

In plumbosolvency applications, measurement is usually made after the dosing of the phosphoric acid into the final treated water.

This may or may not control the actual dose rate of the dosing plant, but is always used to monitor the operation of the plant, signalling alarms if preset concentration limits are exceeded.

Why use a Phosphate Monitor

- ▶ It optimises the use of phosphoric acid, monitors the performance of the phosphoric acid dosing plant, and ensures compliance with drinking water directive (phosphate levels).
- ▶ It gives immediate indication if required concentration limits (typically 1.0ppm) are exceeded.
- ▶ Conventional analysis of phosphate concentration by laboratory analysis is a time consuming task (and not suitable for on-line control).

Samples must be collected, stored, delivered and possibly stored again before a laboratory colorimetric analysis is made, this analysis itself taking some 10 minutes.

On-line analysis offers a simple, convenient, low-cost solution.
- ▶ An on-line Phosphate monitor continuously monitors (and if required controls) plant performance, thereby ensuring compliance with current legislation.

Why use ABB Instrumentation?

- ▶ Proven reliability with low maintenance requirements.
- ▶ Continuous on-line monitor – not a batch type analysis.
- ▶ Sample read-out update every 1 minute.
- ▶ Uses a single reagent – low ongoing reagent cost.
- ▶ Manual intervention is reduced to only four-weekly reagent replenishment and a twelve-monthly service, guaranteed through the use of specially developed long life pump tubing.
- ▶ Single consumable spares kit, included with the monitor, includes all spares and peripherals necessary for two years operation – no hidden extras.
- ▶ Full installation, commissioning and routine servicing is available.

What ABB Products are Suitable?

- ▶ **Model 8242 Phosphate Monitor**
 - Continuous sample reaction ensures optimum speed of response,
 - fully dynamic chemical mixing guarantees complete chemical reaction,
 - unique heated block assembly maintains full temperature control over the chemical reaction and optical measurement system,
 - measurement is fully temperature controlled and takes place at completion of the chemical reaction, ensuring accurate reproducible performance at varying sample and ambient temperatures,
 - fully automatic two-point calibration confirms no error due to chemical drift,
 - comprehensive on-board diagnostics monitor performance parameters.

Associated ABB Products for use in Potable Water Treatment Plant

▶ Analytical Applications

- pH transmitters on the inlet, coagulation, lime addition and final treated water,
- Dissolved oxygen monitors for reservoir storage,
- Ammonia monitors on the inlet and final treated water,
- Phosphate monitors on the works inlet,
- Nitrate monitors on inlet and for de-nitrification control,
- Turbidity monitors on the inlet, clarifiers, filters and final treated water,
- Process recorder for validation of measurements.

Installation

- ▶ In this application, the sample is at ambient temperature and requires no pre-installation preparation.
- ▶ The sample is usually fed to the monitor directly from the treated water line
 - Typically at 3 to 4 bar pressure.
- ▶ Pressure reduction, isolation and trimming valves may be required to obtain the correct sample flow-rate for the monitor (5 to 750ml/min.).

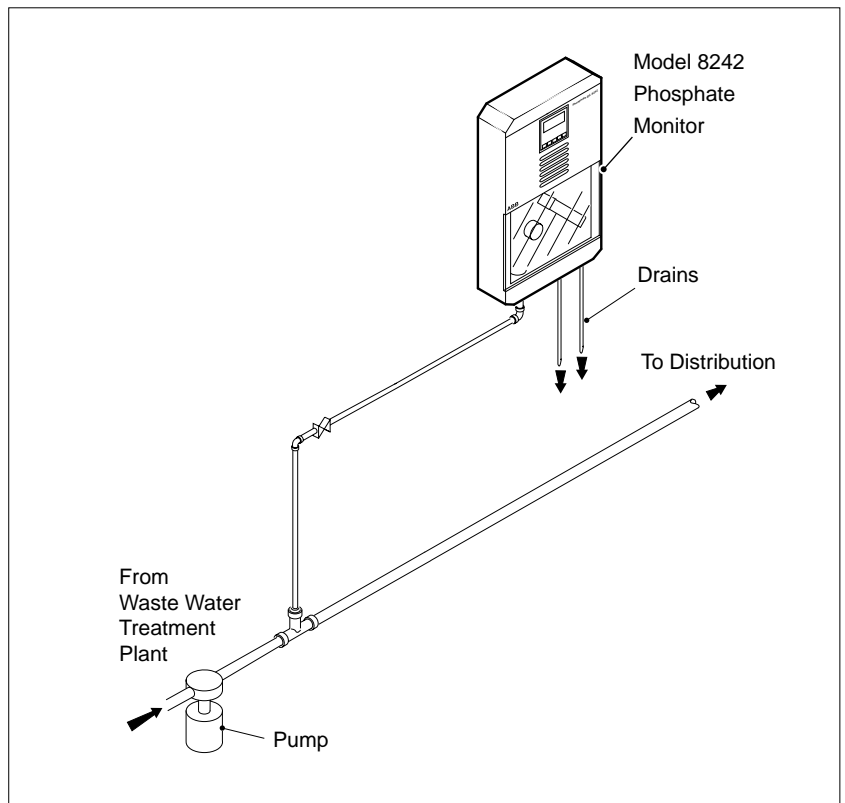


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