Kalvoya Bridge - Norway

In 1985 ZINGA was applied by brush on the steel structures of the Kalvoya Bridge in Norway. Paint gloves were used for the carrying cables.

System :

ZINGA 2 x 60 µm

In April 1995, 10 years after the application, the Kalvoya Bridge was inspected by the controlling organism Det Norske Veritas (DNV).

BÆRUM KOMMUNE
AVDELING LEVEKÅR
KOMMUNALTEKNISK SEKSJON
Samferdsel - drift

Vei, vann, avløp,
Renovasjon og havn
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Pb 34, 1301 Sandvika
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ROTORKONTROLL A/S
PB 31

2014 BLYSTADLIA

Deres ref.	Vår Ref.	Dato
Jon-Ivar Hagen	614-730 /97-lhm	01.12.1998

BRIGDE TOO KALVØYA.

The Kalvøyabrua was inspected in April 1995 by det Norske Veritas Certification A/S.

Their comment in 1995 was that this brigde was in a good condition. Compared with the control in 1985 (another system for about the same period of time) the brigde was in a considerrable better condition regarding corrosion protection of the steel parts and carrying cables.

It took 5 kg ZINGA to touch up the entire brigde for some small scatches, and this 10 year after the first treatment.

Med hilsen

Haakon Skogstad
Avd.ing.

Leiv H. Moe
Avd.ing.

On 01/12/98 the Baerum Kommune, owner of the bridge, wrote this testimonial stating that the DNV found the Kalvoya Bridge in a good condition compared to the DNV inspection in 1985 on the previous coating system that had protected the bridge before the repair with ZINGA.

In 1995 only 5 Kg of ZINGA were necessary for touch-ups on spots that had been mechanically damaged.

dokument1

Post adresseres til etaten - ikke til enkeltpersoner

In 1999 the ZINGA system has been accepted by the Norwegian Ministry of Roads for the complete treatment of steel bridges, as stated in this letter from Rotorkontroll, dated 04/06/99.

TELEFAX
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Teknisk/Kjemisk

PB. 31
N - 2014 BLYSTADLIA
Telefax 47-63838724
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Til/To/An	Telefax 00 32	Dato
Zingametall	93 855 869	040699
Att. Patrick Willemot		
Fra/From/Von	Antall sider inkl.denne	
J I Hagen	1	

Dear Sirs,

Re.: "Kalvoeya Bridge" in Baerum, Norway

We refer to previous information with report as well as phonecall yesterday and have the pleasure in confirming that

Kalvoeya Bridges outside Sandvika in Baerum, Norway was in 1985 recoated by the Road Division of Akershus County and later taken over by the Counsil of Baerum. The specifaction has been approved by the norwegian Ministry of Transport (Brigde Department).

In 1999 the Zinga-System has been accepted as a system by the Norwegian Ministry of Roads for complete treatment of steel-bridges.

Hope that this confirmation will be at your satisfaction.

Best regards

ROTORKONTROLL A/S
Avd Teknisk/Kjemisk

Jon-Ivar Hagen

Rotorkontroll A/S

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Messrs
Zinga Metall BVB
Industriepark VENECO
Rozenstraat 4
B-9810 E K E
B e l g i u m

Deres ref. / Your ref. P. Willemot
Vår ref. / Our ref. JIH
Dato / Date 24.02.2000

Report
Layer-thickness per 23.02.2000
Kalvoeya Bru

As requested by Mr Patrick Willemot Zinga Metal BVBA in Gent, Belgium I have measured the present thickness of ZINGA layer on this bridge.

The original recommended thickness was 120 µ. On the cables the operater has applied more than 120 µ. It was difficult to control the layer thickness on the cables during the application because painting gloves were used. There is no topcoat.

The first application took place Aug/Sept 1985. Total maintenance consumption of ZINGA in 1995 was less than 5 kgs.

I have received following results

Tower north side:
108 - 134 - 95 - 116 - 109 - 91 - 113 -
125 - 134 = 1025 : 9 = 113.88 µ average

Tower north side:
132 - 74 - 85 - 100 - 143 - 183 -
122 - 70 - 96 = 1005 : 9 = 111.67 µ average

Tower south side:
113 - 66 - 103 - 80 - 55 - 63 -
101 - 121 - 75 = 777 : 9 = 86.33 µ average

cont page 2

Hovedkontor:
Dynamisk utbalansering av rotorer opp til 6 tonn. Frekvensanalyse, forebyggende vedlikehold.
Teknisk/Kjemisk:
Lakker for stål, metaller, kunststoffer. Zinkbaserte produkter. Limstoffer +90° - +1250°C. Kompensatorer.

In February 2000, 15 years after the application, the layer thickness of ZINGA on the Kalvoya Bridge was measured.

The loss in layer thickness after 15 years was approx. 16 µm.

This report, written by Mr. Hagen from the company Rotorkontroll on 24/02/00, is very important because it gives us an idea of the estimated lifetime of ZINGA.

Report
Kalvoeybrua, Baerum, Norw
ZINGA
Layer-thickness after nea

Tower south side:
97 - 152 - 132 - 144 - 100 - 102 -
94 - 123 - 93 937 : 9 = 104.11 µ average

Carrying Cable:
114 - 83 - 149 - 138 - 57 - 99 -
110 - 197 - 119 - 173 - 119 - 139 -
137 - 128 - 129 1891 :15 = 126.06 µ average

The measured area is what I could reach without using a ladder.

The cable showed small spots, less than 10 mm, on some areas. The application system used here was a painting glove.

It was due to present conditions (ice/snow etc.) not possible to measure the carrying beams under the brigde, no rust spots were discovered.

Kalvoey Bridge is situated outside Sandvika a suburb to Oslo. The brigde is connecting an island to the mainland. There is some heavy traffic not far from this bridge. The water is saltwater as in the Oslo Fjord.

I hope that this report will be of some help to estimated the lifetime of ZINGA under similar conditions.

Best regards form Norway

ROTORKONTROLL A/S
Avd Teknisk/Kjemisk

Jon-Ivar Hagen