

PROCRAFT

Participation of PI4 (CEMES) and PAs

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Visio, 05/11/2020
Kick-off meeting

Actions in WP2 : Corpus selection

- Requirements for PROCRAFT transmitted to APs
- Selection of aircraft parts (corpus) :



Aerocherche (AP15)

He 177 (1943)



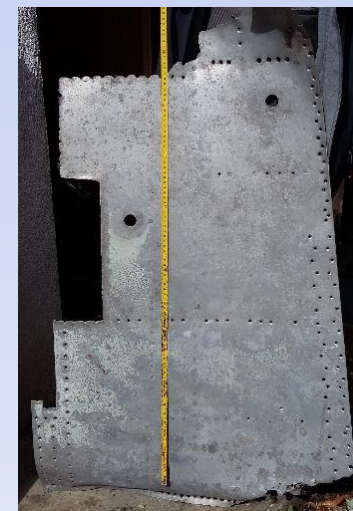
Junker 88



Dornier 217 (1943)



FW 190



Actions in WP2: Corpus selection



Aérothèque (not AP yet)

Dewoitine D 338



Vedal (AlClad)



Projet Aérothèque
Sauvegarde et Restauration d'un tronçon DEWOITINE D338



Actions in WP2 : Corpus selection

Toulouse Métropole (AP3) – Envol des Pionniers

Merlin XX engine from Avro Lancaster (1944)

- Cast aluminium alloy + other metallic materials

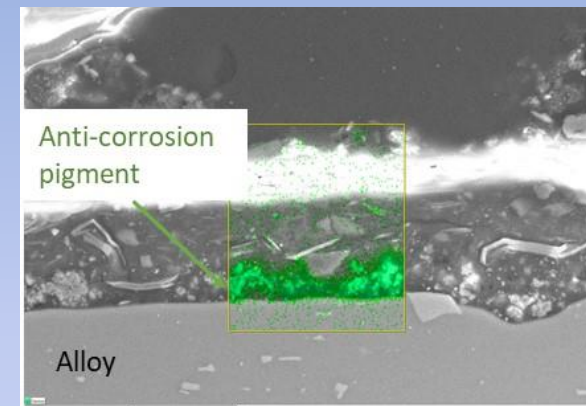


Crédit photo: Materia Viva

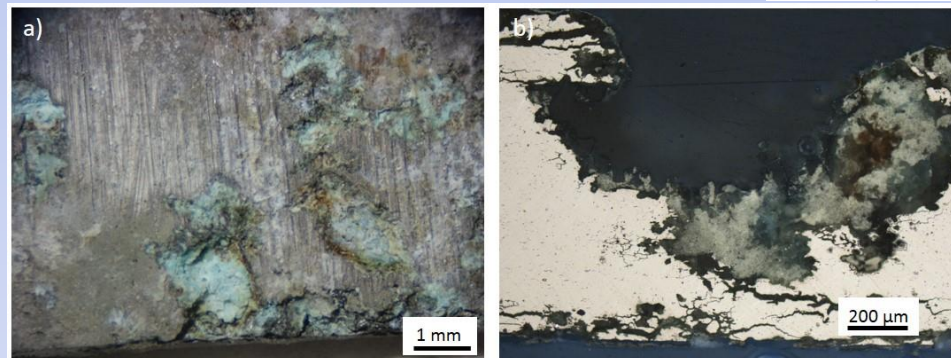
Actions in WP2: Materials analysis

Post-doc : 6 months in CEMES from 01/01/2021

- Identification of materials :
 - Metallic alloys : SEM-EDS, TEM
 - Protective coatings: OM, SEM-EDS, XRF, FT-IR, Raman, XRD



- Diagnostic on corrosion :
OM, SEM-EDS, XRD

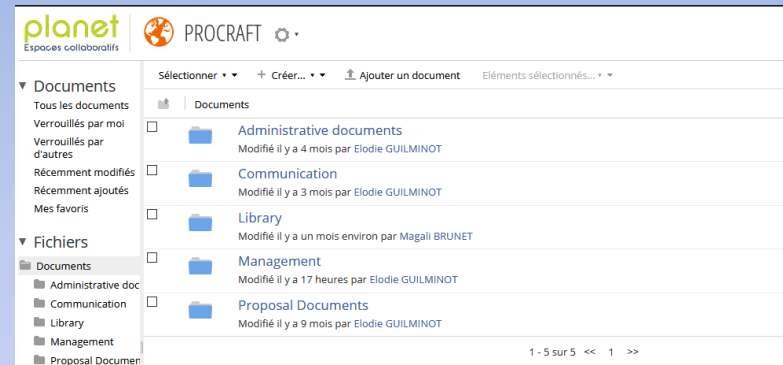


- Choices to transmit for WP3 and WP4:
 - Model materials : 1 wrought alloy, 1 cast alloy
 - Real materials (from corpus)

Actions in WP2: Data base

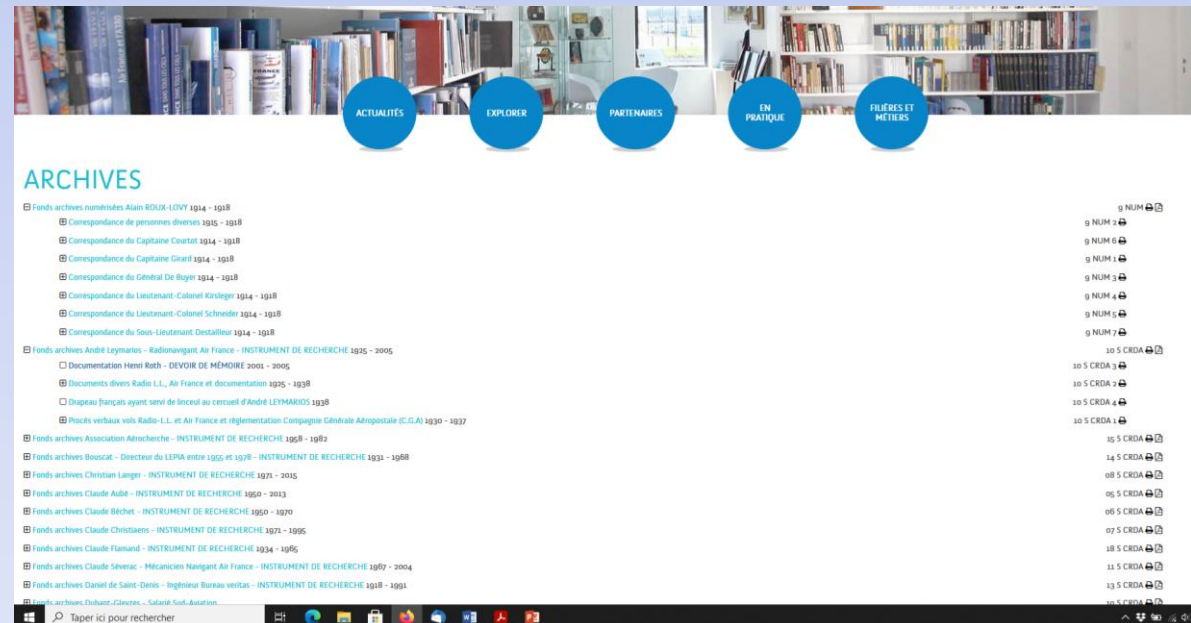
Master student : 6 months from 01/01/2022 – codirection FRAMESPA

■ Project database: internal



■ Open access database:

- HAL (CNRS)
- Aeroscopia's database (AP7)



Actions in WP4 and WP5

Master student : 6 months from 01/01/2022 – codirection CIRIMAT (AP5)

- Assesement of protective coatings developped by UNIFE and UNIBO :
 - Advanced characterization :
 - Adherence tests
 - Micro-nano characterization (FIB-SEM)

M. Aufray, C. Josse, An. Balbo, C. Monticelli, E. Švara Fabjan, L. Škrlep, T. Kosec, N. Gartner, C. Martini, G. Masi, C. Chiavari, E. Bernardi, M. C. Bignozzi, L. Robbiola, M. Babnik, T. Koršič, M. Kete, *Practical adhesion measurements of protective coatings on bronze by 3-point bending Test*, Journal of Coatings Technology and Research, 2019, 16(5), pp. 1465-1477

Actions in WP6

Collaboration with CTU (PI 3) / Toulouse Métropole (AP3) / Materia Viva (AP19)

- Merlin Engine = case study for definition of micro-climatic conditions
 - ⇒ Showcase design
 - ⇒ Choice of sensors for monitoring materials alteration
 - ⇒ Monitoring of the conservation conditions (HR, T°C, O₂ etc) and of materials alteration inside the showcase

Data for CTU model

Actions in WP7: Communication

- Workshop organization (26/01/2021): with Aéroscopia
- Participation in the elaboration of protocoles / Guides for associations in charge of aircraft
- Conferences (specialized and/or vulgarization)