

Experimental x Numérico Urano com o EMPUXO 1.9

Propelente: KNSu 65/35

dt = 1e-3

Dados

Grão 9 = Queima de tronco de cone (coroas desinibidas)

Motor	U-17	U-18	U-19	U-20			
Data TE	10 Dez 17	10 Dez 17	10 Dez 17	10 Dez 17			
Dg (mm)	19.51	17.65	17.40	17.36			
De (mm)	44.45	44.45	44.45	44.45			
Di1 (mm)	21.86	21.88	21.87	21.87			
Di2 (mm)	26.73	26.69	26.83	26.74			
Lp (mm)	230.7	228.6	235.0	231.1			
ro (kg/m ³)	1410.877	1413.669	1403.452	1420.305			
a (m/s.Pa)	2.66E-05	2.66E-05	2.66E-05	2.66E-05			
n (.)	0.39	0.39	0.39	0.39			
pa (Pa)	89630	89610	89630	89590			
prop	0	0	0	0			
expansão	1	1	1	1			
Mp (g)	353.7	351.3	357.7	356.6			

Resultados

Netuno-R	U-17	U-18	U-19	U-20			
It real (N.s)	205.0	259.5	264.4	260.4			
It sim (N.s)	207.5	231.6	242.6	241.2			
Erro It (%)	1.2	-10.8	-8.2	-7.4			
tq real (s)	3.165	2.130	2.375	2.290			
tq sim (s)	3.369	3.001	2.914	2.915			
Erro tq (%)	6.4	40.9	22.7	27.3			
Emed real (N)	64.8	121.8	111.3	113.7			
Emed sim (N)	61.6	77.2	83.2	82.8			
Erro Emed (%)	-4.9	-36.6	-25.2	-27.2			
Emax real (N)	171.4	205.8	226.3	217.4			
Emax sim (N)	83.2	102.1	109.8	109.1			
Erro Emax (%)	-51.5	-50.4	-51.5	-49.8			
pmed sim (bar)	2.4	3.2	3.5	3.5			
pmax sim (bar)	3.0	4.0	4.3	4.3			
ls real (s)	59.1	75.3	75.4	74.5			
ls sim (s)	59.8	67.2	69.2	69.0			
Erro ls (%)	1.2	-10.8	-8.2	-7.4			
pmax corrigida (bar)	6.18	8.06	8.86	8.57			
razão Emax	2.06	2.02	2.06	1.99			
OBS							

$p_{max\ corrigida} = (E_{max\ real} / E_{max\ sim}) * p_{max\ sim}$

razão Emax = fator sobre pmax sim

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