



North American Society for Trenchless Technology
2007 No-Dig Conference & Exhibition



San Diego, California
April 15-20, 2007

Paper C-1-04

GROUTED-IN-PLACE-LINER (GIPL) DESIGN

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ABSTRACT: Pipe rehabilitation with Grouted-in-Place-Liners (GIPL or GIPP for Grouted-in-Place-Pipe) produces a fundamentally different result than lining with flexible liners such as Cured-in-Place-Pipe (CIPP) or Folded Pipe. The grouted liner and the host pipe may or may not form a composite but the entire structure will be a rigid structure. Thus the assumed failure state is flexural cracking of the grout as opposed to the current (questionable) design assumption of buckling of flexible liners. Further, the GIPL plastic liner is of little, if any, consequence in the structural design; the grout is the structural element in the rigid pipe design. This paper explores these aspects of GIPL design and gives design examples.