		General specifications							
Measured	Wheel diameter	 Diameter of unused wheel tread Approx, 10% wear for 860 mm Φ 							
object		Continuous wheel measurement 8 wheels							
	Measurement condition	Sensor setting position On a pit in train depot							
		Ambient light Away from direct sunlight at measurement point							
		Wheel speed 0 to 15 km/h							
		Direction of rail width of wheel Direction of rail width: Within ±20mm							
		Displacement and meandering Meandering: Within ±2°							
		Wheel status Has no grease and dust at a basis groove.							
		Moving direction of wheel Entering and existing: Both,							
		Only when moving no inverse direction during							
		moving, and no stopping during measuremen							
		Measurement processing time From image import to wear calculation;							
		Within 20 seconds/ wheel							
Measureme	Measurement method	Light-slice method, 3 dimension processing							
nt contents	Measuring items	Items Accuracy 寸法算定							
		Back gauge(G) ±0.5mm							
		Thickness(T) ± 0.5 mm							
		Height(H) ± 0.5 mm							
		Distance ± 0.5 mm $^{\text{bis}}$							
		For verification of measurement accuracy, Tyre thickness(T)=(C-H)+(A-G)/2							
		ACT basic wheel parts is used by the method Outside distance=F+B·G/2							
		shown right. A: Diameter of groove(780mm)							
		G: Basis diameter of tyre							
Cofficients		thickness(730 mm)							
Soltware	display structure	Windows AP, U# Main many massyrement plan measurement start, result display, and and							
Performance	Temp (sensor unit)	0 to 40° C							
1 chomanec	Humid (sensor unit)	10 to 90% without condensation							
	Vibe. proof (sensor unit)	Less than 5G							
	Struc. (sensor unit)	Splash-proof construction for heavy-duty uses							
Dimensions	Sensor unit	740(W)x654(D)x245(H)mm, excluding projections Approx, 10kg							
Weight	(for one-sided wheel)								
	測定ラック	600(W)x800(D)x1600(H)mm, excluding projections Approx, 50kg							

Light-slice method, 3 dimension processing Wheel Profile Measurement System



- \diamondsuit Non-Contact measurement the outline of wheels
- $\diamondsuit\,$ Capable of measuring in moving condition of train
- $\diamondsuit\,$ The data of wheel profile is also converted into data

the outline of wheels oving condition of train also converted into data

Make Non-Contact measurement of flange/gauge automatic

The Wheel Profile Measurement System uses 3 dimension processing system by Light-slice method. This system is available for a measurement of the outline of entering and exiting wheels with laser beam; by setting a sensor on a pit in a train inspection area and a rack for measurement beside a pit. The output measurement result is the following; the data of the top of wheel profile, thickness of a tyre, height of a flange, distance of outer surface, and measured value of back gauge.

A measurement operates in low-speed running condition of train and the measured value and top of wheel profile are also measured at the same time. Moreover, this system has various functions for wheel profile measurement but it is lower price.

This measurement system can make a measurement of flange/gauge automatic and replace a existing wheel profile measurement device.

eatures

- Non-Contact measurement of the outline of wheels in low-speed running condition of train.
- 2. The laser beam for measurement is emitted only when a wheel is in a measurement gate.
- 3. Outputs The measured value and top of wheel profile as measurement result.
- 4. A measured wheel profile is superimposed on a unused wheel profile.
- 5. A measured value and profile are printable data.
- 6. Sends the data to a wheel control system.

Connecting cable

7. Has general hardware and software and lower price.

for laboursaving and accurate measurement

Measurement Condition



Sensor Unit Layout





Rack for measurement

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Measures the value and profile Available for wheel profile control

