

Despite what manufacturers want to hear, washing parts is a critical step in the production process. Components that are not properly cleaned at each step are unable to function as designed when completed. In order to maintain a high level of quality, washers need to be properly maintained. A washer not dealt with promptly and correctly creates an ineffective, wasteful, drain on the company and the production process.

Improperly maintained washers quickly become ineffective. The water in the machine is saturated with contaminant and unable to clean the parts, while the nozzles are clogged with particles that make it impossible for fluid to properly pass through. The pump begins to transfer sludge instead of fluid because the bottom of the tank is so contaminated. As the machine continues to fall into disrepair, it re-contaminates the parts it was intended to clean.

To prevent this scenario, it is necessary to perform preventative maintenance on washers and keep close tabs on their performance. Unfortunately, many companies choose only to perform maintenance after failure of the washer. By waiting until a problem arises, these companies waste time, money, and production. Maintenance is more effective and easier when performed before the problem arises, opposed to waiting until after. In order to do this, it is necessary for supervisors to know when maintenance needs to be performed.

Scheduled maintenance is a common practice with washers. However, scheduling repair via calendar is not an ideal practice. Often, this leads to maintenance being performed too often or not often enough, so rarely is it done efficiently. Unless the same amount of parts, with the same level of contamination, is moving through the washer in the same amount of time, then maintenance cannot be scheduled from a calendar. If any of the variables change, it changes the maintenance schedule.

Finding employees to monitor the washer for possible maintenance needs is also difficult for companies. Cleaning the washer is a tough, dirty, and undesirable position. Often, the last hire in the work cell is handed the responsibility of cleaning. Since they are inexperienced, it can be difficult for these employees to make the correct decisions on when to perform routine maintenance.

Meanwhile, the supervisors have crowded schedules, and do not have the time to make regularly scheduled rounds on the floor to check the small details that indicate the washers' level of performance. When they are on the floor, it is often due to a problem that has already arisen. These situations can be chaotic, as the supervisor and employees work to remedy the issue and continue production. Therefore, alternative methods of monitoring the washer must be examined in order to prevent chaotic situations and fix problems before they begin.

Washers today are equipped with computer interfaces that monitor all aspects of the machine. These interfaces can be linked with computers that are off-site or located away from the machine, allowing for supervision from a distant. The workers on the floor will be able to do their jobs without worrying about constantly monitoring gauges and numbers, and the supervisors will be saved unnecessary and unscheduled trips to the floor.

By connecting the washer to a computer through a network, supervisors can monitor the status of the washer from anywhere that is able to connect to the Internet. This allows for calm analysis of the washer from a remote location. With this setup, the supervisor can check all of the following elements of the washer:

- Production piece count since last fluid dump and recharge
- Fluid pressure before filter
- Fluid Pressure after filter
- Blow off air pressure reading
- Blow off air vacuum reading
- Amp reading on each heater element
- Amp reading on drives motor
- Amp reading of pump motor
- Amp reading of steam exhaust motor
- Gas pressure reading
- Solution Temperature Wash and Rinse
- Air Blow off temperature

If any of the numbers appear problematic, the supervisor simply needs to send an email to the workers, who can adjust the necessary settings or perform the required maintenance.

While this seems to be a simple resolution to the problem of preventive maintenance, it can be difficult to implement. The company must be convinced that the initial set-up costs of the system will provide worthy results. There is always resistance to fundamental change, and this solution is no different in that regard. However, if the company is able to be progressive in their decision making they will soon reap the benefits of proper care of their washing equipment. The ability to confidently monitor and schedule maintenance will prevent quality decline, slow downs in production, and wasteful time spent doing unnecessary maintenance or difficult repairs after a problem has already occurred.

This new system will enable the production line to utilize a more efficient, less costly to maintain washer, a more tightly controlled manufacturing process and a Production Supervisor who can prevent a crisis before it begins.