



The MATEX line

*FAST & EASY CONTROL OF HARD OR
MAGNETIC MATERIALS*



SIGMAMETRY & APPLICATIONS

KEP Technologies is not simply an instrument company, but a full solution provider.

We do not claim that a single product is suited for all applications and have with our SETARAM brand developed a range of products with different characteristics to more closely meet your demands.

We are confident that with KEP Technologies you will find a dedicated magnetic measurement solution with the performance you need to get the best understanding of your materials. This will be the case whatever the market segment in which you operate.

MARKET

We offer our materials testing solutions to all industries that need to be able to guarantee the composition and therefore the properties of their materials.

Our solutions are of particular interest to manufacturers of alloy-based parts with a magnetic phase.



HARD METALS

Carbon content of cemented carbides, e.g. for cutting and machining -
Residual austenite of hard steels, e.g. for crushing and grinding rocks and minerals.



MAGNETIC MATERIALS

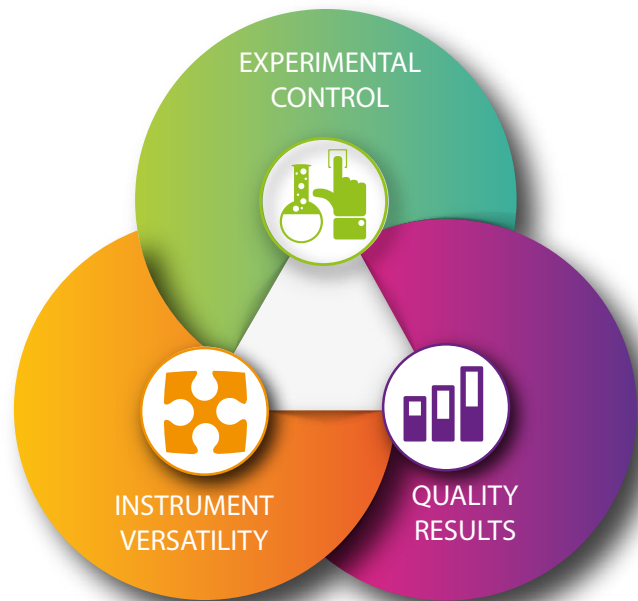
Composition control of soft-magnetic magnets and composites.

THE KEP TECHNOLOGIES ADVANTAGE

Each MATEX Sigmameter also embodies our “Reimagine Material Characterization” value proposition. It does so by delivering the three core customer benefits of Experimental Control, Instrument Versatility and Quality Results.

We know that solutions that provide these benefits will deliver the highest value to our customers.

In addition to our core customer benefits, we are able to provide customized solutions by harnessing the engineering and project management expertise of our highly skilled organization.



CUSTOMIZED SOLUTIONS

Modular design allows for upgraded and tailored functionality
Access to all previous non-proprietary custom requests
Open access to engineering development team

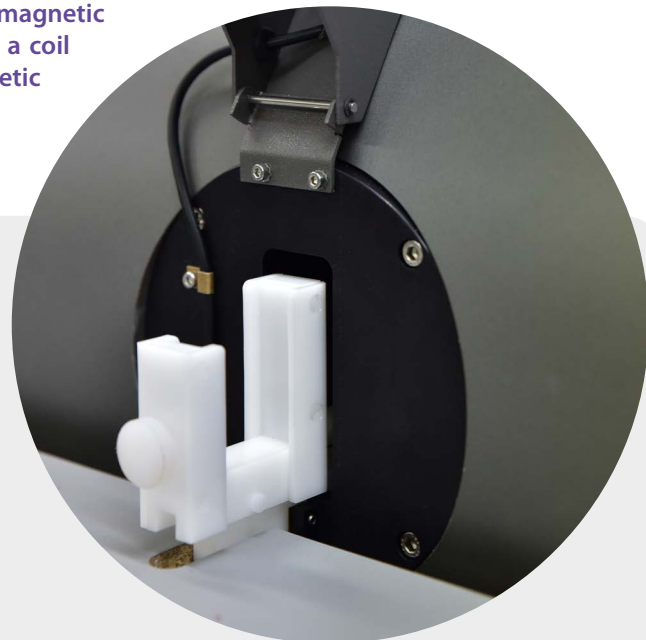
THE MATEX LINE

MATEX is Setaram’s range of sigmometers, which quickly and easily measure the magnetic saturation of hard materials such as austenitic steels and tungsten carbides. This method is particularly useful for cutting tool materials, hard steels for mining, and cement or aggregate grinding processes. It is also suitable for examining materials used in the manufacture of soft-magnetized magnets or composites.

A sample is inserted into a powerful permanent magnet, and its magnetic saturation is determined by rapidly removing it. The e.m.f. induced by a coil surrounding the sample is measured to determine the amount of magnetic phase present. The process is automated and takes just a few seconds.

The MATEX measuring system, based on this measuring principle, consists of a permanent magnet with a strong magnetic field, a pneumatic system for introducing and removing the sample in this field, to which measuring coils are attached.

The system comes with an electronic interface and software for easy acquisition and display of results.



MATEX PHASE



ESSENTIAL MEASUREMENT

For controlling hard and specialty metals : content of residual austenite, cobalt or nickel, carbon balance.

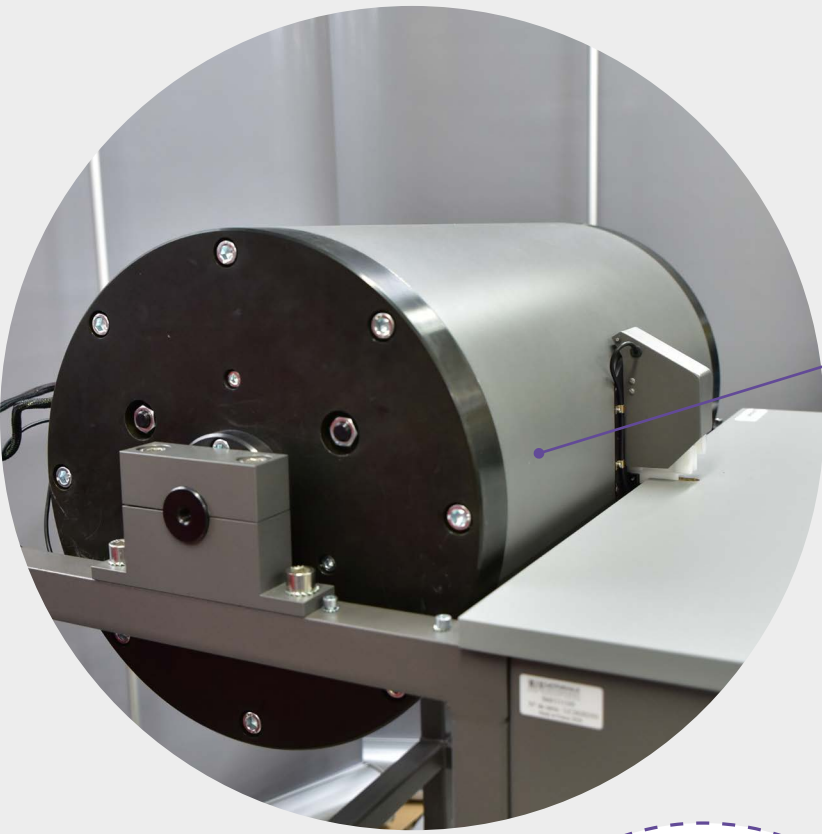
MEASUREMENT ACCURACY & PRECISION

Even with large samples, and with samples containing large amounts of magnetic phase.

FAST & EASY CONTROL

Quick (within seconds) and automated tests, independent of the operator's skills.

PERFORMANCE	
Measurement accuracy	+/-1% full scale
Detection limit	Equivalent to 1mg cobalt
Maximum sample dimensions (H/D/L)	30/20/20mm
Magnetic field	1T (=800kA/m)
Test time (weighing excluded)	Within seconds
GENERAL	
Compliant with testing standards	IEC 60404- 14 - Methods of measurement of the magnetic dipole moment of a ferromagnetic material specimen by the withdrawal or rotation method ASTM B886 - Determination of Magnetic Saturation (Ms) of cemented carbides
Dimensions (H/D/L)	1100/1280/840mm
Power supply	230V - 50/60Hz - 50VA

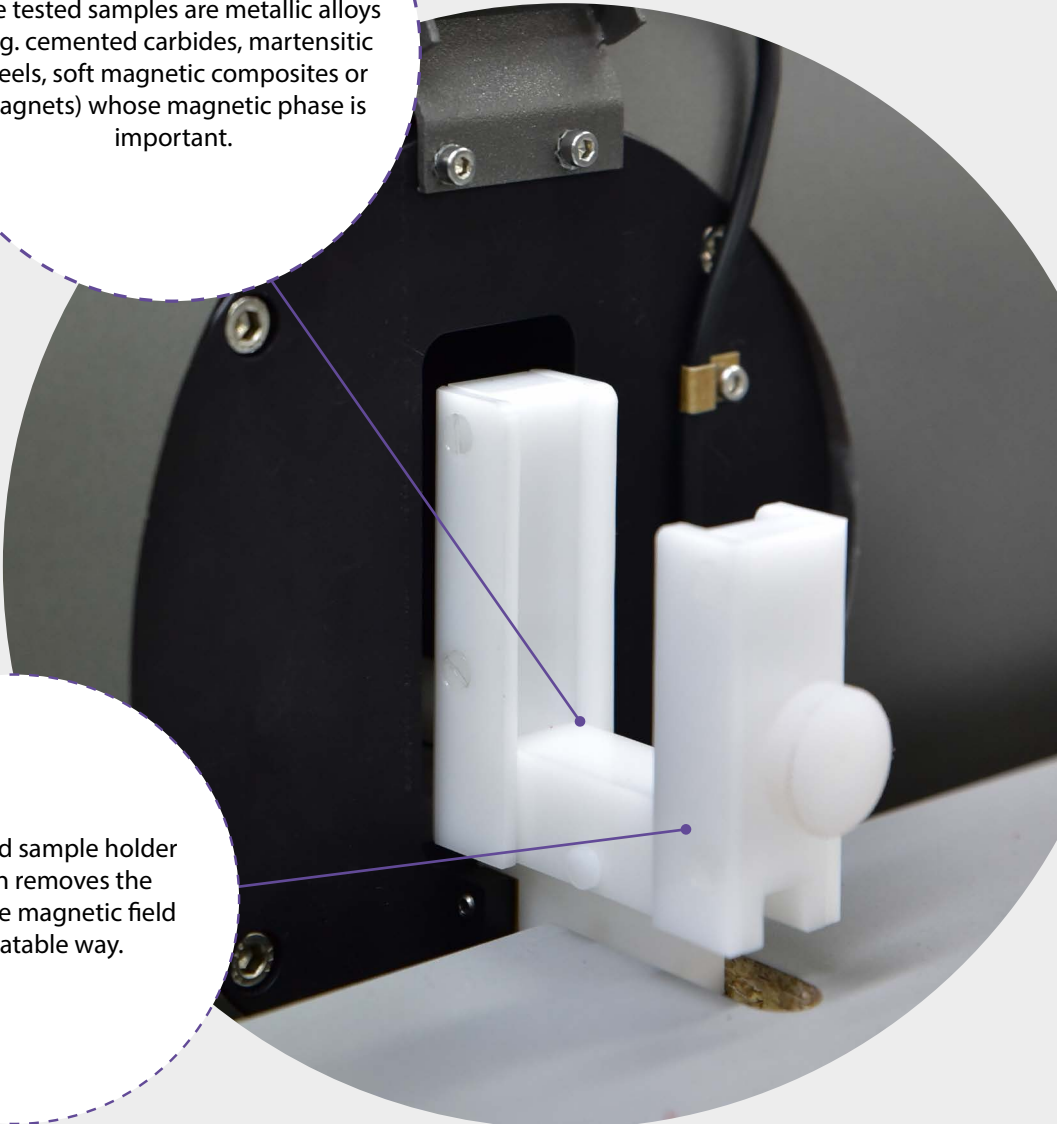


MATEX PHASE is equipped with :

- A powerful and permanent magnet to magnetize the sample,
- Coils that measure the quantity of magnetic phase in the sample when it is removed from the permanent magnet

The tested samples are metallic alloys (e.g. cemented carbides, martensitic steels, soft magnetic composites or magnets) whose magnetic phase is important.

Software can record measurement data and optionally sample mass.



An automated sample holder inserts then removes the samples in the magnetic field in a repeatable way.



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