



**Improved operational efficiency
of lime slurry system
by non-intrusive chemical treatment**



OPERATIONAL EFFICIENCY PROBLEMS

- Incrustation of pH & instrument probes
- Clogging of dosing and circulation pumps
- Fluid stratification and solid settlement
- Restricted operations
- Increased operational costs
- Increased maintenance cost

MAINTENANCE PROBLEMS & LIMITATIONS

Traditional maintenance of lime slurry systems have practical operational limits including – access, time & effectiveness due to need for confined space entry.

Traditional methods involve confined space entry, scraping & power washing. Which is time intensive and requires the system to be offline for extensive periods.

No readily available method for removing deposits from pipework & pumps, the only available solution being replacement of pipework and pump sets (expensive and time consuming).



EPSCO SOLUTION

Two Part Treatment & Circulation

Chemical Treatment of Lime Slaking Vessels

Dissolves Hard & Soft calcified lime deposits from all internal tank surfaces & instrumentation.

- Removes restrictions to inlet & outlet pipework
- Removes agitator fouling – *optimising axial flow, power consumption, shear rate and suspension efficiency*
- No confined space entry required

Chemical Circulation of Lime System Pipework and Circulation Dosing Pumps

- Dissolves all lime fouling from all internal pipework and pump internals
- Removes pipework blockages & increases flow rates
- Reduces need for regular maintenance & flushing
- Clears inlet valves, outlet valves, drains, bleeds valves & all associated pipework
- Removes deposits from pH and flow probes with zero damage to structure

RESULTS & BENEFITS

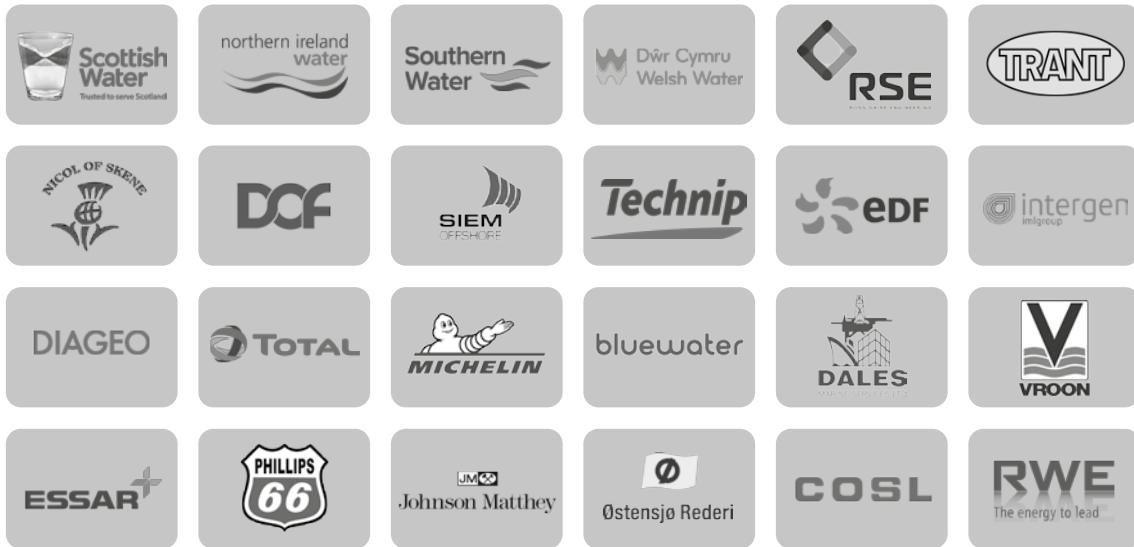
Results –

- Complete restoration of Lime slurry slaking vessel and associated pipework
- Normal operation maintained during treatment
- Increased operational efficiency

Benefits –

- Health & Safety – *No confined space entry & lower risk compared to traditional methods*
- Non-intrusive – treatment using existing system infrastructure to create circulation flow
- Time Saving – *chemical treatment faster than traditional methods, treatment completed within 12hrs with zero system downtime*
- Cost savings – *associated with reactive maintenance and system downtime*

REFERENCES



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