

CONTROL 
TECHNIQUES

AUTOMATION TAKES THE STRAIN

ROBOSTREET | MACHINE TOOL

DRIVE OBSESSED

SAFER, QUICKER & MORE COST EFFECTIVE

Dutch company Robostreet has developed Streetwise 1200, the first of a range of machines to lay block paving. Control Techniques drives control the hydraulic pump and compressor, and control the servo adjustment of a camera system and rotating laser.

The Challenge

“We recognised there was a significant market need for such a vehicle,” explained Mr A. van Wijngaarden, Technical Director of Robostreet.

“Here in Holland, the heavy work involved in street paving is a major contributor to 5.9% of employees being off sick through back injuries – a national cost of around 120,000,000. And most countries of the world have a similar problem. Local health and safety legislation is now limiting the amount that can be laid manually and the race is on to build street paving machines that are accurate, safe, fast and cost-effective.”

The Benefit

Control Techniques Commander SK were chosen because unlike the other drives that were tested, they have sufficient DC residue to ride through a large dip in AC power from the on-board diesel generator without tripping.

A further factor was the drives' compactness. The new automated system means that the heavy work is done by a machine rather than a human, which has reduced injuries, particularly back strain. It makes the paving process safer, quicker and more cost effective, and the local authority in Rotterdam purchased 22 machines immediately on completion of the development.

Overview

- Lower operating costs
- Less back injuries & time off
- Compact drive
- Extremely versatile

The Solution

Control Techniques worked with Robostreet to develop a solution.

Each vehicle uses Commander SK AC drives: 5.5kW size D model controls the hydraulic pump, a 3 kW Commander SK provides compressor control, and two small 0.25kW Commander SK drives provide rotation control for two positioning lasers. Another small SK provides precise height positioning of the camera in the vision-control system.

Pallets of blocks are loaded into the machine and it is driven by remote hand-held wireless control to its starting point. The robot picks up bricks, using the vision-control system, and places them precisely one at a time in the required pattern. It has tracked transmission, with the facility to put down hydraulically controlled rams to provide a 'lift-and-turn' action on recently paved areas. When the store is nearly exhausted, the system calls for a new load.

