COLORADO DEPARTMENT OF TRANSPORTATION

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 2561-11

Product Evaluation Coordinator
Colorado Department of Transportation
4670 North Holly Street, Unit A
Denver, Colorado 80216

Material code: 707.12.01.00

FOR INTERNAL CDOT USE

Material code description full name: Pipe, Repair, Lining

PART 1

Product name: Grouting Sleeve™	Product category: Drainage\Culvert Pipe\Culvert Lining [Repair]
Product representative (name & address): Attn: Lembit Maimets Link-Pipe Inc. 2-27 West Beaver Creek Road, Richmond Hill, Ontario L4B 1M8, Canada Phone: (905) 886-0335 FAX: (905) 886-7323	Manufacturer (name & address): Attn: Lembit Maimets Link-Pipe Inc. 2-27 West Beaver Creek Road, Richmond Hill, Ontario L4B 1M8, Canada Phone: (905) 886-0335 FAX: (905) 886-7323
Web-site address: www.linkpipe.com	Web-site address: www.linkpipe.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)

Grouting Sleeve is a local trenchless pipe repair system for the structural renovation of damaged pipes. Considered a Mechanical Spot Repair (MSR). The system is comprised of a stainless steel core that uses a mechanical lock to hold it against the host pipe, an absorbent foam gasket and limit straps that prevent it from harming the host pipe. The annular space is filled with a polyurethane based grout (G-200) that activates with water.

Grouting Sleeve™ is structurally designed to carry 5 psi. (33 kPa) external hydraulic pressure with a minimum Factor of Safety of 2.5. WRc assessed the performance, the strength and effectiveness of the Grouting Sleeve™ sewer repair system by conducting loading tests on soil-embedded sleeves as WRc approved dated May 18, 2001. The sleeve can repair all type of pipes with inside diameter from 6" to 54" and laying length from 12" to 36". Sleeve core material is stainless Steel SST-316, higher stainless steel alloys are available for salt water pipes.

Restrictions, (installation and/or use):

If hydraulic load exists 5 psi (33 kPa), special design is required.

Use of the product, (be specific to CDOT highway activities only):

A local trenchless pipe repair system for the structural renovation of damaged pipes which is considered a Mechanical Spot Repair (MSR).

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):

Grouting Sleeve™ carries 10-Years Limited Replacement Warranty with 100 years service life per "Corrosion Behaviour of Stainless Steels in Municipal Waste Waters Report" by Tuthill Associates, Inc dated Sept. 9, 1997.

Installation time is 20 minutes average. Can be installed under live condition, no by-pass is needed.

Manufacturing follows ISO 9001-2008 certified Quality Control procedures.

Specifications, (listing those applicable is required) **& Certificate of Compliance** (required to certify compliance with listed specifications):

- ☐ CDOT :
- ☒ ASTM : SST: ASTM A262/02aE; Grout: ASTM D1662; D2127; C273; D1623; D1638; D2369B; D2196A; D3574; D2196; D93; D1042
- ☐ AASHTO :
- ☐ FHWA :
- ☒ other : AWWA M11 [The design follows standard for Flexible Tunnel Liners]

Product testing, (from national/independent laboratories or universities) **& Certified Test Report** (CTR required to validate all claims):

- ☐ NTPEP-AASHTO :
- ☐ FHWA :
- ☒ other : Tuthill Associates, Inc (September 9, 1997)
- ☒ other : WRc (May 18, 2001),

State DOT Approvals, (current documentation required):

Sample submitted: ☒ yes ☐ no ☐ n/a | Materials Safety Data Sheets (MSDS): ☒ yes ☐ no ☐ n/a

Notes/Additional Comments