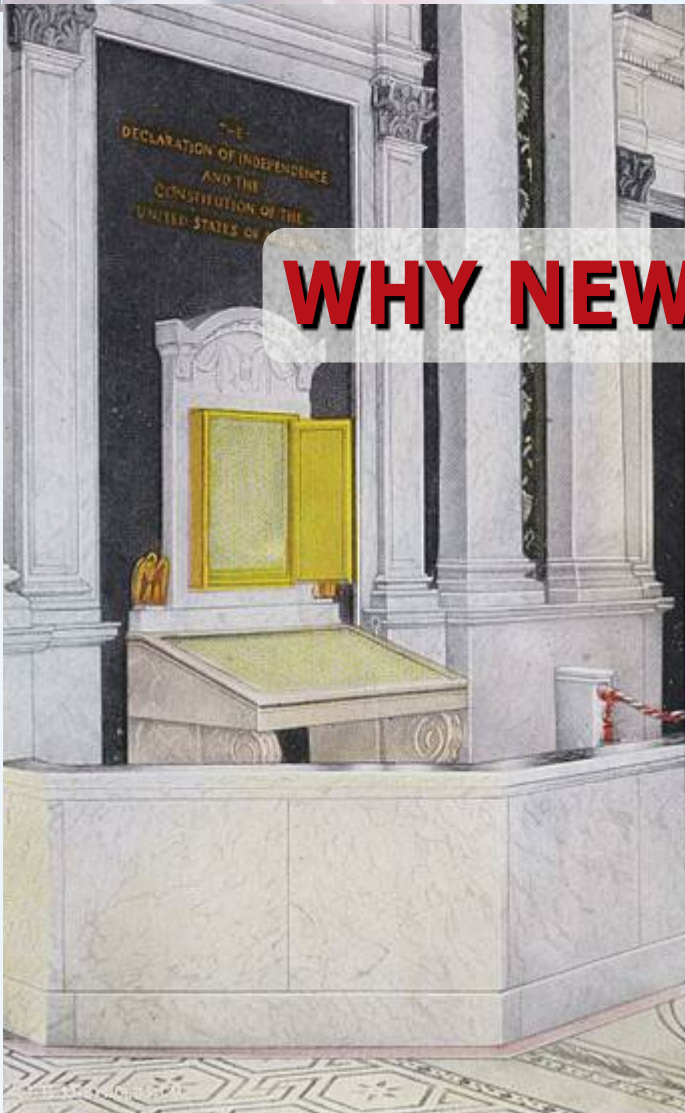


New Encasements: Needs and Goals

Alan Calmes
and
Norvell Jones



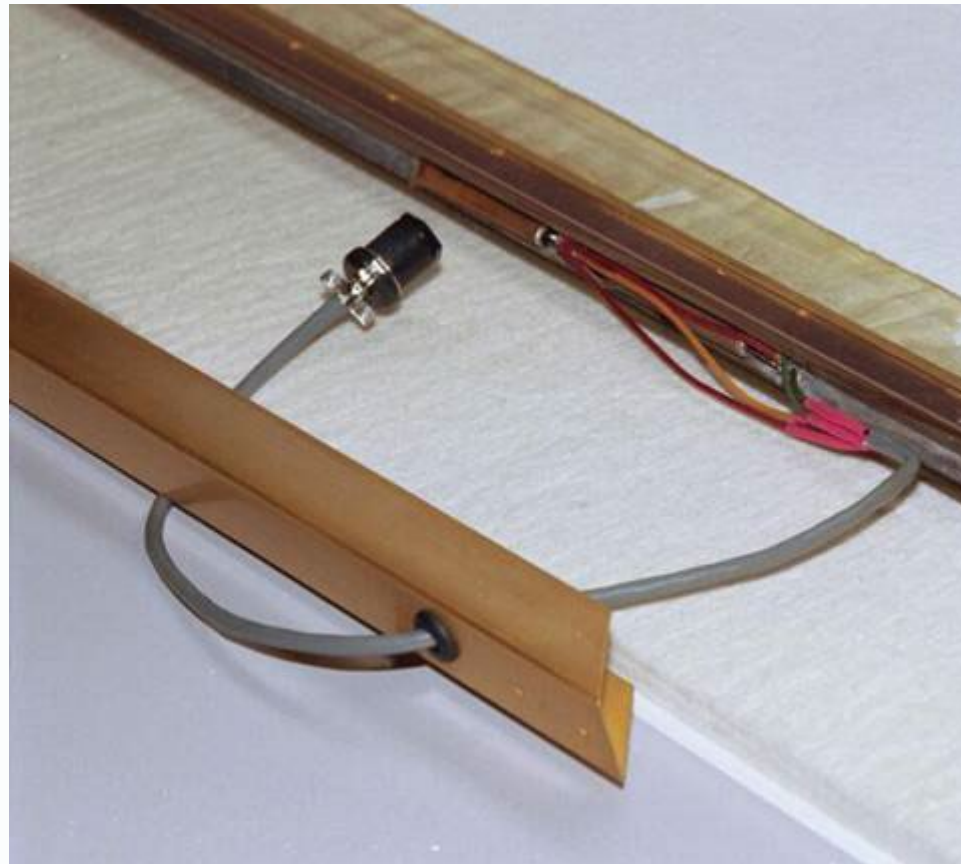


THE SHRINE OF THE DECLARATION OF INDEPENDENCE
AND THE CONSTITUTION, WASHINGTON, D. C.

WHY NEW ENCASEMENTS NOW?



Documentation of the condition of the Charters



Expert staff observation

Review by outside experts

Recommendations of the Advisory Committee on Preservation

“In the judgment of the committee, the method of encasement offers considerable protection to the documents and this encasement should not be opened without most compelling cause. Before opening the encasement a number of factors must be considered by the group of experts. Among these considerations are:

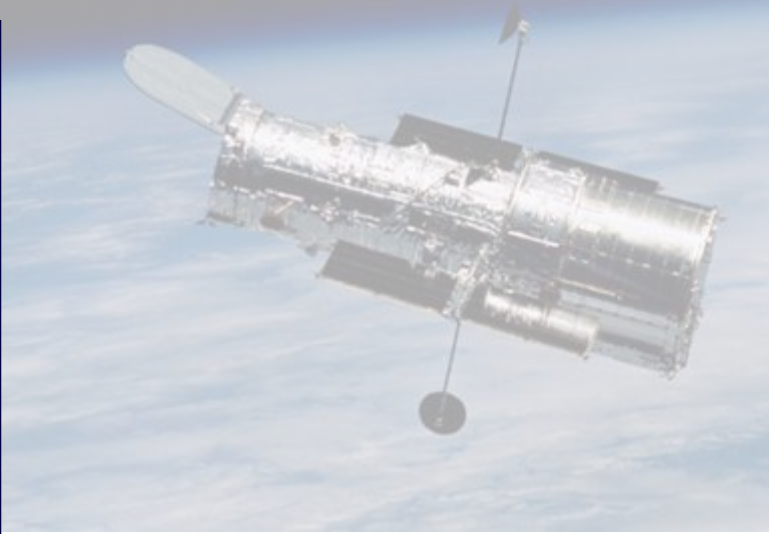
Recommendations of the Advisory Committee on Preservation (cont)

- (a) Visible or documented evidence of deterioration**
 - (1) Flaking ink or fading**
 - (2) Offsetting of ink to glass**
 - (3) Changes in dimensions of the documents or of tears or holes in parchment**
- (b) Damage to encasement or conductivity system, evidence of a leak or break in the seal**
- (c) Development of a superior method of encasement**
- (d) Assurance that opening the encasement will not itself cause new damage**

Recommendations of the Advisory Committee on Preservation (cont)

“Experts in photographic methods, image analysis, and non-destructive analysis should be consulted regarding the application of new technology to the documentation of the condition of the Charters and analysis, in the current encasement, of the inks and other document materials.”

New Encasements: Needs and Goals



A new examination tool

Charters Subcommittee meets again

Identification of the “mystery” shadows

Glass Deterioration

and

Elevated Relative Humidity

A NEW COURSE OF ACTION; REENCASEMENT

The Charters Subcommittee of the ACP met in the spring 1995 and concluded:

“The eventual reencasement of the Charters is no longer a matter of long-term planning. The planning and budgeting process should be undertaken with the assumption that reencasement may be necessary in the near-term. That the monitoring process in place for the past 8 years has revealed no significant changes in the documents in that period suggests to the Committee that there is no need for reencasement or invasive examination at this time.

A NEW COURSE OF ACTION; REENCASEMENT (cont)

... However, the deterioration of the encasement glass at an undetermined rate indicates that reencasement will have to be undertaken in the near-term. In preparation for that eventuality, the Committee recommends that NARA proceed on the assumption that the near-term is on the order of years, not decades."

Design Concepts

- **Each of the seven sheets must be individually encased to provide adequate layers of protection and preservation control**

Design Concepts

- **No sheet will be maintained in a vertical position to assure that the heavy sheets of the documents do not have to be restrained with cover glass or by any other method that would constrict the skin, or support their entire weight on hinges**

Design Concepts

- **Encasements and documents must be maintained in a stationary position and moved only for periodic examination and maintenance (equipment and pathways must be provided for the latter so the documents will remain essentially horizontal)**

Design Concepts

- **There must be no possibility of intrusion by insects or particulate matter; therefore, there must be no airflow through the encasement, and there will be no separate temperature control for each encasement**

Design Concepts

- **Appropriate temperature (68°F plus or minus 2°) must be maintained within the display cases and/or within exhibition hall (a lower temperature may be acceptable, depending on the design of the display module and the exhibition spaces)**

Design Concepts

- **The atmosphere of each encasement will be an inert gas such as nitrogen or argon**

Design Concepts

- **Relative humidity inside the encasements must be controlled by a passive system, such as by silica gel**

Design Concepts

- **Periodic access to the interior of each encasement must be provided to conduct periodic maintenance, such as refreshing the inert gas and examining the document for signs of deterioration**

Design Concepts

- **Documents must be secure from fire, natural disaster and acts of violence**

Big new cases

won't fit in the

old spaces

**Excellent support
for the project concept**

Statement of work for the new encasements

Statement of work for the new encasements

- **The encasement must be designed so that each case can display one page of the documents and must be esthetically pleasing and dignified**

Statement of work for the new encasements

- **The outside dimensions of the enclosures must be kept to the minimum size necessary to display the documents**

Statement of work for the new encasements

- **The encasement must be designed to the minimum weight necessary to provide the desired protection to the documents**

Statement of work for the new encasements

- **Each document shall be clearly visible through the selected encasement cover**

Statement of work for the new encasements

- **The encasement materials, gaskets, sealants, probes and any attendant wiring must be chemically stable to prevent any possibility of chemical reaction or off gassing**

Statement of work for the new encasements

- **The encasement must be designed in a manner to protect the document during periodic movement**

Statement of work for the new encasements

- **The preferred method of display is in a horizontal position (or low angle)** in such a manner that the document is not subject to stress to the parchment; **however, the issue of ADA accessibility must be addressed** including a conceptual description as to how the encasement will be displayed to meet ADA accessibility requirements.

Statement of work for the new encasements

- **The encasement must protect the documents from intrusion by insects and particulate matter; therefore, there must be no airflow through the encasement**

Statement of work for the new encasements

- **The encasement must be designed in a manner to maintain the same temperature inside the encasement as ambient temperature surrounding the encasement**

Statement of work for the new encasements

- **The encasement must be designed to hold and maintain an inert gas atmosphere**

Statement of work for the new encasements

- **Relative humidity inside the encasement must be controlled through a passive system**

Statement of work for the new encasements

- **The design must include a non-sampling means for monitoring the temperature, relative humidity and for the presence of oxygen within the encasement**

Statement of work for the new encasements

- **a means for opening the encasement to permit periodic examination of the document**

Statement of work for the new encasements

- **The encasement must not hinder the operation of the Charters Monitoring System**

Statement of work for the new encasements

- **The design shall include a means to lift the encasement (either integral handles or attachable lifting mechanism)**



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