

Minutes and memorandum from

**European Standardization of Testing Methods in the
Photocatalytic Field**

Prague, Czech Republic, 26th November 2007

Morning session

- 10:15 - 10:30 **Introduction of the present status of standardization activities in the photocatalytic field and the position of COST 540**
Frantisek PETERKA, Research Centre for Nanosurface Engineering - NANOPIN, Czech Republic (chair of COST540, TC206-ISO representative nominated by CNI)
- History of testing methods in the photocatalytic field starting with Japanese company TOTO that made one of the first tests of commercial product. Company tests then resulted in the establishing of JIS Technical Committee for photocatalytic products that introduced JIS standards and later proposed ISO standards through WG within ISO TC 206. In the Europe COST 540 represents possible platform for standardization initiatives. Based on the knowledge of the current situation view on testing methods that could be covered by CEN standards was also given.
- 10:30 - 11:00 **Overview of TC 206 – ISO activities in the photocatalytic field**
Koji TAKEUCHI, National Institute of Advanced Industrial Science & Technology, Tsukuba, Japan (chair of WG for photocatalysis of TC 206-ISO nominated by JIS)
- Very detailed explanation about situation in Japan was presented. Great interest of Japanese industry in the commercial applications of photocatalysis resulted in the establishing of JIS TC and later in the proposals of ISO standards. Currently, there are 11 proposals of ISO methods with one already becoming full ISO standard.
- 11:00 - 11:30 **CEN existing policy and tools towards standardization in the photocatalytic field**
G rard RIVIERE, Chairman of CEN/STAR Research
- This systematic presentation explained advantages and disadvantages of CEN standards and CEN workshop agreement. CEN standards are obligatory but take long time to be accepted (at least 3 years). CWA is very flexible tool agreed by involved parties but obligation is given just by CWA signatories. Relation between ISO and CEN was given. ISO standards are not obligatory in EUROPE. Dr. Riviere also expressed support of CEN office with the selection of suitable procedure and writing proposals within the COST activities.
- 11:30 - 12:00 **Discussion and comments to preceded presentations**
- Most of meeting participants seemed to prefer direct approach towards CEN standards as they are afraid that CWA would not be sufficient for potential users from industry. Most of the comments were addressed rather to the frame condition and not to the specific work explained in draft of CWA. Nevertheless, it was understood that working plan and ways to reach CEN standards are almost identical to CWA.

- 12:00 - 12:15 **Activities of photocatalytic committee of DIN. Its relation to ISO and CEN**
Detlef BAHNEMANN, University Hannover, Germany (chair of DIN TK, TC206-ISO representative nominated by DIN)

Introduction of DIN TC activities and status was very educative. Work of that body seems to be very systematic resulting in the proposal of several ISO standards. The number of memberships in this body is impressive.

- 12:15 - 12:45 **Activities of photocatalytic committees of national standardization bodies in other countries as Italy, UK, France, Czech Republic, ...**

Due to Italcementi activities testing in Italy has long time tradition that led into introduction of national standards. France introduced AFNOR structure with international participation. UK sees establishing of national TC as important. Czech Republic established subcommittee within Nanotechnology TC. Based on other COST member countries investigation, there are no national bodies established and there are only very few knowledge about existing ISO activities. However, other countries as Greek, Austria, Slovenia, Poland and Spain have expressed their interest to follow joint European effort.

- 12:45 - 13:00 **Summary of the morning session and decision making for the afternoon program (if CWA is agreed or other tools are preferred)**

Frantisek PETERKA, Research Centre for Nanosurface Engineering - NANOPIN, Czech Republic (chair of COST540, TC206-ISO representative nominated by CNI)

All meeting participants including chairmen of already established national Technical Committees agreed that Europe needs its own system of standards, which should result from the review of the existing and new-proposed ISO standards (e.g., testing of air purification systems proposed by JIS). Direct approach towards CEN standards was favored instead of CWA. All 3 key presentation will be put to COST 540 website (www.cost540.com).

Afternoon session

- 14:00 - 16:15 **Preparation of CEN Workshop Agreement** (*comments to CWA draft, proposal of new standards in harmony with ISO*). *If CWA is refused, to propose other policy.*

As CWA was refused another policy was discussed. European participants proposed to establish a new CEN Technical Committee for photocatalysis as a priority in spite of the fact that it might be time consuming process comparing to using the CWA alternative. AFNOR, with support of others European National Standardization Bodies, was so kind to accept to do all necessary work related with establishing of the new CEN Technical Committee. AFNOR representatives expressed the optimistic view that this new CEN TC shall be established until middle of 2008.

Due to extended discussion about frame policy not too much time and energy and brain potential was left to agree on the concrete work plan. Especially, which standard methods seems to be the most important to follow. Meanwhile the draft of CWA has been considered as a good preparatory document for the new CEN TC.

Conclusions from the meeting

AFNOR colleague hope to organize first CEN TC meeting in Paris next year. However, it was also understood that standardization work initiated and financially supported by COST must continue. Since CWA was substituted by direct approach to CEN, COST role shall be seen as:

1. to prepare at least 5 proposals of CEN standards (candidates may be borne by reviewing and modifying already existing ISO proposals) The possible method to distribute ISO proposals among all members of COST strategic group for standardization shall be found (e.g., to distribute them as JIS)
2. to establish network of reference testing laboratories in EUROPE starting with COST540 member countries
3. to agree to work (cooperate, distribute among partners) on methods resulting from no. 1, incl. development of instrumentation, test protocols for interoperability of data and quality management of the research, especially for sampling definition.

This plan shall be introduced to MC of COST540 to comment it and to agree with the role of COST540 in it.

CEN-STAR (Dr. Riviere) expressed the full support to COST540 activities, especially pending to potential industry interest in Europe.