



The MAT-HAG Project:

an example of investigative fieldwork

In August 2009, a salvage campaign was mounted at the exceptional 'car cemetery' at Kaufdorf near Bern (soon to be destroyed) during which samples of materials were taken from vehicles that had remained outdoors since the 1930s. The resulting 'materials collection' includes metals, fabrics, wood, lubricants and various dashboard instruments – constituting a valuable teaching and research tool for understanding processes of deterioration at work in the automobile heritage.

The SPAMT-TEST Project:

an example of technological achievement

A portable qualitative analysis tool, inexpensive and easy to use, has been pioneered to enable conservators-restorers of technical objects, scientists and horologists to make an initial analysis of the composition of copper-based alloys. The principle involves measuring the corrosion potential (E_{corr}) of a metal surface when a drop of test solution is applied, then to monitor changes over time. The results obtained are compared with those in a database of 66 reference alloys tested with three different solutions, enabling suggestions to be made as to the composition.

ACCESS TO UNIQUE SKILLS

HECR Arc, a centre of excellence recognized in Switzerland and throughout Europe, is home to international specialists in the fields of preventive conservation, conservation-restoration of metals, and conservation-restoration of scientific, technical and horological objects.



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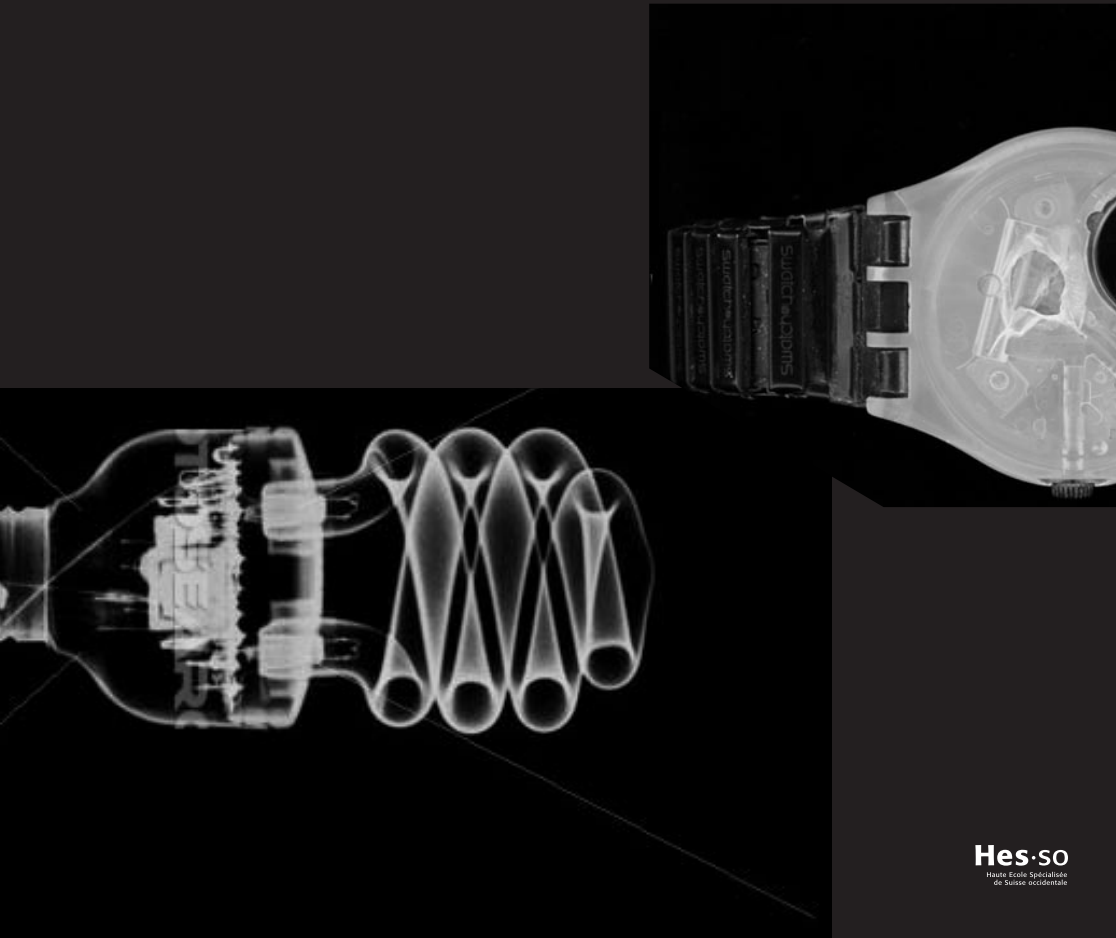
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SERVING OUR HERITAGE

APPLIED RESEARCH AND DEVELOPMENT
SERVICES
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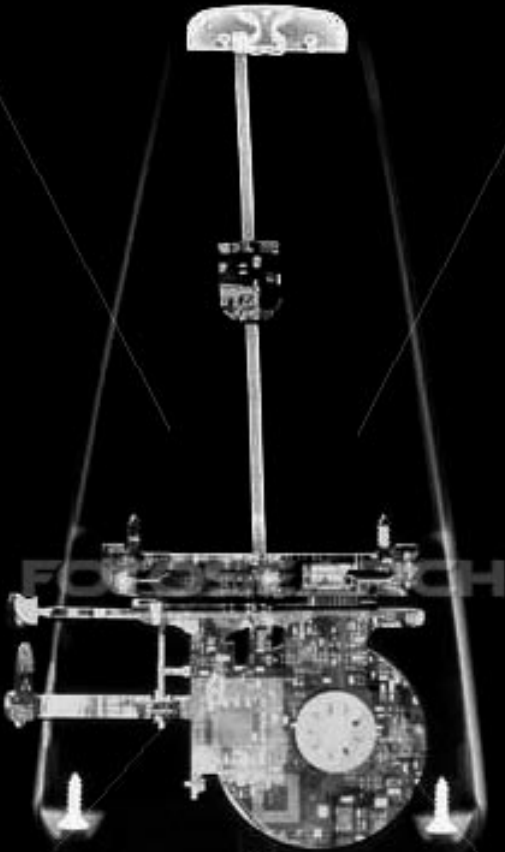
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SERVICES

HECR Arc provides a bridge between the public domain and the wider social and economic fabric. Its services can be tailored to specific needs: independent conservators-restorers, collectors, heritage organizations, corporate museums, etc.

THE BENEFITS OF HECR ARC

Guaranteed neutrality and objectivity

HECR Arc is a training and research centre; its aims are not commercial and it does not compete with independent conservators-restorers. Its skills are made available to professionals to assist in the work of preserving objects of cultural value.

Exceptional facilities

The resources of the Haute Ecole Arc (particularly the Institute of Applied Microtechnologies) provide HECR Arc with access to a wide range of equipment for the functional and physicochemical analysis of materials. HECR Arc can offer advice on the choice of analyses to carry out, as well as technical supervision and a professional code of ethics, essential when dealing with cultural artefacts.

Characterizing the constituent materials of cultural objects

A wide range of physicochemical analyses adapted to the study of heritage objects is covered by methods such as scanning electron microscopy (SEM), associated with energy-dispersive spectroscopy (EDS), X-ray photoelectron spectroscopy (XPS) or Raman spectroscopy.

Advice on producing specifications

- Recognition of materials and their deterioration.
- Observation reports and diagnoses for preventive conservation and conservation-restoration.

Materials testing

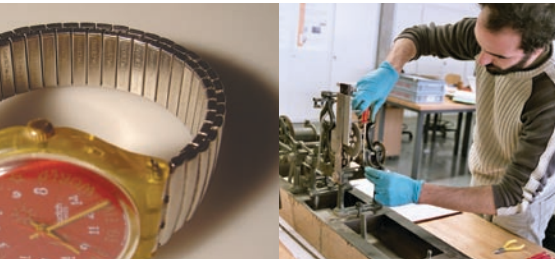
- Ageing, pH, chlorine tests.

Skills transfer

- Expert advice.
- Assistance with on-site interventions.

APPLIED RESEARCH & DEVELOPMENT

The field of conservation-restoration is constantly evolving. HECR Arc has chosen applied research to develop knowledge and skills directly of use to the discipline and its practitioners.



Developing your skills, offering our knowledge

A team of internationally renowned researchers (conservators-restorers, scientists and anthropologists) explores different fields of investigation in collaboration with an extensive European network of external contributors.

Preventive conservation and conservation-restoration of our technical heritage: the twofold strategy of HECR Arc

Teaching and research staff at HECR Arc combine unique skills, in these two fields, strengthened each year by new graduates choosing to work in applied research and development.

CONTINUING EDUCATION

HECR Arc proposes a wide range of continuing education and advanced courses in the fields of preventive conservation and conservation-restoration. Practical and theoretical course work is taught by Swiss and European specialists.

SOME EXAMPLES:

- Conservation of ceramics & glass.
- Conservation of metal.
- Conservation of organic materials.
- Conservation of horological objects of cultural significance.
- Museum-based preventive conservation.
- Risk management in relation to accidents.
- Conservation by electrolytic treatment.
- Moulds and copies.

HECR Arc also offers tailor-made courses adapted to the requirements of institutions, companies, associations and foundations.

STUDY COURSES

HECR Arc is a specialist Haute Ecole offering university-level tuition.

Bachelor & Master Degrees

A three-year course specializing in preventive conservation leads to the HES-SO Bachelor of Arts in Conservation.

A two-year course following on from this leads to the HES-SO Master of Arts in Conservation-restoration.

- Teaching is multidisciplinary and includes theoretical and practical modules:
- Conservation-Restoration.
 - History of Art, Sciences & Techniques.
 - Materials Chemistry, etc.

Two special subjects unique in Switzerland

- From the third year of the Bachelor's degree course, two special subjects are proposed:
- Archaeological & Ethnographical Objects.
 - Scientific, Technical & Horological Objects.