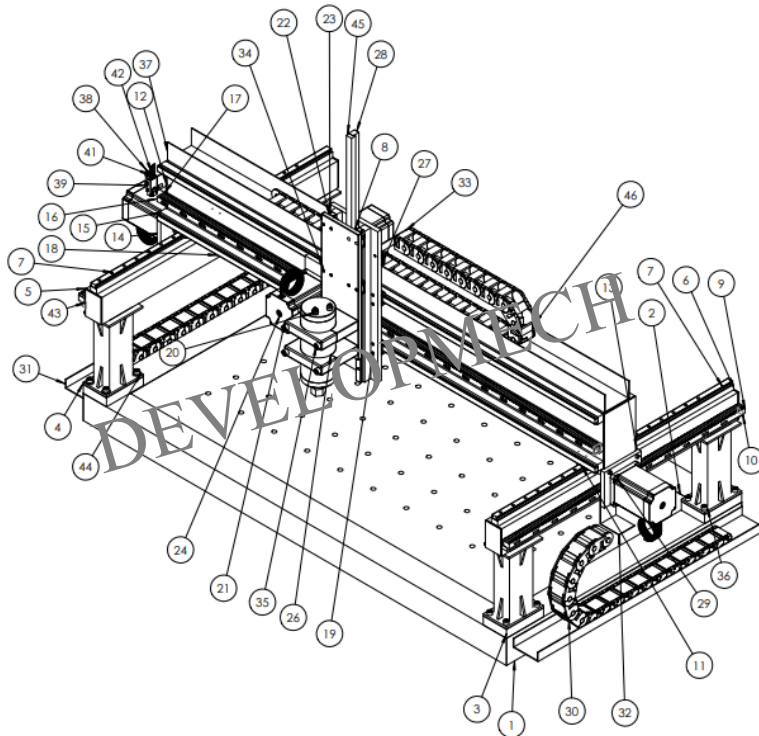


Designing of a CNC milling machine for wood cutting

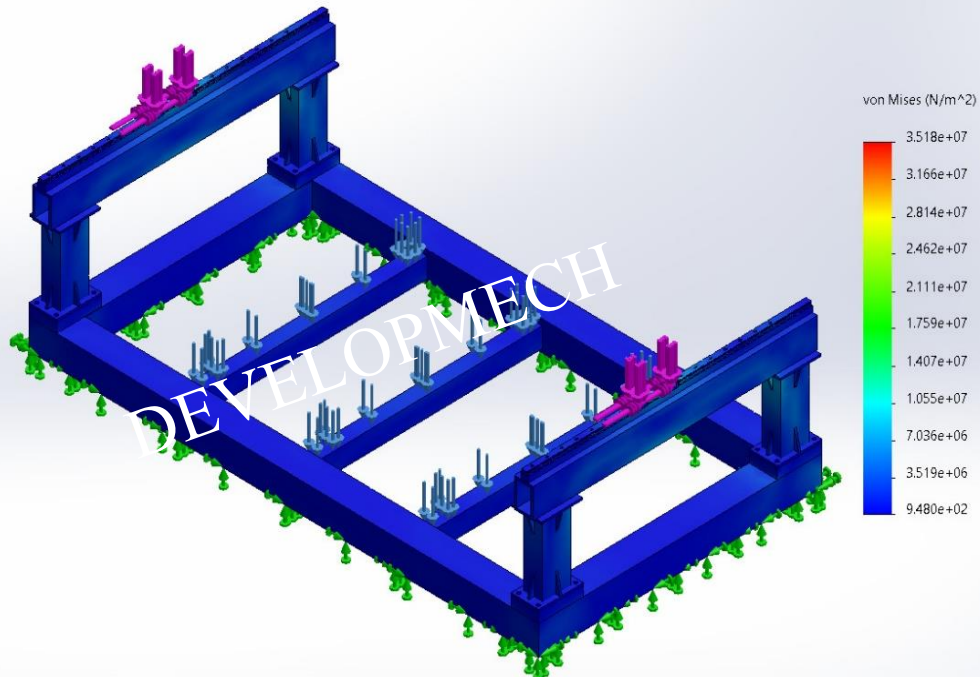


ITEM NO.	PART NAME	DISCRIPTION	QTY
1	Bed Structure		1
2	bed		1
3	bed plate support2		4
4	Vertical column		4
5	X-axis Horizontal beam		2
6	X axis adjustment bar1		2
7	X axis Long Guide Rail for Clean Room Ball		2
8	Ball Bearing Carriage		8
9	X axis Metal Gear Rack		2
10	X axis adjustment bar5		2
11	Ball Bearing Carriage		3
12	Y-axis Vertical Beam		1
13	Motor mount bracket 2		2
14	Motor mount bracket 1		2
15	Y axis adjustment bar2		2
16	Y axis Metal Gear Rack		1
17	Y axis adjustment bar6		1
18	Y axis Guide Rail for Clean Room Ball		2
19	Bearing Carriage		
19	Motor mount plate		1
20	Spindle		1
21	spindel support		2
22	Spindel Long Guide Rail for Clean Room Ball		2
23	Spindel Bearing Carriage2		
23	Spindel motor mount adjustment bar4		2
24	Stepper Motor34		3
25	Metal Gear		4
26	spindel support 1		2
27	Stepper Motor		1
28	spindel Metal Gear Rack -		
29	B18.3.1M - 5 x 0.8 x 16 Hex SHCS -- 16NHX		21
30	X axis 4591T112_Snap-Together Cable and Hose Carrier		2
31	X-axes belt c-channel		2
32	clip		2
33	clip2		1
34	Spindle clamping plate		1
35	HX-SHCS 0.375-24x2x1.5-N		4
36	B18.3.1M - 8 x 1.25 x 12 Hex SHCS -- 12NHX		16
37	Y-axes belt c-channel		1
38	limite clipping		1
39	7287K13_Harsh Environment Snap-Acting Switch		1
40	B18.6.7M - M4 x 0.7 x 5 Slotted PHMS --SN		2
41	B18.6.7M - M5 x 0.8 x 13 Indented HHMS --13N		2
42	B18.2.2.4M - Hex flange nut, M5 x 0.8 --N		2
43	X axis side cover		4
44	B18.22M - Plain washer, 8 mm, narrow		4
45	Spindel adjustment bar7		1
46	Y axis 44091512_Lay-in Snap-Together Open Cable Hose Carrier		1
47	Y axis 44091512_Lay-in Snap-Together Open Cable Hose Carrier2		1

Study Results

Name	Type	Min	Max
Stress1	VON: von Mises Stress	9.480e+02N/m^2 Node: 35078	3.518e+07N/m^2 Node: 62821

Model name: main
Study name: Static 1(-Default-)
Plot type: Static nodal stress Stress1



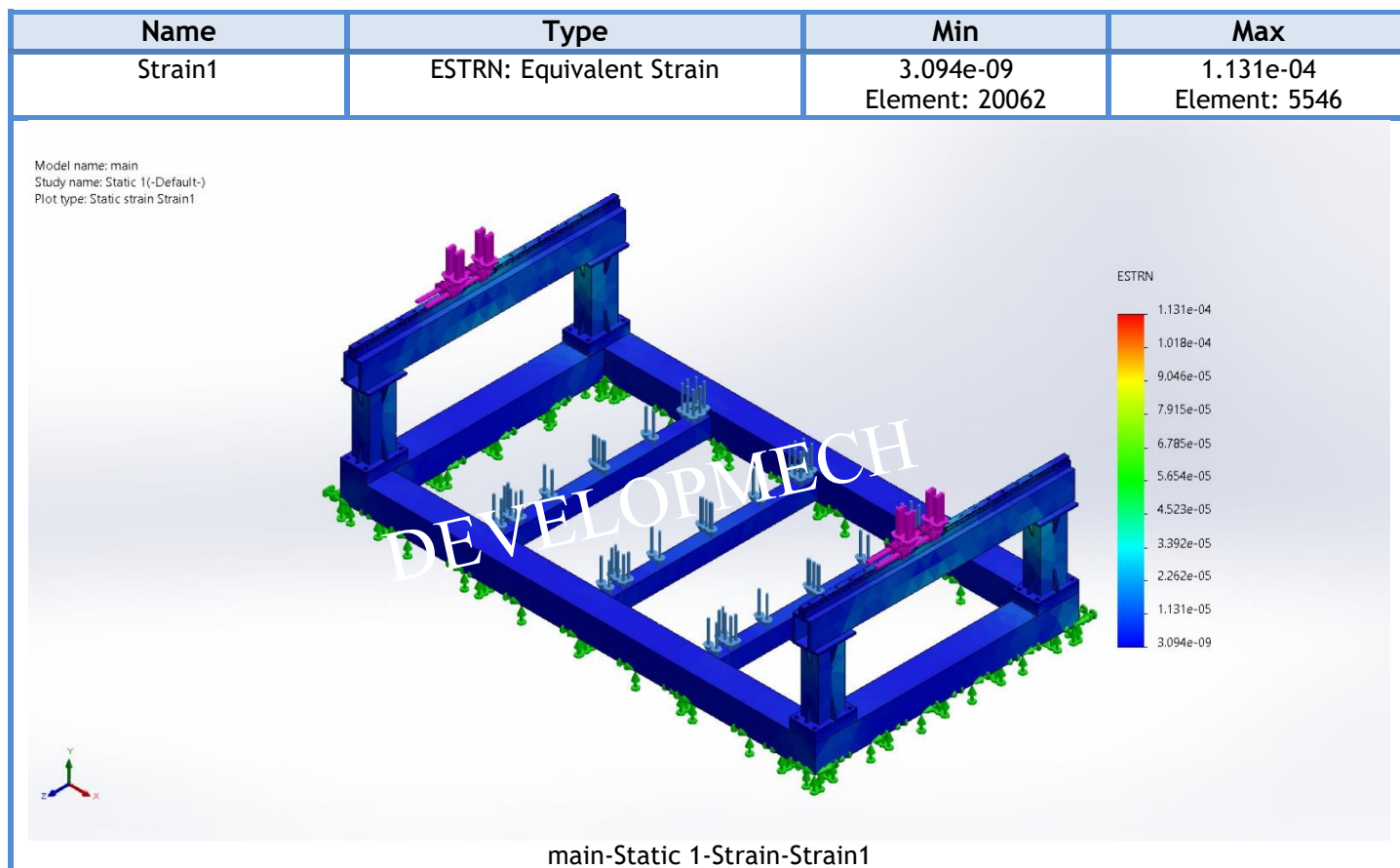
main-Static 1-Stress-Stress1



SOLIDWORKS

Analyzed with SOLIDWORKS Simulation

Simulation of main 1



Mode List

Frequency Number	Rad/sec	Hertz	Seconds
1	1,218.4	193.91	0.0051569
2	1,220.7	194.27	0.0051474
3	2,450.5	390.01	0.002564
4	2,454.2	390.59	0.0025602
5	2,976.5	473.73	0.0021109

Mass Participation (Normalized)

Mode Number	Frequency(Hertz)	X direction	Y direction	Z direction
1	193.91	0.18001	1.4428e-09	3.5326e-10
2	194.27	0.18155	2.417e-10	6.0674e-10
3	390.01	3.333e-07	3.849e-08	0.00033778
4	390.59	5.3795e-08	2.496e-07	0.00032522
5	473.73	8.4674e-08	3.4348e-06	0.21072
		Sum X = 0.36157	Sum Y = 3.7245e-06	Sum Z = 0.21138

Name	Type	Min	Max
Displacement1	URES: Resultant Displacement	0.000e+00mm Node: 97570	7.597e-03mm Node: 39360

