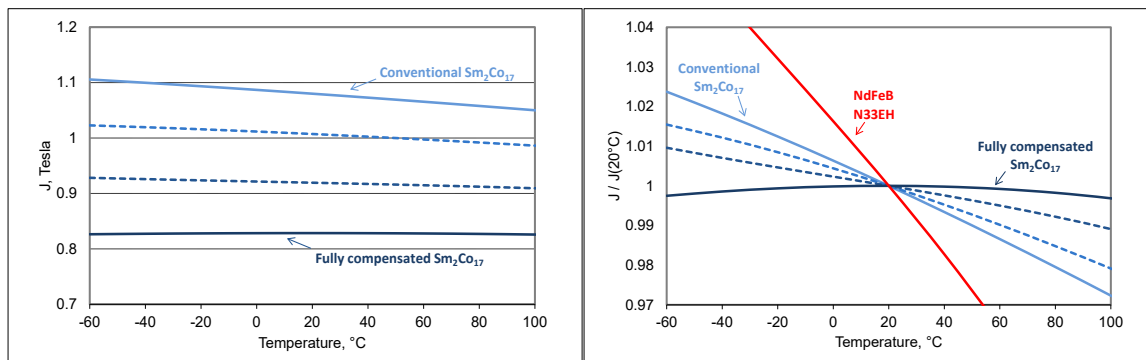


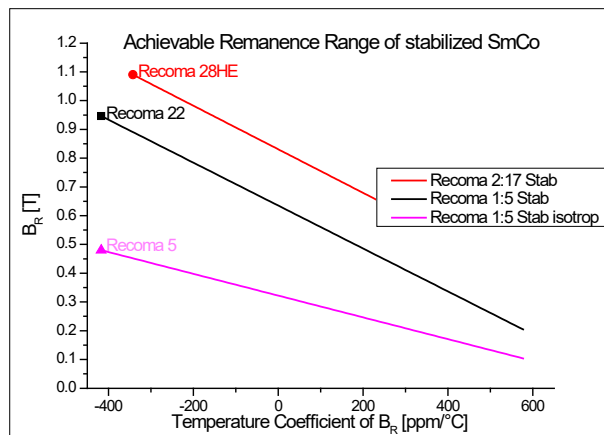
RECOMA[®] Stab

Temperature Compensated Rare Earth Magnets

The reversible magnetization changes in standard SmCo magnets are already quite low, which makes SmCo the material of choice in measuring systems such as electronic balances. In cases where even lower temperature changes are required, the family of Recoma Stab materials are available. Our long experience in producing SmCo magnets allows us to reduce the reversible temperature coefficients to almost any desired value and in tight tolerances.



Remanence



This reduction of the temperature changes can be done in SmCo_5 – and $\text{Sm}_2\text{Co}_{17}$ type magnets. These changes of the reversible temperature coefficients are accompanied by a moderate reduction of the remanence B_R . It is, in fact, not uncommon to choose a Recoma Stab material because a certain value of B_R is needed, rather than the modified temperature coefficient.

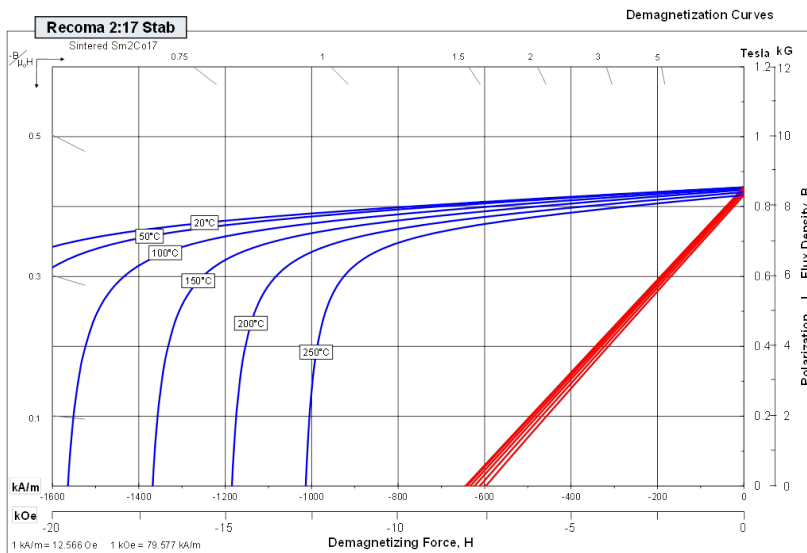
Magnetic Properties

Arnold produces the Recoma Stab materials according to specific customer requirements, but some typical custom grades of isostatic pressed magnets are listed below.

	Type	B _R [T]	(BH) _{Max} [kJ/m ³]	H _{cB} [kA/m]	H _{cJ} [kA/m]	RTC(B _R) ⁽¹⁾ [ppm/K]
Recoma 22	SmCo ₅	0.94	175	730	>2000	-420
Recoma 18	SmCo ₅	0.87	143	650	>2000	-300
Recoma 1:5 Stab 0	SmCo ₅	0.64	77	490	>2000	±0
Recoma 28HE	Sm ₂ Co ₁₇	1.10	225	805	2000	-340
Recoma 2:17 Stab	Sm ₂ Co ₁₇	0.90	155	680	1800	-100
Recoma 2:17 Stab ⁽²⁾	Sm ₂ Co ₁₇	0.83	135	630	1800	±0
Recoma 2:17 Stab	Sm ₂ Co ₁₇	0.76	110	575	1800	+100

⁽¹⁾ between -60 °C and +100 °C

⁽²⁾ see the demagnetization curves below



- ### Applications
- Nuclear magnetic resonance systems
 - Accelerometers
 - Travelling wave tubes (TWTs)
 - High precision balances
 - Replication of legacy grades

Detailed Information

The definition of a low temperature coefficient material for a given application is often quite demanding and depends among other things on the involved peripheral materials and the magnetic load of the magnet. Therefore it is strongly recommended to contact our applications engineers, who can provide you with more detailed information and can assist you during the specification of the right Recoma Stab material.

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