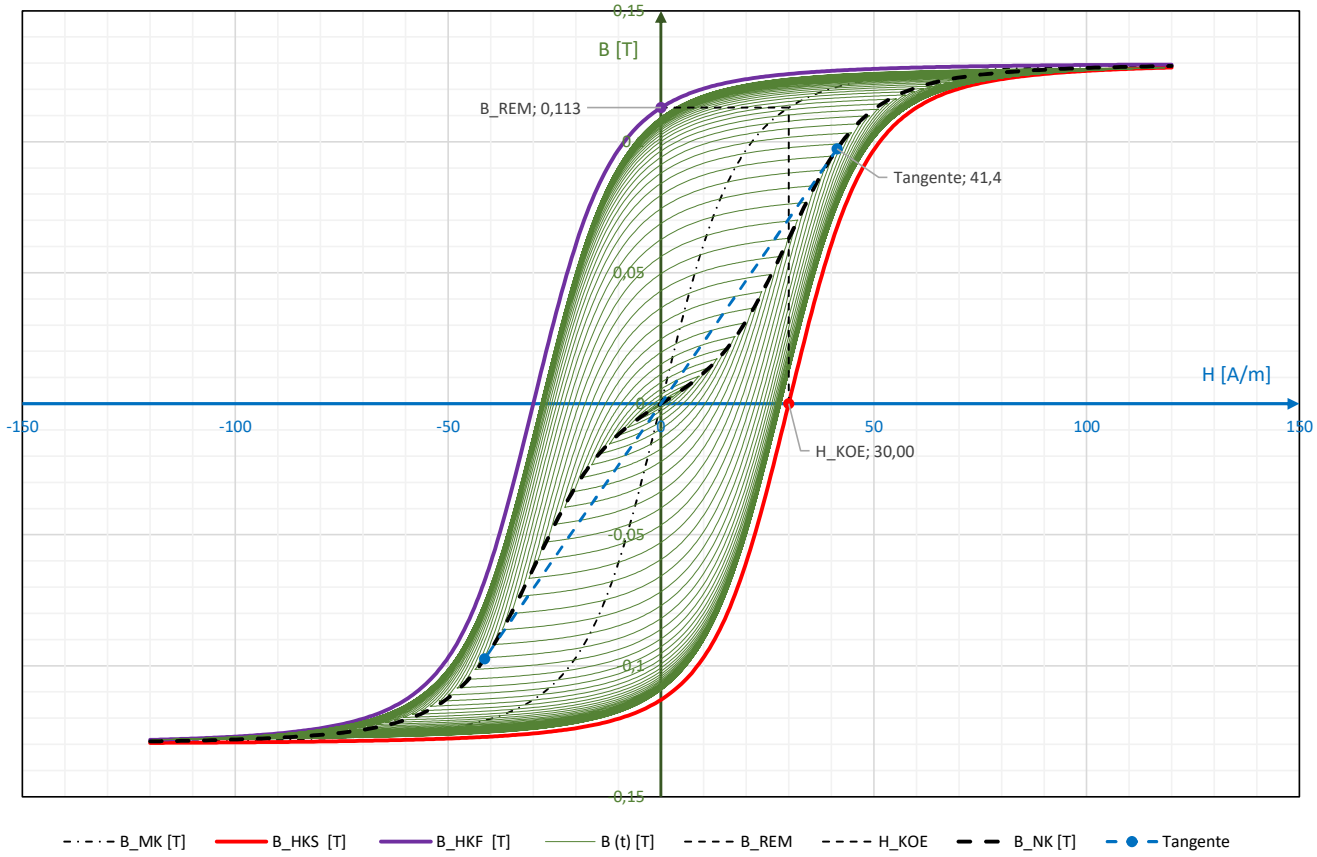
DEMO M xxx-xx

magnetische Hysterese



Variablen:

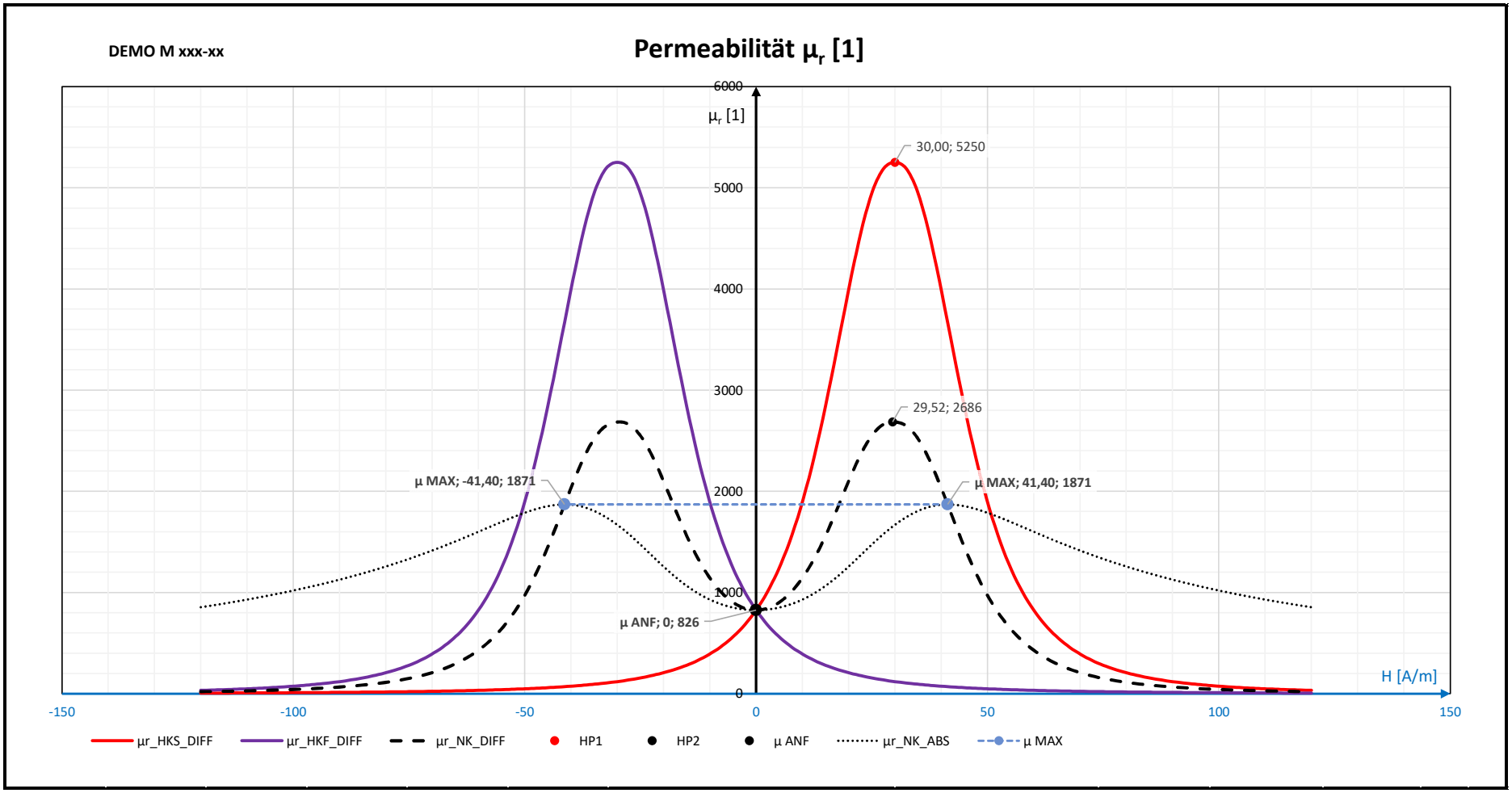
Amplitude H	120	[Am]
H_KOE	30,00	[Am]
µ_r	5250	[1]
Exponent	2,3	[1]
B_SAT	0,130	[T]
Frequenz f	5700	[Hz]
Material	DEMO M xxx-xx	

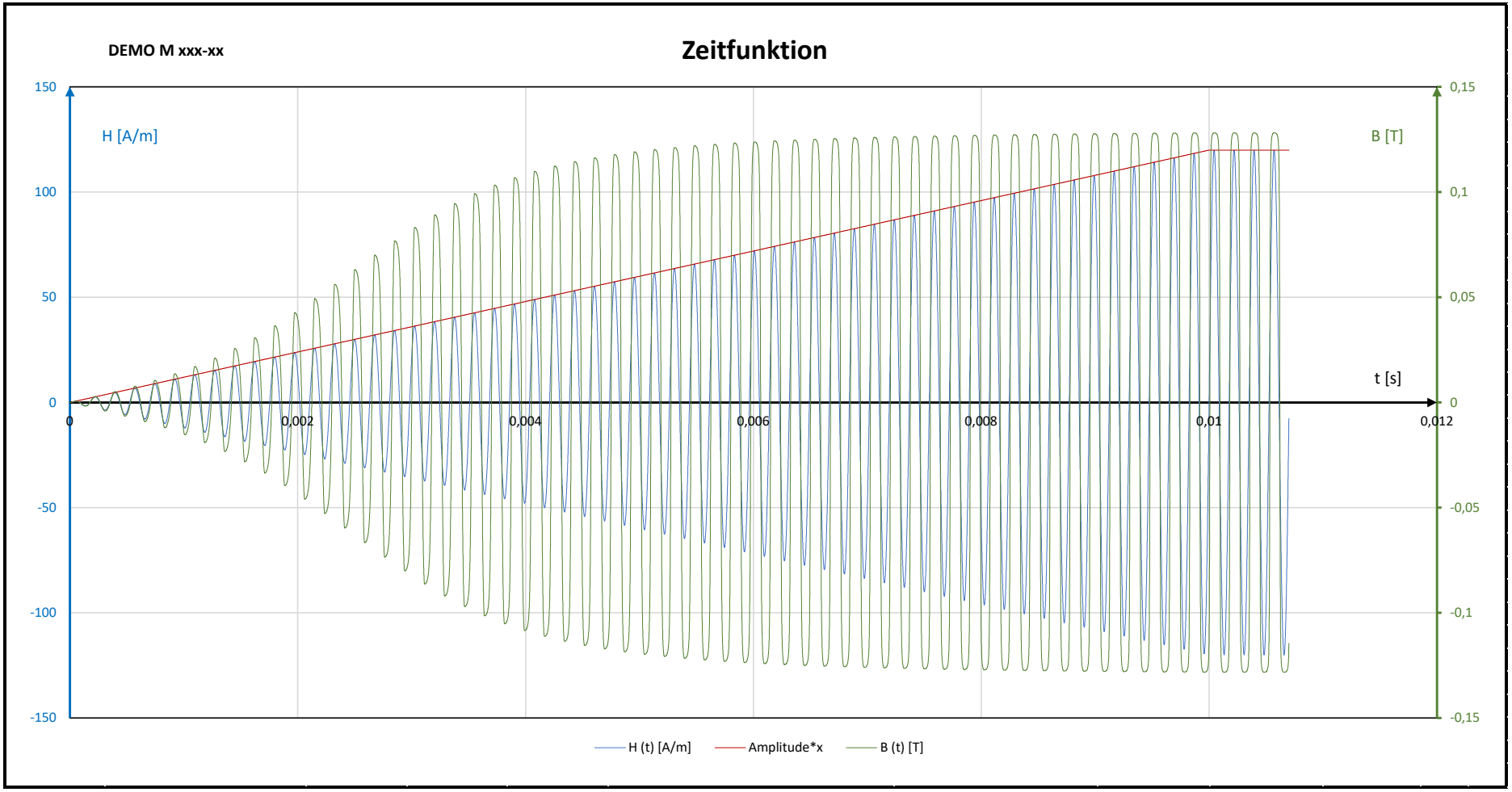
Konstanten & Ergebnisse:

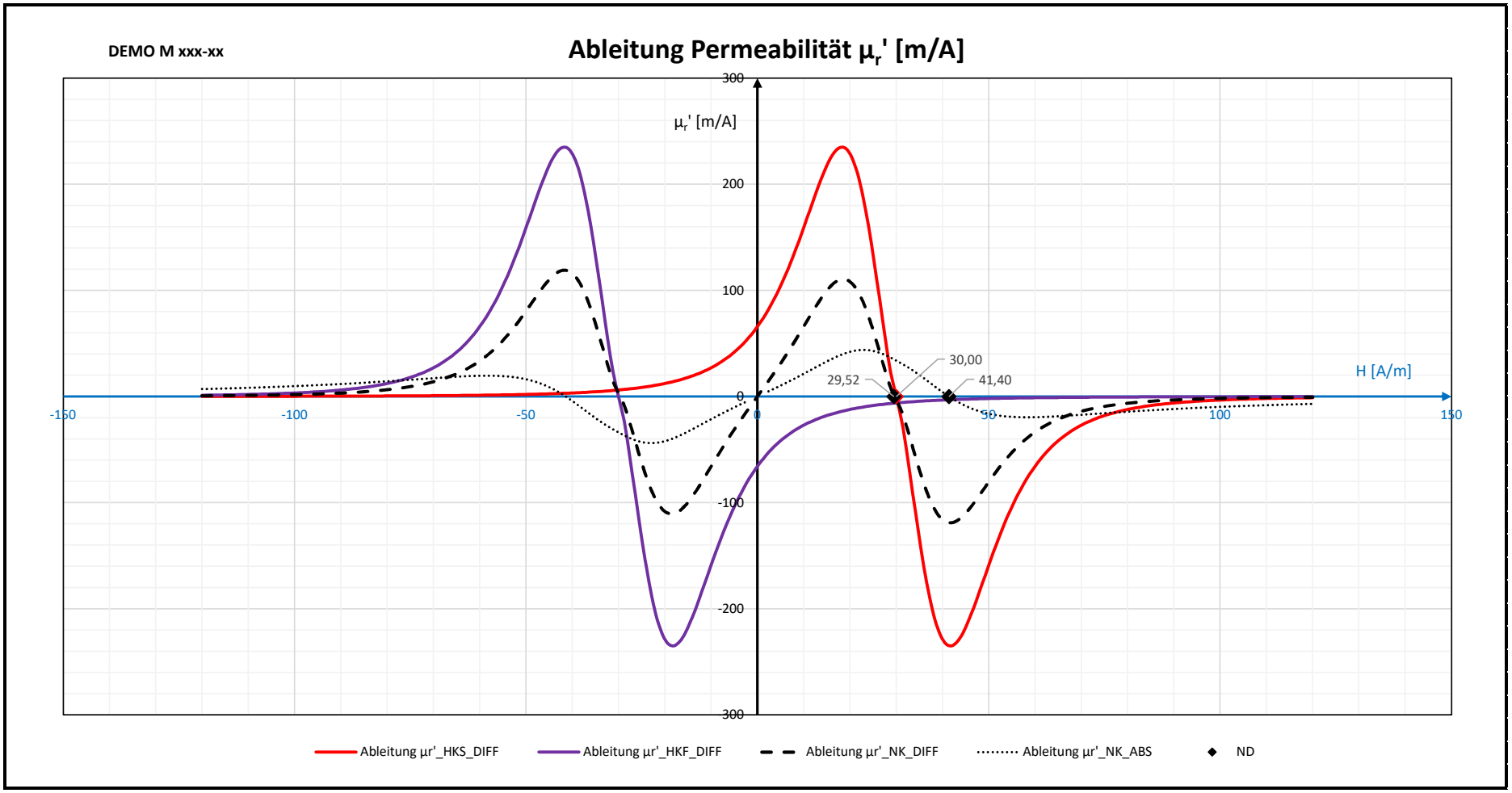
dt	Inkrement t	0,000001	[s]
µ_o	$4\pi*10^{-7}$	1,257E-06	[Vs/A/m]
µ_FE	Permeabilität	6,597E-03	[Vs/A/m]
ω [1/s]	2πf	35814	[1/s]
W_UMV	Fläche	15,49	[Ws/m³]
P_UMV_50Hz	Verlustziffer	0,099	[W/kg]
M_UMV/pp	Static Friction	0,0020	[Nm/kg]
µ_ANF_DIFF	= µ_ANF_ABS	**826**	[1]
µ_NK_MAX	µ im HP ABS	**1871**	[1]
H_NK_HP	H im HP	**41,40**	[A/m]

Legende:

MK	Mittenkurve
HKS	Hüllkurve steigend
HKF	Hüllkurve fallend
NK	Neukurve
HP	Hochpunkt
ND	Nulldurchgang


DEMO M xxx-xx
Permeabilität μr [1]
μr [1]
6000
5000
4000
3000
2000
1000
0
30,00; 5250
29,52; 2686
μ MAX; -41,40; 1871
μ MAX; 41,40; 1871
μ ANF; 0; 826
H [A/m]
-150
-100
-50
0
50
100
150
μr_HKS_DIFF
μr_HKF_DIFF
μr_NK_DIFF
HP1
HP2
μ ANF
μr_NK_ABS
μ MAX


DEMO M xxx-xx
Zeitfunktion
H [A/m]
B [T]
t [s]
150
100
50
0
-50
-100
-150
0,15
0,1
0,05
0
-0,05
-0,1
-0,15
0
0,002
0,004
0,006
0,008
0,01
0,012
H (t) [A/m]
Amplitude*x
B (t) [T]


DEMO M xxx-xx
Ableitung Permeabilität μr' [m/A]
μr' [m/A]
300
200
100
0
-100
-200
-300
-150
-100
-50
0
50
100
150
H [A/m]
29,52
30,00
41,40
Ableitung μr'_HKS_DIFF
Ableitung μr'_HKF_DIFF
Ableitung μr'_NK_DIFF
Ableitung μr'_NK_ABS
ND