RST Introduces Advanced Manhole Inspection System

RST Helix Delivers Dramatic Cost Saving to Municipalities

Petaluma, California. November 10, 2016. A new and advanced manhole inspection system from R.S. Technical Services Incorporated (RST), a leading manufacturer of high performance pipeline inspection equipment, will help municipalities improve system performance by dramatically lowering manpower costs, increasing worker safety, avoiding structural failures, and helping source inflow and infiltration.

The RST Helix can be deployed from a CCTV vehicle, pick up or ATV (when access is limited) and is capable of scanning a typical 10 foot manhole in under a minute. Using the Helix, a one-man crew can perform over 50 manhole inspections in a single day.

The Helix has an industry-leading six high-resolution cameras that capture panoramic imagery of every surface as well as six active 3-D sensors that record hundreds of thousands of spatial data points for precision measurements. Users are able to use the data to look around a manhole and take various measurements using the provided software from the comfort and safety of the office.

“While surveying manholes has always been a part of any sound Sewer System Management Plan, as these assets reach the end of their design life there is a growing recognition that they not only represent a true danger to the public and personnel, but are a major source of inflow and infiltration of ground and surface water,” says Bob Grenier, RST’s Western Regional Sales Manager. “The Helix will help municipalities address these serious problem.”

The RST Helix completes a detailed and fully-automated survey with a single pass down a manhole while the operator remains safely above ground and monitors the process with a

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tablet or laptop computer. Once the Helix reaches the bottom of the manhole, it returns and automatically transmits the scan data to software where it can be reviewed in the office or in the field.

“The economic viability of RST’s manhole inspection technology is very compelling,” says Juan Torres, Operations Manager for RST. “We’ve conservatively estimated the cost for a detailed survey of a single manhole with traditional approaches at about $150. The old way is a slow, visual inspection performed by either entering the manhole or using a pole camera to capture data and, in most cases, manually recording it. There is also simply no comparison when it comes to the data quality of traditional methods compared to our new technology. If a system has just a thousand manholes, a municipality could be investing $150,000 for inferior data that is not easily used. With the RST Helix, you are getting superior data at fraction of the cost.”

The RST Helix is being precision manufactured using state of the art equipment at RST’s plant in Petaluma, California. The first inspection projects using the Helix were recently completed and have received a positive response from contractors and municipalities alike:

“The capabilities of the Helix have only begun to come to life and I can say with absolutely no exaggeration that our inspection results had our clients immediately as excited as us,” says Chris MacDonald of Empipe Solutions, a contractor serving municipalities.

The RST helix Advance Manhole Inspection System includes the camera, cable reel, launching boom, and wireless control unit. The system data is compatible with NASSCO’s MACP standard and will be undergoing the MACP 7 certification shortly.

More Information:
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BACKGROUND

Product Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
<tr>
<td>Power Source</td>
<td>100 - 240V AC</td>
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<tr>
<td>Scan Speed</td>
<td>10 ft in &lt; 1 min</td>
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<tr>
<td>Resolution</td>
<td>288 MP/scan *avg 10 ft manhole depth</td>
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<tr>
<td>3D Measurement</td>
<td>Six active sensors</td>
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<tr>
<td>Probe Dimensions</td>
<td>25&quot; x 13&quot;</td>
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<tr>
<td>Probe Weight</td>
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<td>Reel Dimensions</td>
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<tr>
<td>Reel Weight</td>
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About Manholes

• “Manhole inspection key to collection system performance”
  By Denis Pollak
  - Waterworld Magazine
  Denis Pollak was a founding member of the California Water Environment Association Southern Sections Collection System Committee and is a former President of the CWEA, San Diego Section.

• NASSCO Training & Recertification - Manhole Assessment & Certification Program
  Current Version - 7.0.1 Released January 2016
  Description: In response to industry demand NASSCO has developed a program for the coding of defects within manholes. Recognizing that manholes are much more complex structures than pipe has made the task somewhat more challenging. However, we believe the results will be very helpful to those who need to have a reliable and consistent manhole evaluation system. http://nassco.org/training_edu/te_macp.html

• “Many of the U.S. 20 million manholes are in need of immediate rehabilitation or replacement” - Homeland Security Newswire.
**About RST**

R.S. Technical Services Incorporated (RST) was founded in 1984 and has a long history of innovations for the industry, including the first mainline color camera featuring internal lights and filament-type bulbs, the first true pan-and-tilt camera with tracking lights, a cable reel with electrical gear selection, a time-saving tractor design with freewheeling capability for rapid returns, and an electronic circuit to double a tractor’s torque without increasing power consumption. RST has also developed a steerable storm drain tractor and explosion-proof camera.

RST’s equipment is manufactured in the United States and sold throughout much of North America (U.S. Canada and Mexico).

Website: www.rstechserv.com/helix