	Min	Max
Factor of Safety1	Automatic	2.000e+000 Node: 1	2.000e+000 Node: 1



Frame-Static 1-Factor of Safety-Factor of Safety1

Lampiran 1 Proses Persiapan Bahan

Lampiran 2 Proses Pembuatan Kerangka

Lampiran 3 Proses Pembuatan Poros

Lampiran 4 Proses Perakitan Komponen

Lampiran 5 Proses Pembuatan Cover Rangka

Lampiran 6 *Prototype* Mesin Pengering Gepuk Tipe *Tray Rotary*