



PROtection & Conservation
of Heritage airCRAFT



CTU partner (PI3) activities

Dept. Instrumentation and Control Engineering (DICE)

Faculty of Mechanical Engineering (FME)

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Prague, Video conference, 5th November 2020

Kickoff Meeting

Schedule for steps in WP6

- 1) (M6) Mapping of representative real exposure conditions in museum building and closed or possibly sheltered hangars
- 2) (M12) Analysis of preventive approaches for representative sites
- 3) (M30) Active climate control, optimized for representative sites

Ad 1) Designing the Heating, Ventilation, and Air-Conditioning (HVAC) system in cooperation with Military History Institute Prague (VHU)

- humidifier-heater device, or dehumidifier-cooler apparatus
- ventilation system

Schedule for steps in WP6

Ad 2) Installing measurement devices and data loggers for remote data collection of

- RH, T, indoor air quality, outdoor (meteorological) data
- metallic corrosion (dosimetry)

Ad 3) Energy-efficient climate control demonstrated on a buliding museum leading to preventive conservation of aircraft wrecks

- Development of ***damage risk assessment*** for multi-material aircraft wrecks (combination of non-invasive indoor and outdoor corrosion protection methods developed in WP4,5,6)

Schedule for steps in WP6

Conclusions

Indoor-climate control and degradation mitigation measures will be analysed based on the practitioners experience, data analysis and mathematical models. These models will be proposed in analogy with the corrosion modelling as in case of iron materials.

Høerlé, S., Mazaudier, F., Dillmann, P. and Santarini, G. (2004). Advances in understanding atmospheric corrosion of iron. II. **Mechanistic modelling of wet–dry cycles.** *Corrosion science*, 46(6), 1431-1465.