

# NMR INSTALLATION REPORT

Anti-Corrosion Application, Royal Garden Hotel in UK

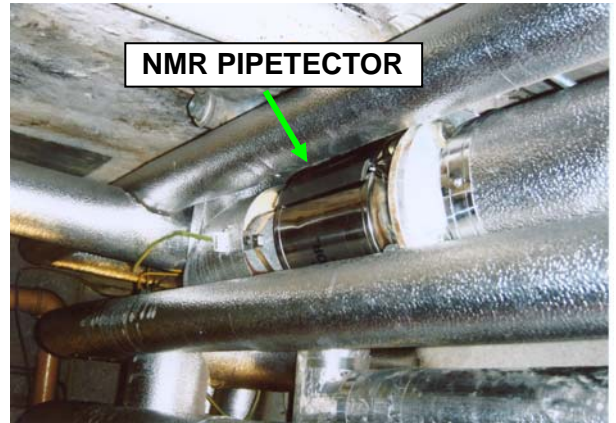
(Domestic Hot Water System)

NMR Corporation

\*Appearance of Building and Installation Place



Appearance of the building



Domestic hot water pipe work

## < Installation Purpose and Result >

The Royal Garden Hotel in Kensington England belongs to one of the most prestigious hotel chains in the world was built in 1965, renovated from 1994 to 1996, and has 400 bedrooms. For the prevention of the domestic hot water pipe work from the internal corrosion that the hotel has, one NMR Pipetector of 8 inch (PT-200DS) and one NMR unit of 4 inch (PT-100DS) were installed onto two separate domestic hot water pipe works in the main hotel.

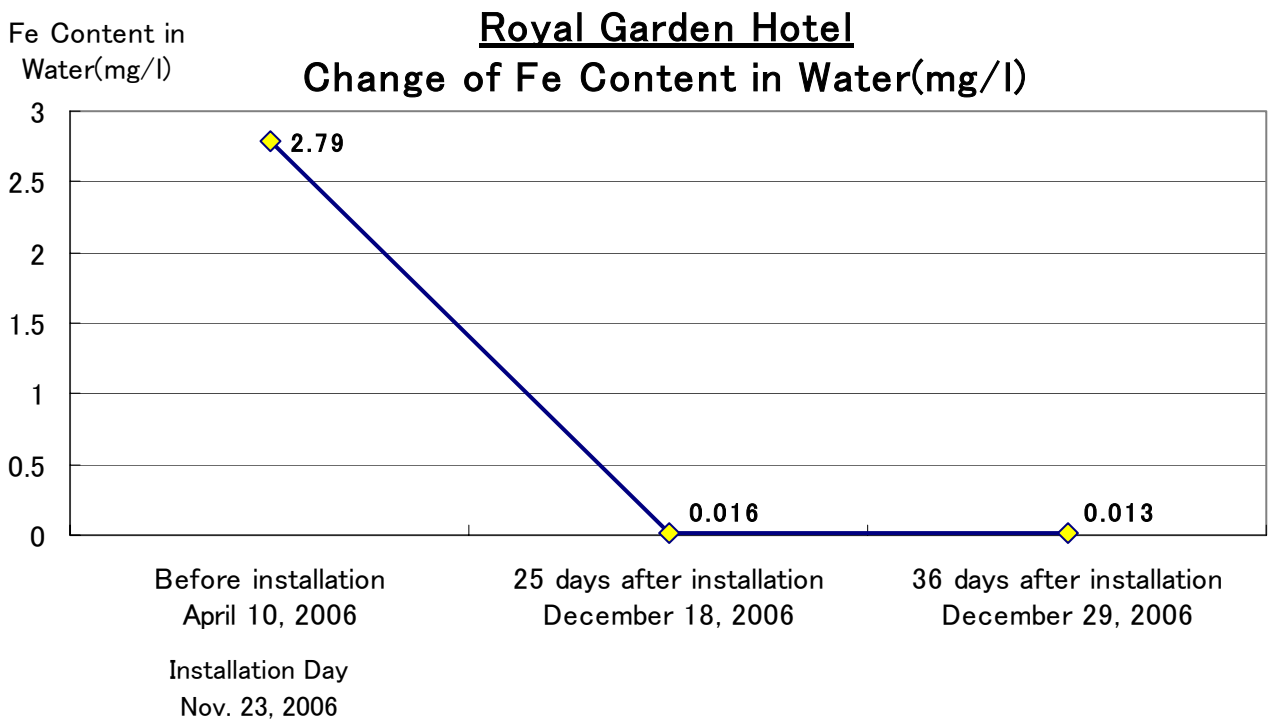
25 days after the installation of NMR Pipetector onto the domestic hot water pipe work in the main hotel , the Fe content drastically decreased from **2.79mg/l** (before the installation of NMR Pipetector) to **0.016mg/l**, stayed at the low of **0.013mg/l** 36 days after the installation, and these data are far below 0.2mg/l of the British Government Standard for Drinking Water. The decrease of Fe content means that new forming of corrosion (FeO(OH)) inside of the pipe work was terminated, and the existing corrosion was reduced to magnetite (Fe<sub>3</sub>O<sub>4</sub>) which is not dissolved into the water and protects the inside of the pipe from corrosion.

## < Installation Summary >


Name of Building	Royal Garden Hotel
Address	2-24 Kensington High Street, London W8 4PT, England
Building Summary	One of the prestigious hotels in the world. The hotel was built in 1965, renovated from 1994 to 1996, and has 400 rooms.
Installation Place	Domestic hot water pipe works in the main hotel and the hotel's staff hotel.
Installation Day	November 23 <sup>rd</sup> in 2006
Number of installed NMR PIPELECTOR	8 inch, 4 inch, and 3 inch domestic hot water pipe works (Iron pipe) PT-200DSx1 unit, PT-100DSx1 unit, PT-75DSx1 unit

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

	<b>Before Installation</b> April 10, 2006	Installation Day Nov. 23, 2006	<b>25 Days After Installation</b> December 18, 2006	<b>36 Days After Installation</b> December 29, 2006	The British Government Standard for Drinking Water
Fe Content in Water (mg/l)	<b>2.79mg/l</b>		<b>0.016 mg/l</b>	<b>0.013 mg/l</b>	0.2 mg/l



## Before Installation

**Certificate of Analysis**  **SEVERN TRENT** **STL**  
ENVIRONMENTAL LEADERSHIP

1314  
0897  
1229  
1510

Sample **2** Laboratory Number: **347652**  
of **4** Report Number: **BR/336626/2006** Issue **1**


Sample Source: **Cambridge Water Company**  
Sample Point Description: **Cambridgeshire Water Company**  
Sample Description: **6TH FLOOR DOMESTIC HOT WATER Royal Garden Hotel**

Sample Date: **10 April 2006** Sample Received: **10 April 2006** Analysis Complete: **18 April 2006**

Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	2790	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, L = Analysed at STL Midlands, S = Sub-contracted  
For Microbiological determinands 0 or ND = Not Detected, DET = Detected, For Legionella ND=Not detected in volume of sample filtered. IS = Insufficient sample

## 25 Days After Installation

**Certificate of Analysis**  **SEVERN TRENT** **STL**  
ENVIRONMENTAL LEADERSHIP

1314  
0897  
1229  
1510

Sample **2** Laboratory Number: **819035**  
of **3** Report Number: **BR/395109/2006** Issue **1**


Sample Source: **Cambridge Water Company**  
Sample Point Description: **Cambridgeshire Water Company**  
Sample Description: **ROYAL GARDEN HOTEL-10TH KITCHEN TOILET**

Sample Date: **18 December 2006** Sample Received: **18 December 2006** Analysis Complete: **20 December 2006**

Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	16	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, L = Analysed at STL Midlands, S = Sub-contracted  
For Microbiological determinands 0 or ND = Not Detected, DET = Detected, For Legionella ND=Not detected in volume of sample filtered. IS = Insufficient sample

## 36 Days After Installation

**Certificate of Analysis**  **SEVERN TRENT** **STL**  
ENVIRONMENTAL LEADERSHIP

1314  
0897  
1229  
1510

Sample **8** Laboratory Number: **832177**  
of **9** Report Number: **BR/396964/2006** Issue **1**

Sample Source: **Cambridge Water Company**  
Sample Point Description: **Cambridgeshire Water Company**  
Sample Description: **RGH 10TH LOO KITCHEN**

Sample Date: **29 December 2006** Sample Received: **29 December 2006** Analysis Complete: **05 January 2007**

Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	13	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, L = Analysed at STL Midlands, S = Sub-contracted  
For Microbiological determinands 0 or ND = Not Detected, DET = Detected, For Legionella ND=Not detected in volume of sample filtered. IS = Insufficient sample

Royal Garden Hotel 3-3(080226)

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