


ASK THE TAC

TOPIC:
**PACP™ Codes and
Automated Defect
Recognition**

 **Is there an industry report or standard regarding effectiveness of Automated Defect Recognition (ADR) for gravity sewer coding using PACP?**



Presently there is no ADR software system certified by NASSCO that has been verified as recognizing every code combination in the Pipeline Assessment Certification Program (PACP), Version 7 format. And there are no industry-published metrics regarding the types of observations that are consistently identified with ADR.

Consequently, one should consider that the industry is delivering ADR as an “assisted” solution method with certified individuals confirming and augmenting ADR evaluations. In April 2022, NASSCO published “Guidelines for Quality Control (QC) of NASSCO’s PACP, LACP and MACP Surveys.” This document provides recommendations for quantifying the acceptability of inspections. This includes quality validation of ADR solutions, understanding that the QC document will be amended as the technology evolves.

The recent record of accomplishment for ADR solutions has been impressive, with demonstrated proofs for evaluating large data sets relatively quickly, especially for smaller diameter, rigid pipe types. However, the ability to recognize more types of defects consistently depends on the quality of the imagery data provided and the data made available on which to train the software. Therefore, better quality video and more diverse imagery datasets will improve machine learning capability to consistently code a broader range of defects in more diverse ranges of pipe materials.

For PACP Version 8, which is anticipated in 2023, NASSCO is presenting a discussion of ADR, and NASSCO will publish a technical position paper about ADR in the near future. Please stay tuned as we learn more and have better clarity about the future of ADR technology.



Have a technical question? Email TAC@NASSCO.org