

COATING WET SURFACES

The Single Buoy Mooring (SBM) is an import/export medium for crude oil. Moored one or two kilometres from the shore, SBMs allow tankers to collect or deliver crude oil without entering ports by mooring and connecting to pipes which transfer the material via a sub-sea link. The approximate weight of the SBM shown is 234 tons. It has a turntable with the ability to turn 360 degrees in order to facilitate berthing and is fitted with a crane.



After surface preparation, using hydroblasting, the SBM was immediately coated with a 3-coat system in two different areas. Above the splash zone, Alocit 28.14 primer was used followed by Alocit 28.15 grey as a colour-coded second coat, with a final coat of P.U. for colour and U.V. protection. Total D.F.T 360 microns.

In the splash zone and

subsea areas the same primer and second coat were used, but the final coat was Alocit 28.15 black, giving a total D.F.T. of 500 microns. Total area 1900m².

As well as the main SBM structure being coated, the internal surfaces of the cofferdams, which give buoyancy to the SBM, were coated. After power-tool preparation, one coat of

Alocit 28.15 white was used at a DFT of 200 micron for corrosion protection, to seal the existing coal-tar finish and for safety - giving a lighter environment for inspections.



Top: The main buoy during work and after coating.

Above: The underside of the buoy, covered in marine growth, is typical of the general condition of the SBM.

Left: Water-jetting is a fast and clean surface preparation method. Using blast media with the water gave profile, the ability to use Alocit immediately after cleaning while still wet achieved significant cost savings.



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AUSTRALIA

A & E Systems PTY Ltd
3/20 Clark Court, Bibra Lake,
Perth WA 6163, Australia
Tel: +61 (0)8 94183688
Fax: +61 (0)8 94183588
Email: aus@ae-sys.com

EUROPE

A & E Systems Ltd
3 Charles Wood Road
Dereham, NR19 1SX, UK
Tel: +44 (0)1362 694915
Fax: +44 (0)1362 695350
Email: uk@ae-sys.com

MALAYSIA

A & E Systems Sdn Bhd
No 37B, Jalan USJ 21/11
UEP Subang Jaya,
47600 Subang Jaya
Selangor, Malaysia
Tel: +60 (0)3 80246277
Fax: +60 (0)3 80236090
Email: mal@ae-sys.com

USA

A & E Anti-Corrosion
Systems LLC
150 Hilden Road,
Ste #301, Ponte Vedra,
Florida 32081, USA
Tel: +1 904 819-8985
Fax: +1 904 819-1430
Email: usa@ae-sys.com

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PAINTS AND COATINGS



Above: Inside the coffer dams after coating
 Above left: Buoy bottom after hydro blasting
 Left: Stripe coating cofferdam with 28.15



INSPECTION/TESTING

Top left to right: Surface profile check, surface temperature check prior coating, final coat DFT on buoy body.

Left: Final coat DFT on buoy fender

Middle top: 2nd coat 28.15 grey DFT on buoy

Middle bottom: Final coat DFT on well.

SURFACE PREPARATION

Pull-off
Strength - PSI

Hydro-blasting with Garnet

1200

Hydro-blasting with Sand

900

Hydro-blasting with Garnet/Sand mix

750



As well as providing a high performance anti-corrosion coating, using Alocit meant that significant time and cost savings could be achieved. Engineers from the commissioning oil company estimated up to 50% savings were achieved in some areas because it could be applied immediately after water blasting without affecting adhesion. Total area coated was 800m².

Top left: Stripe coating on the turntable

Top right: Spraying 1st coat of 28.14 on the buoy at night

Above: The fully completed turntable after application.

Right: The completed and assembled SBM.

