Wood Coatings Symposium to Explore Changing Business Environment

Coatings for wood and wood-based substrates will be the focus of an upcoming symposium sponsored by the Federation of Societies for Coatings Technology (FSCT). Coating Wood and Wood Composites: The Changing Future will be held September 25-27, 2005 in Charlotte, NC. This ACSeries event has been endorsed by Master Painters Institute, RadTech International North America, and the Painting and Decorating Contractors of America. This unique event will bring together wood experts and coatings formulation experts to exchange information about the changing nature of wood substrates and how to improve the performance and durability of coatings for them.

The schedule of the event includes a Short Course on the first day followed by two days of presentations covering wood/coatings research, materials testing, regulations, construction techniques, and solving problems in the field. The Short Course will provide a comprehensive overview of the current issues associated with the use of wood and wood composites. Participants will learn how various characteristics of wood, such as weathering, new preservatives, and moisture can affect coating performance. Wood composites, regulatory developments, and laboratory testing methods will also be reviewed.

During the two-day symposium, experts in the research, development, and testing of coatings for wood and wood composites will present a series of lectures on current market trends and issues and state-of-the-art technology designed to address the needs of the marketplace. On each day, two tracks of topics will be running concurrently. Sessions include the following topics:

- The changing nature of wood-based substrates
- Meeting VOC requirements for the future
- Moisture problems and how to deal with them
- New developments in interior finishes
- Getting the most out of your performance testing

The conference should benefit anyone involved in research and development of coatings (resin, pigment, additive suppliers and formulators) for wood and wood composites, those who used wood-based materials (architects and builders), and those who apply coatings to wood substrates. Attendees will gain an increased knowledge of current market dynamics, new regulations, and technological advances. Some topics to be addressed include factory application of UV and powder coatings, correlating testing results with actual performance, applications for nanotechnology, how to address moisture issues, preventing and addressing wood coatings failures, and selection of appropriate wood-based materials. The conference also provides attendees the opportunity to improve contacts between the wood and paint industries.

Dr. R. Sam Williams, project leader, Wood Surface Chemistry with the USDA Forest Service Forest Products Laboratory (FPL) and Chair of the Coating Wood Task Force will be presenting the opening talk of the Short Course on "The Effects of Wood Properties on Coatings Performance." The presentation will include a discussion of wood anatomy, wood chemistry, how this varies with different species, and how processing the lumber affects the wood surface properties and, thus, its finishing characteristics. "One of the main goals of the Symposium is to increase awareness among the coatings industry and their suppliers of wood properties and the effect these properties have on the performance of different types of coatings," notes Dr. Williams. "This talk will set the stage for the remainder of the Short Course and the presentations on the following two days."

Dr. Williams will also be presenting talks on changing characteristics of cedar siding and prevention of the release of metal salts from CCA treated wood. The Forest Products Laboratory has found that saw textured surfaces give far superior performance to those of smooth-planed surfaces when coated with low VOC formulations. With arsenic-treated woods, Dr. Williams and Stan Lebow have found that finishes such as semi-transparent stains that retard photochemical degradation of the wood surface, decrease the loss of chromium, arsenic, and copper salts from the wood surface. "The conference offers an opportunity for technology transfer of FPL research. I hope to be able to help increase the understanding of wood and its properties among those doing research and development in the coatings industry and make them aware of the changes that are taking place in the wood and paint industries," Dr. Williams adds.

Having representatives from both the coatings and wood industries in one conference is a key attribute for this symposium, adds Dr. Victoria Scarborough, Director of R&D, The Thompson’s Brand, The Sherwin Williams Wood Care

by Cynthia Challener
JCT CoatingsTech Contributing Writer

www.coatingstech.org
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Staying abreast of current trends and issues can be a significant challenge in a rapidly changing business environment, and this is the situation that faces those involved in all aspects of coatings designed for wood and wood composites. Increasing regulatory restrictions, introduction of tropical woods, and development of wood composites are just some of the factors impacting this market. The Coating Wood and Wood Composites conference was specifically designed to explore the changing nature of wood and wood composites and the coatings used on these materials. Attendees will learn about new technologies related to the different properties of wood and wood-based materials in order to be able to maximize the performance and durability of the coatings applied to them.

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- Meeting VOC requirements for the future
- Moisture problems and how to deal with them
- New developments in interior finishes
- Getting the most out of your performance testing
- UV curing uses on wood/factory finishes
- Staying abreast of current trends and issues

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chitects, retailers, and contractors. Mr. Mall is a mem-
ber of the Wood Coatings Task Force and the current
coatings chairman of the Joint Coatings and Forest
Products (JCIP) committee, which is focused on devel-
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formance of wood-based products. He will be present-
ing a talk on the changing dynamics for
exterior substrates, including wood and wood compos-
ites. "A formulator or company who is informed
of new trends, substrates, and building recommendations
will have a decided market advantage in providing
workable and accurate solutions for today's home-
owner, contractor, and architect," he says.

In the past decade, the use of wood has dropped
from a 33% share of the market for exterior siding
for new single family homes in part because the public has
developed an unwarranted negative perception of its
performance capabilities, according to Mr. Mall.
Difficulties with wood siding have resulted from
changes in substrate choices, coatings, and construc-
tion techniques, resulting in an influx of different types
of substrates being offered for exterior siding.

An awareness of these issues and choices, and an un-
derstanding of current best practices may make it possible
for homeowners to obtain the best performance possi-
bile from their siding, which will benefit both the wood
and coatings industries. "By building a new state-of
the-art latex plant at its St. Charles, LA, facility, Dow is
making a significant investment in its UCAR Emulsion
Systems business and the market UES serves. These in-
clude the architectural and building products markets,
and Dow recognizes that offering a robust product mix
is essential to meet the future trends of these markets."

Through his talk, Mr. Mall also hopes to make atten-
dees aware of the ICFP committee and its efforts to
get information about best practices. "We want peo-
dle to be aware of the amount of reliable information
that is available and to get a sense of the incredible
level of activity in this sector," he explains. "We want to
be in contact with the industrial sector that produces
wood building products to ensure an ample margin of
safety from hazardous air pollutant (HAP) emissions
exists in this country," he notes. He will be discussing
the maximum achievable control technology (MACT)
requirements for the wood building products National
Emissions Standards for Hazardous Air Pollutants (NE-
SHAP), specifically the applicability of the rules to dif-
ferent wood building products and the emission limits
associated with these products. "Controlling HAPs
from coatings is good business and good stewardship of our country's air.

The issue of moisture in wood and wood composites will be ad-
dressed by several speakers. Stephen Smulski, Ph.D., president of Wood
Science Specialists Inc., will be giving two presentations on this topic. Dr.
Smulski has investigated moisture-caused problems in energy-efficient
wood-frame buildings for over 20 years, and wants to share the knowl-
dge he has gained on how to address these problems. "Construction
practices and the characteristics of wood siding have changed over the
years such that walls of wood-frame buildings have gone from being
leaky, warm, and forgiving of getting wet to being tight, cold, and unfor-
giving. Additionally, manufacturers began formulating solid color stains
that tend to sit on the surface of wood rather than penetrate into the
wood as traditional oil-based paints did," he explains. His talk will in-
clude suggestions for addressing the chronic mildew, extractive staining,
and premature flaking and peeling of coatings—all of which are caused by excessive mois-
ture in siding.

As can be seen from the variety of presentations dis-
cussed in this article, there will be an abundant choice
of relevant topics for attendees. Once the conference is
concluded, they will have gained insight into the cur-
rent dynamics of the market for wood and wood com-
posites. learn how to select appropriate wood-based
materials and coatings formulations, and understand
how to maximize the performance of these products.
"Performance of finishes and their interactions with
the structure all start with an understanding of the
wood substrate. This is no different than coatings on
other materials, such as metals. Wood shrinks and
swells with changes in moisture content. It can decay,
it can be infected with insects, but it can also last for
more than 1000 years in properly designed and main-
tained structures," says Dr. Williams. "It all depends on
the choices made by architects, contractors, and the in-
dustries supplying materials for structures. Attendees at
this conference should leave with more tools in their
toolbox to achieve long service life for finishes and the
structures on which they are applied."
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gather information about best practices. "We want peo-
ple to be aware of the amount of reliable information
that is available and to get a sense of the incredible
level of activity in this sector," he explains. "The com-
mittee is a source of unbiased domain informa-
tion to help the industry and its customers to get the
best performance possible out of wood-based materials
and the coatings applied to them." The committee also
welcomes new information and, especially, new volun-
teers who would like to participate in its activities.

Christopher White, research chemist with the Na-
tional Institute of Standards and Technology (NIST)
is excited about the opportunity to talk about service
life prediction at the conference. "It is my hope that
the attendees will have a greater understanding of the
issues related to durability and the accurate predic-
tion of service life, which includes the economic
costs associated with not having accurate data. This un-
derstanding will help them make more informed deci-
sions about the actual costs of the materials they se-
lect," he explains.

Dr. White's talk will highlight the continuing work at
NIST with industrial partners to develop data that will
allow an accurate prediction of in-service performance
in less than real time. He will also provide a link be-
tween the data and the economic consequences of ma-
terials acquisition decisions. "Not knowing about the
durability of the materials you have or even own is
wasteful," Dr. White says.

The Environmental Protection Agency (EPA) will be
represented at the conference by environmental scien-
tist H. Lynn Dail, who will be giving a talk on current
and upcoming environmental regulations. "I want to
be in contact with the industrial sector that produces
wood building products to ensure an ample margin of
safety from hazardous air pollutant (HAP) emissions
exists in this country," he notes. He will be discussing
the maximum achievable control technology (MACT)
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