

EYES IN THE PIPE

Well-trained CCTV operators form the backbone of any successful inspection program

By Jim Aanderud



Properly trained operators are critical for success in any pipeline inspection program. Rushing a candidate into the operator's chair is a common but big mistake.

Proper inspection lays the foundation for any successful inflow and infiltration abatement program, and proper inspection requires proper training.

The No. 1 decision that will make or break your CCTV inspection program is the operator who runs the equipment. The wrong person will sink your program faster than anything else, while the right one will ensure everything runs smoothly.

There are three areas to consider when hiring a CCTV operator — innate skills, learned skills and attitude.

Innate skills are the talents a person is born with. These include things like intelligence, aptitude, organization and meticulousness.

Learned skills are abilities that a person has picked up from life experiences. Things such as computer knowledge, electrical capabilities and mechanical capabilities fall into this category.

The last area to consider is a person's attitude and level of maturity. This may be a little more difficult to determine from an application and interview. Make sure to ask challenging questions, and do your homework by checking the person's work history and calling references. Ask those who have worked with the person how he or she reacts under pressure and when faced with difficult tasks.

SLOW AND STEADY

Training a good CCTV inspection operator doesn't happen by accident; it requires a clear and focused plan. This will ensure that training covers every important and necessary point. A plan will also provide a measuring stick of the candidate's progress.

A common mistake that agencies make is rushing a candidate into the operator chair. Many utilities want to get a new operator working as soon as possible, so they tend to hurry them through the training process.

Ideally, a candidate should be placed in a support role to learn the outside of the truck first — six months to a year is ideal. Once the individual is sitting in the operator's chair, they are so focused on the inspection process that they miss learning some of the more important lessons. During the training period, the candidate must be given sufficient time to learn and observe the effect they have on traffic, pedestrians and safety.

It's critical that the person training the candidate be a competent pipeline inspection operator. This individual will be passing on knowledge as well as habits, both good and bad.

NASSCO and Pipeline Assessment and Certification Program training is an important part of the overall training. However, you need to refrain from sending the candidate to this training too soon. Having just been introduced to the industry, the person will need some time to take in their new surround-

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LEFT: An inspection crew lowers a camera into a remote manhole to inspect the line. Proper setup and technique is important on every job. BELOW: Equipment care and maintenance are critical parts of training. The success of an inspection program is based on the ability to maximize efficiency in the field.



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ings. Once they have had time to acclimate and learn the industry terminology, they will be able to absorb and retain much more of the training.

Many operators are asked to begin inspecting pipe after only receiving a few days of factory orientation and PACP training. As valuable as this training is, it doesn't come close to sufficiently preparing an operator. There are many other areas that need to be learned and practiced.

Training goals should be documented and then checked off as milestones are achieved. Ensuring that each area is covered in detail will guarantee the operator is fully competent at the conclusion of the training period.

THE FOUR PILLARS

Training can be broken down into four areas:

1. Safety, setups and traffic control are a great place to begin. By observing how the CCTV van pulls up to the work site and sets up traffic control, they will learn the proper way by example. It's important to always remind them of the safety concerns while working in and around traffic. Contractors need to teach them the right method for opening manholes and then maintaining a safe work environment while the manhole is open. Finally, you need to give them time to observe the effect on traffic flows and pedestrians while encouraging them to make appropriate changes when necessary.

2. Equipment care and maintenance are critical parts of training. The success of a CCTV inspection program is achieved based on the candidate's ability to fix broken equipment and keep it working in the field. The candidate must learn the right way to configure the CCTV camera and crawler for various pipe sizes and perform regular preventive maintenance. They should learn how to make minor repairs and how to diagnose major ones.

Maintaining the generator and vehicle engine is another important part of training. The candidate must be instructed on the proper way to perform daily fluid and engine checks and document them accordingly.

3. Inspection software and data management may be one of the most challenging areas of CCTV inspection training. The overall success of an operator will depend greatly on their ability to thoroughly learn the inspection program. They must become very familiar with creating databases, setting up new inspections, conducting inspections and then exporting the data out of the program.

Computer ability is key. Without a strong knowledge of Microsoft Windows, a candidate will be lost when it comes time to moving and exporting files to external hard drives and merging databases.

4. Inspecting pipe is the core of an operator's function. With PACP certification under their belt, they should be familiar with the process of driving a camera down a line and making correct observations. Operator candidates should be encouraged to memorize the codes in order to become more efficient during the inspections.

Candidates need to be given examples of what high-quality inspection videos look like. They should take the time to watch good videos in order to emulate correct methods for inspecting pipe. Last of all, as they begin to inspect pipe, their videos and reports should be reviewed thoroughly by a seasoned operator in order to catch incorrect procedures long before they become bad habits.

One of the best ways to prepare a future operator is by placing them in a support role. With early exposure to the industry, each party (operator and contractor) can decide if it's a fit long before time and money are invested in training.

Training a future operator in a support role will also help absorb some of the cost of training and provide a perfect environment to prepare a quality pipeline inspection operator. **I&I**