

# FAST AND NON-DESTRUCTIVE ANALYSIS OF METALS AND THEIR ALLOYS

The x-ray fluorescence spectrometry (XRF) analysis of metals and their alloys provides an exact breakdown of the different elements contained in a sample without altering it. The procedure can be applied to all clean and accessible surfaces, and even eliminate the need to dismantle the components in certain cases.

## Methodology

- measurements taken on site or in the workshop.
- submission of a report with an evaluation of the material.

## Specific skills

This method reduces the analysis costs and speeds up the decision-making process. We quickly and accurately analyse pure metals and alloys, in particular :

- Aluminium alloys
- Copper alloys
- Nickel alloys
- Stainless steels
- Wrought aluminium alloys
- Chromium molybdenum steels
- Exotic alloys
- Nickel-cobalt alloys
- Tool steels
- Zinc alloys
- Cobalt alloys
- Magnesium alloys
- Precious metals
- Titanium alloys
- Zirconium alloys

## Client benefits

This method allows us to quickly analyse a sample without altering it. Our material science experts will help you choose a replacement metal or determine the weldability of your component.

## ADDITIONAL SERVICES

### Central workshops

Set up at the Martigny site in 2007, the Central Workshops bring together our skills in the servicing of mechanical components. The knowledge we have acquired in the operation of hydroelectric plants qualify us to fulfil our clients' needs and provide them with tailored solutions.

### Servicing of mechanical components

Servicing the mechanical components is an integral part of operating a hydroelectric plant and the work is carried out at the intervals specified in the owner's maintenance schedules. This service focuses on the inspection of large-diameter safety equipment, such as globe valves, butterfly valves, injectors, pumps and Francis turbines. Multiple skills are required and they permit the complete servicing of safety equipment according to the supplier's requirements.

### Renovation of wheels

This Workshop brings together all the skills previously sourced from the former Alp Hydro facilities at Chippis and the Grande Dixence workshops of Les Haudères and Z'Mutt under one roof at Martigny. Our colleagues provide all the services needed to maintain and service impellers and turbine wheels (Francis, Pelton, Kaplan), as well as their component parts, whatever their dimensions. This work is carried out in Martigny, but can also be done on site, for example, for polishing a turbine wheel.

### Machine Shop

Since 2007 and its set-up at the Martigny site, this Workshop has brought together all of our machining skills under one roof. Its sole purpose is to manufacture various parts to support the servicing of mechanical components and spare parts. Thanks to its constant expansion, in particular with the acquisition of the new CORREA machining centre facilitating dimensions unique in the French-speaking part of Switzerland, we are able to fulfil the many demands of different clients.

## CONTACT

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