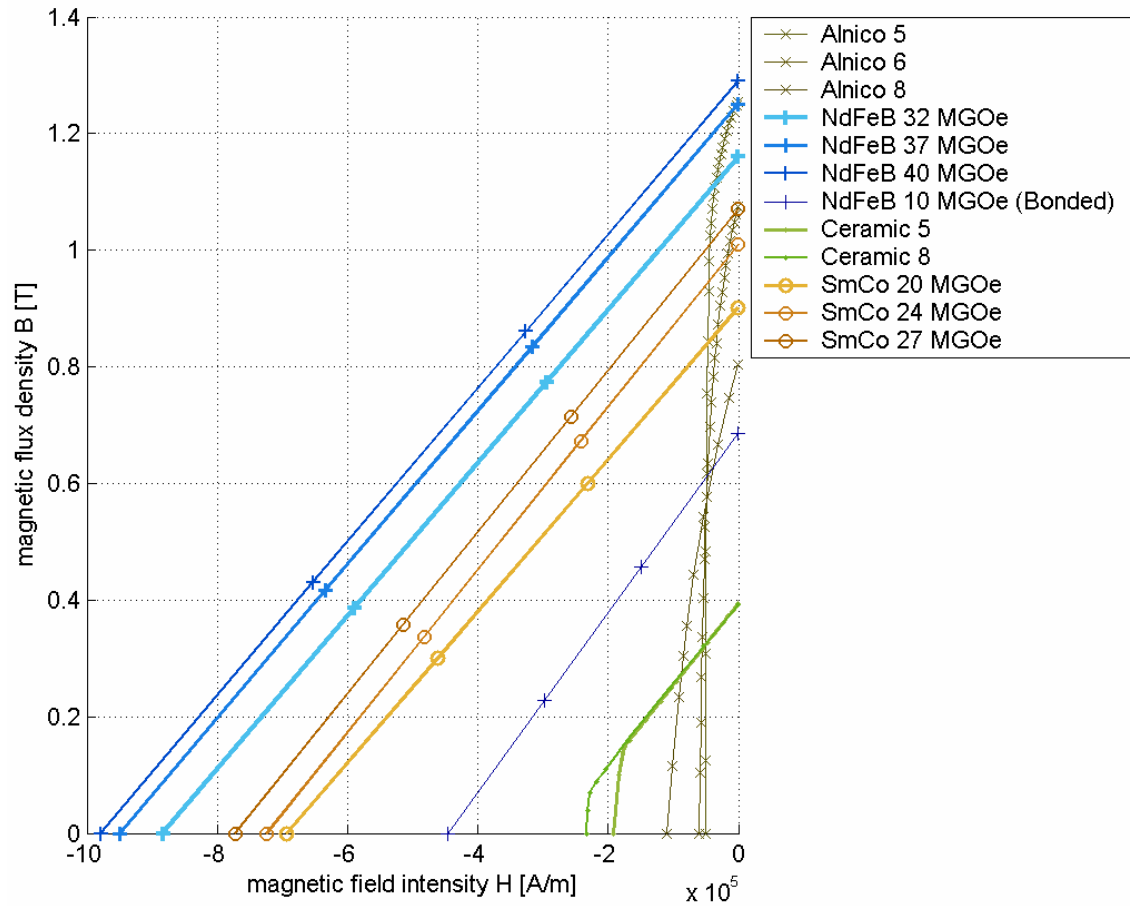


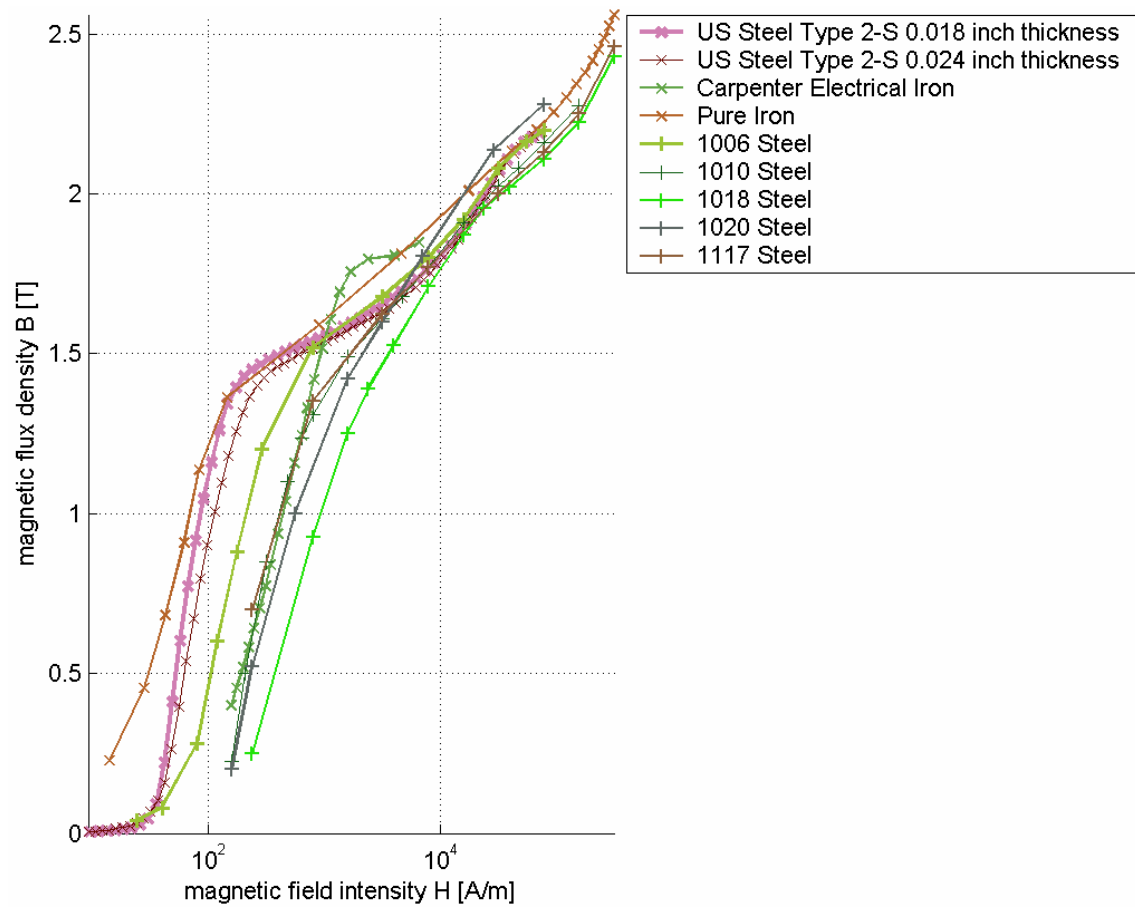
Materials library in FEMM 4.0

PM materials



PM materials	Remanence B_r , [T]	Coercitive force H_c , [A/m]	Relative permeability μ_r , [-]	Electric conductivity γ , [MS]
Alnico 5	1.254	50988.0	1.5	2.25
Alnico 6	1.075	59928.2	3.3	2.25
Alnico 8	1.804	109301	6.678	2.25
NdFeB 32 MGOe	1.160	883310	1.045	0.667
NdFeB 37 MGOe	1.251	950000	1.048	0.667
NdFeB 40 MGOe	1.290	979000	1.049	0.667
NdFeB 10 MGOe (Bonded)	0.685	445634	1.223	0
Ceramic 5	0.394	191262.1	1.886	0
Ceramic 8	0.391	233567.9	1.438	0
SmCo 20 MGOe	0.901	693000	1.034	1.176
SmCo 24 MGOe	1.010	724000	1.110	1.176
SmCo 27 MGOe	1.070	772000	1.103	1.176

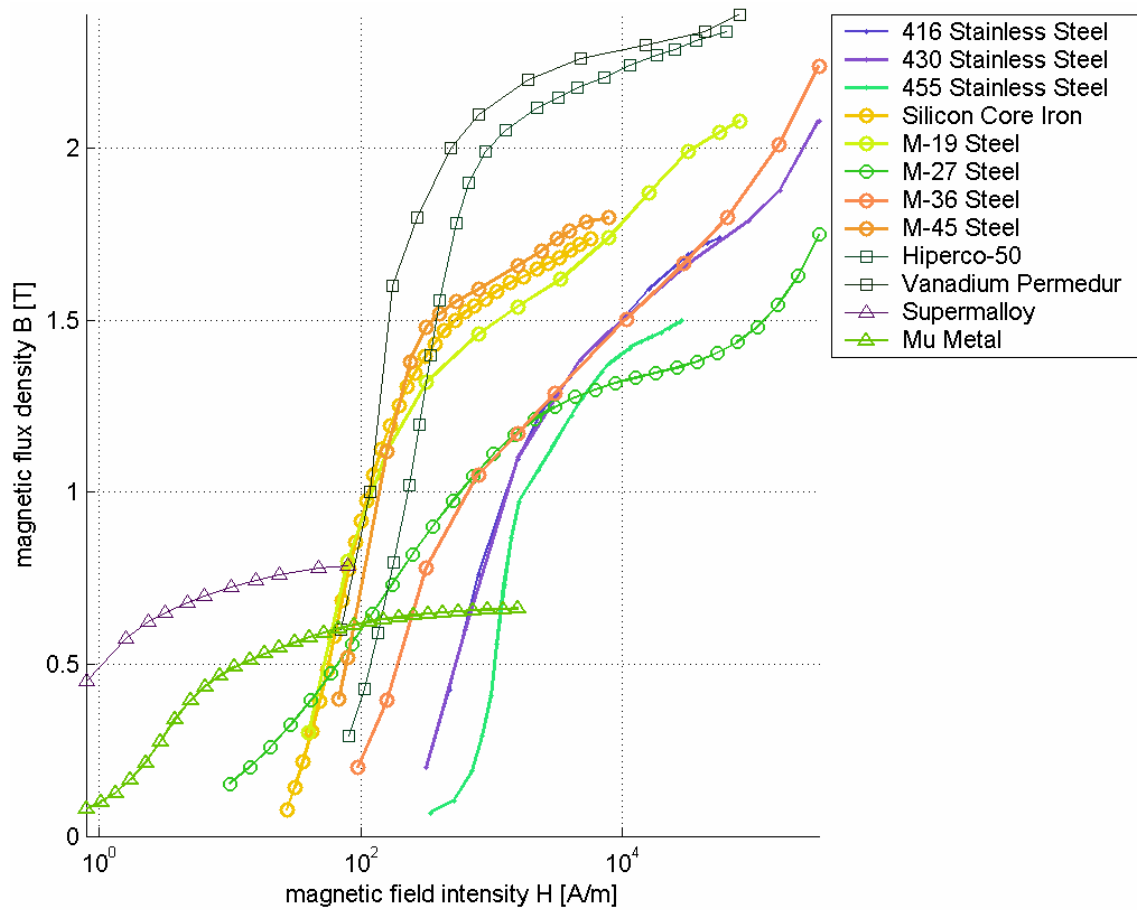
Soft magnetic materials



Soft magnetic materials	Saturation flux density B_{sat} , [T] ¹	$H(\mu_{max})$, [A/m] ²	Relative permeability μ_r , [-]	Electric conductivity γ , [MS]
US Steel Type 2-S 0.018 inch thickness	1.906	77.340	9400	6.25
US Steel Type 2-S 0.024 inch thickness	1.957	84.980	7400	6.25
Carpenter Electrical Iron	NaN	221.74	2065	7.69
Pure Iron	2.01	27.796	14872	
Low Carbon Steel				
1006 Steel	2.164	119.36	1404	0
1010 Steel	2.275	318.31	902.6	0
1018 Steel	2.43	795.77	529	0
1020 Steel	NaN	238.73	760	0
1117 Steel	2.13	238.73	1777	0

1: Saturation flux density is defined according to the relative magnetic permeability: $\mu_{sat}=0.01*\mu_{max}$

2: Magnetic field intensity at the point of maximum magnetic permeability



Soft magnetic materials	Saturation flux density B _{sat} , [T] ¹	H(μ_{\max}), [A/m] ²	Relative permeability μ , [-]	Electric conductivity γ , [MS]
Magnetic Stainless Steel				
416 Stainless Steel	NaN	795.77	440	0
430 Stainless Steel	2.08	636.62	409	0
455 Stainless Steel	NaN	1417.43	470	1.67
Silicon Iron				
Silicon Core Iron	NaN	81.010	7000	3
M-19 Steel	1.99	79.577	4416	0
M-27 Steel	1.317	10	12138	0
M-36 Steel	2.010	159.15	1616	0
M-45 Steel	NaN	159.15	4689	0
Cobalt Iron				
Hiperco-50	2.341	179.91	3520	2.5
Vanadium Permedur	2.34	175	6856	0
Nickel Alloys				
Supermalloy	NaN	0.795	529095	2.5
Mu Metal	0.657	0.795	82910	0

1: Saturation flux density is defined according to the relative magnetic permeability: $\mu_{\text{sat}}=0.01*\mu_{\text{max}}$

2: Magnetic field intensity at the point of maximum magnetic permeability