MOCA Projects

MOCA Standard.

It is our belief that the existing standards in use are incomplete and therefore MOCA has initiated a process to develop our own standard to be modeled on ASTM Standards. A long term goal will be to have the MOCA standard adopted in whole or in part by ASTM as their standard for MgO boards. MOCA intends to work wherever possible in collaboration with CMMA and NRC Construction

Given that there are multiple uses for MgO boards the Standard will separate boards into various usage classifications which may be initially described as:

1. Basic Board
2. Fire Separations
3. Structural Applications
4. SIP panels

1. Basic boards will exhibit the characteristics required to be used for interior and exterior uses including tile backers and likely will be non combustible per ASTM E 136. A low flame spread rating is required. We will be advancing the concept that similar to gypsum, MgO boards do not have to be non-combustible per CAN/ULC S114 or CAN/ULC S135 which measure weight loss and may not be the best way to determine non-combustibility for materials which rely in part on encapsulated H2O for their fire resistant properties. Basic board tests will include paint, adhesive and related compatibility tests.
2. Fire Separations will be boards or assemblies that pass these required tests.
3. Structural applications would include boards that pass cyclical ASTM E72 and related tests for suitability as shear wall and floor / roof sheathing applications.
4. SIP (MIP) boards will exhibit the structural characteristics that these assemblies require.

Our approach is to form a working group currently headed by Mike VanGeyn including Jak McCuaig PEng and Samantha Sasso EIT. Mike brings a wealth of experience from managing the fire test department of Intertek Coquitlam for 20 years. He also crafted the code compliance report for SureBoard, an MgO backer with a steel sheet bonded to it.

Mike's team are cobbling together a document that includes requirements from various ASTM and other tests required by ICC for AC386 so that we automatically exhibit compliance with this standard along with Chinese JCT-688 and European BS EN 12467. In addition to the ASTM and related tests, appearance issues will also be included. Once this draft standard is created, in time for the Sept conference, an enlarged working group will be founded, financing secured to

compensate the key members and submissions invited for a more comprehensive and useful document based on a consensus from group.

MOCA test reporting matrix

As we work towards widespread acceptance of MgO boards designers and specifiers will continue to rely on test results to properly select products and develop a comfort level with their selections. The value of testing is largely connected to the size of the sampling, more tests of similar or identical boards will provide greater assurance that all boards of this type will meet the desired requirements.

MOCA will compile as many test results as are made available to us with and without the name of the supplier so that some level of security for competitive reasons can be maintained. For its part MagO will display all tests conducted by itself. The tests will be identified as Accredited, Certified and In-house.

The matrix will attempt to connect the basic formula for each board with the results so that designers can determine how much of what kind of glass fiber mesh for instance will provide what level of bending strength. Ratios of cellulose or perlite with regard to compressive strength or non combustibility. We envision a matrix where all tests can be cross referenced to the type of board so that we can all learn what it takes to produce a board with the desired characteristics.

Any members or others willing to share the basic data, with our without redaction of the brand or supplier, can forward this information to peter@magobp.com for now. In time MOCA will host its own email service but for now mine will suffice.

We will need someone to manage this task including developing the matrix where test results can be entered.

Ecospex a division of Master Format Specifications is also building a third party verified data base of test results for "green" construction products. MOCA will also provide certain test results to be offered through this portal increasing the distribution of this valuable knowledge that will enhance the business of all members.

Julie from Ecospex will attend the conference.

MOCA certification

We have developed a process to improve the known quality of boards and suppliers while reducing costs and the time it takes to have boards and suppliers certified and listed on the Intertek / Warnock Hersey web sites. MOCA will use the services of Intertek exclusively for certification and listing purposes for the NA markets.

This plan involves using Intertek China to conduct factory audits and sampling while also creating or editing / approving any and all quality assurance manuals and procedures. All QA manuals used to make boards to the MOCA standard will be identical. Intertek will then test sampled boards to appropriate ASTM tests and on passing these suppliers and products will be listed on the WH site. In addition sampled boards will be sent to the CMMA test lab in Beijing which is accredited to IAF and ILAC for testing to the Chinese standard which included chloride and halogen testing not considered in the NA test protocols.

On an ongoing basis, samples from future orders will be forwarded to CMMA's lab for additional testing to ensure compliance. CMMA's fees are a fraction of those charged by Intertek and can provide ongoing assurance that all orders will meet specifications.

Boards that arrive in North America can also be tested in the lab currently being set up at MagO. It is the intention of MagO / MOCA to have this lab registered with Intertek's Satellite Program: http://www.intertek.com/satellite/

Once the MOCA standard is adopted by CMMA boards will be tested to this protocol depending on the class of board ordered or made.

Intertek will continue to audit as per the requirements outlined in their procedures 4 times per year in order to maintain the listing.

MOCA will focus efforts on convincing designers and specifiers to request MOCA certified boards which can be purchased direct from accredited factories or through distribution such as MagO. MOCA will levy a fee on all boards imported, 2% to 5% is envisioned with these funds being used by MOCA primarily for ongoing testing with additional investments into building awareness and knowledge of these materials. A small percentage would be used for administrative purposes.

Resellers and large volume purchasers of multiple containers would be able to purchase containers directly from suppliers with the MOCA and WH stamps. Smaller orders of single containers or LCL loads would be purchased through MagO or other distributors. In order to qualify to purchase directly the distributor would incur fees for listing and certification costs to be determined.

Conference outline:

The initial presentation on Tuesday evening will be given by Peter Francis. Francis will outline the goals, tasks and events for the week, introduce the local team and resources.

Goals:

1. Educate suppliers on the demand for consistent quality that surpasses test requirements.
2. Demonstrate local construction methods and systems including the requirement to meet all building codes and the reliance on third party testing to prove compliance.
3. Introduce suppliers to potential customers while demonstrating the market for MgO boards.
4. Develop relationships between research facilities in Canada and China in order to better regulate the products and develop new materials better able to sell in these markets.
5. Sign agreement with CMMA including MOCA standard and MOCA / WH branding.

Wed. Mike VanGeyn will provide the broad strokes about the building code, where it came from, how it operates, how to prove compliance. Combustible vs non-combustible construction. He will also discuss the benefits of group testing and certification. This talk will occur at the hotel while in the afternoon a site visit to the single family construction site.
The evening would be open for various activities to be determined and of course networking and follow on meetings.

Thur. Visit to Intertek to view their lab and receive more information on testing. Where tests can occur, how audits are conducted, what testing will cost, why Intertek is the best choice for the listing agent.
How Intertek can work with other accredited labs including the Satellite Program.

The afternoon will be a visit to a Home Depot or other building supply yard.
or
Thursday afternoon will also offer a meeting at UBC with Prof. Greg Dipple and Ian Power the authors of the recent paper on carbonization of MgO

Fri. Visit Parallam or Richply factory to see firsthand how in line QA testing can be done during the manufacturing process. (These visits are as of yet unconfirmed)

Presentation by Dr Jon Makar at the hotel. Jon is the lead scientist at NRC and will discuss the process to have materials widely accepted using CCMC (Canada Construction Materials Council) approvals
Jon will discuss:
The role of the Canadian Construction Materials Centre in the building regulatory system;

- The process for getting CCMC evaluations done;
- How and why Technical Guides are developed;

- Types of MgOCl board products that have been proposed to CCMC and the issues that would need to be explored to write a Technical Guide for testing to successfully meet CCMC requirements; and
- Quality control and other critical issues.

Day 4. Visit BCIT in morning, presentation by Fitsum Tariku and Wendy Ying, tour Building Science Center of Excellence.

Fitsum will present their findings on the characteristics of MgO board to modulate air humidity.

Afternoon MOCA AGM at Hotel

MOCA AGM agenda:

Discussion on charter
Adoption of Charter with or without edits

Election or selection of administrator, financial manager, tech committee.

Discussion on MOCA projects outlined above including agreement with CMMA

Acceptance of MOCA projects as discussed

Schedule next web based meeting, face to face meeting

Any other business

Wrap up

Evening Banquet at Hotel

Sunday, open day for follow on meetings or recreation.