

RETAINED AUSTENITE QUANTIFICATION BY ENERGY DISPERSIVE X-RAY DIFFRACTION (EDXRD)



Energy dispersive phase analysis

Your expectations

You would like to quantify the amount of retained austenite in order to:

- Develop or test a manufacturing process
- Compare several manufacturing processes
- Develop new products
- Develop new heat and thermo-chemical treatments
- Analyse parts after failure

Our solutions

Techniques:

Energy dispersive X-ray diffraction (EDXRD)

Quantification carried out from the measurements of the intensities of the constituent phases of the materials.
For example – thermo-chemical treatment of a steel: 16 α phase (ferrite, bainite and martensite) and γ phase (austenite) reflections

Totally automatic quantification and analysis

Length of time for acquiring then processing results ranges from 10 min to 30 min maximum according to the samples (24 hr as required in standard method)

Characteristics:

Analyses of all types of steel and iron (even textured and containing carbides)

Contents between 0% and 100%

Analysis repeatability currently less than 0.5%
Determination of strain-induced martensite in austenitic steels
Additional information on the structure (strain-hardening, lattice parameter)
Characterisation of layer thicknesses

Your benefits

Comprehensive management of your experiment requirements
Meeting deadlines with results in less than 48 hours
Response adapted to the requirements of your customers
Assurance that analyses can be repeated
Availability of accredited expert laboratories (accreditation Cofrac - No. 1-1014 - Scope available on www.cofrac.fr)



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