enovasense

BEHIND THE INVISIBLE

Enovasense offers an innovative in-line solution to measure the thickness of coatings even in harsh industrial environments.

CONTACTLESS

The Enovasense device measures thickness without any contact with the part. Laser and infrared sensors are used to analyse the coating from a distance of 5 to 20 cm.This means that parts can be measured in their industrial coating environment, even when they are on moving lines, at high temperatures, still brittle or wet.

NON DESTRUCTIVE

Since very little heat is created by the laser beam, neither the coating nor the part are damaged or altered during measurement. As a result, each part can be systematically measured in industrial applications where, up until now, existing methods have required destruction of the test specimen.

REAL TIME

Measurement takes less than one second. Since the Enovasense process is based on a physical model wich allows to pre-calibrate the device according to the application concerned, calibration is both quicker and easier than it is for most existing methods. The Enovasense process can even eliminate the calibration step for certain industrial applications.

AUTOMOTIVE INDUSTRY

- Painted body
- Glazing
- Chassis
- Piston rings

- Piston skirts
- Bearing bushes
- Cylinder head gaskets

METAL COATING

- Copper coatings over plastic connectors
- Galvanisation
- Gold and chromium-plating over plastic

AERONAUTICS

- Anti-friction in engines
- Paint over composites and metal

INNOVATIVE, PATENTED TECHNOLOGY:
LASER PHOTOTHERMAL RADIOMETRY

4.

3.

2.

1.

Part to be measured
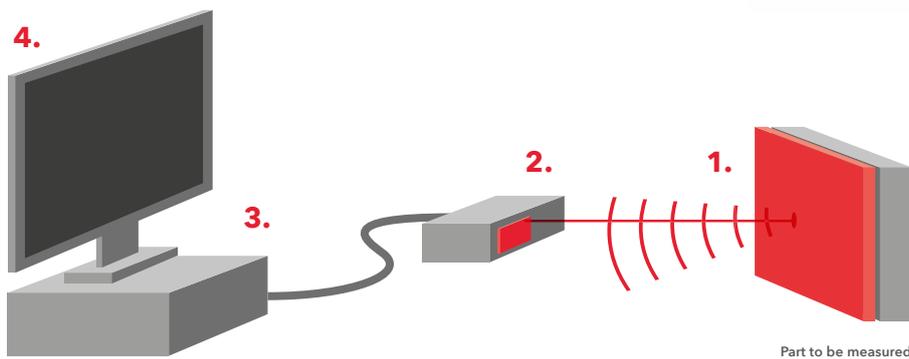
1. Laser heating (< 1°C)

2. Heat absorption

3. Filtering and treatment

4. Display of thickness

STRONG
ADDED-VALUE

**WITH ENOVASENSE
BREAKTHROUGH TECHNOLOGY**

Destructive sampling
or on contact

Instant non-destructive
system

During process

Untested parts   Untested parts

Remote testing of each part
Automatic and integrated

Manual post-production destructive testing
by an operator
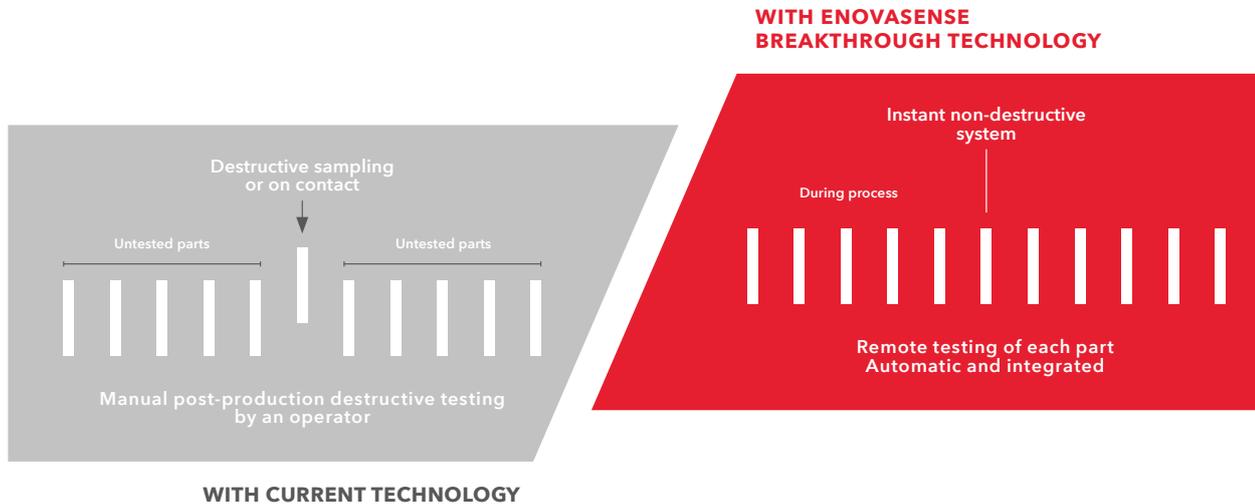
WITH CURRENT TECHNOLOGY

Integration into production,
multi-purpose

enovasense

Magnetic
methods

Other radiometric
methods

Destructive   **Contactless**

X-ray
methods

Ultrasound

Destructive
methods

Testing after production,
single-use
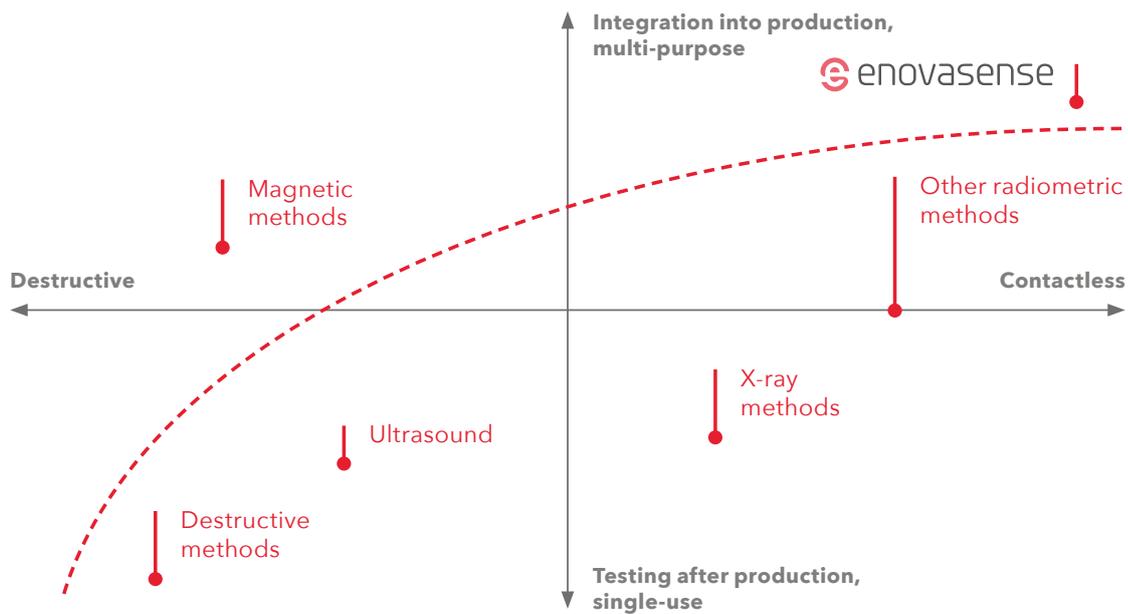
While industry is becoming increasingly automated and robotised with sensors to control production, conventional methods are still used for numerous crucial measurements. Most of the solutions available require direct contact with the coating.

With our solutions it is now possible to measure:

✓ **parts at high temperatures**   ✓ **parts that are hard to reach**
✓ **brittle and fragile coatings**   ✓ **coatings in a medical environment**
✓ **parts on moving lines**

Enovasense uses these advantages for new applications, outside our current fields of intervention.

More than thickness measurement, Enovasense solutions allow better coating deposition and optimisation of current processes.

Optimisation of raw material consumption:
paint, zinc, chromium, etc.

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Better quality:
100% of the parts are controlled

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Better industrial performance:
detection of non-compliance
in real time

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**Better management
of coating process
by in-line inspection**