Biographical Information:

Rachel Detwiler is Associate and Senior Materials Engineer at Braun Intertec Corp., where she provides consulting and troubleshooting services in concrete and concrete materials. Prior to joining Braun Intertec in 2004 she was a Principal Engineer at Construction Technology Laboratories in Skokie, Illinois, where she conducted research and forensic investigations in the areas of concrete and concrete materials. Previously she was Assistant Professor at the University of Toronto. She is a registered professional engineer in Minnesota, Wisconsin, Illinois, North Dakota, and Hawaii. She has served on three committees of the National Academy of Sciences, providing specialized expertise to the federal government on the cleanup of radioactive wastes remaining from the Manhattan Project and the Cold War.

Abstract:

The title of Dr. Detwiler’s talk is “Concrete Durability and Corrosion of Reinforcement.” Because of its high pH, concrete provides a protective environment for steel reinforcement. However, chloride ions from deicing salts can migrate into the concrete, catalyzing the corrosion reactions. The pH can be reduced over time due to leaching and carbonation. As a result, corrosion of reinforcement is often the cause of premature failure of concrete structures. Good design detailing and good concreting practice can limit the rate of chloride ion ingress. Some additional measures to reduce the rate of corrosion may also be beneficial, but these must be balanced against the constraints imposed by the service conditions.
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JOIN US NEXT TIME...

The next MN Chapter ASM meeting will be Wednesday, January 16th. The meeting will feature our ASM Trustee, and it will be the annual “Past Chair Night.” The chapter celebrates all of the chairpersons who have served the membership.
# Program

<table>
<thead>
<tr>
<th>Month</th>
<th>Event</th>
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<tbody>
<tr>
<td>September 19</td>
<td>Plant Tour at Cortec, White Bear Lake, MN (No Dinner)</td>
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<tr>
<td>October 17</td>
<td>“Concrete Durability...” Rachel Detwiler, Braun Intertec, Green Mill-Plymouth</td>
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<tr>
<td>January 16</td>
<td>ASM Trustee Visit/Past Chair Recognition</td>
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<tr>
<td>February 27</td>
<td>All Day Seminar, “Heat Treating,” Hennepin Technical College, Brooklyn Park</td>
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<tr>
<td>March 19</td>
<td>Minn TS (Technical Symposium) Joint Societies Meeting at Medtronic</td>
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<tr>
<td>April 21</td>
<td>TBD, Scholarship Presentations</td>
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<tr>
<td>May 16</td>
<td>TBD, Annual Business Meeting</td>
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