

4 mm

2,250 mm

Metallographic Specimens



To advertise the residual life of the equipment



To program future maintenances.

To know about welding qualities.

We do not destroy the analyzed material as in the conventional metallography, the analysis is made in situ, with no destruction of any part.

The first results are immediately submitted and can be shared with our associated metallographic experts around the world.

We study changes in microstructure in ferrous and non-ferrous materials, used in energy plants. Petroleum piping and natural gas, no matter its angle or if the part is curve or flat.

Our processing software allows us to observe the counting of phases, the grain size calculation (ASTM E112), recovering thickness measurements, micro-cracks length and counting on grain border cavities for creep measurement.

Our Methodology

Surface preparation

We isolate and prepare the surface to be analyzed through polish and sanding process well above the requirements of the international standards, with sandpaper, cleaning clothes up to 0.25 microns and high-quality additives such as diamond paste.

Chemical / Electrolytical Attack

Once the surface is processed, we make a chemical or chemical / electrolytical attack with solutions made for each kind of material and according to the microstructure type we want to reveal. For special alloys such as 304, 316L, 316MoL, 347H steel, duplex, super duplex, alloys as copper, aluminum, nickel based and nickel-cobalt.

Microscopy

Our microscopies can be attached in a safety way to any surface, reaching up to 1.200X magnification.

As it is wireless, it is possible to share the results with our Metallurgical expert which are part of SolColab® around the world, wich allows us to compare results and give most precise and accurate solutions.

Results

Our experts in metallography give recommendations of maintenance, recovering, repairing or changing of the analyzed part, and project the remaining life of the component.





Materials
& Failure
Engineering

Metallographic Specimens

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