



Total Hazardous and Integrated Solutions Co. Ltd.

81/64 M.10, T.Nongprue, A.Banglamung, Chonburi 20150, Thailand

Tel / Fax +66 (0) 33673435

www.isthesolution.com

this@isthesolution.com

STORAGE TANK CLEANING & PLANT DECONTAMINATION



ABOUT THE CHEMICAL *HyDeX*

No Heat Resources has developed a groundbreaking chemical to decontaminate plants, vessels and tanks from dangerous hydrocarbons and other toxic gases. **HyDeX** is completely unique and it will revolutionize the way the oil and gas industry deal with tank cleaning and plant decontamination. It is fast reacting and works by breaking down hydrocarbon heavies found in BS&W and by converting Hydrogen Sulfide and Iron Sulfide into Water-soluble compounds on contact. **HyDeX** uses steam as a carrier fluid and is specifically formulated to be used for Plant Turnaround, Storage Tank, Sludge removal and General Decontamination for maintenance works.

HyDeX is safe and 100% effective

HyDeX Is a unique compound with a special enzyme cultured in a complex detergent system designed to dissolve heavy hydrocarbons

HyDeX Will transform, hydrocarbons, benzene, H₂S, CO₂ into water soluble solutions and inert Iron Sulfide.

HyDeX Chemical is carried by steam and will transform hydrocarbon and toxic gases on contact

HyDeX Will save you valuable down time in the decontamination process and improve worker safety

HyDeX Works fast and the results are 100% GUARANTEED

HyDeX Is SAFE and is ENVIRONMENTALLY FRIENDLY

Chemical Application For Plant Decontamination

- 1 TO EXPEDITE PLANT HANDING OVER FOR MECHANICAL AND MAINTENANCE WORKS DURING TURNAROUND
- 2 TO REDUCE RISK OF HUMAN EXPOSURE TO TOXIC GASES DURING CONFINED SPACE ENTRY
- 3 TO ELIMINATE POTENTIAL OF FIRE AND SPARK FROM REMAINING HYDROCARBON & IRON COMPOUNDS
- 4 DESLUDGING & SOIL DEGREASING OF VESSELS, COLUMN AND STORAGE TANKS
- 5 REMOVES H₂S, CO₂, BENZENE & DEACTIVATES PYROPHORIC MATERIALS

Advantages of HyDeX

HyDeX is a breakthrough in technology that will substantially reduce decontamination time

HyDeX Chemical usage is a fraction of traditional methods

HyDeX Is effective at any temperature

HyDeX Cleaning system requires less equipment and less Manpower than existing methods

HyDeX Reduces shutdown waiting period for Degassing, LEL and is Hydrocarbon Free

HyDeX EXCEEDS WORLD STANDARD TURNAROUND SAFETY CRITERIA

HyDeX Is applied by circulation technique. Both water circulation and steaming techniques are suitable

HyDeX Is a safe to handle liquid that is injected in water or steam during decontamination of system

HyDeX Is an ALL-IN-ONE process that uses very little water and requires NO rinsing

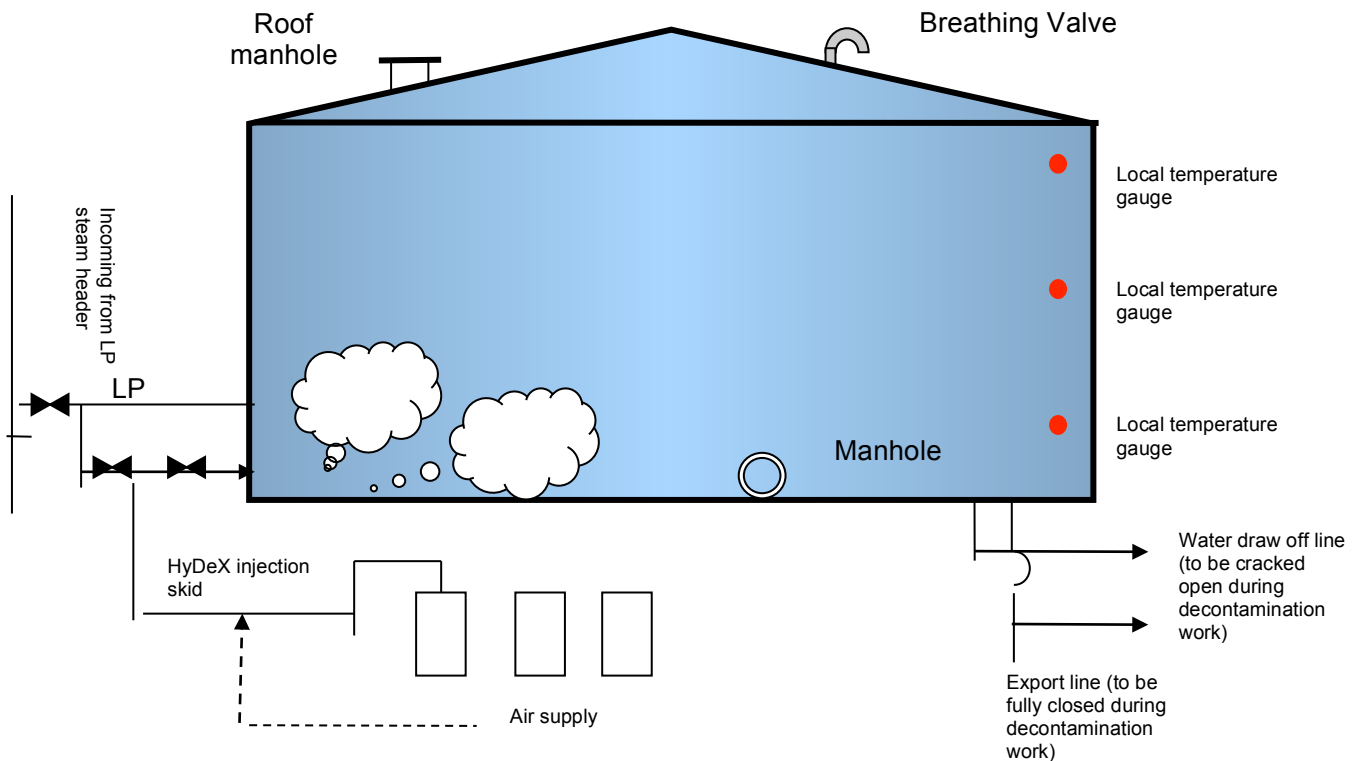
HyDeX PRODUCES EXCEPTIONAL RESULTS AT A FRACTION OF THE TIME AND COSTS OF THE CONVENTIONAL METHODS

HyDeX Applications

- Columns including feed lines, bottom, reflux and overhead
- Receiver Drums including transfer
- Recycle pumps discharge line and overhead
- Isolation of piping system for rejuvenation, and reroute replacement
- Storage Tank Desludging and cleaning
- Pipelines, Passes and Furnaces



STORAGE TANK CLEANING AND SLUDGE REMOVAL

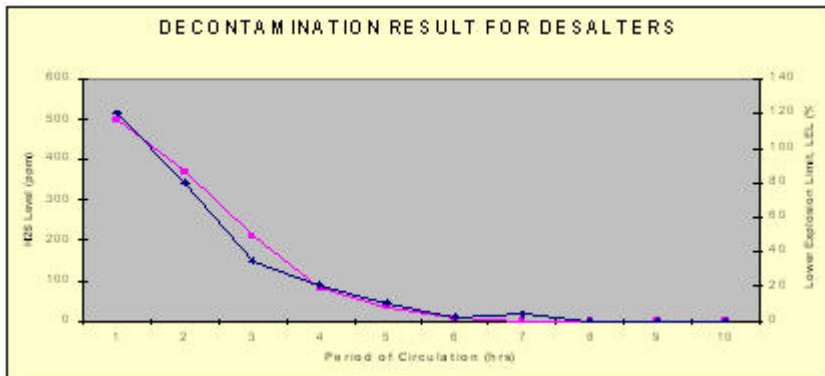


- The water sludge and hydrocarbon heavies are then transported back to a floc tank for reprocessing
- The HyDeX chemical will not effect the quality of the crude
- The water separated at the floc tank can be treated at the water effluent plant
- No personnel are required to enter the tank

ACTUAL RESULTS

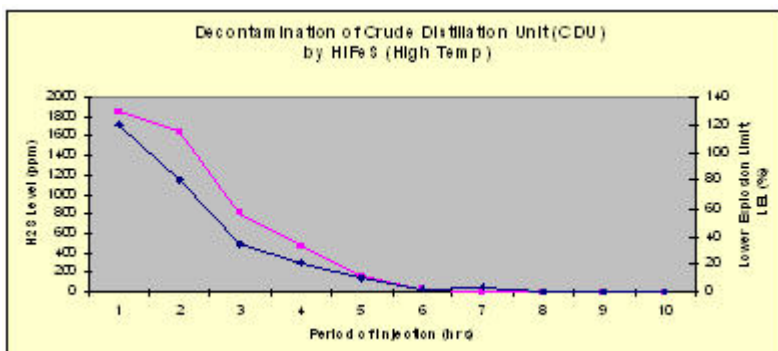
DECONTAMINATION OF DE SALTERS

COMBINED INJECTION RATE: 46 gallons per hour
NUMBER OF INJECTION POINTS: 2
TOTAL INJECTION TIME: 6 HOURS
TOTAL TIME: 10 HOURS
TOTAL CHEMICAL USAGE: 276 gallons



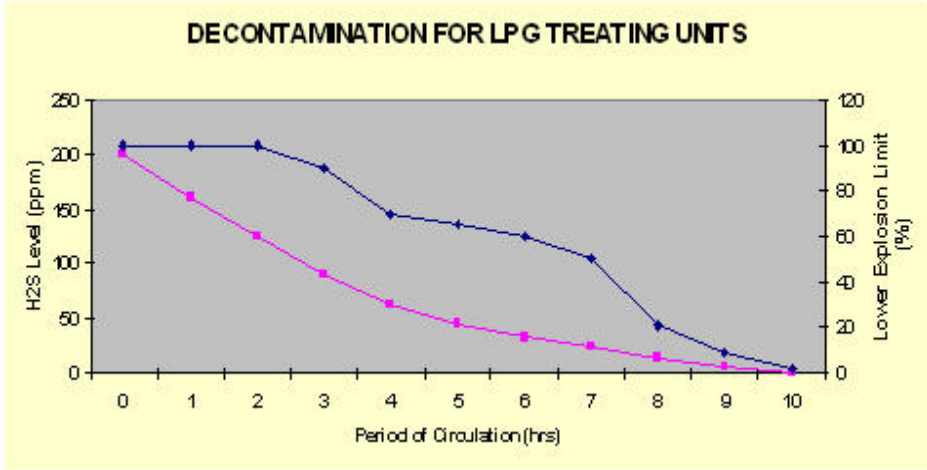
DECONTAMINATION OF CRUDE DISTILLATION UNIT

COMBINED INJECTION RATE: 283 gallons per hour
NUMBER OF INJECTION POINTS: 2
TOTAL INJECTION TIME: 4 HOURS
TOTAL TIME: 8 HOURS
TOTAL CHEMICAL USAGE: 1,132 gallons



DECONTAMINATION OF LPG TREATING UNITS

COMBINED INJECTION RATE 53 gallons per hour
NUMBER OF INJECTION POINTS: 2
TOTAL INJECTION TIME: 4 HOURS
TOTAL TIME: 6 HOURS
TOTAL CHEMICAL USAGE: 212 gallons



HyDeX Chemistry

CELLULOSE-----
 CARBONATES (CO₃)-----
 ENZYMES-----
 SURFACTANTS -----
 AMINE-----
 (Coconut based)
 PH ADJUSTER-----

Viscous Pre-Mature Enzyme
 (Toxic Remover)

 +

 Cleaning and Desludging
 (Hydrocarbon Decontamination)

OUR CONTACT DETAILS



Total Hazardous and Integrated Solutions Co. Ltd.
 81/64 M.10, T.Nongprue, A.Banglamung, Chonburi 20150
 Tel / Fax +66 (0) 33673435
this@isthesolution.com / www.isthesolution.com