



Work continues on the northern section of the tunnel. A second machine is expected to reach its target by the end of the year.

SMART tunnel breakthrough

KUALA LUMPUR: Come Thursday, Gemilang, the boring machine working on the SMART tunnel will break through at Taman Desa.

The machine's emergence on the southern tip is a milestone as it would have bored through four kilometres of the southern stretch.

Work on the northern section, measuring close to six kilometres, continues, and a second machine is expected to reach its target around the end of the year.

SMART, an acronym for Stormwater Management and Road Tunnel, is a project the Federal Government initiated to alleviate flooding in the Kuala Lumpur city centre.

Recent checks showed that the three-tiered tunnel has a giant storm drain at its lowest section where segments of

concrete are fitted together like pieces of jigsaws, forming a pattern of half-rings.

Clean and bright, the homogenous sections of the tunnel hide a waterproofing system which incorporates the latest technologies.

Willie Kay, managing director of MC Bauchemie Muller GmbH & Co, a Germany-based company that produces injection systems for building and construction repair work, said tunnelling equipment and lining systems advanced technically each year but leakages in tunnels were still a practical reality.

Indeed, in the half-built tunnel, long, narrow dark stains appear on the segments and joints of the tunnel, indicating water seepage.

Technical and business development manager Richard

Holt said there were dry surface cracks and wet cracks in the tunnel, pressurised due to the presence of water behind the concrete segments.

"We have to finish on time, so we are using quality products to inject into the cracks, making sure they don't leak," he said as he showed the waterproofing injection resins manufactured by MC Bauchemie Muller, a name known to most builders and engineers.

"It is a strong foam which expands to 40 times its normal size when reacting to water," he said, adding that the product had to be injected correctly. The crews were trained in Germany.

Motorists are expected to be able to use the partially opened motorway by the middle of next year.