To whom it may concern,

Jotun inspector Mr. Jia QZ together with representative from Grand Tower and SIDEM had carried out some testing at Ras Laffan site Qatar to the 11 pieces of steel bars(10 angle bars and 1 channel) on 28th-29th of November 2009. We summary the findings as following:

1. Dry Film Thickness.

A sample of DFT readings were measured using an E456 electric-magnetic gauge to the steel bars and with the following result -- --

Numbers of measurement taken – 53 points.
Maximum reading – 387Microns.
Minimum reading – 200Microns.
Average – 249Microns.
The original paint specification required a total D.F.T. of 240Microns.

Comments:

From a coating inspector's point of view, the above readings tell good paint application technique.

2. Adhesion testing.

"X" cuts following ASTM D3359 were carried out at site to all the eleven pieces of steel bars available at site and with the result shown below:

5A – 3 pieces.
4A – 7 pieces.
3A – 1 piece.

Comments:

According to the standard, "5A" is the best adhesion result achievable, which therefore can be rated as "excellent" and "4A" is in most industrial cases considered as "acceptable". And as the original owner specification does not mention acceptable criteria about adhesion issue, so no comment to "3A".

3. Pencil hardness testing (ASTM D3363).

The result of the testing is recorded as following:

"HB" – 3 pieces.
"B" – 7 pieces.
"2B" – 1 piece.

Comments:

A hardness testing using the same standard and same equipment at ZPMC JiangYing China was carried out at Sep.29th 2009 to the coatings (Hardtop XP) applied on some port cranes. The coating according to some relevant document, had been applied for

more than one month and dried in temperature around 25℃ and is considered to be fully cured. The results were all “B”s and the coatings when touched, not tacky to the fingers and generally the coating impresses one as “normal”.
It is true that final hardness of a coating can be influenced by a number of factors, such as, temperature, DFT, humidity, amount of thinner added etc. So, we can not say for sure which hardness is the “right” one, however when judging by the hardness tests that were done so far, we are of the opinion that the result of “B” is fairly easy to achieve and the coating at such hardness offers proper protection to the structures in terms of general topcoat function.

Jotun Coatings (ZJG) Co., Ltd.
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