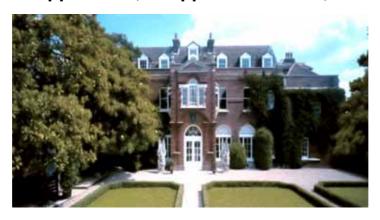
## Official Scientific Report of NMR PIPETECTOR Installation Anti-Corrosion Application, Shepperton Studios, located in London



#### NMR CORPORATION

## \* Installation Purpose and result

Shepperton Studio is a film studio with a long history dates back to 1931. One of the original buildings that was once a luxury hotel for film stars and now being used as offices, has a problem of internal corrosion in the old galvanized pipe works, and the film studios did not want to have pipe replacement because this building is listed as grade II buildings, and pipe replacement might cause major problem for building's structure.

For the protection of domestic hot water pipe work, NMR Pipetector was installed. One unit of PT30-DS was installed onto the domestic hot water pipe work.

After the installation of the NMR Pipetector, the Fe content in sample water decreased dramatically from 20mg/I to 0.37mg/I at the Gents hot tap, 14.5 mg/I to 0.39 mg/I at the Kitchen Hot Tap, 0.34 mg/I to 0.12 mg/I at the Disabled Hot Tap in just 10 weeks.

It means that the corrosion (FeO(OH)) inside of the pipe work was terminated and reduced to magnetite (Fe<sub>3</sub>O<sub>4</sub>) which is not dissolved into the water.

## \* Installation Summary

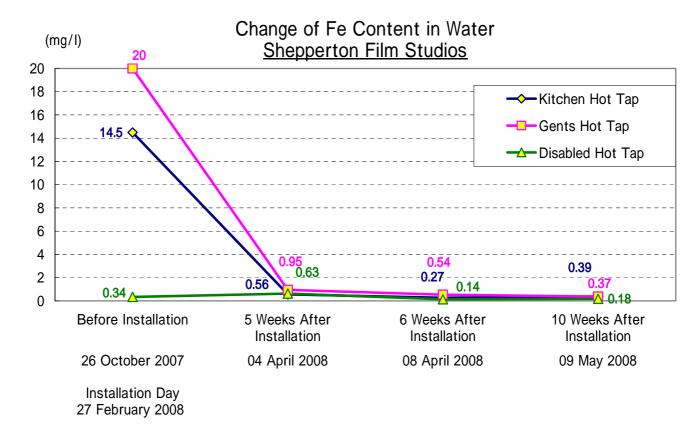
Name of Building: Address	Shepperton Studios, London, Surrey, United Kingdom			
Building Summary	Film Studio			
Installation Day	27 <sup>th</sup> February, 2008			
Installation Place: Number of installed NMR PIPETECTOR	Hot water header pipe	One unit of PT30-DS		

#### \*Fe content in hot water

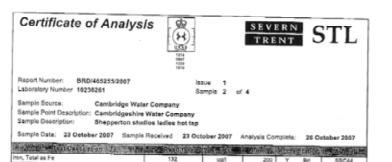
	26 October 2007 Before Installation	Installation Day 27 February 2008	04 April 2008 5 Weeks After Installation	08 April 2008 6 Weeks After Installation	09 May 2008 10 Weeks After Installation
Kitchen Hot Tap	14.5 mg/l		0.56 mg/l	0.27 mg/l	0.39 mg/l
Gents Hot Tap	20 mg/l		0.95 mg/l	0.54 mg/l	0.37 mg/l
Disabled Hot Tap	0.34 mg/l		0.63 mg/l	0.14 mg/l	0.18 mg/l

(Sample water was first water in the morning from the tap which was not used for at least 8 hours.)

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



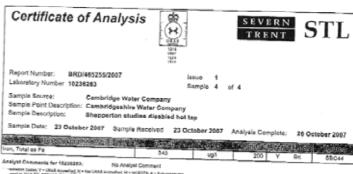
## **Before Installation**



Analyst Comments for 10236281:

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Severn Trent Laboratories Ltd.

Severm Trent Laboratories Ltd. Page 2 of 5 2 Technology Drive, Bridgend Science Park, Bridgend, CF31 3044 Tat-44 (2)16 8664 7557 Fax: +44 (2)16 8664 6526

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2 Technology Orive, Bridgend Science Park, Bridgend, CF31 SNA Tel+44 (0)16 5644 7957 Pax+44 (0)16 5654 6535

Certificate of Analysis TRENT STL Report Number: BRD/466255/2007 Laboratory Number 10236262 Sample Source: Cambridge Water Company
Sample Point Description: Cambridgeahire Water Company
Sample Description: Shepperton studies gents hot tap Sample Date: 23 October 2007 Sample Received 23 October 2007 Analysis Complete: 26 October 2007 Cally 25 at 1920 continued as a second of the contract of the Analyst Comments for 10236262: No Analyst Comment - Obligio Cobine, Y. e. (Edd. According, N. v. Nov.) Cod. Assembled, M. v. MCCKTR. B. v. Suprementarial, ptel by St. 4 St., Strigend, Str. v. Str., Cosmolo, S. Liu v. Pt., Material, Nov. v. St., Resting, Nov. v. St., For Microthospool Spherocomput S or Microbia Shapatal, Nov. approved by Synch Decisions in common of process by Synchronic Common of Synchroni

Certificate of Analysis SEVERN STL (H) ìm BRD/465255/2007 Laboratory Number 10236264 Sample Point Description: Cambridgeshire Water Company Sample Description: Shepperton studios kitchen hot tap Sample Date: 23 October 2607 Sample Roceived 23 October 2607 Analysis Complete: 26 October 2667 Name: T. Down Date: 28 October 2007

Title: Production Manager

Signed: Down .

# 5 weeks after Installation

#### Certificate of Analysis





Report Number: BRD/505436/2008 Laboratory Number 10502638

Cambridge Water Company Sample Point Description: Cambridgeshire Water Company

Sample Description: SFS DOMESTIC HOT Sample Date: 04 April 2008 Sample Received 04 April 2008 Analysis Complete

Total Total menplones with the foundation of the control of the co

Analyst Comments for 10502638:

Sample Source:

No Analyst Comment

Accreditation Codes: Y = UKAS Accredited, N = Not UKAS Accredited, M = MCERTS, S = Sub-contracted.
Analysed to th n STL Religiond, Cav = STL Coverty, Md = STL Midlands, Res = STL Residing, Riun = STL Rencom.
For Microbiological determinants of or MNNNto Extend. For Legisland, NNN-Nto Detection in volume of estergie (Started, US)-tip.

Certificate of Analysis

P+

SEVERN STL

Analysis Complete:

09 April 2008

Report Number: BRD/505436/2008 Laboratory Number 10502639

04 April 2008

Sample Source: Cambridge Water Company Sample Point Description: Cambridgeshire Water Company Sample Description: SFS 1ST FLOOR CLEANERS

Sample Date: 04 April 2008 Sample Received

Iron Total as Fe Analyst Comments for 10502639:

No Analyst Comment

Accrediation Codes; Y = UKAS Accrediad, N = Not UKAS Accrediad, M = MCERTS, S = Sub-command.
Analysis at B = STL Bridgend, Cor = STL Coventy, Mid > STL Middlends, Rea = STL Residen, Rhun = STL Resident, Per Microbiological Internations () or McDivide Detected, For Legionals Nations () Detected for Submit of surrols (Stared U.S.).

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**→** 

SEVERN STL

09 April 2008

Certificate of Analysis

Laboratory Number 10502640

Cambridge Water Company

Sample Point Description: Cambridgeshire Water Compa Sample Description: SFS GROUND FLOOR GENTS Sample Received Sample Date: 04 April 2008

04 April 2008 Analysis Complete: TostiDescription Result Result Units

Analyst Comments for 10502640: No Analyst Con Accreditation Codes: Y = UKAS Accredited, N = Not UKAS Accredited, M = MCERTS, S = Sub-contracted.
Analysed at: Dir = STL Skidgeed, Cor = STL Corenty, Mid = STL Midunde, Rea = STL Reading, Run = STL Runcom.
For Microbiogical determinants of or MD-Into Torocode, For Lagonals MD-Into Disaded in Volume 6 simple filemed, IIS-insufficient sample

Signed: Roows

Date: 09 April 2008 Name: R. Robins

Title: Team Leader

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Certificate of Analysis

# | | | |

SEVERN STL

Report Number: BRD/505436/2008

Laboratory Number 10502637

Cambridge Water Company

Sample Source: Sample Point Description: Cambridgeshire Water Company
Sample Description: SFS GROUND FLOOR KITCHEN

Sample Date: 04 April 2008 Sample Received 04 April 2008 Analysis Complete: a controccuption and the Result of the Cities

Analyst Comments for 10502637:

No Analyst Comment Alburyst Committed for Inducedry. New UNIX Appendix, M. MCCETT, \$ 5-60-controlled.
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Accordation C

# 6 weeks after Installation

#### Certificate of Analysis



SEVERN STL

Analysis Complete:

Report Number: BRD/506194/2008 Laboratory Number 10508303

Sample Source: Sample Description:

Cambridge Water Company

Sample Point Description: Cambridgeshire Water Company Old House 1st Floor Cleaners Zink

Sample Date: 08 April 2008 08 April 2008 Results :

Analyst Comments for 10508303: No Analyst Comment

ARIATYSE LORIMENTS TO TUDUSUSS:

Accordisting Codes, Y LIVEA proceeds it = No UKAS Accordisting Codes, The Sub-contrigiond.

Assigned at Dir. S.T. Biologise, Cov. S.T. Coventy, Md. et J. Middlend, Res. s.T. Resigne, Ris. et J. Russom.

For Monotechnique is destroyed in Control, Md. et J. Middlend, Res. s.T. Resigne, Ris. et J. Russom.

The Monotechnique is destroyed in Control, Md. et J. Middlend, Res. s.T. Resigne, Ris. et J. Russom.

Certificate of Analysis



TRENT STL

Report Number: BRD/506194/2008 Laboratory Number 10508294

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

Sample Description: Old House Bathroom

Sample Date: 08 April 2008 Sample Received 08 April 2008 Analysis Complete: 15 April 2008 Iron, Total as Fe 2560

Analyst Comments for 10508294

No Analyst Commen

Accreditation Codes: Y = UKAS Accredited, N = Not UKAS Accredited, M = MCERTS, S = Sub-contracted, Analysed at Bri = STL Bridgend, Covr = STL Coveroy, Md = STL Middends, Ras = STL Reading, Rus = STL Runcom, For Microsituacient deserminants of an Nithology Delastrad, For Lacientals Nithology Delastrad Delastrad for Notice of Lacientals Notice Obstaced and Access of Lacientals Notice Code Code (Notice of Lacientals Notice)

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## Certificate of Analysis



TRENT STL

Analysis Complete:

15 April 2008

BRD/506194/2008 Report Number:

Laboratory Number 10508293

Sample 3 of 9

Sample Source:

Analyst Comments for 10508293:

Cambridge Water Company Sample Point Description: Cambridgeshire Water Company
Sample Description: Old House Ground Floor Kitchen

Sample Date: 08 April 2008 Sample Received 08 April 2008

16.52 Dissentation Constitution Constitution

fitation Codes: Y = UKAS Accredited, N = Not UKAS Accredited, M = MCERTS, S = Sub-contracted, sed at: Birl = STL Bridgend, Corr = STL Covenity, Md = STL Midlands, Ras = STL Reading, Run = STL Runcom. mobilectical determinands to a DNING Descript, For Legisland, ND-Not Descript in volume of sample filtered. InS-instiffic

No Analyst Comment

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## Certificate of Analysis

SEVERN TRENT

Report Number:

BRD/506194/2008

Laboratory Number 10508291

Cambridge Water Com Sample Point Description: Cambridgeshire Water Company
Sample Description: Old House Ground Floor Gents

Sample Date: 08 April 2008 Sample Received

08 April 2008 Analysis Complete: Toble of scriptions (24)

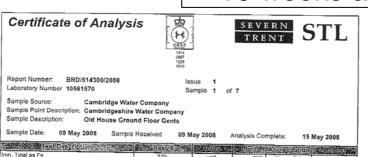
Sample 2 of 9

Analyst Comments for 10508291:

No Analyst Comment

Acceptitation Codes: Y = UKAS Accredited, N = Not UKAS Accredited, M = MCERTS, S = Sub-corrected.
Analyzed at; BS = STL Bridgerd, Cov = STL Coverup, Mo = STL Midsents, Ras = STL Reading, Run = STL Runcom.
For Microbiological determinants of or ND-Noted Decoded, For Lacondard ND-Noted Deception in Submit of sample Strand, US-b.

# 10 weeks after Installation



Asserbation Codest Y = UKAS Ascrodised, N = Not UKAS Ascrodised, M = MCERTS, S = Sub-contracted.
Adults at 84 = STL Bedgard, Cov = STL Coverty, Md = STL Medians, Rev = STL Reading, Rm = STL Re

No Analyst Comment

Analyst Comments for 10561570:

Certificate of Analysis (H) SEVERN TRENT STL Report Number: BRD/514300/2008 Laboratory Number 10561571 Cambridge Water Company Sample Point Description: Cambridgeshire Water Company Sample Description: Old House Top Floor Kitchen Sample Date: 09 May 2008 Sample Received 09 May 2008 Analysis Complete: Accreditation Whenever Iron, Total as Fe

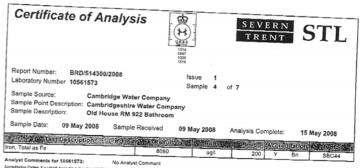
Analyst Comments for 10561571: Accredition Codes: Y = URAS Accredited, N = Not URAS Accredited, N = No

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Accredits on Codes: Y = URAS Accredited, N = Not URAS Accredited, M = MCERTS, S = Sub-marracted.
Analysed at the 3 TL Bringers, Cov = STL Coventy, Mol = STL Midseris, Rs = STL Reading, Rx = ST

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Alteryst Germinetts out Tvors 1974:

Pro Alteryst Germinett
Alterdation Code: Y s UKAS According, N = Not UKAS According, M = MCRETS, E = Bub-contracted,
Analysed of the 1 STL Redgled, Cor = STL Chemisy, Mel = STL Middlend, Res = STL Redgled, Fin = STL Remove,
For Microbiological determinands 0 or NOther Delegale, For Legionella NOTHER Delegale in Volume de Langue Bened, 19