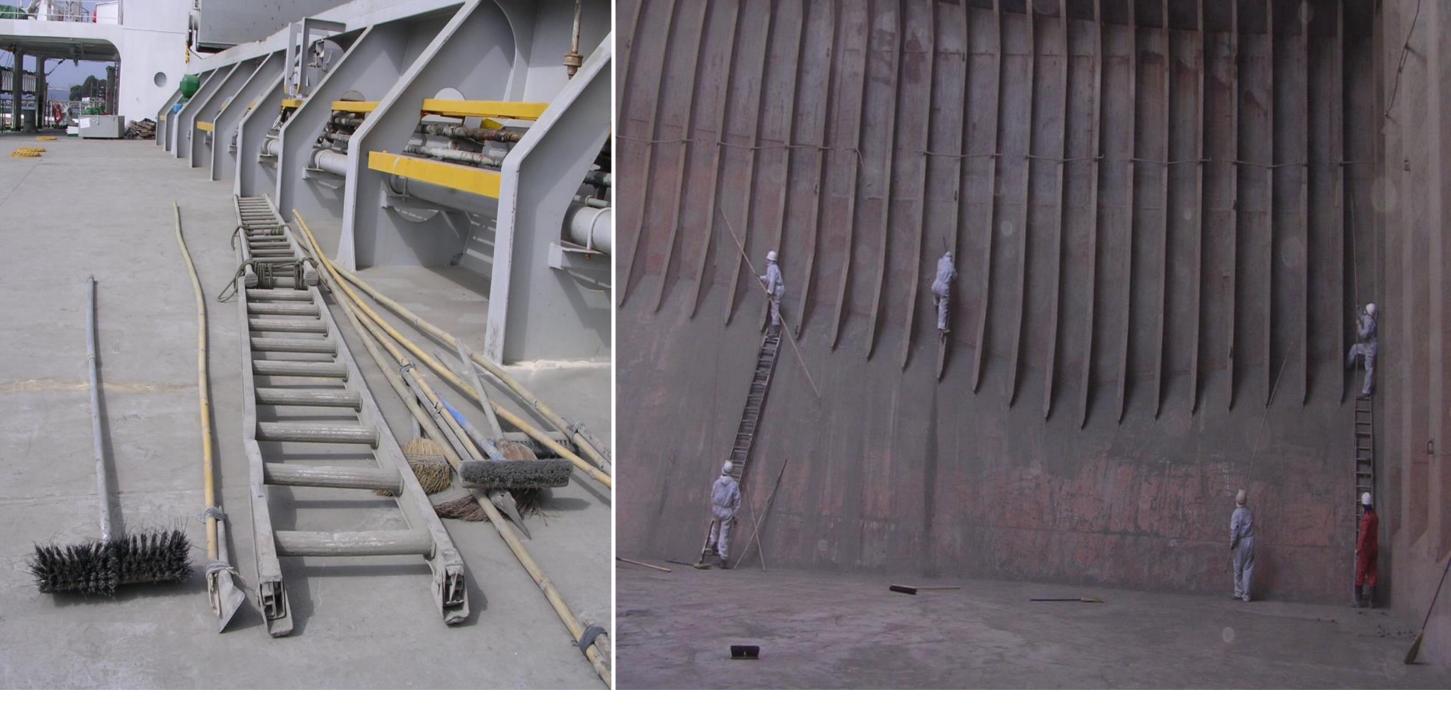


Air Flail Cleaning Technology A completely new innovative way to clean dry bulk cement vessels, rail cars and terminals with simple tools anyone can use.

February 2018 Hold Cleaning Technologies LLC



Cement cleaning with *pre-industrial tools* is dangerous, difficult, slow and ineffective



Cement cleaning with modern Air Flail tools is safe, easy, fast, effective – economical and eco-friendly

Fast

- CREW MULTIPLIER: One worker can clean six times faster than with pre-industrial tools; but more thoroughly and with less effort
- Thorough dry cleaning eliminates time spent "wet" (high pressure water or acid) cleaning
- ✓ Reduces total vessel cleaning time at discharge port by 1-2 days
- ✓ Complete elimination of all vessel cleaning time lost by cleaning underway to next load port: 2-3 days



Economical

- ✓ Increased rail terminal throughput
- ✓ NO expensive contractors for ships, rail or terminal cleaning
- ✓ NO expensive wet cleaning and waste water/acid/cement disposal
- Cleaning savings up to 90%; up to \$2.00/Mt for bulk vessel Portland Cement transport. Additional savings for underway cleaning
- ✓ Unilateral adopters realize cleaning savings as competitive landed cement cost advantage



- Reduced cleaning time reduces vessel CO2 emissions
- Dramatically minimizes vessel residual cement cargo for ocean discharge
- NO water, acid or wet cement waste for ocean or land discharge
- Thoroughly cleans "escaped" cement from all surfaces in and around manufacturing and intermodal facilities, eliminating further environment migration

Click here to watch our video