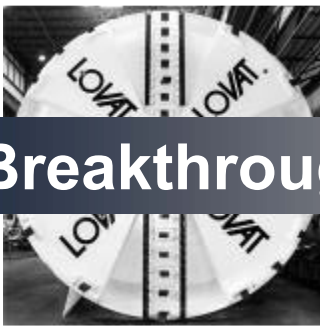


4.7m Tunnels Lower Lea Valley Cable Tunnel, LONDON, UNITED KINGDOM



J MURPHY & SONS LAUNCH TWINS FROM A SINGLE 15m DIAMETER SHAFT

The First TBM arrived on site at early May 2006 and was lowered into shaft and assembly starting in the first week of June. The TBM was assembled in "short mode" configuration to allow it to be launched out of the 15 meter diameter shaft. Key components such as substation, electrical panels and all support systems (grease, ground conditioning) were temporarily installed in bottom of shaft until TBM mined ahead allowing space for rear gantries to be built up. The TBM was tested and ready for mining in approximately two weeks, from the commencement of assembly. Mining began on June 22nd, and continued until ring number 22 (31 meters), on June 30th to allow TBM No. 2 to be installed.

TBM No. 2 arrived on site at the end of June 2006 and was lowered into shaft and assembly starting the first week of July. Again, the TBM was assembled in "short mode" configuration and in same manner as first TBM. This TBM was launched on July 18th, and mined until ring number 22 (31 meters), on July 27th and then the mining operations were temporarily halted. The first gantry sections for both machines were the added to continue mining

Mining operations were resumed on both TBMs in September 2006. TBM No. 1 mined until ring number 71 (100 meters) and TBM No. 2 mined until ring number 95 (133 meters). This allowed the completion of the assembly of the remaining gantries. Full mining operations commenced the first week of October.

EXCEPTIONAL PRODUCTION FROM A SMALL SHAFT

Two TBMs mining from a single 15m diameter shaft have achieved production rates that would be considered exceptional for a single TBM.

- Best shift, one TBM: 19 rings (26.6 meters) in 11 hours
- Best shift, both TBMs: 33 rings (46.2 meters) in 11 hours
- Best day, one TBM: 33 rings (46.2 meters) in 24 hours
- Best day, both TBMs: 61 rings (85.4 meters) in 24hours
- Best week, one TBM: 123 rings (172.2 meters) in 5 days or 10 shifts
- Best week, both TBMs: 228 rings (319.2 meters) in 5 days or 10 shifts