

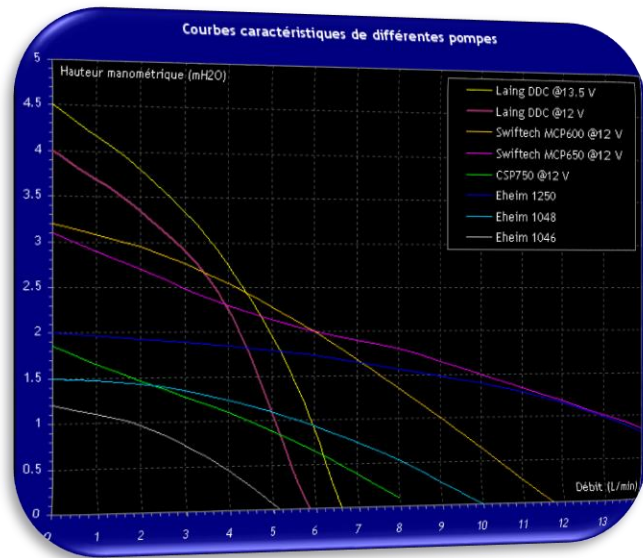
Симулации в Амстердам

XVI-та среща на приятелите на ДиТра

Пенко Ангелов

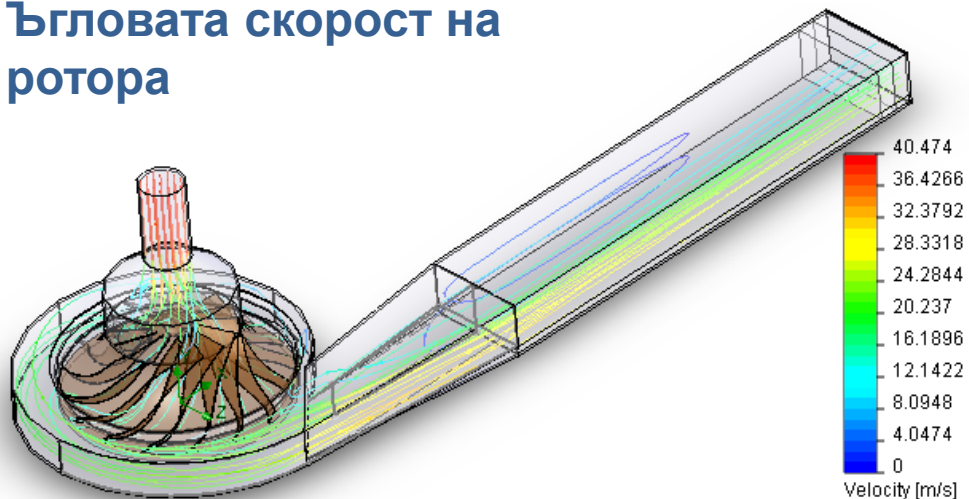
Експерт, Техническа поддръжка
ДиТра ООД





Ефективността на помпата
зависи от:

- Геометрията
- Ъгловата скорост на ротора



SOLIDWORKS Flow Simulation

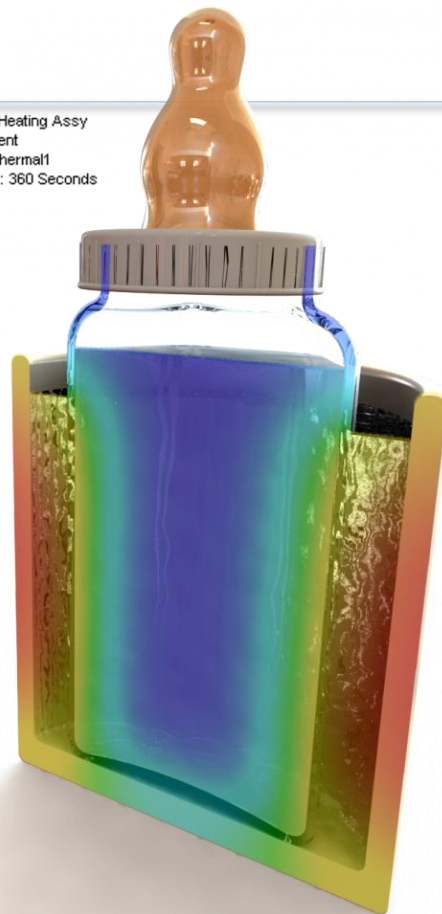
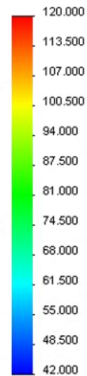


Сигурност и доверие
от най-ранна
възраст.

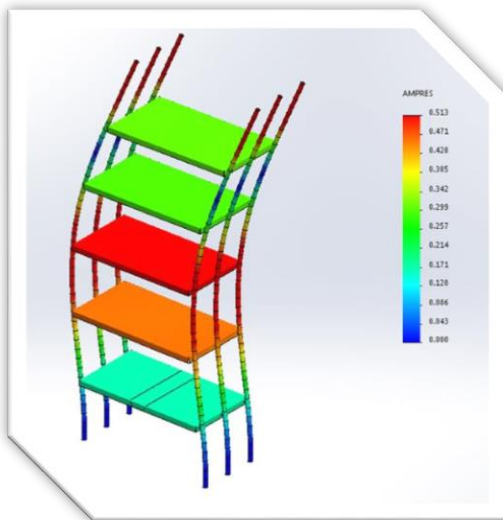
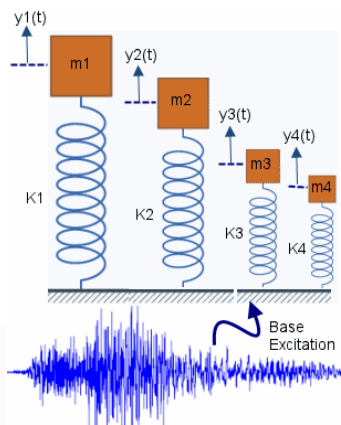
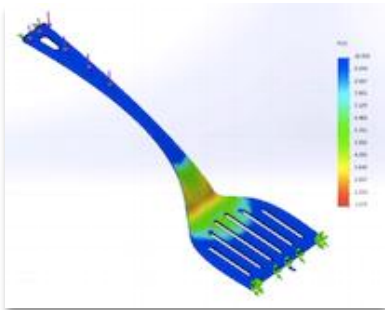


Model name: Bottle Heating Assy
Study name: Transient
Plot type: Thermal Thermal1
Time step: 36 time : 360 Seconds

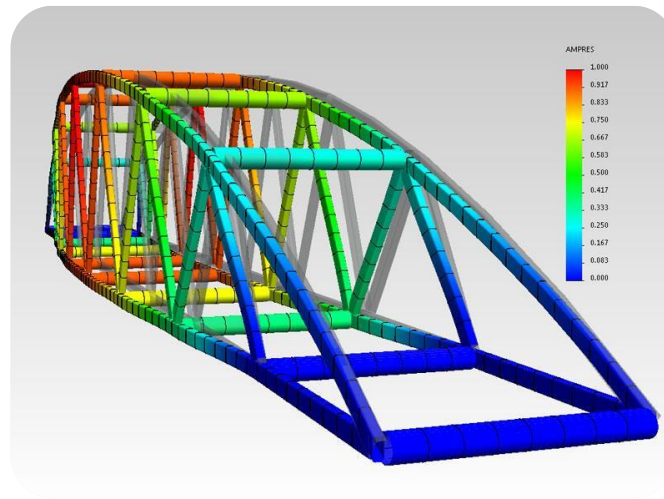
Temp (Fahrenheit)

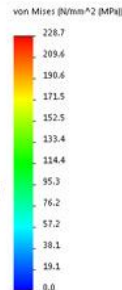
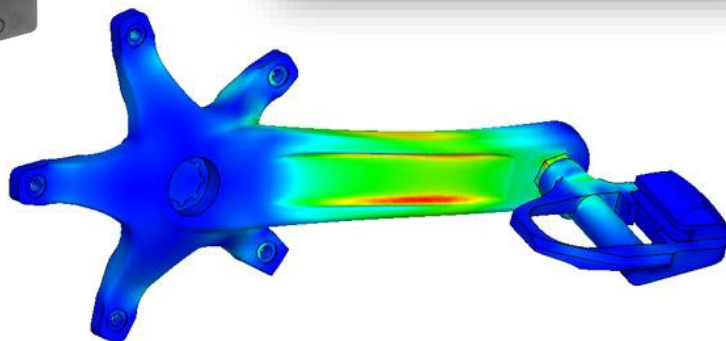
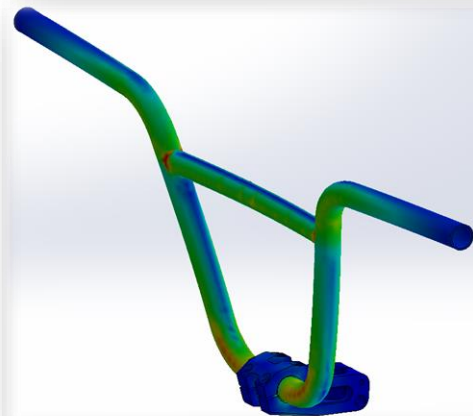
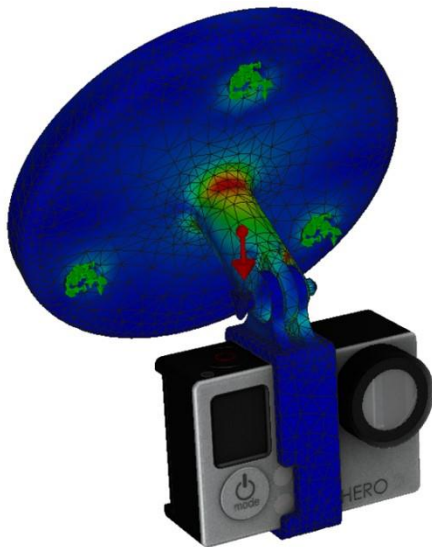
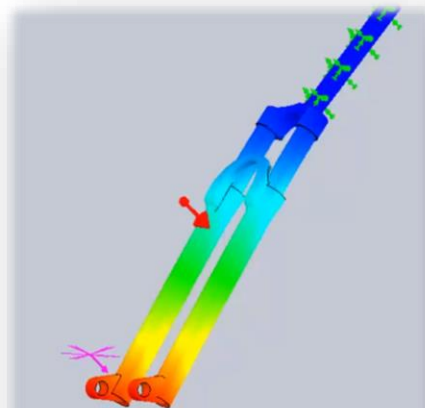


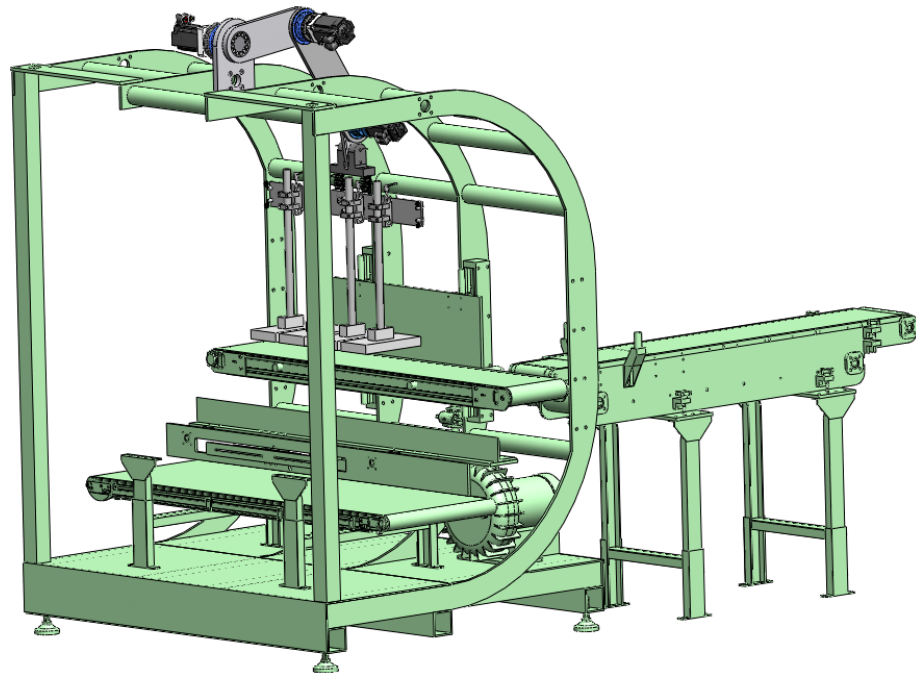
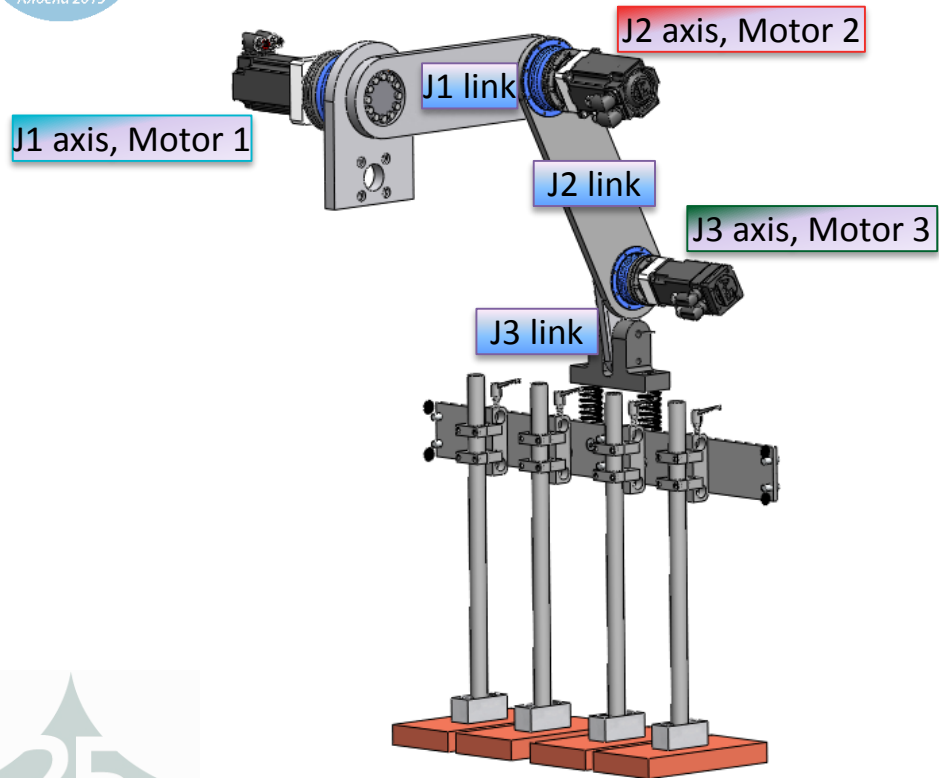
Честотни анализи и умора на материала



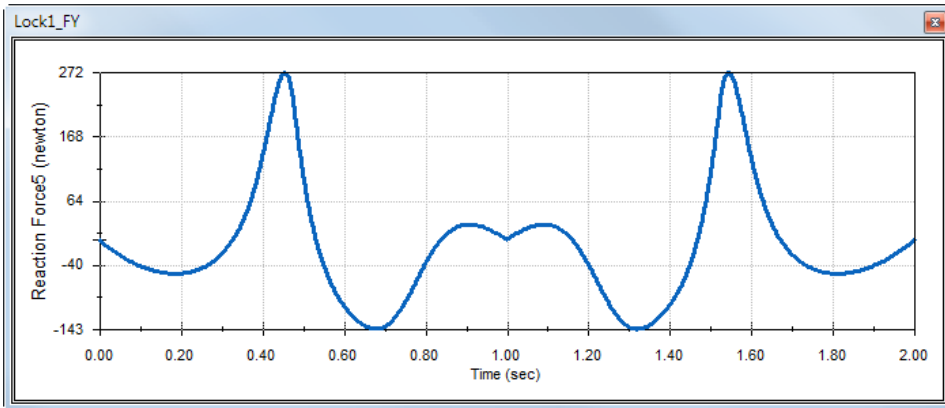
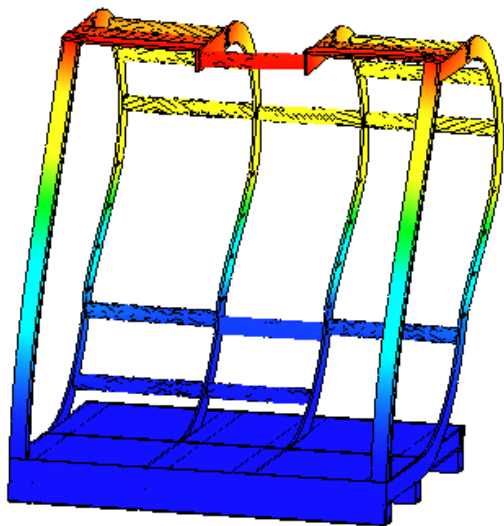
Умората на материала е причина за 90% от повредите в машините и конструкциите!





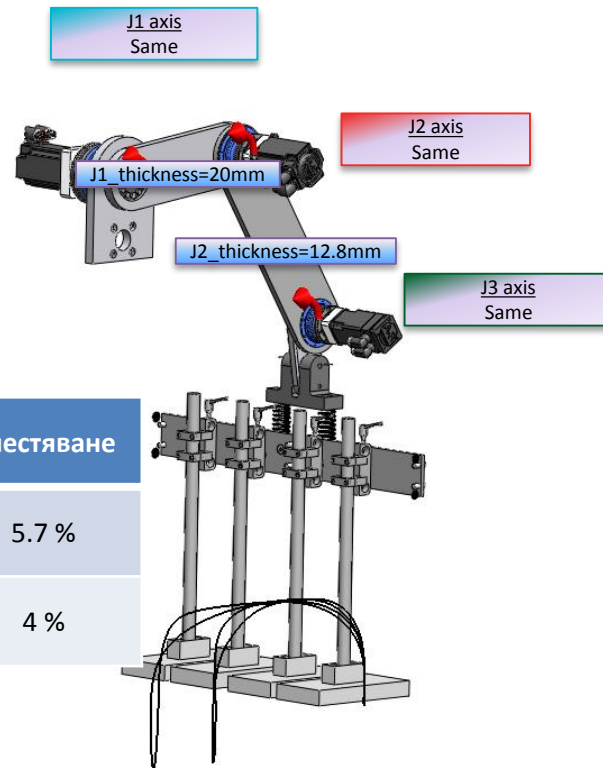
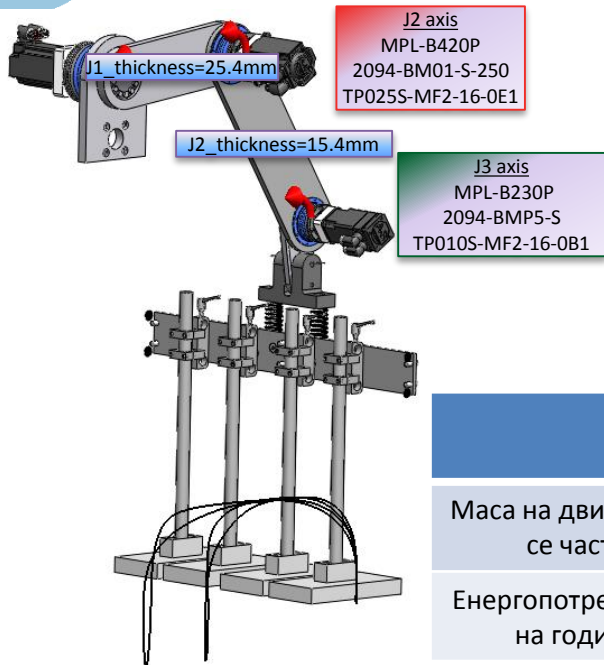


SOLIDWORKS Motion + Simulation



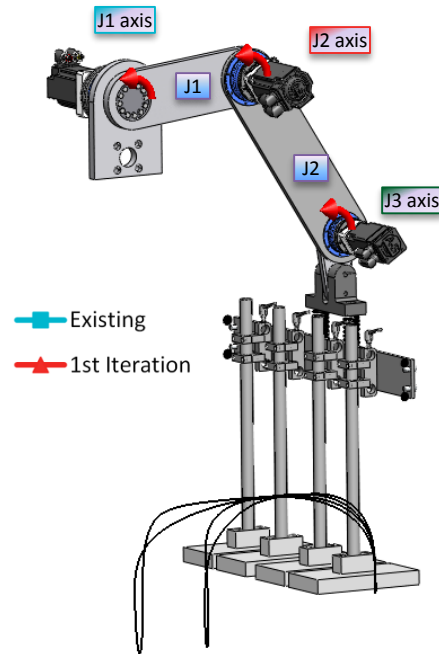
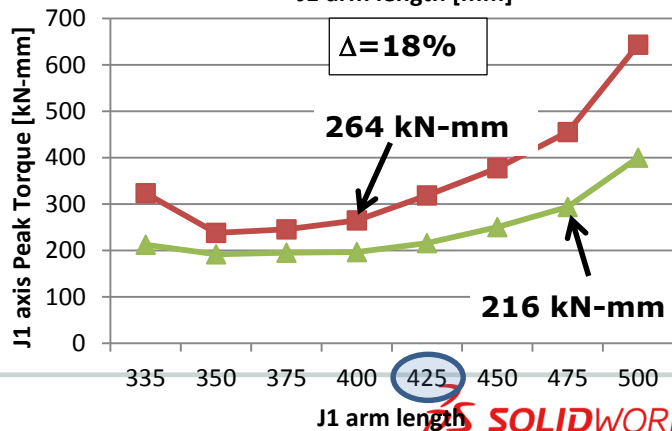
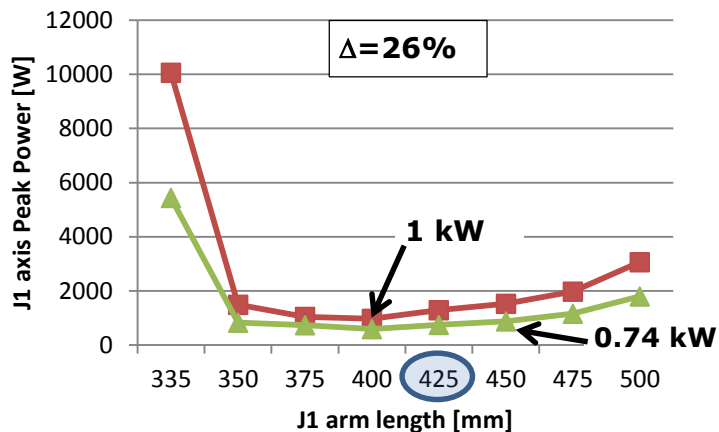
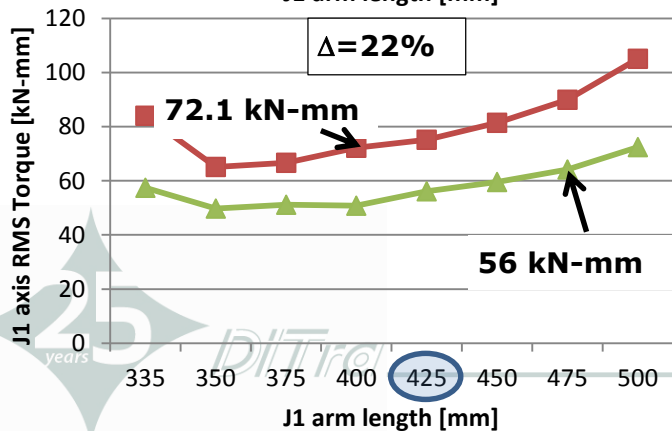
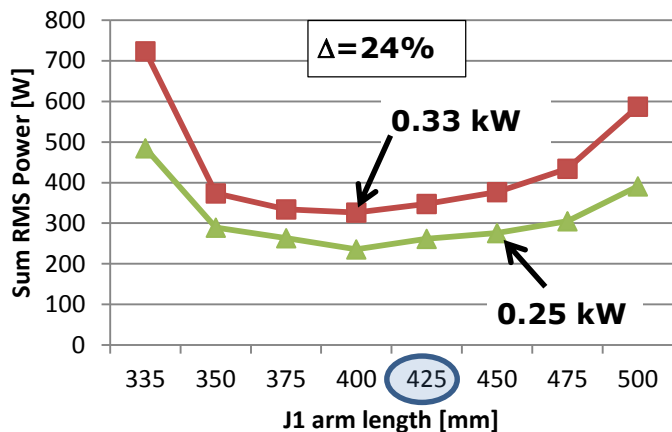
		Current	Initial	Scenario 32	Scenario 33	Scenario 34	Scenario 35	Scenario 36	Scenario 37	Scenario 38
Hinge1_FX_Force_X		5.71e-009 N	-9.04e-01 N	-1.58e-008 N	1.26e-008 N	5.71e-009 N	-5.76e-009 N	6.85e-009 N	-3.37e-009 N	-9.04e-01 N
Hinge1_FY_Force_Y		634.985 N	491.849 N	712.085 N	673.888 N	634.985 N	596.368 N	559.04 N	524.177 N	491.849 N
Hinge1_FZ_Force_Z		373.97 N	278.189 N	397.086 N	388.662 N	373.97 N	354.224 N	330.804 N	305.179 N	278.189 N
Hinge1_MX_Moment_X		4.52e-013 N-m	4.06e-014 N-m	1.4e-012 N-m	7.66e-013 N-m	4.52e-013 N-m	1.12e-013 N-m	0 N-m	1.09e-012 N-m	4.06e-014 N-m
Hinge1_MY_Moment_Y		-283.70902 N-m	-263.88505 N-m	-270.77235 N-m	-279.03373 N-m	-283.70902 N-m	-284.46061 N-m	-281.20838 N-m	-274.28607 N-m	-263.88505 N-m
Hinge1_MZ_Moment_Z		52.34533 N-m	39.42341 N-m	59.36203 N-m	55.88665 N-m	52.34533 N-m	48.84107 N-m	45.46829 N-m	42.32551 N-m	39.42341 N-m
Stress Model max:	Monitor Only	31.439 N/mm ²	28.352 N/mm ²	31.121 N/mm ²	31.433 N/mm ²	31.439 N/mm ²	31.118 N/mm ²	30.475 N/mm ²	29.547 N/mm ²	28.352 N/mm ²
Displacement Model	Monitor Only	0.00011m	0.0000954m	0.00012m	0.00012m	0.00011m	0.00011m	0.00011m	0.0001m	0.0000954m
Displacement Vertex 1	Monitor Only	0.00008662m	0.00007459m	0.00008872m	0.00008805m	0.00008662m	0.00008445m	0.00008164m	0.00007832m	0.00007459m
Displacement Vertex 2	Monitor Only	0.00009162m	0.00007964m	0.00009312m	0.00009279m	0.00009162m	0.00008963m	0.00008689m	0.00008353m	0.00007964m

Оптимизация на конструкцията

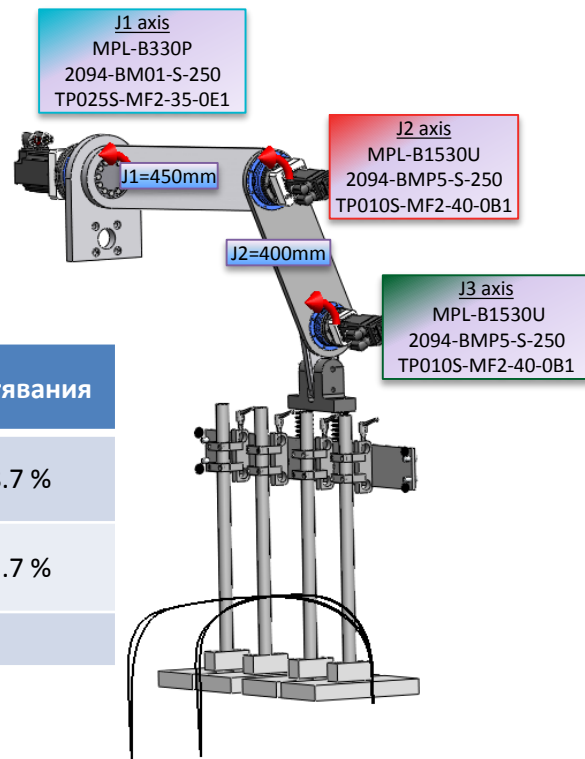
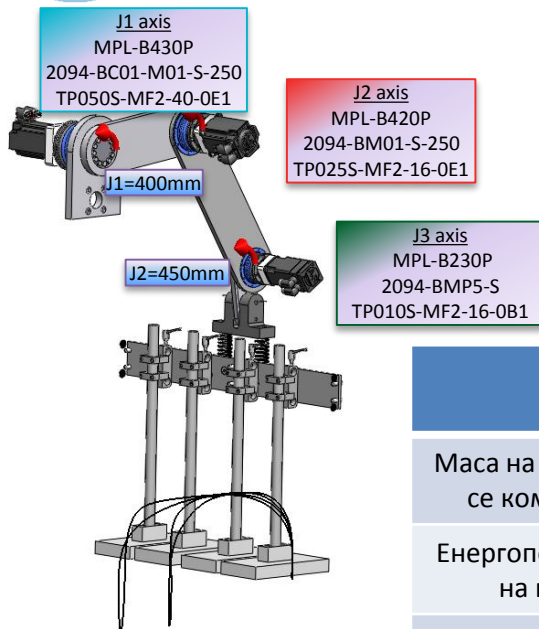


	Текущ дизайн	Оптимизиран дизайн	Спестяване
Маса на движещите се части	32.9 kg (72.5 lbs)	31 kg (60 lbs)	5.7 %
Енергопотребление на година	587.9 US\$	571.1 US\$	4 %

Оптимизация на задвижването



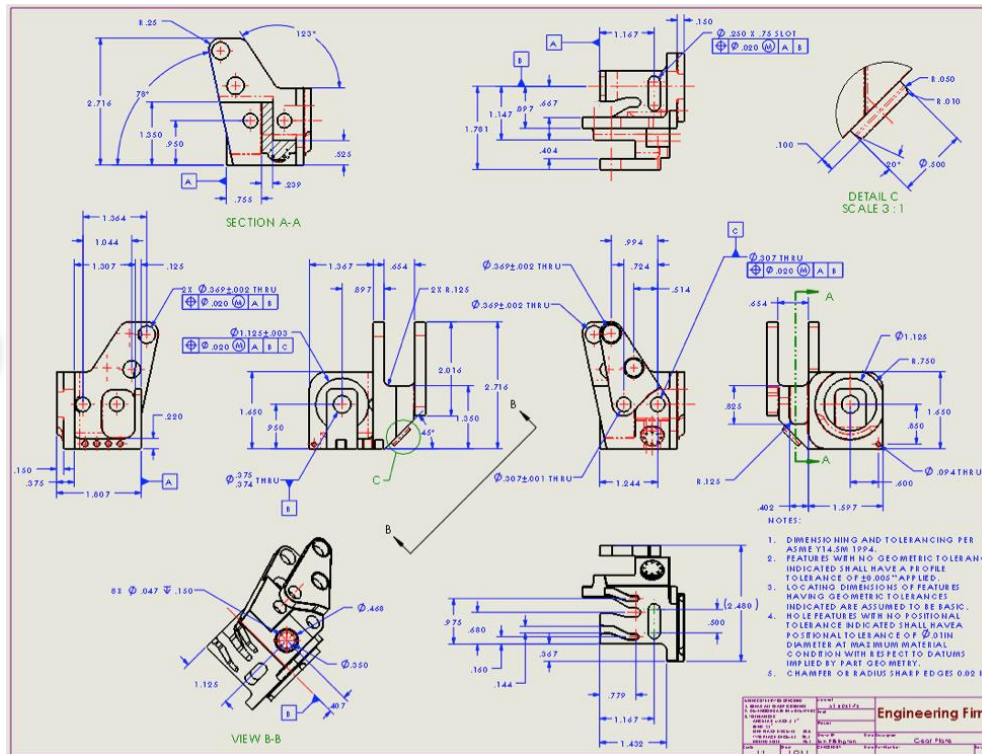
Крайни резултати

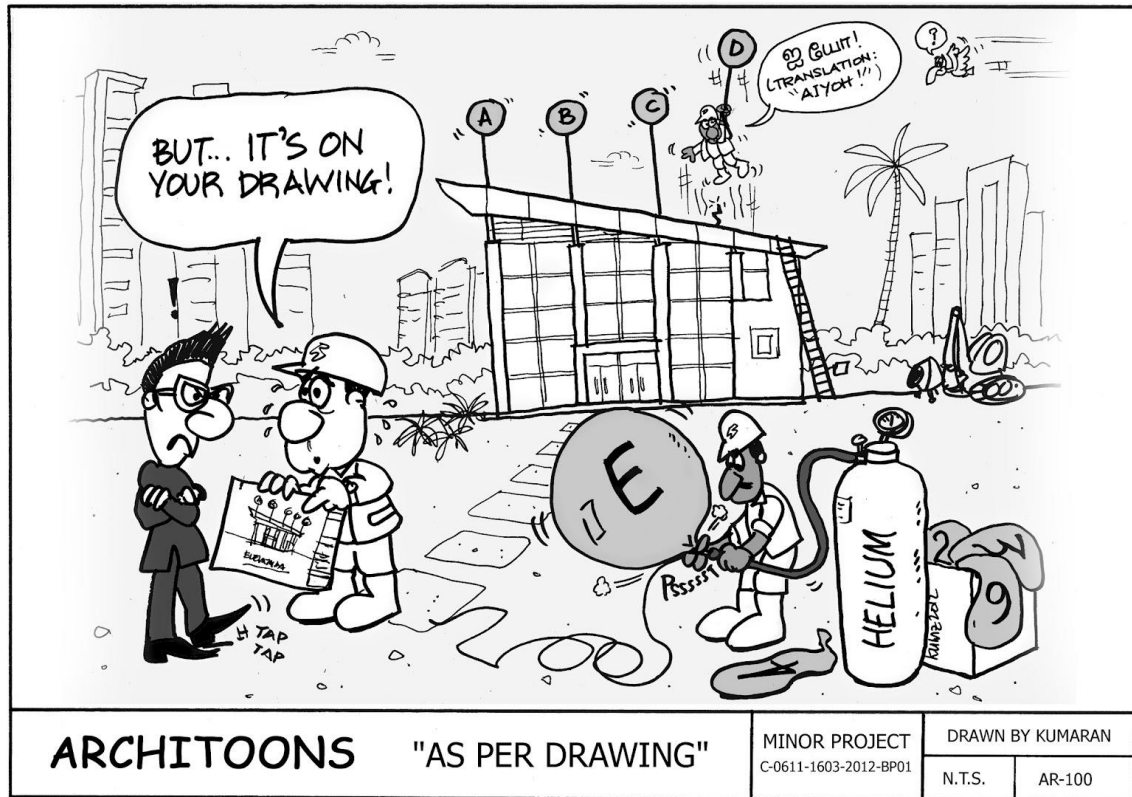


	Текущ дизайн	Оптимизиран дизайн	Спестявания
Маса на движещите се компоненти	32.9 kg (72.5 lbs)	26.76 kg (60 lbs)	18.7 %
Енергопотребление на година	582.9 US\$	464.1 US\$	21.7 %
Крайна цена	150,000 US\$	125,000 US\$	

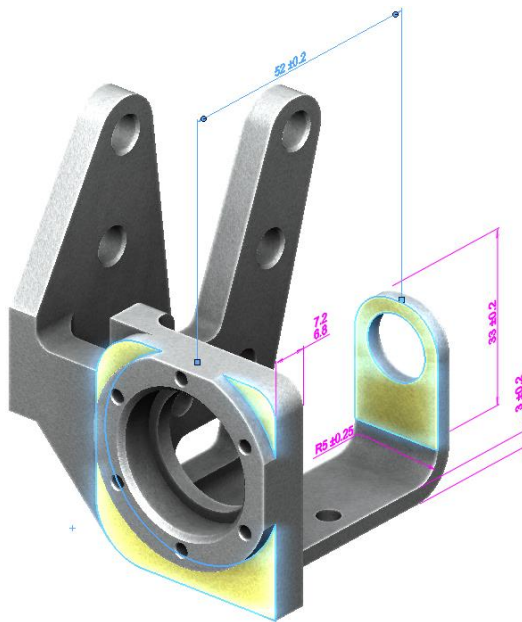
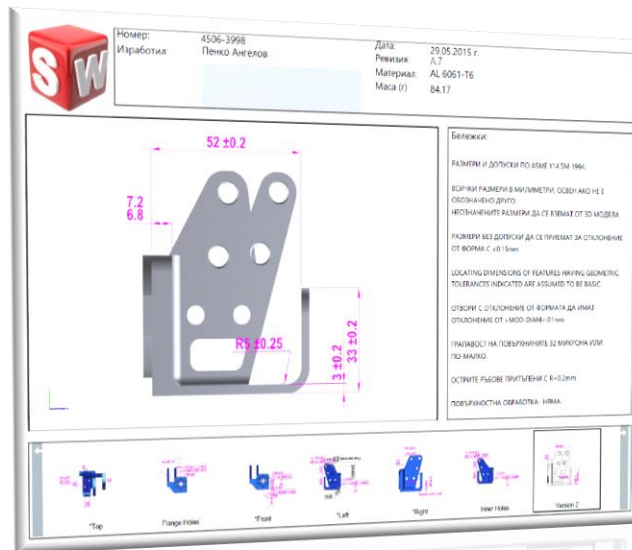
(Model-Based Definition)



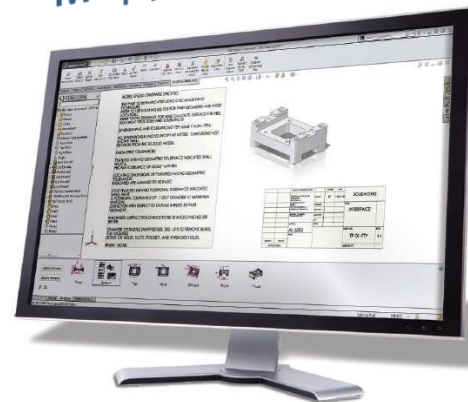




Комуникация без чертежи със **SOLIDWORKS MBD**



Всичко
необходимо
директно от 3D
моделите.





Благодаря за
вниманието!

Пенко Ангелов
pangelov@technologica.com

