TransTech Systems, Inc.

ENSURE YOUR DENSITY WITH NON-NUCLEAR DENSITY TECHNOLOGY

While having a quality control plan in your construction business is important, ensuring you're getting the most out of your density readings in a safe and sustainable way is key for forward-thinking companies

It's time to evolve or expire in the construction industry. Companies who choose not to embrace the technologies and advancements available to help them complete jobs in more efficient and more profitable ways will be left behind in favor of companies that embrace forward-thinking mentalities.

These advancements can be seen everywhere throughout the construction process, but are particularly prevalent in the quality control process. Density gauges have been available for years to help improve the quality and longevity of roadways, but you may not be getting the most out of this process if you're still using a nuclear device.

QUALITY CONTROL MEETS EASE OF USE

Non-nuclear density gauges like the TransTech Systems, Inc. PQI 380 were designed to eliminate the safety, transport, storage and operation issues associated with nuclear technology. Introducing the PQI 380 non-nuclear density gauge into your asphalt paving quality control process can not only save you money, but also help to produce longer lasting, more sustainable pavements.

"The PQI allows my compaction foremen to quickly and easily monitor the in-place density behind our rollers, much easier and faster than traditional nuclear density gauges,: Shawn Hammer, QC Manager at Fisher Sand & Gravel said. "The ease of use, speed, accuracy and smaller footprint makes the user's job much easier to perform."

Using the PQI 380 on your paving project means you have immediate information on the density of the asphalt mat as it is being compacted. This gives you confidence that the specified percentage relative compaction or percentage of air voids is being achieved and if it is not, then corrective action can be taken right away to avoid potential penalties.

"We've tried a variety of density gauges both nuclear and non-nuclear. The PQI is more accurate and has the options for testing and data recording that are most useful to us," David Hose, Vice President, Materials & Field Quality at Mathy Construction Company said. "We get faster and more reliable results with a PQI than we do nuclear gauges. Even before we have an offset we identify trends and lower density segments and make faster corrections to our rolling patterns. They are safer, easier, lighter, faster and more accurate than nuclear gauges and allow us to make corrections before the mat is set up. If your state or federal projects do not require a nuclear gauge you should seriously consider switching to non-nuclear. You will save time, test a larger portion of the mat and spot deficiencies before they become penalties. If you are required to use nuclear gauges I would recommend supplementing with a non-nuclear gauge. The PQI 380 is the best we've found."

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TransTech's PQI technology is also considered an environmentally preferable technology, which is a technology whose use is intended to mitigate or reverse the effects of human activity on the environment. As it uses electrical impedance generated from rechargeable batteries the impact on the environment is negligible. Sustainability is also supported as reducing the air voids content by just 1% can increase the pavement life expectancy by up to 10%. Increasing the durability of the pavement can reduce the level of premature maintenance required which reduces costly and inconvenient disruption and delays to traffic flow.

SAFETY & THE FUTURE OF WORK

In addition to the environmental benefits, the PQI 380 can bring tangible technical and commercial benefits to a company, whether you are a large-scale paving contractor or a company working on municipal contracts or parking lots. First and foremost are the safety benefits associated with eliminating nuclear density technology.

"The initial purchase price of a non-nuclear gauge is comparable to a nuclear gauge, and after that there is no comparison," Hammer said. "The overall cost of ownership is much less than a nuclear gauge. There are no bi-annual leak tests, no annual license fees, no extensive safety training, no extensive utilization, storage, and transportation records required. The annual calibration is much easier as shipping the gauges back for service and calibration is as simple as shipping a standard package. If you extensively use nuclear densometers to monitor in-place densities of asphaltic concrete pavements then the PQI could almost be considered the "silver bullet". No more nuclear regulations or licensing to deal with, no more complicated storage issues, anyone can be trained and use the gauge, it's easy to use and provides instant readings."

At the end of the day, the on-going costs of ownership of a PQI 380 is less than $700 a year. Whether you use nuclear density gauges now or want to improve the QC processes of your asphalt paving, the introduction of the environmentally preferable, safe and easy to use PQI 380 non-nuclear asphalt density gauge can go a long way to supporting your business both commercially and technically.