

Mitsubishi Mobile Monitoring System for Diagnosis



High density laser scanner, high resolution camera and various sensor technologies realize advanced automatic and labor-saving social infrastructure inspection



MMSD III



MMSD II



MMSD I

MMSD enables to grasp current status, deteriorating status of railway or road equipment by analyzing high accuracy measurement data.

Example of railway infrastructure analysis

Structure gauge analysis

Gauge and center of track measurement

Earth wall surface analysis

Point cloud data → CAD

Point cloud data

3D CAD data (DXF)

Beacon and signal location measurement

Contact wire position measurement

Bolt joint status

Road surface analysis

Road surface analysis

Rutting

Flatness

Example of Tunnel wall state analysis

0.3mm width crack (40km/h)

Free lime, water leakage (40km/h)

Wall surface contour analysis

Tunnel aged degradation analysis

Past measurement

Latest measurement

Automatic camera image composition

Automatic damage states detection

Automatic tunnel development drawing

Comparison analysis (Inside=red, Outside=blue)

Mitsubishi Mobile Monitoring System for Diagnosis MMSD®

MMSD Vehicle specification

Item		MMSD I	MMSD II	MMSD III
Application		Measurement along with road and railroad, Tunnel surface deviation measurement	In addition to MMSD I , crack detection of tunnel wall and road surface	
Applicable area		Road (Load MMSD I vehicle to a road-rail vehicle in case of railway)	Road + Railroad	Road + Railroad (Put container on flatcar. Smaller tunnel applicable.)
Vehicle	Base	PHEV	6ton truck (Road-rail vehicle)	6ton truck
	Power	Storage battery	Power generator	
Laser scanner		High density laser scanner + Standard laser		High density laser scanner
Wall imaging	Camera	(N/A)	8K line camera	
	Light	(N/A)	Laser light	
Road surface imaging	Camera	(N/A)	8K line camera	
	Light	(N/A)	Laser light	
Coordinate detection	GPS	Multiplexing		
	IMU	Multiplexing		
	Speed meter	Odometer, Laser Doppler (in running)		
Real-time clearance measurement		Available		

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