

NMR 『パイプテクター®』 設置結果報告：BBC（英国放送協会）

ロンドン、英国

空調冷水配管

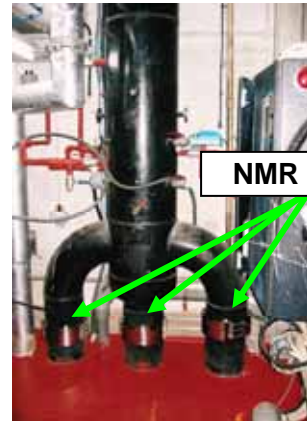
築 53 年 鉄管使用 空調冷水配管 放送局
(赤錆防止・配管延命)

日本システム企画株式会社

建物外観及び設置箇所



建物外観



設置箇所(空調冷水配管 PT - 250DS)

設置結果

築後 53 年が経過している BBC (英国放送協会) は、空調冷水配管に鉄管を使用している為、配管の赤錆劣化が非常に深刻な状態でした。赤錆劣化による漏水防止と空調冷水配管の延命を目的として、メインブロックビルとステージ 5 ビルの空調冷水系統の配管に “ NMR パイプテクター ” を 4 台設置しました。

効果の確認は、この 2 つのビルにおいて冷水を採水し、NMR パイプテクター設置前と設置後の鉄分値を比較することにより行いました。

メインブロックビルにおいては、NMR パイプテクター設置前の水中の鉄分値 **5.53mg/l** が、設置 32 日後には **0.048mg/l** と大幅に減少し、さらに設置 57 日後には **0.06mg/l** まで減少しました。ステージ 5 ビルにおいても、設置前の水中の鉄分値 **3.8mg/l** が、設置 32 日後には **0.063mg/l**、設置 57 日後には **0.008mg/l** と大幅に減少しました。鉄分値が減少したのは、新規の赤錆発生が防止され、配管内の既存の赤錆が水に不溶性黒錆に変化したためです。以上により、配管内の新規赤錆の発生が防止され、既存の赤錆が黒錆化されることによる、NMR パイプテクターの赤錆防止・配管延命効果が実証されました。

設置概要

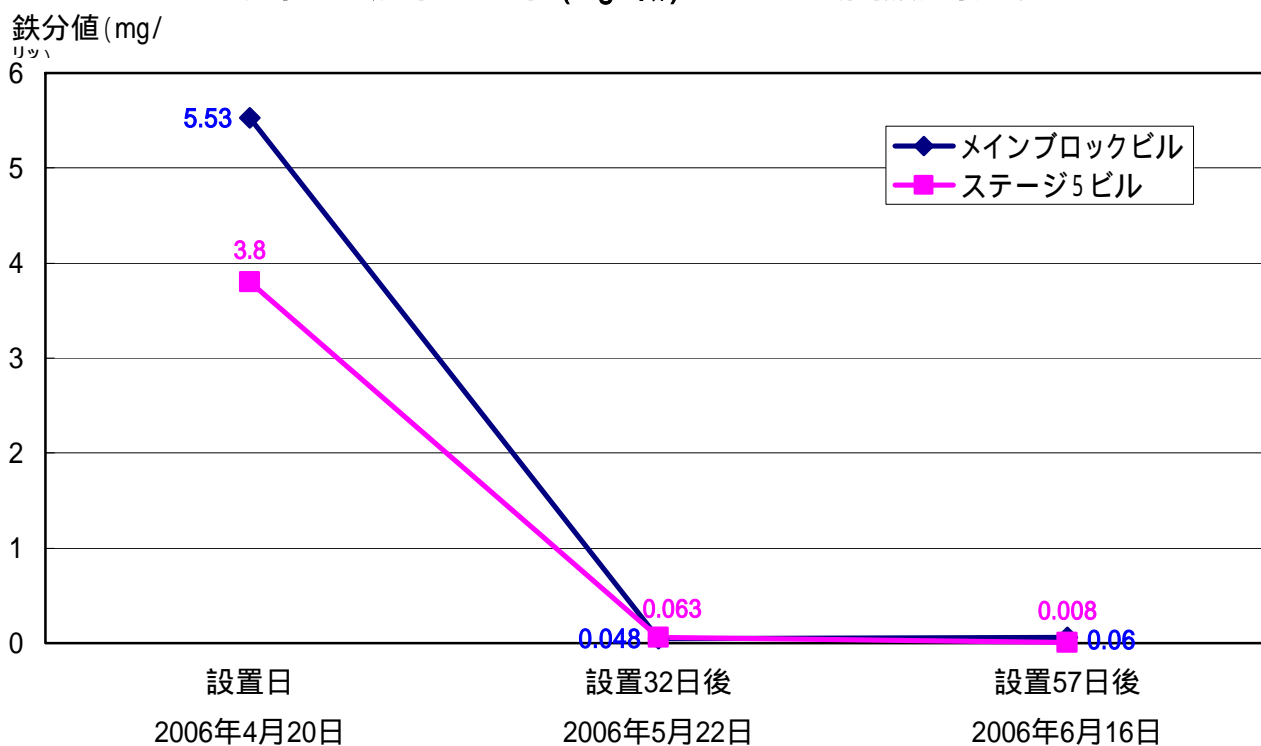
建物名：所在地	BBC (英国放送協会) 英国 BBC Television Studios, White City, London, England
建物概要	1953 年竣工、築 53 年
設置工事日：設置工事者	2006 年 4 月 20 日 : Japan System Planning UK.
設置配管及び設置数	空調冷水系統配管 PT - 250DS×4 セット

水質検査結果

検査項目	採水箇所	設置日 2006.4.20	設置 32 日後 2006.5.22	設置 57 日後 2006.6.16
鉄分値 (mg/リットル)	メインブロックビル	5.53	0.048	0.06
	ステージ5ビル	3.8	0.063	0.008

BBC(英国放送協会) 水質検査結果のグラフ

水中の鉄分値の変化(mg/リットル)【BBC 英国放送協会】





設置日
(メインブロックビル)

設置 32 日後
(メインブロックビル)

設置 57 日後
(メインブロックビル)

Certificate of Analysis

STL

1314
0897
1229
1510

Sample 2 Laboratory Number: 368746
of 3 Report Number: BR/341627/2006 Issue 1



Sample Source: Cambridge Water Company
Sample Point Description: Cambridgeshire Water Company
Sample Description: PETER GOSLING - BBC MAIN BLOCK

Sample Date: 26 April 2006 Sample Received: 26 April 2006 Analysis Complete: 02 May 2006

Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	5530	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-contract
For Microbiological determinands 0 or ND = Not Detected, DET = Detected, For Legionella ND=Not detected in volume of sample filtered US = Insufficient sample

Certificate of Analysis

STL

1314
0897
1229
1510

Sample 1 Laboratory Number: 407519
of 3 Report Number: BR/347123/2006 Issue 1



Sample Source: Cambridge Water Company
Sample Point Description: Cambridgeshire Water Company
Sample Description: MAIN BLOCK

Sample Date: 22 May 2006 Sample Received: 22 May 2006 Analysis Complete: 24 May 2006

Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	48	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-contract
For Microbiological determinands 0 or ND = Not Detected, DET = Detected, For Legionella ND=Not detected in volume of sample filtered US = Insufficient sample

Certificate of Analysis

STL

1314
0897
1229
1510

Sample 2 Laboratory Number: 448869
of 3 Report Number: BR/352952/2006 Issue 1

Sample Source: Cambridge Water Company
Sample Point Description: Cambridgeshire Water Company
Sample Description: Main Block


Sample Date: 16 June 2006 Sample Received: 16 June 2006 Analysis Complete: 21 June 2006

Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	60	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-contract
For Microbiological determinands 0 or ND = Not Detected, DET = Detected, For Legionella ND=Not detected in volume of sample filtered US = Insufficient sample

BBC3-4 (20061227)

設置日
(ステージ5ビル)

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

1314
0807
1229
1510


Sample 3 Laboratory Number: 368747
of 3 Report Number: BR/341627/2006 Issue 1

Sample Source: Cambridge Water Company
Sample Point Description: Cambridgeshire Water Company
Sample Description: PETER GOSLING - BBC STAGE 5 CHILLED WATER CONDENSER
Sample Date: 26 April 2006 Sample Received: 26 April 2006 Analysis Complete: 02 May 2006

Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	3800	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

設置 32 日後
(ステージ5ビル)

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

1314
0807
1229
1510


Sample 2 Laboratory Number: 407520
of 3 Report Number: BR/347128/2006 Issue 1

Sample Source: Cambridge Water Company
Sample Point Description: Cambridgeshire Water Company
Sample Description: STAGE 5
Sample Date: 22 May 2006 Sample Received: 22 May 2006 Analysis Complete: 24 May 2006

Test Description	Result	Units	Limit	Accreditation	Method
Iron, Total as Fe	63	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

設置 57 日後
(ステージ5ビル)

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


1314
0807
1229
1510

Sample 1 Laboratory Number: 448866
of 3 Report Number: BR/352952/2006 Issue 1

Sample Source: Cambridge Water Company
Sample Point Description: Cambridgeshire Water Company
Sample Description: Stage 5
Sample Date: 15 June 2006 Sample Received: 16 June 2006 Analysis Complete: 21 June 2006

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, 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

Signed:  Name: T. Down Date: 02 May 2006
Title: Production Manager