TANKS-BULK FLAMMABLE LIQUIDS TANKS MANAGEMENT SOLUTIONS

"I CAN IMPLEMENT EMERSON'S TANK MANAGEMENT SOLUTIONS INCREMENTALLY AND WITH SOLID ROIS"







MANUAL ERRORS

Inaccurate manual measurements and recordings trigger time-consuming and expensive third-party inspections, as well as demurrage charges.



HYDROCARBON LEAKS

Corrosion or mechanical stress causes tank walls to leak hydrocarbon product, resulting in toxic releases, fires, and other hazardous incidents.



UNDERUTILIZED TANK SPACE

When volume, density, and other properties are unclear, tank space is wasted.



POOR COMMUNICATION

Key personnel rely on different databases for the same information at the same time, impairing product movement and overall operations.



UNSCHEDULED DOWNTIME

Stuck valves, product movement errors, and other equipment problems can lead to slowdowns, shutdowns, missed production schedules, safety risks, maintenance costs, and reportable incidents.



HYDROCARBON VAPOR RELEASES

Vapor recovery unit failures and valve leaks cause toxic releases, fires, reportable incidents, and fines.

OVERFILLS

Measurement errors and inadequate prevention systems lead to overfills and related safety risks, environmental fines, cleanup costs, and public relations expenses.

P V

PRODUCT DEGRADATION

With inadequate blanketing, oxidation creates safety risks and reduces product quality.

WOULDN'T IT BE BETTER IF YOU COULD INCREASE TANK AND PROCESS VISIBILITY AND ...

Maximize storage in lines and tanks

ccount for 100% of he volume in your lines and tanks

Avoid losses

Detect leaks early

Remove people from the tops of tanks Reduce equipment downtime

OUR CUSTOMERS REALIZE THE VALUE BY AVOIDING...

Product Loss Product Contamination Product Degradation





TANK MANAGEMENT SOLUTIONS GUIDE

Emerson maintains a complete portfolio of solutions that can address your tanks and terminals needs and challenges.

The numbers below correspond to the those in the diagram.

CORROSION MONITORING

Roxar corrosion monitoring

2 FIRE & GAS DETECTION

Net Safety combustible gas sensors Net Safety optical flame detectors Net Safety toxic gas sensors

3 FLAME & DETONATION PREVENTION

Enardo detonation arrestors Enardo flame arrestors

BLANKETING GAS & VAPOR FLOW MONITORING 4

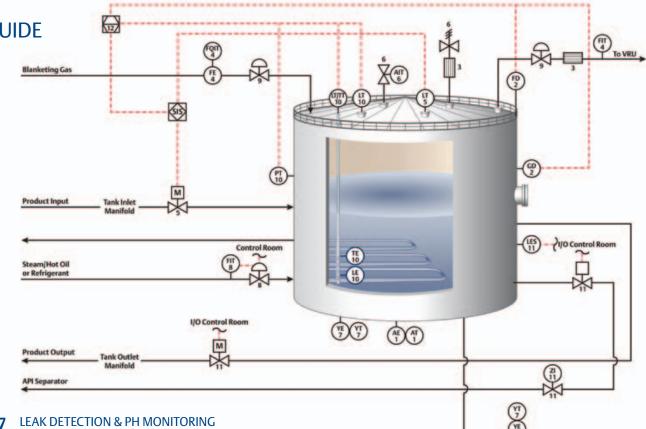
Micro Motion Coriolis flowmeters Rosemount multivariable flowmeters Rosemount differential pressure flowmeters

5 OVERFILL PROTECTION

Bettis actuators DeltaV SIS and digital automation systems Fisher digital valve controllers Fisher valves Rosemount Tank Gauging radar level gauges Rosemount vibrating fork liquid level switches

OVERPRESSURE/VACUUM CONTROL 6

Enardo emergency pressure/vacuum relief vents Enardo pressure and vacuum relief valves Rosemount acoustic indicator transmitters



7

Rosemount Analytical conductivity transmitters and sensors Rosemount Analytical pH/redox transmitters and sensors Rosemount transmitters with TraceTek sensor

STEAM FLOW MONITORING/HEATING AND COOLING 8

Fisher valves Rosemount differential pressure flowmeters Rosemount vortex flowmeters

9 **TANK BLANKETING & VAPOR RECOVERY**

Fisher vapor recovery regulators Fisher tank blanketing regulators Emerson Climate Technologies vapor recovery unit

TANK GAUGING SYSTEM 10

Rosemount pressure transmitters Rosemount Tank Gauging level gauges and transmitters Rosemount Tank Gauging temperature transmitters Rosemount Tank Gauging temperature and water-level sensors

11 WATER DRAIN & VALVE MONITORING

Fisher valves and wireless position monitors Rosemount vibrating fork liquid level switches Virgo valves and controls

12 INVENTORY & PROCESS MONITORING

Syncade DeltaV **TankMaster**

PARTNER WITH EMERSON TO STORE MORE AND MOVE MORE, SAFER AND FASTER

"RESULTS SHOW FASTER ORDER HANDLING AND AN EFFICIENCY IMPROVEMENT OF UP TO 30%. WE ALSO BELIEVE THAT SAFETY HAS IMPROVED."

-Vopak

"WE SHORTENED TRUCK TURNAROUND TIME TO LESS THAN TWO HOURS, AND DECREASE OPERATING COST BY APPROXIMATELY 20%."

-Shell Terminals



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D352158X012 / Printed in USA / 8-14

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