3 STEP CHECKLIST TO AUDIT YOUR COMPRESSED AIR SYSTEM

WHAT IS A COMPRESSED AIR SYSTEM AUDIT?

The United States Department of Energy estimates that compressed air systems use as much as 10% of all electricity generated in the country. They also estimate that over 50% of that energy is wasted.

One solution? Compressed air system auditing.

A compressed air audit is a comprehensive process in which you identify areas of loss or inefficiency within your compressed air system. With a variety of tools and techniques, you can understand more about your system's performance, as well as what you can do to improve it.

10%

Of all electricity generated in the country comes from compressed air systems

50%

Of the country's electricity generated from compressed air systems is wasted

HOW THIS CHECKLIST WORKS

This checklist, complete with information from TMI's compressed air experts, is a guide for anyone who's interested in optimizing the performance of their compressed air system — as it covers the three main steps of TMI's auditing process, as well as some underlying tasks within each of them. If you have the right tools and understanding, you can complete the auditing process on your own. Go through each step and check the boxes once you've completed each task.

3 STEP CHECKLIST TO AUDIT YOUR COMPRESSED AIR SYSTEM

1. MEASURE

The first step of the auditing process is to measure your current compressed air system's performance. This involves the following tasks:

- [ ] **Hook up kW loggers to each air compressor in your facility.**
- [ ] **Hook up pressure loggers to each air compressor in your facility.**
- [ ] **Let both types of loggers run and record data for a week (seven continuous days).** They should take a sample every second.

2. ANALYZE

Once you have seven full days of data logged, you can use it to report certain performance indicators like annualized compressed air system cost, plant demand flow, system efficiency, and more. Here's what to do:

- [ ] **Analyze your 7 days of data, looking for any key patterns and inconsistencies.**
- [ ] **Ask yourself questions related to the data,** such as, "How much energy/air do second and third shift really use?" or "Do we have the appropriate pipe size for our compressor room and distribution system?"
- [ ] **See how your data matches up with industry best practices.** Is your condensate being disposed of lawfully? Is your air compressor drawing minimal power when unloaded?

3. MODEL

The final step is to take action based on your data analysis. Perhaps you need to invest in a new compressor, or perhaps you just need to make some minor adjustments to your existing one. At TMI, we take this step a little further by modeling what some recommended actions may look like. If you'd like to do the same, follow these steps:

- [ ] **Invest in sophisticated compressed air system simulation software.**
- [ ] **Use that software to model the performance of a recommended system against the performance of your existing one.** This should result in precise energy (and cost!) savings figures.
- [ ] **Draw other conclusions and suggestions about system improvements from the software.** This could be anything from HVAC issues, to backup compressor viability, to air quality improvements.

NEED HELP WITH YOUR COMPRESSED AIR SYSTEM AUDIT? CONTACT TMI

Interested in the auditing process, but not willing to invest the time, energy, and money into doing it yourself? If you're located in West Michigan, contact our experts at TMI.

With experience performing hundreds of audits per year, we know how to provide sound recommendations driven by data, so you can gain comprehensive insight into optimizing your system.

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