

TECH TIPS

FROM NASSCO

TECH TIPS BY NASSCO IS A BI-MONTHLY ARTICLE ON TRENDS, BEST PRACTICES AND INDUSTRY ADVICE FROM NASSCO'S TRENCHLESS TECHNOLOGY MEMBERSHIP PROFESSIONALS.

CCTV INSPECTION QUALITY IN SEWER CLEANING

By NASSCO member Brian Ackerman, Pro-Pipe Manager in Phoenix, AZ

When preparing to perform a NASSCO-compliant Pipeline Assessment Certification Program (PACP) inspection, there are several factors that need to be taken into account. PACP-certified operators need to consider pipe diameter, pipe material and flow conditions in order to properly configure the tractor and lighting to obtain the best video quality which, in turn, produces the most accurate structural and operational coding.



IT TAKES A PROPERLY TRAINED OPERATOR AND WELL MAINTAINED EQUIPMENT TO PROVIDE AN ACCURATELY CODED, HIGH QUALITY VIDEO

PREPARATION

Prior to lowering the camera into the line, the lens must be free of grease and debris and all camera and transporter functions need to be verified. The size of the pipe to be inspected should be double checked to ensure the camera transporter is sized properly to place the camera lens in the center of the pipe. During this pre-inspection check, many operators apply some type of glass treatment such as Rain-X® to their lenses. This treatment quickly sheds the lens of water and reduces grease attachment.

MANAGING FLOW

If flow is an issue where more than 40% of the line cannot be viewed, jet or combination jet/vac trucks can be utilized in conjunction with the camera. Following the jetter through the line can provide a more complete view of the pipe, as the force from the jet nozzles draws the water down exposing a greater portion of the pipe. This is also a great method for de-watering sags encountered within a pipe section. When utilizing this method it is important to balance the camera and jetter speed to avoid getting splash back on the lens. In addition, continuous communication between TV and Jetter operators is critical to avoid nozzle to camera collisions.

Other options include working at night during low flow conditions, bypass pumping, or the use of flow through plugs which restrict the outlet to a reduced diameter, therefore reducing the volume of water discharging. When using flow through plugs, special

care needs to be taken to monitor the upstream system to prevent property damage or unauthorized releases of sewerage.

CAMERA SPEED

With flow conditions managed, the next area of focus is travel speed and correct identification of system components and observations. The PACP recommends a maximum camera speed of 30 feet per minute. Additionally, operators need to take care to ensure features and defects are captured on the video and described by the appropriate code.

This is accomplished through stopping prior to an observation, panning and tilting to make sure the item is clearly represented on the video, taking a picture - if desired by the owner - and then proceeding down the line. At all times minor adjustments to lighting, iris and focus may need to be made as pipe material changes, flow conditions vary and conditions change within the pipeline. The operator's objective in viewing a defect or feature is to provide a perspective view similar to those found in the PACP Manual®.

Conditions within active sewer lines and gravity collection systems are ever changing. It takes a properly trained operator and well maintained equipment to provide a high quality, accurately coded video that will stand on its own for future reference.

For more information, please visit NASSCO's website at www.nassco.org.