



• CEMENT/CONCRETE

## Gas Conditioning Tower Success Story Middle East

HydroFLOW® eliminated nozzle scaling in a cement plant gas conditioning tower, preventing daily cleaning and filter blockage

**100%**

Nozzle Cleaning Eliminated

**24**

Spray Nozzles Protected

**1 yr**

Maintenance-Free  
Operation

**2x**

Production Lines Protected

### ⇒ BEFORE & AFTER

#### ● BEFORE

- ✗ 4-8 nozzles cleaned daily
- ✗ Cartridge filters clogged with scale
- ✗ Scale blocked spray nozzles

#### ● AFTER

- ✓ No nozzle cleaning required
- ✓ Filters stayed free from clogging
- ✓ System operated continuously

### OVERVIEW

A major cement factory in the Middle East used gas conditioning towers to cool kiln exhaust gases before filtration. Water was sprayed through a three-inch diameter ring fitted with 24 nozzles operating under extreme conditions, including very hard water, pressure drops from 45-60 bar to atmospheric pressure and ambient temperatures reaching 350°C. Severe scale buildup blocked spray nozzles daily and caused cartridge filters to seize in their housings. Hydropath treatment was installed to reduce scaling and improve system reliability.

### CHALLENGE

Severe scale buildup blocked cooling nozzles and clogged cartridge filters daily.

- 4-8 spray nozzles blocked every day
- Cartridge filters clogged with scale
- Hard water accelerated scale formation
- Extreme heat increased scaling conditions

## SOLUTION

A *HydroFLOW*® C120 unit was installed on the nozzle supply line after the cartridge filters.

### UNIT INSTALLED

1x *HydroFLOW*® C120

### APPLICATION

Gas conditioning tower spray system

### OPERATING PRESSURE

45-60 bar

### INSTALLATION DATE

2009

## RESULTS

### Nozzle Operation Maintained

All 24 spray nozzles remained operational without blockage

### Daily Cleaning Eliminated

No spray nozzles required cleaning during the one-year test period

### Filters Stayed Clean

Cartridge filters no longer clogged or seized in their housings

### Reliable Cooling Maintained

The gas conditioning tower operated consistently under extreme conditions

### Second Line Installed

A second *HydroFLOW*® unit was installed after the successful trial

### Long-Term Success Proven

The system delivered maintenance-free performance for over one year

### KEY TAKEAWAY

## Summary

Hydropath treatment solved severe scaling problems in a Middle Eastern cement factory gas conditioning tower system. Before installation, operators cleaned 4-8 spray nozzles daily while cartridge filters regularly clogged with scale. After installing a *HydroFLOW*® C120 unit, the factory completed an entire year without nozzle or filter cleaning, leading to installation on the second production line.

100%

NOZZLE CLEANING ELIMINATED

24

SPRAY NOZZLES OPERATIONAL

1 yr

MAINTENANCE-FREE OPERATION

# HYDROPATH

The Forefront of Sustainable Water Treatment

**HYDROPATH** 

## Ready to reduce scale buildup?

Get a free consultation for your facility.

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