CASE STUDY
REHABILITATION | SLIPLINING

Project Name:
Q Line South

Subcontractor:
E.R. Itshaky-Microtunneling Ltd

Location:
Bat Yam, Israel

Owner:
Dan Regional Association for Environmental Infrastructure (IGUDAN)

Akkerman Equipment:
SLS 100 Modular Jacking Frame and Diesel Power Pack

Pipe:
70-78-in. (1,800-2,000mm), 98-10-ft. (2.4-3m) Length GRP

Total Length/Longest:
4,970-lf. (1,515m)/2,510-lf. (765m)

PROJECT OVERVIEW

Central Israel has experienced a revitalization causing rapid population growth, and capacity concerns for the Q Line Interceptor, its 40-year-old wastewater infrastructure.

The owner's inspections of the Q Line revealed signs of significant deterioration and the potential for a service failure. Dense existing underground infrastructure negated the consideration of adding new line by pipe jacking. They considered several technologies for the restoration before landing on sliplining as the preferred method.

THE CHALLENGES

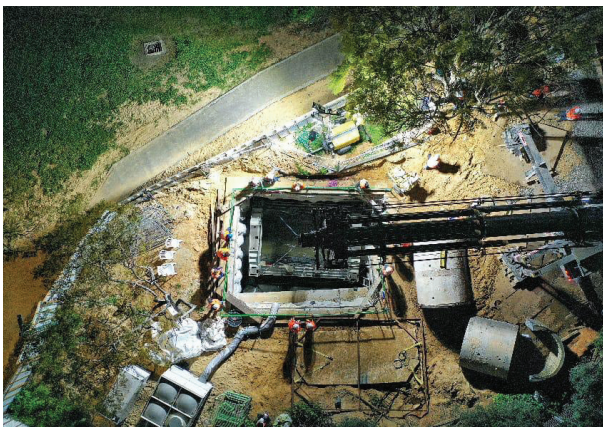
- Limited open space along the Q Line
- Live flow sliplining work could only be executed when stream level was at 50% of capacity, so limited to two, two-hour construction intervals in the early morning hours
- 60% of total installation had to be conducted in live flow
- Final, dry installation culminates with a curved section that emerges in a multi-level shaft

THE SOLUTION

The length and diameter of each section required equipment suitable for high jacking forces and execution under streaming sewage. The Akkerman SLS100 sliplining system complies with these parameters.

OUTCOME

- Successful installation of three sliplined alignments, two in live sewage flows
- Achieved a six pipe per hour production rate
- Due to the Israeli regulation to protect underground water pipes which are adjacent to sewage, the last section was performed in two stages in a dry environment
- All sections were completed within the original project timeline
- Q Line South project was the first of its kind in Israel and the largest sewer line installation while still underflow.



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