

# How to Set Up, Conduct, and Sustain a Successful Walkaround Inspection Program

## *Walkaround Inspection Program - Part 2*

By Sidney Hand, Ethan Frye, and Forrest Pardue

It cannot be overstated how valuable a successful, sustainable walkaround inspection program is to equipment and production reliability. Yet many plants are still running limited or paper-based visual inspections, and some have tried and failed to establish a modern walkaround program.

To be sure, a successful walkaround inspection program is one element of a mature maintenance and reliability program and part of a greater operational excellence model. It is not the pinnacle, per se, but it provides essential ground-level insight into some of the issues that have not already made their way to the right person or work order.

The first-hand plant insights described in this two-part article are shared to help you establish a successful, enduring walkaround inspection program.

- This article, Part 2, summarizes common challenges to setting up, conducting, and sustaining walkaround inspection programs; and outlines actionable steps to ensure your program is optimized to withstand the test of time.
- Part 1 explores why physically monitoring critical assets remains a vital reliability practice that necessitates consistent plant and executive support.

### 1. Setting Up a Walkaround Inspection Program

#### a) Common challenges:

- **Prerequisites.** If starting the program as a newcomer to the facility or role, the developer may need to complete specialized IT, safety, or other training before access is granted.
- **Staffing.** Finding and enlisting personnel fluent with relevant information sources and systems to support development may be an interruption to their own routine duties, slowing the development process. Ideally, management will provide dedicated personnel to the task to avoid delays, but this is not always possible.
- **Asset criticality.** The same is true if assistance is needed in determining the risks of failure and priority of inspections to prevent unscheduled downtime. Identification of specific high-risk or critical equipment to target is necessary, though Operations management many times will claim “all” process equipment is critical.
- **Scheduling.** The goal of the inspectors is to monitor as many equipment trains as time will allow. Setting the frequency of inspection requires coordination between Operations and Maintenance teams.
- **Resistance.** Initial resistance can be expected but overcome. Some people consider the program a tool for assigning blame, when in reality it is a mature tool for a mature plant. Some operators may question whether an inspection task is someone else’s responsibility, though it is their job in tandem to identify if there is a problem.
- **Unions.** Union environments may also push back initially due to giving member inspectors another system to learn to carry out their responsibilities.

- **Executive support.** Ultimately, the responsibility for improving production and controlling costs falls on the facility manager. No matter who proposes the task of implementing walkaround inspections, it needs to be known that the effort has the highest level of support.

**b) Keys to success:**

- **Start small but focused.** Identify target areas or equipment conditions for the initial proving ground to gain support for wider implementation.
- **Trust but verify.** When loading existing, paper-based routes into the program, audit them to make sure they are reflected accurately and meet your needs.
- **Make improvements.** When building new routes, work with the team to include checks to get the data you want to see from the rounds. For instance, instead of asking if a reservoir's oil level is good or not good, consider using more useful options such as full, half full, quarter full, or empty.
- **Route efficiency.** The path taken to collect data should be ordered to minimize backtracking. The starting and ending points of not only the route, but of every machine, need to be established.
- **Inspection intervals.** Scheduling parameters will vary by equipment and area. Inspections may be needed daily, weekly, monthly, yearly, or every time there is a shutdown. For a gearbox, it could be every shutdown, while a motor may be every six months.
- **Time management.** For plants with hundreds of machines needing inspections, it is strongly recommended that routes be constructed to dedicate the first half of the workday to data collection, and the second half to report and work order generation. Ideally, the different methods of condition monitoring (e.g., visual inspections vs. vibration analysis) will be staffed separately.
- **Technical skills** Proactively address limitations in technical abilities with training, such as navigating advanced tablets, using them online vs. offline, and what to do if the Wi-Fi connection drops.
- **Standardized approach.** Training between inspectors is necessary to ensure the standards of measures taken are consistently accurate.
- **Data consolidation.** If other digital condition monitoring databases exist, consider consolidating them now or later into the walkdown inspection program's database for further efficiencies.
- **System integration.** When the program is mature enough to support it, integration with an asset management system can automate work order generation.

## **2. Best Practices for Conducting a Walkaround Inspection Program**

**a) Common challenges:**

- **Hazard protection.** Safety awareness must always be on the inspector's mind and many safety considerations need to precede the walkaround inspection. Equipment access may require ladder climbing. Some thorough inspections require climbing over or leaning into close proximity of rotating shafts. Flooring or equipment may be slippery, creating a hazard. Some equipment is extremely hot by design and caution should be taken by wearing the proper personal protective equipment (PPE). The process or environment may also require specialized PPE (e.g., dust masks, face shields, etc.) or mobile lighting.
- **Accessories.** The tablet and all tools needed for the inspection should be carried in a tool belt or shoulder strap.

**b) Keys to success:**

- **Stick to the task.** The primary task of the inspector is to complete the inspection and share the report with the condition monitoring team and work planners. Too often, the greatest hurdle to this

task comes from deep-seated cultural practices. The number one ill-fated strategy is to make the repairs while performing the inspection, rather than capturing the data that could otherwise reveal a recurring chronic problem, and running out of time before the route is complete.

- **Emphasize teamwork.** Meet regularly with the reliability and work management teams to ensure the walkaround findings are appropriately prioritized and the work is ultimately completed.

### 3. Sustaining a Walkaround Inspection Program

#### a) Common challenges:

- **Personnel changes.** The loss of a program champion, supportive team member, or leader can bring a program to an end. Promotions, reassignments, resignations, dismissals, and extended absences can have devastating consequences for any project. To counter personnel loss, multiple positions with primary and secondary active engagement (manager and inspector) team members need to be created by the program leader.
- **Ongoing education.** Because all bases need to be covered to prevent setbacks to the program, all team members need to attend routine progress and training meetings. Secondary team members need to be prepared to step into active roles during times of absence or a vacated position. If the vacated position is permanent, an alternate secondary team member should be assigned who has already been trained.

#### b) Keys to success:

- **Celebrate successes.** Quantify the cost savings and communicate outstanding efforts in regular emails or newsletters.
- **Cut your losses.** In certain cases, “run to fail” is the acceptable and most cost-effective maintenance strategy, allowing attention to be focused on higher priorities. It is one of many factors needing to be considered when deciding where to spend on manpower.
- **Target the root cause.** Team involvement in determining the root cause and resolution must be an integral function of the program. One loose mount bolt may not mean failure of the equipment to function, but might two, three, or more? The key is to determine “why?” and prevent it from happening again.
- **Prioritize reporting.** Having automatically generated reports sent to select facility personnel ensures the condition information reaches those who can act on it.
- **Continuous improvement.** Good reporting and communication, constantly tweaking and improving inspection criteria, and resolution of root causes to prevent further occurrences all play an important role in maintaining buy-in and maintaining program success.
- **It will get better.** If well-seasoned mechanics begin to view discovered issues as nitpicking after larger and more serious issues have been resolved by the program, that’s progress!

In conclusion

Purpose-built walkaround inspection programs benefit plants by:

- Increasing route efficiency
- Generating exceptions
- Generating history
- Creating work notifications and work orders
- Following up to provide resolutions
- Increasing Operations and Maintenance team satisfaction
- Improving reliability, reducing costs, and increasing uptime

For those struggling with or not currently using walkaround inspections, know that human senses on the plant floor are as essential as ever and can live in harmony with modern condition monitoring technologies. Setting up a program the right way will help you capture information that can be acted on quickly to prevent failures, increasing the viability, reliability, and performance of your critical equipment.

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