



## SPRINGING INTO SUCCESS

*Spring is at our doorstep - baseball players are in spring training, the days are getting longer, nature is beginning to reveal itself. These are welcome signs after an especially cold winter for much of the U.S. and our neighbors.*

*Early in a new year, it is common to make resolutions, typically goals to improve one's behavior or health. Here at NGC Testing Services, our New Year's resolution is to make 2018 even better than 2017.*

*Last year was our best yet in the number and quality of tests conducted. We also continued to implement improvements in several areas - we are always striving to grow and improve, and to find new ways to serve you better.*

*In this issue, our technical articles will outline pass/fail criteria for ASTM E119 testing and explore OITC ratings in acoustical testing. You also will have an opportunity to meet Anthony Rivers, a test technician in our acoustical lab.*

*As always, let us know if we can help, and enjoy the better weather to come with spring. It will be nice to see baseballs flying through the air instead of snowballs.*

**Bob Menchetti**  
Director of Laboratory Facilities & Testing Services

## UNDERSTANDING PASS/FAIL CRITERIA FOR THE E119 FIRE TEST

How do we determine that a wall, partition, roof or floor that you manufacture will be safe when exposed to fire? We rely on the ASTM E119 test method. This comprehensive test allows us to evaluate the duration for which certain building elements can contain a fire, retain their structural integrity or exhibit both properties during a predetermined test exposure. To conduct this test, we expose numerous building elements to uniform fire exposure and evaluate the period of resistance before the first critical point of behavior is observed.

The following critical timed events are recorded during the ASTM E119 test. Pass/fail (endurance time of the assembly) is when the first of these events occurs:

- Temperature rise of 250 degrees F above the ambient temperature on the average of all unexposed surface thermocouple locations.
- Temperature rise of 325 degrees F above the ambient temperature on any single unexposed surface thermocouple location.
- For assemblies where structural steel members are utilized, maximum temperature on a structural steel member exceeds of 1,100 degrees F.
- Any flaming is observed on the unexposed surface of the test specimen.
- Smoke and/or gas emissions are hot enough to ignite cotton waste material applied on the specimen surface.
- Failure to sustain the applied load during exposure of load-bearing assemblies. In many cases, the ASTM E119 test requires an additional evaluation of the assembly where it is subjected to a hose stream test to establish a fire-resistance rating.



For more details about this test (including information about what this test standard does not provide), please contact us at **716-873-9750** Ext. 302 or [email@ngctestingservices.com](mailto:email@ngctestingservices.com). We're well equipped to help you run the ASTM E119 test and will support you every step of the way.

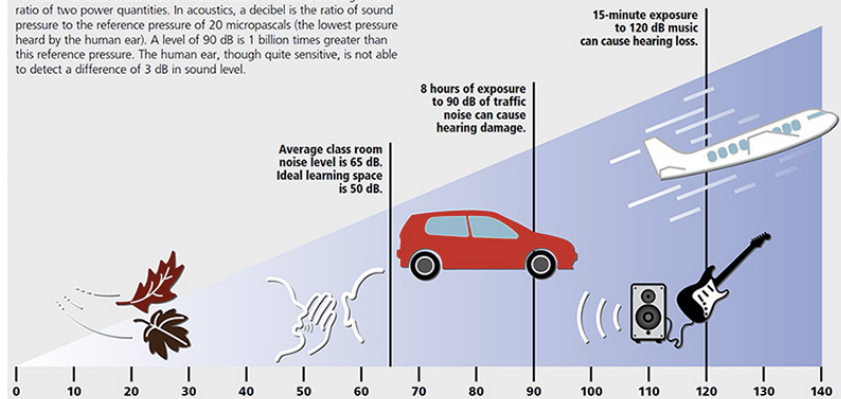
## WHAT IS THE OUTDOOR-INDOOR TRANSMISSION CLASS (OITC) RATING SYSTEM?

The OITC rating system measures the transmission of street sounds (such as car horns, sirens, construction and low-flying airplanes) through exterior walls, windows, doors and other facade elements. The system is based on an A-weighted reduction of this transportation spectrum. Exterior transportation noise tends to have a lower frequency than interior noise (such as voices), so the OITC rating system emphasizes low-frequency sounds in its calculations. The difference between this transportation spectrum and the transmission loss data measured in ASTM E90 STC tests is used to calculate OITC ratings as per ASTM Test Procedure E1332. In addition to acoustical evaluations, NGC Testing Services also has capabilities to conduct tests on these type of exterior products and systems for fire performance, wind load, water penetration and air infiltration.

#### DECIBELS (dB) OF COMMON SOUNDS

##### Did you Know:

"Decibel" describes how loud a sound is and it is defined as a logarithmic ratio of two power quantities. In acoustics, a decibel is the ratio of sound pressure to the reference pressure of 20 micropascals (the lowest pressure heard by the human ear). A level of 90 dB is 1 billion times greater than this reference pressure. The human ear, though quite sensitive, is not able to detect a difference of 3 dB in sound level.



## MEET ANTHONY RIVERS, TEST TECHNICIAN

Analyzing and evaluating acoustical test data requires a keen, finite sense of hearing. And that's just what Anthony Rivers, Test Technician in our acoustical lab, has developed under the guidance of senior acoustical test engineer Andy Heuer.

Anthony has 15 years of experience in testing, including three years managing another lab prior to joining NGC more than three years ago. He has become a valuable member of the NGC team and quickly demonstrated his abilities in acoustics and to accurately conduct, record and report test results. Our clients find Anthony a pleasure to work with and appreciate his knowledge, attention to detail and accuracy.

Anthony is an islander. Before you picture him in a Hawaiian shirt sitting under palm trees with a tall fruity drink in hand - he lives on Grand Island, which is what you cross and where you pay your tolls on the way to Niagara Falls. Unless he acquires a boat, he has the luxury of a great view of the Niagara River as he crosses the Grand Island bridges each day to and from work, along with the adventure that navigating these bridges provides. Along with acoustics, Anthony's interests include his family and baseball (perhaps this was unavoidable since Andy has a Yankee shrine in the adjacent office).



Feel free to contact Anthony at 716-873-9750 ext. 352, or e-mail him at [arivers@ngctestingservices.com](mailto:arivers@ngctestingservices.com) to discuss your next acoustical testing project. He will also be happy to tell you about all his island adventures.

#### TAKE A CLOSER LOOK!

Check out our new [brochure](#) and watch our [video](#) for the latest updates about NGC Testing Services' capabilities. We're ready to put your products to the test, and this is a great way to see all that we can do for you. Take a look and give us a call — let us know how we can help.



  
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