

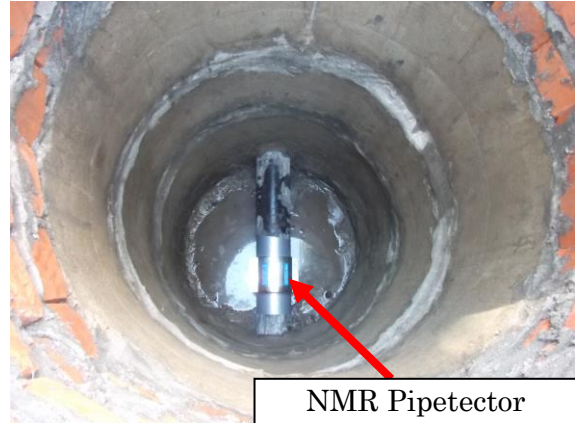
Official Scientific Report of “NMR Pipetector” Installation Yangon City, Myanmar

◆ More than 150 years old, SGP, Main Water Supply System ◆

<Appearance of Site and Installation Place>



Appearance



NMR Pipetector Installation Place at
Upper Mandalay Street (PT-100DS)

<Installation Purpose and Result>

The water supply system at Yangon City is old started back in 1842 and water supply rate is low as 37% and the replacement of old pipes have not to be done yet. Within the current water supply amount of 520,000 m³ per day, the amount of non-revenue water is up to approximately 66% so the countermeasure for old water distribution pipework has been becoming an urgent matter.

We conducted the trial installation of our equipment named “NMR Pipetector” designed to prevent corrosion inside pipework on Upper Mandalay Street in order to conduct an effect verification of preventing corrosion and water leakage throughout the pipework by confirming the increased amount of magnetite in corrosion inside pipework.

We installed “NMR Pipetector” PT-100DS on the 4 inches diameter pipe at Upper Mandalay Street on December 23rd 2016 and selected a pipe that supplies water to private houses which is approximately 50 meters downstream of the installing place as an effect verification place. 5 months after the installation, we requested the research institution in Japan to analyze the magnetite amount in corrosion formed inside the pipework. As a result, the amount of magnetite before installing “NMR Pipetector” was 22.5% whereas it went up to 48.5% 5 months after the installation which enabled us to confirm the increased amount of magnetite by 115% compared with that of before installation.

From the above results, we accomplished to reduce internal corrosion by the effect of “NMR Pipetector” as it increased the amount of magnetite more than twice compared with the amount before the installation, also managed to prove the pipe renewal effect of reducing corrosion into magnetite and preventing any corrosion problem inside a pipework. We have also confirmed that the existing corrosion inside pipework has been reduced into magnetite and inner wall of it has now been protected by the hard, passive coating of magnetite. From now on, this water pipework system can be used until the life duration of “NMR Pipetector” besides external corrosion.

<Installation Summary>

Name of the place	Upper Mandalay Street in Yangon City, Myanmar
Summary	Main Water Supply Pipework System
Installation Date	December 22 nd 2016 for Upper Mandalay Street
Installation Place and Amount	4 inches diameter pipe at Upper Mandalay Street: PT-100DS × 1

<Magnetite Amount in Corrosion (%) >

	Before Installation December 22 nd 2016	5 Months After May 24 th 2017	Absolute Increased Amount
Amount of Magnetite (%)	22.5%	48.5%	115%

