

HALLIBURTON AUSTRALIA PTY LTD

1999



HALLIBURTON

HALLIBURTON AUSTRALIA PTY LTD.
A.C.N. 000 000 778

100 Greenhill Road, Perthville SA 5043, PO Box 2752 Adelaide SA 5001 / Tel. 08 8301 1321 / Fax: 08 8301 1319

Dear Sir,

We have been using coatings supplied by Superior Hi-Tech Coatings since late 1997 when Super Therm insulation Coating was used successfully for heat reduction on computer boxes and fuel tanks on our pump trailer in Moomba.

Positive results with the above led us to try Rust Grip, Super Therm and Enamo Grip on our nitrogen tanks for protection against the elements on offshore rigs. Results to date have been successful.

We are in the process of refurbishing our acid tanks internally using Rust Grip and Lining Kote. The first few tanks have now been in operation for more than 14 months. Inspection reports indicate there is no sign of cracking or any penetration of the acids. We are also refurbishing our existing frac tanks with Rust Grip and Lining Kote.

We have recently commissioned 2 new 500-barrel frac tanks. Treated internally with Rust Grip and Lining Kote and externally with Rust Grip and Enamo Grip.

The same coating system is currently being used on our new LGC Tanker and we envisage continuing to use these products.

Yours faithfully,

HALLIBURTON AUSTRALIA PTY LTD

A handwritten signature in black ink, appearing to read 'Andy Dewar'.

ANDY DEWAR
Operating Manager

HALLIBURTON OIL

When I started with SPI in 1997/8 Halliburton in Australia had a problem with their 800 horse power pump trailers powered by 2225 HP Caterpillar motors (Grizzlies 4 unit) the computers malfunctioned due to heat.

The heat in the Moomba area at 9 am was 38C checking the computer boxes the temperature 58C non operational. The fuel in the tanks 56C non operational.

When all the units were hooked together and in full operation a break down occurred in the control boxes on the motors due to the heat transferred to the control boxes as well the connection cables. To overcome the heat problem the following coatings and procedure was applied

1: The control boxes were removed and 3 mm of (SP2001F Fire Coating) now called HPC Coating Applied to the motors area and the boxes reattached.

2: The computer boxes were then coated with 2 coats Supertherm and 2 coats Enamo Grip Clear, I then attached dual temperature gauges to the boxes so we could have an internal and external readings when the units are in full operation.

3: The fuel tanks were coated with 2 coats Supertherm and 2 Coats Enamo Grip Clear.

Checking the temperature reductions as follows.

1: Computer boxes reduced from 58C down to 32C NON OPERATIONAL.

2: When the units are in full operational mode the internal temperature of the computers was 38C and the external on the screen 41C.

3: Fuel temperature NON OPERATIONAL 56C reduced down to 32C.

4: Fuel temperature OPERATIONAL 42C **This temperature could have been reduced further if fuel coolers had have been fitted.**

By using all the coatings manufactured by SUPERIOR PRODUCTS INTERNATIONAL II inc all the problem that Halliburton had with this project were solved.

Due to the above success in solving their problem Andy Dewar asked what coatings I would recommend for refurbishing FRAC Tanks (Water), on inspection of some tanks in Moomba I looked at using Rust Grip and Moist Metal Grip. On working out a cost for the coatings required I then looked at different scenario as Frac tanks outnumber acid tanks in the oil industry. I discussed with Andy to treat all the Frac Tanks as acid tanks for two reasons.

1: The cost of refurbishing a Frac Tank for water use only was \$3,000.00 AUS using 2 coats Rust Grip and 3 coats Moist Metal Grip.

2: The cost of refurbishing an Acid Tank was \$4,000.00 AUS and gave Andy the following explanation.

Due to logistics and the huge distances that Acid Tanks were moved around Australia in the oilfields the costs are horrendous, by treating all Frac Tanks as Acid Tanks then any tank could be used for an acid job.

Andy agreed to treat all tanks with **2nd** proposal.

The 1st tanks to be refurbished were 350 barrel Frac tanks, These tanks were grit blasted to a class 2.5 profile due to the corrosion then 2 coats of Rust Grip and 4 coats of Lining Kote applied.

The 1st acid tanks had liner inside which detached from the steel due to heat and had pin hole in the liner allowing the acid to attack the steel (If the outside of the tank had been coated with Supertherm the liner would have stayed intact). A circular saw was used to cut the liner into sections so they could be removed from the tank, the tanks was then grit blasted 3 coats of Rust Grip applied and 4 coats Lining Kote applied.

The 2nd acid tanks had chlorinated liner inside all hanging loose as it also detached from the steel due to heat, this liner was removed and the area was grit blasted to a class 3 profile, as the chlorination can not be removed.

Reason for the class 3 profile was remove as much of the contamination as possible, to over come the chlorination the only coating that will not brittle (Solvent Drying out) is Rust Grip 4 coats of Rust Grip was applied the profile was checked to make sure it was covered then 2 additional coats of Rust Grip applied as the primer coating 4 coats of Lining Kote was applied to complete this tank.

2 nitrogen tanks after testing and rejected, instead of scraping the tanks we turned them into acid tanks using the same coating system as above.

We also treated 1 nitrogen tank with Supertherm externally, this tank was fitted with a tropical roof to keep the tank cool when while being used on an off shore rig.

After being coated with 2 coats of Supertherm and 2 coats of Enamo Grip the tank contents remain stable as to requirements.

Over the time period of 7 years no problems were found with these tanks and to the best of my knowledge are still in operation, these tanks are still in the Halliburton system in Australia.

Since Andy Dewar left Halliburton and the staff changes the records are no longer available as the serial numbers are no longer kept on tank movements.

Regards

Tony Brady

SUPERIOR HI-TECH COATINGS
Australasia Pty Ltd
Black Top & Cornishman's Hill Roads
One Tree Hill SA 5114
Australia
Mobile 0418 835 155
PH 08 8280 7730 Fax 08 8280 7700
Email tbrady@chariot.net.au
Web www.superiorcoatings.net.au