

Case Study

Pavement Preservation

OEM Seals in Safety with MELTRIC Switch-Rated Plugs and Receptacles

Seam Sealing Systems, a pavement preservation firm, needed a high-capacity, compact, plug and play electrical connector for their infrared asphalt heaters. After inspecting a wide variety of connection devices, Project Engineer Isaac Sargent specified MELTRIC Switch-Rated plugs and receptacles for all of their machines.

“We looked at other plugs and most of them were heavy and bulky. MELTRIC plugs were compact, Switch-Rated and dead-front,” said Sargent. “Since we operate our machines at construction sites in remote locations, we were also concerned about safety. After considering the worst case scenario of someone possibly pulling the plug out ‘live,’ we chose the MELTRIC plug because that’s never a problem.”

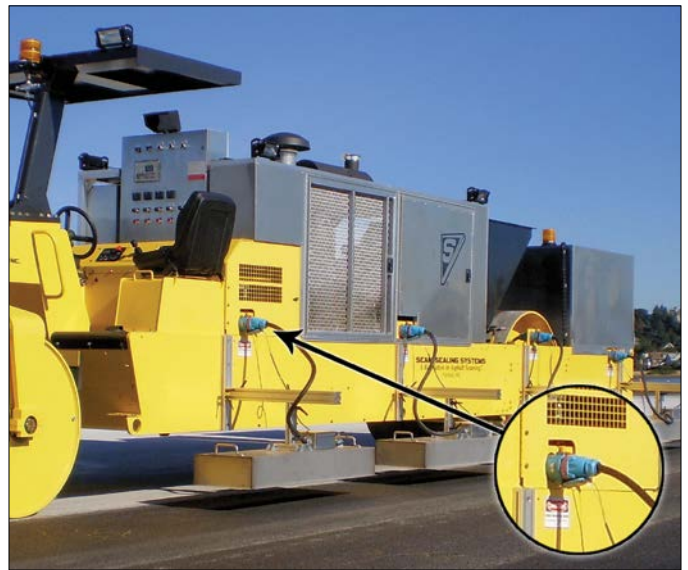
Solving a Leading Cause of Pavement Failures

Founded in 2008, Hermon, ME-based Seam Sealing Systems Inc. designs and builds machinery used to preserve the condition of airport and highway pavements by solving one of the leading causes of asphalt pavement deterioration: the failure of the longitudinal joint. Studies have found that premature deterioration of the longitudinal joint is primarily caused by a non-watertight, low-density joint. To solve this problem, Seam Sealing Systems Inc. developed a joint sealing process based on electric infrared heating technology that can create a solid, compacted and watertight joint with increased bonding strength, which cannot only extend the service life of the pavement, but also reduces overall maintenance costs.

Switch-Rated Plugs: The Ideal Connector for High Amperage, Removable Asphalt Heaters

When Mr. Sargent assumed responsibility as the lead engineer of the seam sealing machines, he was charged with finding ways of making them more user-friendly, safer, and easier to operate. One of those ways involved the power connector used for the electric infrared asphalt heaters, which are frequently removed either for transport to a job site, or moved to a different side of the machine based on a particular sealing job’s requirements.

Due to limited space on the machines for mounting junction boxes or electrical disconnects, he sought a compact connecting device that had a quick changeout feature. Most of the plugs he



Electric infrared asphalt heaters are quickly and safely connected or disconnected using MELTRIC Switch-Rated plugs and receptacles.



MELTRIC Switch-Rated plugs and receptacles can be used to safely make or break electrical loads.

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inspected were not well-suited for these requirements. “But the Switch-Rated, dead-front, MELTRIC plugs stood out from the other devices,” Sargent said. “The size of the MELTRIC plug is so small and compact in comparison to everything else. Nothing else was Switch-Rated. We connected it right on the machine and didn’t need a junction box.” Presently, all the heaters and dryers on the sealing machines are connected with MELTRIC DS-100 plugs and receptacles.

MELTRIC Switch-Rated plugs combine the safety and functionality of a disconnect switch with the convenience of a plug and receptacle. They are an approved ‘line of sight’ disconnect switch, which eliminates the need for space-consuming interlocks and auxiliary disconnects, resulting in a compact footprint. Push-button circuit disconnection provides fast, safe connections and disconnections.

While the size, electrical ratings, and performance of MELTRIC DS-100 plugs satisfied the power connection requirements of the asphalt heaters, Mr. Sargent liked the dead-front safety feature of the plugs. “We work on projects where some of the laborers who work around our machines aren’t familiar with electricity. So we were concerned about someone walking up to the plug and potentially unplugging it while it’s in use. You can’t do that with a MELTRIC plug,” Sargent said. The dead-front design makes it virtually impossible for a user to be exposed to either ‘live’ parts or arc flashes. In addition, MELTRIC plugs have provisions for lockout/tagout (LOTO). Both of these features help employers simplify compliance to workplace electrical safety standards such as NFPA 70E.



MELTRICS DS 100 receptacles feature a safety shutter that prevents exposure to live parts and arcing.

The Growth of Pavement Preservation

“As we sell more sealing machines, we plan to purchase more MELTRIC plugs for our connection needs. We already use them on quite a lot of different projects,” said Sargent. As a decades-long supplier of electrical connecting devices in the construction and heavy equipment industry, MELTRIC will continue to be an important supplier and business partner for pavement preservation companies in the years to come.