

NMR PIPETECTOR Installation Report, in UK

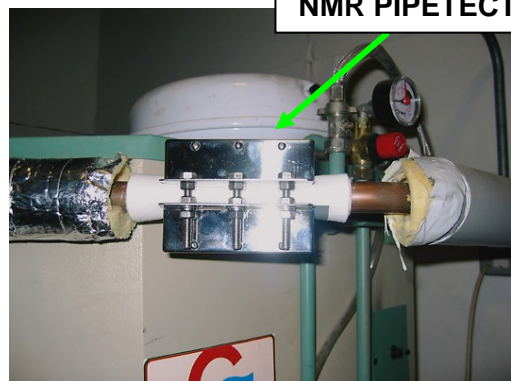
Anti-Corrosion Application, Ross House of Data Connection, UK

NMR Corporation

* Appearance of Building and Installation Place



Appearance of the building



Outlet pipe from the hot water cylinder

* Installation Purpose and result

Ross House is an office building located in Enfield London, England, which was built in 1970 and owned by Data Connection who are the largest independent company for developing computer software in the United Kingdom, Ross House had been suffering from a major problem where the hot water pipework had been contaminated by corrosion and discoloured water was coming from the faucets.

For the protection of hot water pipework from corrosion, one unit of NMR Pipetector was installed on the copper hot water header coming from the hot water cylinder, the copper tube was then connected into the galvanized iron pipework that distributed all the hot water throughout the office building.

Before the installation of NMR unit, the sample water was taken from the hot water faucet for the analysis of Fe content, which was found to be **2.26mg/l**. The NMR unit was installed on October 21 of 2004. Fe content decreased dramatically to **0.215mg/l** 75 days after the installation, **0.18mg/l** 85 days after, and continued to decrease to **0.008mg/l** 125 days after the installation. It means that the corrosion (FeO(OH)) inside of the pipework has been terminated and reduced to magnetite (Fe_3O_4) which is not dissolved into the water.

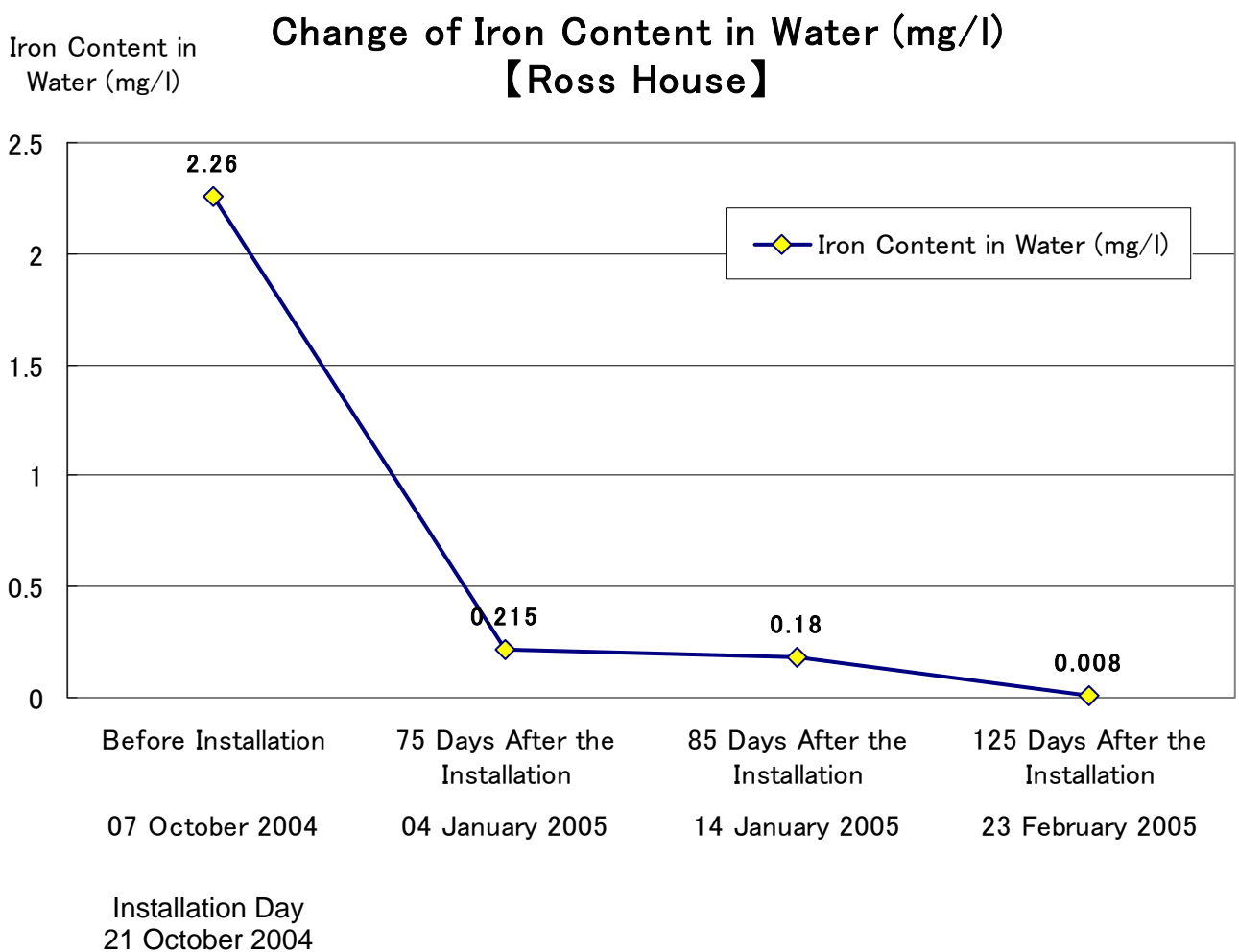
* Installation Summary

Name of Building	Ross House, Enfield London, United Kingdom	
Building Summary	Office building owned by Data Connection	
Installation Place	Outlet pipes from the hot water cylinder	
Installation Day	October 21, 2004	
Installation Place Number of installed NMR PIPETECTOR	Outlet pipes of hot water pipework	PT-20DSx1unit

***Fe content in hot water (mg/l)**




Fe content in Water (mg/l)	Date	Period after installation
2.260mg/l	Oct. 7, 2004	Installation Day
0.215mg/l	Jan. 4, 2005	75 days after
0.180mg/l	Jan. 14, 2005	85 days after
0.008mg/l	Feb. 23, 2005	125 days after
0.2mg/l	British Government Standard for Drinking Water	

***Fe content in hot water (mg/l)**



Installation Day

Certificate of Analysis

1314
0897
1229
1510

Sample 2 Laboratory Number: 430868
of 25 Report Number: BR/249951/2004 Issue 1




Sample Source: Cambridge Water Company
Sample Point Description: Cambridgeshire Water Company
Sample Description: PETER GOSLING ROSS HOUSE
Sample Date: 07 October 2004 Sample Received: 07 October 2004 Analysis Complete: 13 October 2004

Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	2260	ug/l	200	B	SBC44

Accreditation Codes: * = Not UKAS accredited B = Analysed at Bridgend C = Analysed at STL Coventry R = Analysed at Runcorn S = Sub-contracted
L = Analysed at STL CAS For Microbiological determinands 0 or ND = Not Detected, DET = Detected

75 Days After Installation

Certificate of Analysis

1314
0897
1229
1510

Sample 2 Laboratory Number: 581218
of 2 Report Number: BR/262342/2005 Issue 1

Sample Source: Cambridge Water Company
Sample Point Description: Cambridgeshire Water Company
Sample Description: Peter Gosling-Data Connection Ross House
Sample Date: 04 January 2005 Sample Received: 04 January 2005 Analysis Complete: 06 January 2005




Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	215	ug/l	200	B	SBC44

Accreditation Codes: * = Not UKAS accredited B = Analysed at Bridgend C = Analysed at STL Coventry R = Analysed at Runcorn S = Sub-contracted
L = Analysed at STL Midlands For Microbiological determinands 0 or ND = Not Detected, DET = Detected

Signed: *T. Down* Name: T. Down Date: 07 January 2005
Title: Production Manager

85 Days After Installation

Certificate of Analysis

1314
0897
1229
1510

Environmental Leadership

Sample 1 Laboratory Number: **589672**
of 17 Report Number: **BR/263700/2005** Issue 1

Sample Source: **Cambridge Water Company**
Sample Point Description: **Cambridgeshire Water Company**
Sample Description: **Peter Gosling-Data Connection Ross House**




Sample Date: **14 January 2005** Sample Received: **14 January 2005** Analysis Complete: **21 January 2005**

Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	180	ug/l	200	B	SBC44

Accreditation Codes: * = Not UKAS accredited B = Analysed at STL Bridgend C = Analysed at STL Coventry R = Analysed at STL Runcorn S = Sub-contracted
L = Analysed at STL Midlands For Microbiological determinands D or ND = Not Detected, DET = Detected

125 Days After Installation

Certificate of Analysis

1314
0897
1229
1510

Environmental Leadership

Sample 1 Laboratory Number: **624266**
of 1 Report Number: **BR/269316/2005** Issue 1

Sample Source: **Cambridge Water Company**
Sample Point Description: **Cambridgeshire Water Company**
Sample Description: **Peter Gosling Ross House Enfield**

Sample Date: **23 February 2005** Sample Received: **23 February 2005** Analysis Complete: **25 February 2005**

Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	8	ug/l	200	B	SBC44

Accreditation Codes: * = Not UKAS accredited B = Analysed at STL Bridgend C = Analysed at STL Coventry R = Analysed at STL Runcorn S = Sub-contracted
L = Analysed at STL Midlands For Microbiological determinands D or ND = Not Detected, DET = Detected

Signed: *R. Robins* Name: **R. Robins** Date: **28 February 2005**
Title: **Senior Chemist**