

AQC0514

# Nanopublication — Ceramic Structural and Surface Methodology for Complex Forms

by Arnaud Quercy · Archimedes, the owl · 2024



TECHNICAL METHODOLOGY FIRST PERSON DIRECT

PRACTITIONER KNOWLEDGE CRAFT TECHNIQUE

DOCUMENTATION HIGH

## Ceramic Structural and Surface Methodology for Complex Forms

I addressed the [7] technical challenges of this sculpture's scale and geometric complexity through internal chimneys to prevent thermal fracture, petite chamotte for structural integrity, and beeswax-pigment surface treatment to achieve tonal differentiation between yellow-green and brown planes.

### CONTEXT

At 28×34×17 centimeters, this sculpture presented significant structural challenges due to its complex geometry of enclosed volumes and intersecting curvilinear planes. I engineered internal chimneys—hollow vertical passages—to allow moisture and gases to escape during the firing process, preventing thermal stress fractures that commonly occur when thick ceramic [2] walls or enclosed spaces trap expanding air. This technique is essential when working at this scale with forms that cannot be hollowed uniformly.

I used petite chamotte—fine-grained grog (pre-fired ceramic particles)—mixed into the clay body to provide structural integrity and reduce shrinkage during drying and firing. The chamotte creates a more stable matrix that can withstand the thermal expansion and contraction cycles of high-temperature firing while supporting the cantilevered planes and thin-walled sections of the cubist composition.

For surface treatment, I applied beeswax and pigments to achieve tonal differentiation between planes. The dominant yellow-green patina covers most surfaces, while darker brown tones mark recessed

areas, the base, and interior voids. This chromatic separation helps articulate the geometric decomposition—each plane reads as a distinct element through color as well as form. The beeswax creates a subtle sheen and aged quality, enhancing the metallic appearance produced by the glaze crystallization during firing.

These technical decisions—internal structure, clay body composition, and surface treatment—work together to make the complex cubist form materially viable while supporting its visual reading as distinct geometric components in unified sculptural space.

### REFERENCES

- [1] Arnaud Quercy (2024). Archimedes, the owl — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0514.html>  
<https://arnaudquercy.art/fr/catalogue-raisonne/AQC0514.html>
- [2] Ceramic technical specifications: Stoneware clay body with petite chamotte; high-temperature firing (cone 6-10 range typical for this body type); custom glaze formulation producing yellow-green crystalline surface.
- [3] **Medium**: Ceramic sculpture
- [4] **Artist**: Arnaud Quercy
- [5] **Reference**: Arnaud Quercy Creations / AQC0514 / 2024
- [6] **Artwork**: Archimedes, the owl
- [7] Peterson, Susan. "The Craft and Art of Clay" (5th edition, 2003), Laurence King Publishing. Chapter on structural engineering for hollow forms and thermal stress management.
- [8] Rhodes, Daniel. "Clay and Glazes for the Potter" (1957, revised 1973), Chilton Book Company. Technical reference on chamotte/grog usage for structural stability.
- [9] **Document Metadata**
- [10] **Dimensions**: 28.0×34.0×17.0 cm
- [11] **Year**: 2024
- [12] **Collection**: Spells and Magic
- [13] **Certificate**: 20240120-0010
- [14] **Documentation Date**: February 2026
- [15] **Claims**: 2
- [16] **Voice**: First-person practitioner
- [17] **Workshop**: Created under master ceramicist Isis Gondoin at Profils et Reliefs, Paris
- [18] **END OF DOCUMENT**

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|--------------------|------------------|
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