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: 16α 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)

