

Italian road train from Dynapac

Italian asphalt specialist Matteini takes delivery of a new Dynapac PL2000LS planer and CP271 pneumatic roller – bringing its Dynapac fleet to 10 units - to provide a complete ‘road train’ on its SR71 repavement contract.

In an ongoing rehabilitation contract for Italy’s State Road SR71, local contractors Matteini Srl (Arezzo) is utilizing its Dynapac ‘road train’ comprising a newly delivered PL2000 planer, F141CR and CP271, CC522 HF and CG233 tandem asphalt rollers.

The SR71 connects Arezzo and Florence in Tuscany with Matteini’s contract currently concentrating on the km section between Arezzo and Bibbiena.

An ancient highway, the SR 71 was last repaved over its full length more than some 25 years ago. Since then, as a result of increased traffic volumes, poor grade asphalt materials and old compaction techniques, pot holes and severe cracking has required ongoing repavement along the route.

The highways heavy traffic volumes call for Matteini to undertake the repairing contract throughout the night time hours. Initially during the first night milling and making good for the next days traffic is carried out before paving the wearing course on the second night.

Accordingly to Matteini’s owner Roberto Paulo Matteini work is generally confined to sections up to 3km long due to logistics including the distance from the asphalt plant.

“We would anticipate laying 10,000m² over a 3km section” he said. The two-lane highway features a full width of 10.5m

Generally the wearing and binder courses are milled in a single pass to a combined depth of 12cm – using the newly delivered Dynapac PL2000LS, operating at its full 2m operating width. Powered by a Cummins diesel engine rated at 447kW/600hp has a cutting depth of up to 320mm.

Continuing the first night's operation, Matteini repaves the 8cm binder course with a 0/20mm asphalt mix. Compaction duties involve a Dynapac CP271, delivered earlier this year, and a CC522HF articulated tandem roller.

A bitumen emulsion modified spray is applied above the binder at 1kg/m² to ensure improved drainage and provide a waterproof 'buffer' for the binder course. The 4cm porous wearing course, featuring a 0/12 mm porous mix with 20 % voids, provides anti-skid properties.

In order to meet the specified 99% compaction density Matteini initially used a Dynapac CG233HF with three vibrating passes and a single static pass. The CG233HF asphalt roller has been designed to ensure high frequency mode with low amplitude for thin asphalt layers with a high stone content. It ensures effective compaction without crushing the stone.

Compactly built with a length of less than 4m, the unit is less than 3m high and features a drum width of 1450mm plus a 900mm offset drum drive. The CG233HF is followed by three passes with the Dynapac CC522HF making two vibrating and one static.

"Today, compaction techniques with the Dynapac CC522HF offer significant benefits" said Roberto Matteini, adding, "This together with the use of porous asphalt will ensure a longer lasting life span for the repaved highway."

"The Dynapac CC522HF offers improved productivity and visibility plus the High Frequency feature provides better compaction without cracking stones."

Matteini Srl

Matteini Srl can trace its origins to 1817 when the company prepared the region's roads with cobbles. Following the introduction of asphalt techniques in the 1950's the family company continued to expand its operations; taking delivery of its first hydraulic paver in 1982.

Roberto Matteini joined the company in 1987 taking over from his father at the turn of the century.

Since then Roberto has taken the company into a modernisation programme culminating in today's Dynapac fleet comprising two pavers, two planers and six rollers.

Illustrated under the shadow of a 13th century castle in CastelInvovo, close to the SR71, Matteini's Dynapac F141CR paver and CC142 tandem roller are paving approximately 5000m² for rounds around a new supermarket.

Laid to a depth of 14cm with 0/14 asphalt Matteini made four passes – three vibrating and one static – to meet the specified compaction density; completing the contract within a day.

Dynapac is part of the Atlas Copco Group within the Atlas Copco Road Construction Equipment division. We are experts on asphalt, soil and concrete applications, committed to customer performance worldwide. Products and solutions are marketed under the Dynapac brand and complementary brands. Headquartered in Stockholm, Sweden, the division has production facilities in Europe, USA, South America and Asia. For more information, visit www.dynapac.com