



Enamel on Metals Conservation Network

Sub-Working Group of the ICOM-CC WGs 'Glass & Ceramics' and 'Metal'

Newsletter.....Spring 2007



Editorial

What a wonderful start we had on 1.-2. July 2007 in Germolles! Enjoying Christian's hospitality in a palace of the Dukes of Burgundy, patrons of the art of enamel, French cuisine and wine... and, yes, 19 most interesting talks on all aspects of historic enamels on metals. This experts meeting (for details, see the web, links at the end), made possible by generous support of COST, gave an up to date overview on the whole field. The meeting illustrated impressively the wealth and importance of enamelled metal objects in our cultural heritage, the outstanding Limousin objects being just one example. It originally developed from a questionnaire answered by interested members of the ICOM-CC WG 'Metals' and 'Glass & Ceramics': An overwhelming majority listed enamels as field of interest, for ongoing projects, or research questions.

<http://chateaudegermolles.free.fr/menu.html>



With all these objects in need of conservation care and all open questions (see below), it became clear what to do: The participants created the 'Enamel on Metals Conservation Network' to improve communication and exchange using modern tools. The Network is affiliated to both ICOM-CC WGs as a 'sub-Working Group'. I agreed to coordinate it until the next ICOM-CC Triennial Meeting 2008 together with Agnès Gall-Ortlik.

You will find some informations and ideas what to do in this newsletter. I do hope that it meets your needs and you will find time to contribute actively.

Let's network!

Gerhard Eggert

Conference CD is ready

Waiting will be rewarded! Christian Degrigny took over the task to collect all the Germolles speakers' PowerPoint presentations together with the programme and short abstracts of the meeting and the bibliography in a short time. Then the technical production of the CD in Brussels took some more time than expected. But now it is ready and currently mailed to all participants and a list of experts. If you are interested in the CD (it's free!) and have not received a copy until mid of April then you might ask one of the speakers (they got 5 each, list is on the web).

If you do not know one of them personally then send an e-mail to one of the members of the Scientific Committee: Gerhard Eggert, Lisa Piloni, Christian Degrigny, or Hannelore Roemich (see directory). They will be happy to send you a copy (as long as stocks last...).

Research needs identified in Germolles

The impressive collection of contributions to the Germolles meeting nevertheless made something clear: We still do not know all what we should to protect enamelled metal objects.

Be it the Baroque figurines of the Dresden Green Vault or the Burgundian silver goblets of Kunsthistorisches Museum Vienna, enamel poses specific conservation problems. This led already in the 1990's to important national research projects aiming to prevent further loss which still guides current treatment and preventive conservation.

But despite innovative concepts for prevention and treatment everyday solutions for display and conservation are still not achieved. Costly display cases are normally beyond the reach of local collections. Innovative treatment concepts like the ORMOCERs of the Fraunhofer Institute still need evaluation of their long term effects on enamel under real life exposure. Re-conservation has to face old treatments and their not always well known effects.

The metal part of the enamel/metal composite also needs more consideration. New metal corrosion products are still identified. The effect of conventional corrosion inhibitors on enamel has to be explored. The bond at the metal/glass interface via surface oxides should be studied by modern advanced analytical methods. Here, the future involvement of experts from industry could prove fruitful. Compositional studies of both sides could lead to quantitative data on the differences in thermal expansion, besides corrosion presumably the most important factor for the overall conservation state of objects. No doubt: further research is clearly needed.

Bibliography: Please help!

There is already a bibliography on enamelled metal objects: Agnès Gall-Ortlík produced it in 2001 during a stay at the Corning Museum of Glass. It can be found on the conference CD. Such a bibliography can of course not be complete in the first run! Certainly, many entries (esp. those not in English or French) will still be missing, and new literature has appeared in between.

Agnès has offered to work on the bibliography, but needs your help for this. Please check the bibliography and compare it with your own files. Then send any missing bibliographic entries to her, if possible with an English abstract. For references not easily to find in libraries, photocopies would be appreciated very much. Please note her new address for the next 12 month (see directory)

Literature Databases

They are already 2 free online literature databases for conservation in the web. If you do not know them have a look at BCIN (www.bcin.ca) and AATA (aata.getty.edu). Of course, integration of as much content as possible into these databases would be optimal. Then, also those unaware of our enamel bibliography could find what they are looking for. Therefore, I contacted Luke Swetland, AATA Manager, during the IIC meeting in Munich

in August. He will have a look at the bibliography, so that we can discuss further steps to integrate any missing enamel literature.

Networking per e-mail

If you are a member of the Enamel on Metals Conservation Network (i.e. listed in the directory below) contacting all other members is simple: just keep the e-mail with whom this newsletter has been sent and use the 'answer to all' function of your e-mail software (In case you lost this e-mail you would have to copy the member's addresses from the directory yourself). Your e-mail will then be addressed to all members of the group. Don't be shy to use it! All others will love to hear about your current projects or problems. And someone out there might have the answer to your difficult questions. Just ask! That's what networking is all about...

At the moment I think this process easier than to set up an own yahoogroup or something similar. In such a group, often all get an out-of-office-reply to someone else' out-of-office-reply to a spam mail...

People & Projects

Investigation of Iron Age / Bronze Age enamel in the National Museums Scotland (Edinburgh)

As analytical scientist, within National Museums Scotland, I often have to characterise enamel remains found on metal artefacts mainly from the Iron and Bronze Ages. These objects are heavily corroded as they were found in burial condition, with sometimes traces of enamel decoration, often hidden by the corrosion products. The characterisation of the composition of these enamels with surface analyses such as X-ray Fluorescence (XRF) or Scanning Electron Microscopy (SEM-EDX) is complicated, due to the alteration of the glass.

I would be interested to get in touch with conservation scientists dealing with the same kind of artefacts and would be pleased to exchange analytical data to extend my knowledge on this subject.

Lore Troalen

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Analyzing Cellini's Saliera

At the Kunsthistorisches Museum, Vienna, the investigation of the so called "Saliera" by Benvenuto Cellini has been started using a portable XRF system – lent by the International Atomic Energy Agency (IAEA) – in December 2006. The gold alloy as well as differently coloured enamels were investigated using the non-destructive XRF technique. At the moment the evaluation of the results is still in progress. Complementary measurements using SEM on small pieces of the enamels (already fallen off) for the quantitative interpretation still have to be done. As we plan further investigations on the "Saliera" and about 30 other enamelled gold and silver objects using an enhanced XRF system within probably next year, we would be interested in exchanging knowledge on compositions of enamels in 15th and 16th century Italy, France, the Netherlands (Burgundy), and Germany.

Martina Grießer

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Coatings on enamel

At the V&A, we come across objects made of silver and translucent enamels that in the past were restored and coated with lacquers such as frigilene or incralac. There appears to be little visual damage although we have not yet analyzed the surface other than visually. The only problem I can find so far is that the coatings wear with time and have to be removed with solvents that could be harmful to the enamels, mainly acetone.

Has anyone studied the effects of coatings used to protect metals over translucent enamels?

Catia Viegas Wesolowska

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Research on enamel in Italy

In April I'm beginning my research on enamels on metal conservation. It will take place in Italy and will be done during one year, until March 2008.

During this time, I will be working on several topics:

- the history of enamels on metal conservation, by actualizing the bibliography edited in 2001 in the USA, and by studying enamels kept in Italian collections;
- a technical research, by testing a gap-filling material for translucent enamels at the Vatican Museums' laboratories.

Agnès Gall-Ortlik

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Atmospheric Plasma Cleaning

Currently, I work together with Veerle van der Linden (University of Antwerp) to look at the bonding and the formation of corrosion products between copper and old-type lead containing enamels.

The other thing I will do with enamels is to test the practical use of my developed atmospheric plasma cleaning device for silver substrates. Does it react with the glass? Normally it should be non-reactive. In the same line of tests, the reduction of certain metal oxides in glasspaints of stained glass, which are the result and/or catalyst in glass corrosion, will be looked at.

Patrick Storme

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Copper corrosion products beneath enamel

At the workshop in Germolles, I described two cases of a sodium copper formate acetate as a mixed corrosion product of glass and copper alloys stored together with wood (see conference CD). In the meantime, I could identify two other objects with the same compound. I would be grateful for any information on any (light) green to blue corrosion products occurring in connection with enamel. Has anyone tried to identify them by powder diffraction but could not match them with the Powder Diffraction File?

For those who have no easy access to analytics there would perhaps be a possibility to get them analyzed. Please contact me!

Gerhard Eggert

Contact: gerhard.eggert@abk-stuttgart.de

Craquelure in enamel

If you have a closer look at craquelure in glass and glaze, it can be quite different. And sometimes, there is information hidden in the pattern (Studies in Conservation 1/2006, 69-75). Currently, I am cooperating with a student group from the University of Coblenz, supervised by D. Paulus, who is developing a software to analyze crack patterns from photographs. Is there anyone who has documented crack networks on enamel or has any idea about their diversity? Any observation would be helpful!

Gerhard Eggert

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Teaching in New York

New York University's Institute of Fine Arts appointed chemist Dr. Hannelore Roemich as Associate Professor for Conservation Science at the Conservation Center. As conservation scientist at Fraunhofer Institute for Silicate Research, Bronnbach Branch, she did extensive research on the conservation of stained glass, outdoor bronzes, and enamel objects from the Dresden Green Vault. From 2004 she has been Science Officer at COST, Brussels, where she developed scientific exchange programmes and international conferences. One of her last projects: the Enamel on Metal Conservation Workshop in Germolles. (see the full article in the Glass & Ceramics Conservation Newsletter 15, p. 12).

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Upcoming ICOM CC Conferences

Summer 2007 will bring us interim meetings of our parent working groups. The WG Glass & Ceramics will meet from 27-30 August in Nova Gorica, Slovenia. The programme can already be found online (<http://www.glassandceramics07.org/>). Two contributions will deal with enamel: Mark Wypyski and Terry Drayman-Weisser will report about 'Chemical Analyses of Renaissance Enamelled Jewelry', Agnès Gall-Ortlík has a poster on her research on enamel on metal in Italy.

'Metal 07', the Interim Meeting of the WG Metals is scheduled for 17-21 September in Amsterdam (<http://www.metal07.org/>). Both meetings will give the opportunity to report and discuss the Enamel on Metal Conservation Network during the business meetings and informally outside the lecture halls.

The 15th Triennial Meeting of ICOM CC will be held from 22 - 26 September 2008 in New Delhi (India). Theme is the 'Diversity in Heritage Conservation: Tradition, Innovation and Participation'. For more information see <http://icom-cc.icom.museum/TriennialMeetings/>. The deadline for submission of abstracts to the WG coordinators is very soon: 13 April 2007. The conference will be just the right time to resume the activities of our network and to decide on further initiatives.

Networkers wanted!

The more members actively take part in the Enamel on Metals Conservation Network the better for all. So please feel free to share information about the network and this newsletter with everyone who might be interested. Please also consider to write news items for your national conservators' newsletters.

If you want to get a member simply send an e-mail with your contact data and a short description what you are doing to Gerhard Eggert. All professionals or students who are dealing with the conservation of enamels on metals are eligible to participate. However, membership in ICOM-CC is encouraged (but not mandatory). For information about the benefits of ICOM membership and registration forms, see

<http://icom.museum/membership.html> and <http://www.icom-cc.org/Benefits/>.

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Imprint

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Links

Documents of the Network may be found on the websites of the parent groups:
<http://icom-cc.icom.museum/WG/Metals/MoreInfo/>
<http://icom-cc.icom.museum/WG/CeramicGlassRelatedMaterials/Newsletters/>

All documents will also be posed on the freely accessible MetalConsn-info pages:
<http://rsc.anu.edu.au/~hallam/subject%20areas.html>

Next call for submissions to the Newsletter:

15 October 2007