NMR PIPETECTOR Installation Report, in UK Anti-Corrosion Application, <u>British Broadcasting Corporation (BBC)</u>,

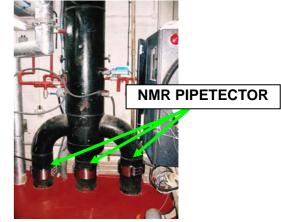
located in London

*Appearance of Building and Installation Place



Appearance of the building

NMR Corporation



Chilled water supply pipe

< Installation Purpose and Result>

British Broadcasting Corporation in London is the national broadcasting company in United Kingdom, and built in 1953, and one of the BBC buildings where the television programs are made in the White City area of London has major problem with corrosion in the iron pipe work of the chilled water system involving the cooling towers. NMR Pipetector has been fitted onto the iron pipe work of chilled water at the BBC television studios.

For the protection of the chilled water system from corrosion in the Main Block Building and in the Stage 5 Building, four NMR units of 10 inch (PT-250DS) were installed onto the separate chilled water pipe works.

<u>32 days after the installation of NMR Pipetector, the Fe content in water considerably decreased from</u> <u>5.53mg/l (before the installation of NMR Pipetector) to 0.048mg/l in the Main Block Building,</u> and <u>3.8mg/l (before the installation of NMR Pipetector) to 0.063mg/l in the Stage 5 Building</u>. <u>57 days</u> <u>after the installation, the Fe content stayed at low of 0.06mg/l in the Main Block Building, and 0.008</u> <u>mg/l in the Stage 5 Building</u>, which are much lower than the British Government Standard for Drinking Water of 0.2mg/l.

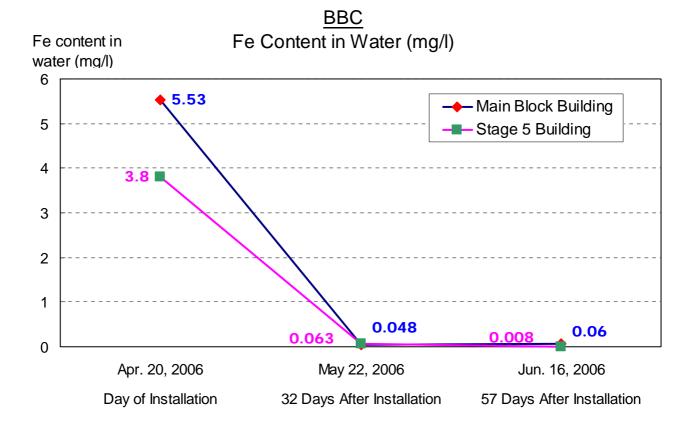
It means that new forming of corrosion (FeO(OH)) inside of the pipe work was immediately terminated, and the existing corrosion was reduced to magnetite (Fe₃O₄) which is not dissolved into the water and protects the inside of the pipe from corrosion.

< Installation Summary>

Name of Building :Address	British Broadcasting Corporation BBC Television Studios, White City, London, UK
Building Summary	One of the BBC television studios buildings The building was built in 1953.
Installation Place	Chilled water supply pipes coming from the cooling towers in the Main Block Building and Stage 5 Building
Installation Day	April 20 th in 2006
Installation Place Number of installed NMR PIPETECTOR	10 inch outer diameter iron pipe of the chilled water PT-250DS×4units

<Fe content in hot water (mg/l)>

	Installation	Day of Installation	32 Days	57 Days
	Building	Apr. 20, 2006	After Installation May 22, 2006	After Installation, Jun. 16, 2006
Fe Content	Main Block Building	5.53 mg/l	0.048 mg/l	0.06 mg/l
in Water	Stage 5 Building	3.8 mg/l	0.063 mg/l	0.008 mg/l



Installation Day of NMR Pipetector (Main Block Building)

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ot	3	Report Number :	BR/341627/2006	Issue 1		
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Before Installation of NMR Pipetector (Stage 5 Building)

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Accordination Codes : * = Not UKAS accredited; B = Anapysed at STL Bridgend; C = Analysed at STL Covenity; A = Analysed at STL Rundom, L = Analysed at STL Midsted; S = Sub-contracted For Microbiological Attentionadu () or NO = Not Detected; D Detected; For Legionelle ND=Not detected in volume of sample filtered. US = InsultCent sample

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Signed :	29	Name :	T. Down	Date :	02 May 2006
eignou	Don .	Title :	Production N	Manager	

32 Days After Installation of NMR Pipetector (Main Block Building)

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of	3	Report Number :	BR/347123/2006	Issue 1		
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32 Days After Installation of NMR Pipetector (Stage 5 Building)

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Accreditation Codes .*.. Not UKAS escredued, B + Analysed at 6TL Bildgerd, C + Analysed at 5TL Coverty, R + Analysed at 5TL Rundern, L + Analysed at 5TL Midlande, S + Sub-certrased For Microbiological determininges 0 or ND - Not Detected, DET + Detected, For Legioneita ND-Not detected in volume of atampic filtered. ItS + insultitient sample

57 Days After Installation of NMR Pipetector (Main Block Building)

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57 Days After Installation of NMR Pipetector (Stage 5 Building)

of 3 Report Number : BR /352952/2006 Issue 1	
Samula Sauraa	
Sample Source : Cambridge Water Company Sample Point Description : Cambridgeshire Water Company	
Sample Description : Stage 5	
Sample Date : 16 June 2006 Sample Received : 16 June 2006 Analysi	is Complete : 21 June 20

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