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# UHP washing a safer alternative for petrochemical tank maintenance

A large petrochemical company in South Africa has extended its contract with leading rope access specialist Skyriders to include the removal and repainting of one of the petrochemical tanks onsite, which is 21 m in diameter and 14 m high. Initially, Skyriders was contracted to maintain the deluge fire sprinkler systems installed on the petrochemical, fuel and gas tanks.

Skyriders marketing manager Mike Zinn notes that a two man team will be responsible for the safe removal and repainting of the tank. "We are using rope access and ultra-high pressure (UHP) washing to remove the paint. UHP is safer and more cost-effective than grit blasting." Zinn explains that the sand used for grit blasting can pose a safety risk when working on a petrochemical plant, as the petrochemical tanks remain operational during the maintenance project.

In addition, UHP is also environmentally-friendly, using water as an alternative. "Water evaporates, leaving behind only the paint debris without the inconvenience of sand from grit blasting. It also eliminates the issue of dust during operations," states Zinn.

To further comply with safety regulations, the team working onsite is provided with protective clothing, which includes TST suits designed with a strong material to prevent bodily harm.

In addition, the teams also wear; special boots, shoe guards, jackets and protective gloves.

"We are working between ultra-high and super-high pressure washing at about 2 800 bar, and it is therefore essential to maintain the personal safety of the teams," adds Zinn.

Skyriders was also contracted to maintain and repair the plant's fire protection systems. Zinn notes that a four-man team is now permanently stationed at the plant to maintain and repair any damage to the system. "Our team abseils around the tanks to flush the network, unclog the sprinkler nozzles, replace broken nozzles, and test the system."

A functional fire protection system is vital in these high hazard chemical processing and storage areas. Any fire, detected heat, smoke or flames will trigger the opening of a deluge valve, allowing a high velocity discharge of water through all sprinkler nozzles in the deluge system.
"It is imperative that the water path is not blocked. Suppression is necessary to prevent a fire caused by low flash point flammable substances – the likes of which are contained in these tanks – from spreading," adds Zinn.

The deluge fire sprinkler system is not only used to control and extinguish fires. It is also crucial to reduce explosion pressure and cool the tanks. When there is a fire in the vicinity of a tank, the system is activated to spray water around the structures, thereby reducing their temperature and preventing rupturing.

The dedicated Skyriders team is on site five days a week, 12 months a year. "The group includes a senior level 3 rope access supervisor and three experienced technicians whom he oversees. The project is going well and we look forward to working on similar projects for other clients in the near future," concludes Zinn.

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