



TOWERTRAK

A unique and reliable system for monitoring, dosing and maintaining cooling water quality to enhance cooling water treatment performance

Introduction

TOWERTRAK is a unique and effective system, which automates monitoring, dosing and control of cooling water treatment programmes, and provides the sophistication and expert attention crucial for optimal performance of client's heat exchangers.

Designed by experts in cooling water management, TOWERTRAK is uncomplicated and at the same time efficient, and incorporates the fundamentals required for treating small and medium sized cooling water systems.

A comprehensive solution that consists of both chemicals and hardware backed up by service

Offers monitoring, observation and analysis by experts

Reduces dependence on unskilled manpower, in handling a crucial asset of the company



Typical Client Concerns

Medium sized cooling water systems typically suffer from poor treatment and / or technical services, resulting in fouling of heat exchangers. Their concerns arise from:

1. Fouling of equipment
2. Irregular service, poorly trained service personnel
3. Improper dosing
4. Lack of expert attention

The unmet needs of the customer, which also is the cause of their pain points, are:

- Insufficient data on water quality
- Difficulty in microbiological control as gas chlorination cannot be used due to safety concerns
- pH control difficulties – again due to hazards of handling sulphuric acid
- Maintaining cooling water parameters within desired control limits

The Solution

TOWERTRAK addresses client issues and thus pain points, by combining five critical elements of a successful water treatment:

1. Continuously monitor and log data of key parameters
2. Transmit data to a Wex server for monitoring and analysis by experts
3. A dosing system integrated with on-line analyzers for chemical dose regulation, pH control and biocide dosing
4. A side stream filter for reducing turbidity of circulating water, and
5. Instantaneous alerts for off-spec conditions

A manual back-up to the system is also provided by Wex and its authorized franchises; they carry out a weekly maintenance and calibration service.



Advantage TOWERTRAK

TOWERTRAK compares favorably with the conventional approach of treating cooling tower water:

Considerations	Conventional Approach	TOWERTRAK
Treatment Performance	Varies 	Highly Reliable 
Is it a viable concrete solution that solves problems	No. In general, chemicals are changed, and that may or may not improve performance	A viable concrete solution that addresses issues of water quality (turbidity, microbial growth), monitoring and dosing in one package
Convenience of buying	Any additional systems will require Capex approvals, enquiry and ordering processes	Offered as a service along with our chemicals
Convenience of use	Operator / service provider dependent	Largely automated, requires little or no attention
Reliability	Moderate	Very high since all commonly encountered problems are addressed
Speed of response in case of problems	Post failure	Pre-emptive alerts
Operational Feedback	Manual, MIS dependent	Online, with trending
Water conservation	High water consumption since cooling tower blow down is regulated based on periodic analysis	Controlled blow down with the help of on-line analysers that ensure that CT operates at maximum CoC and minimum blow down
Chemical Consumption	High dosages to account for variability in water quality	Precise dosing of required chemicals



Implementing a TOWERTRAK Based Treatment Programme

TOWERTRAK is programmed logically, for maximum impact, and is based on the client's feed water quality, recommended treatment chemicals and circulating water control limits. Critical parameters are identified and sophisticated monitoring instruments built into the system with appropriate control logic.

- A Wex service engineer or authorized service franchisee will install the system at client site and charge the system with one week's treatment chemicals and start the system.
- All instruments and dosing systems will be checked and calibrated once in a week, dosing system will be topped up for next week's requirement.
- After each service visit, the service engineer will provide the client with a report on key parameter maintenance record, visual observations of the cooling water system and where appropriate, data on heat exchanger performance.
- Any abnormalities, off-spec alerts and their management will also form a part of the weekly service report.

Requirements for Installing TOWERTRAK

- Supply from cooling water return line.
- Single phase uninterrupted power supply.
- Secure, covered location for installing the system.
- Cellphone connectivity for data transfer

Services Offered

1. Weekly visits for calibration, scheduled maintenance of TOWERTRAK, topping up of dosing tanks and slug dosing any chemicals if required.
2. SMS and mail alerts for any off-spec situations that require manual intervention
3. Visits by Wex service person for repeated off-spec conditions
4. Expert visits and review once in a month