Tunnel Scanner TM-270

Features

➢Wide range scanning
  Both single line and double lines are applicable to scan.
➢Various speed for measurement
  Hand-pushing trolley (Up to 20km/h）.
➢Easy to assemble, run and remove within limited working time.
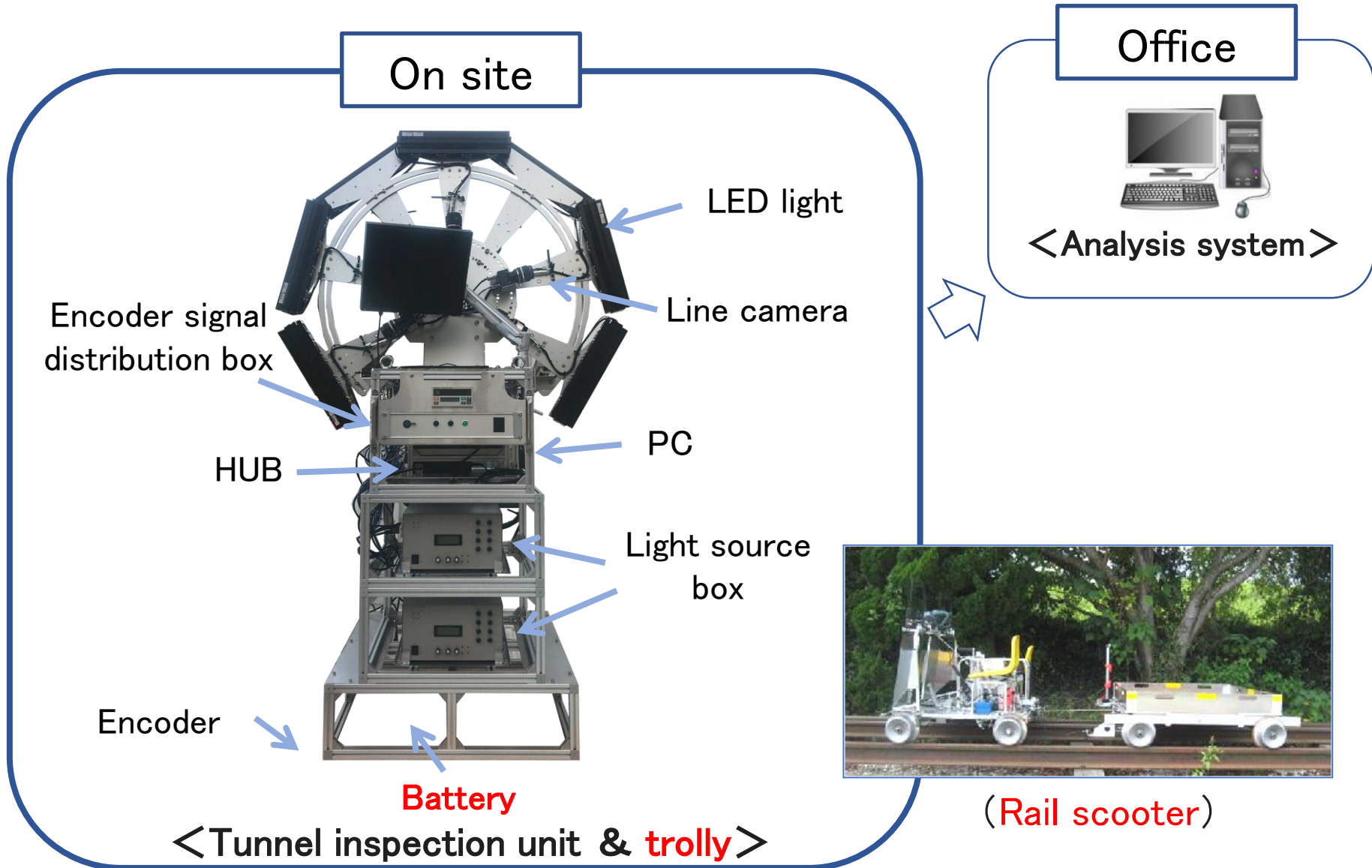 Easy to hand carry the unit and short-time assemble it on site.
➢High definition image
  High definition camera and encoder capture high resolution wall image with various speed.
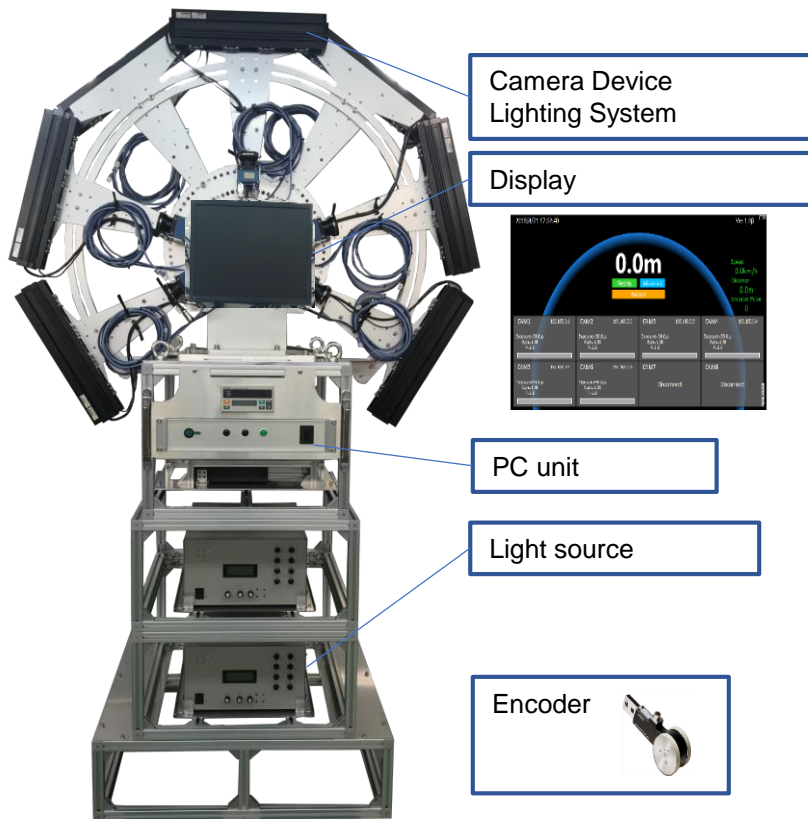➢Excellent analysis software
  A lot of know-how inside of our "Kuraves-Actis" software contribute the measurement of crack and other defect, then create deficiency map.

Unit system

Office

<Analysis system>

LED light

Line camera

Encoder signal
distribution box

PC

HUB

Light source
box

Encoder

Battery

<Tunnel inspection unit & trolly>

（Rail scooter）

＊Equipment highlighted in red should be prepared by customer.

Specification

Camera Device
Lighting System

Display

PC unit

Light source

Encoder

|	Tunnel Scanning System TM-270
Camera device	High resolution color line camera
Camera (TTL300 degrees)	7
Lighting system	LED Light
Transversal resolution	1mm/pix
Travel direction resolution	1mm/pix
Survey speed	Walking speed (Up to 20 km/h) *
Acquisition	Trigger mode (Encoder) *Speed sensor mode is available as an option
Power	Maximum 1.7kW * *Vary depend on the configuration
Tunnel shape	Maximum tunnel height by approx. 7.5m

Example of use

Single-track

＊7 pcs cameras
（300 degree photographing）
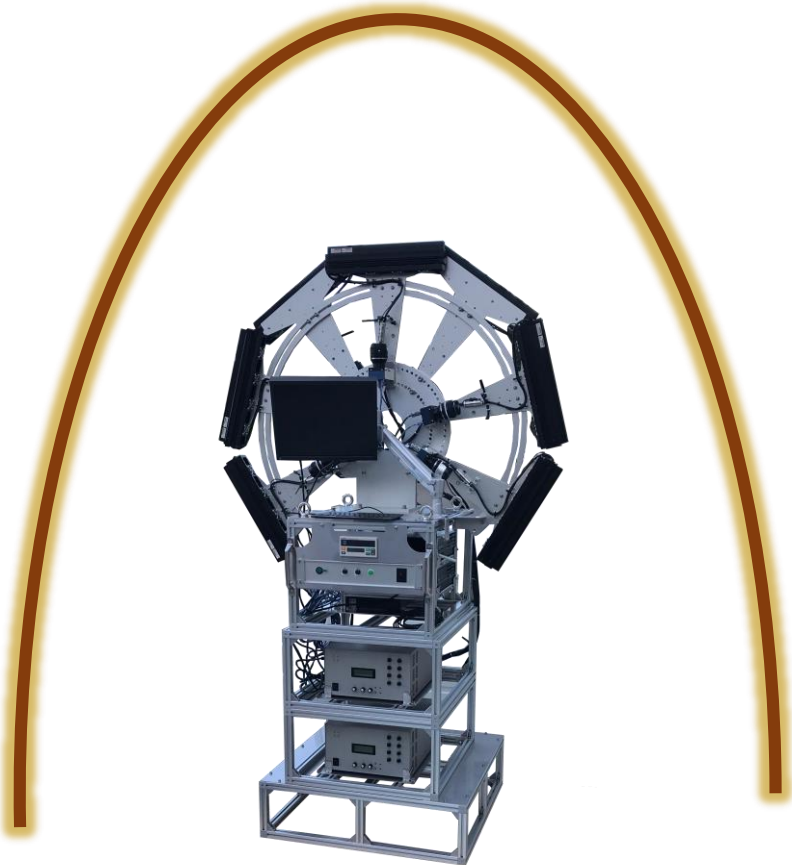
Multiple-track

＊4 pcs cameras
（180 degree photographing）
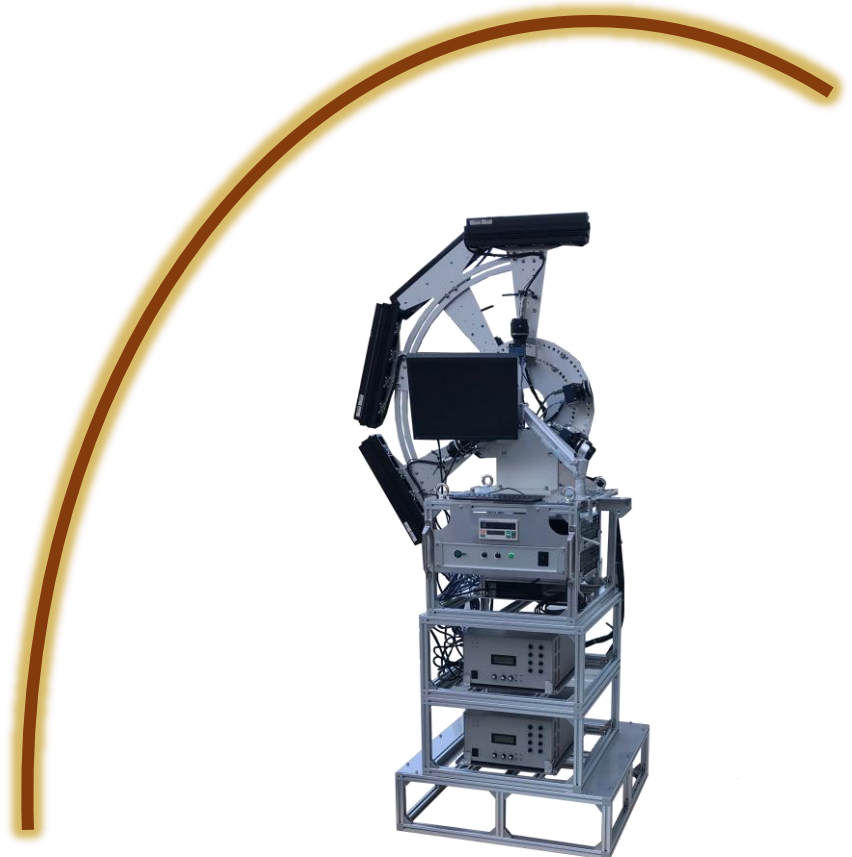
Processing Flow

Pre-work

1. Camera Adjustment

2. Assemble
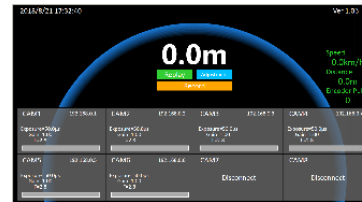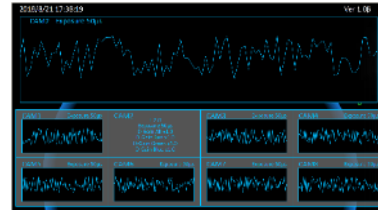
On site

3. Taking photo

4. Bring data to the office

Office

5. Data Analysis

Span image

- Long correction
- Multiple image correction
- Color correction
- Output image of span unit

Deficiency Map(Lined image)

- Tilt correction
- Deformation
- Image synthesis
- Output the living image

Abnormality analysis

- Extraction and drawing the crack
- CAD output the damage data (Crack location map)

Assemble

Working time 30min
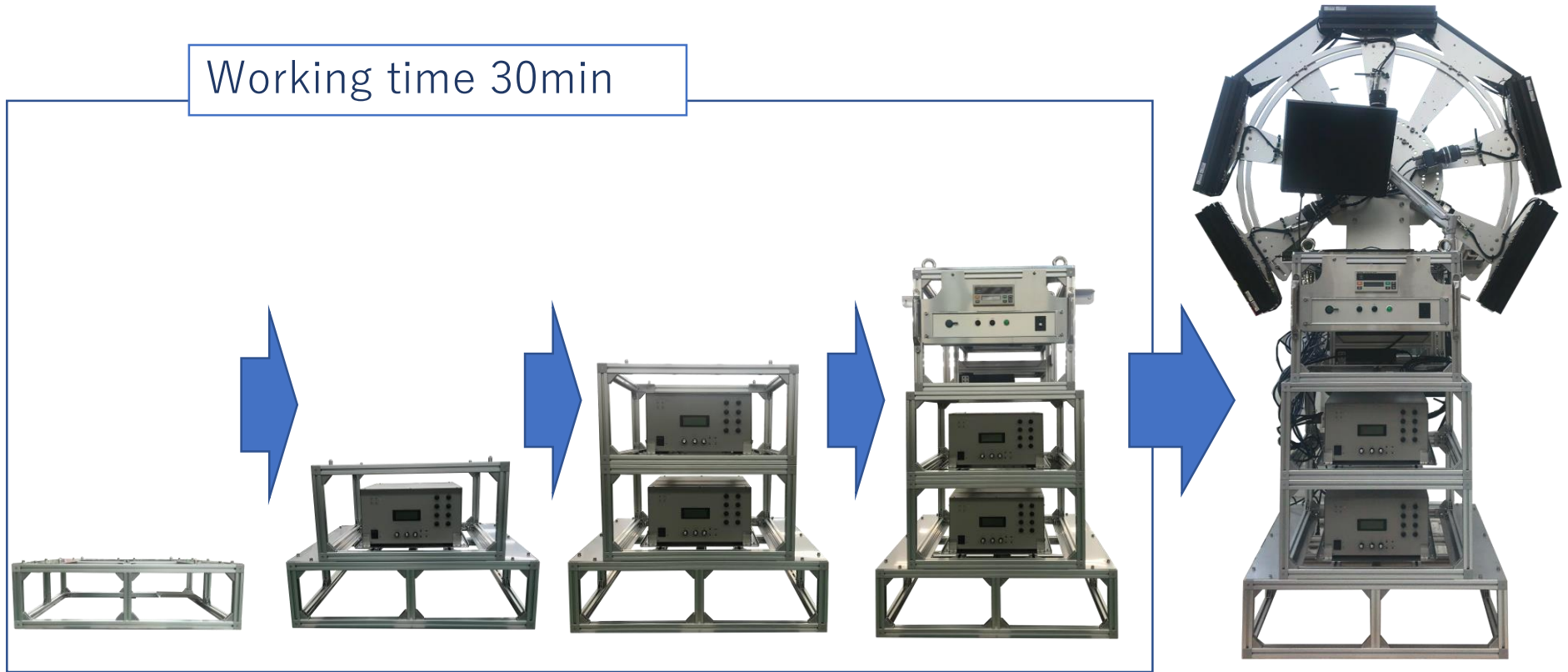
5 STEP！

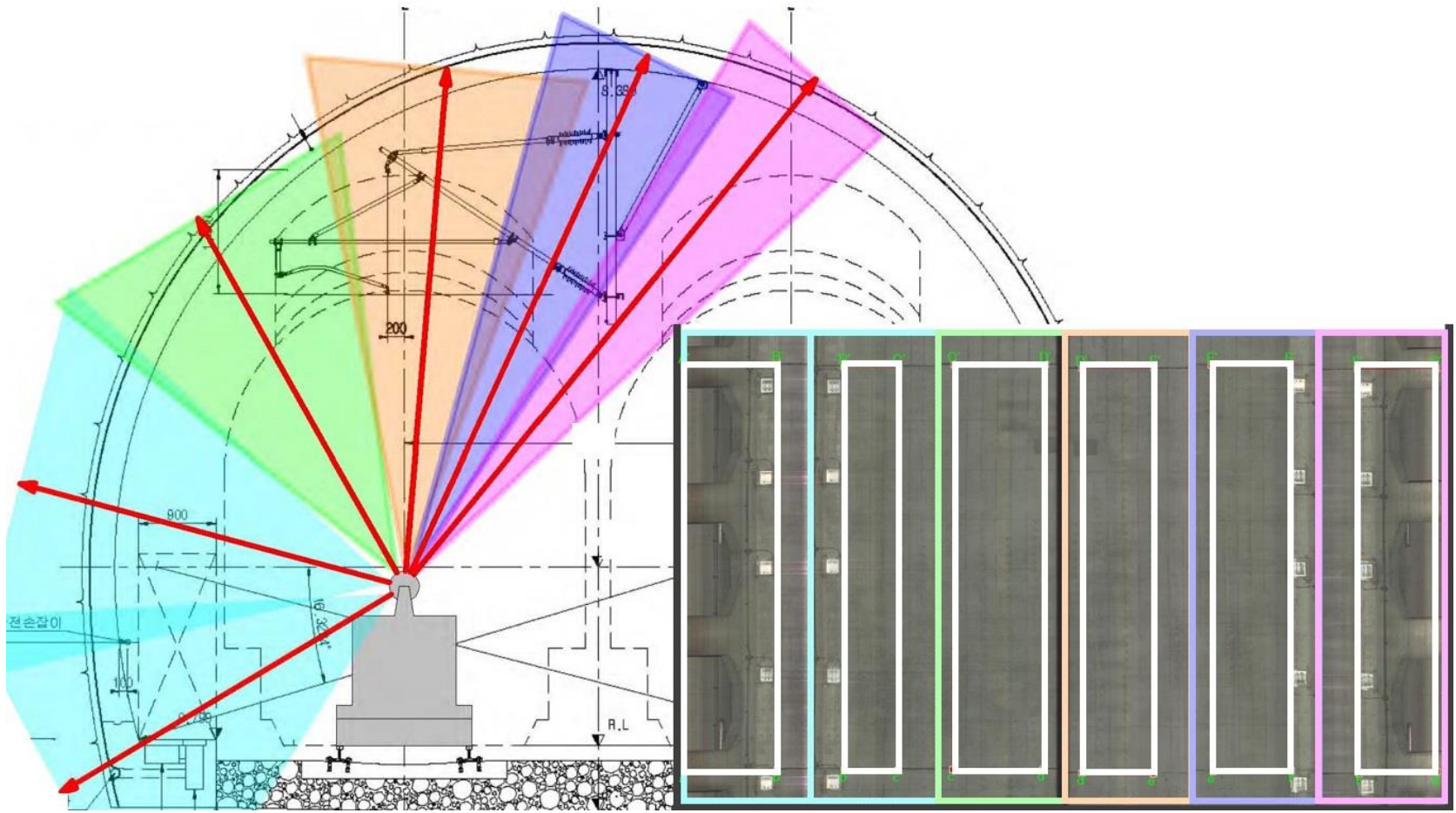# On site inspection

Scanning Software

Easy to confirm the overlap.
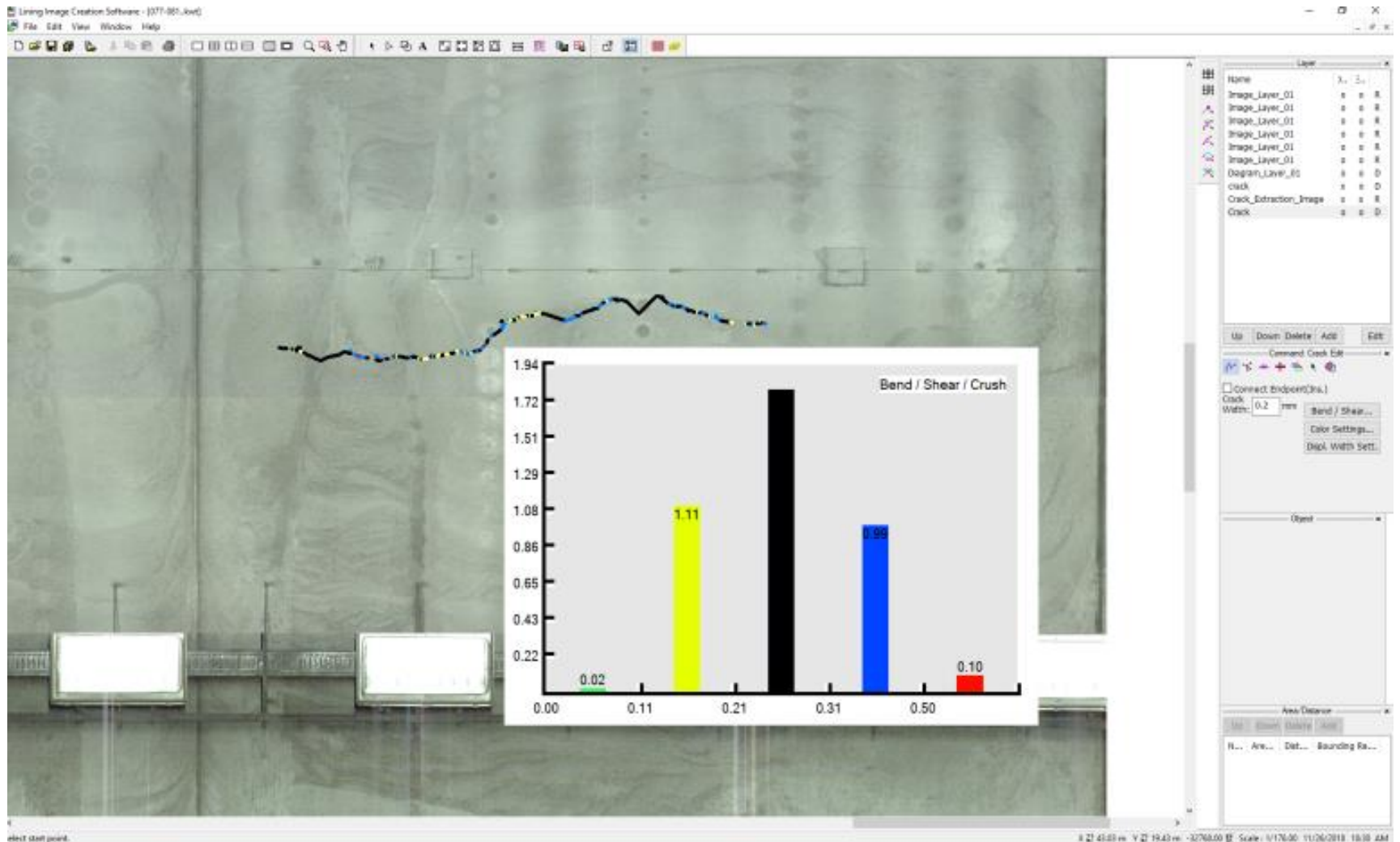
Scanned data
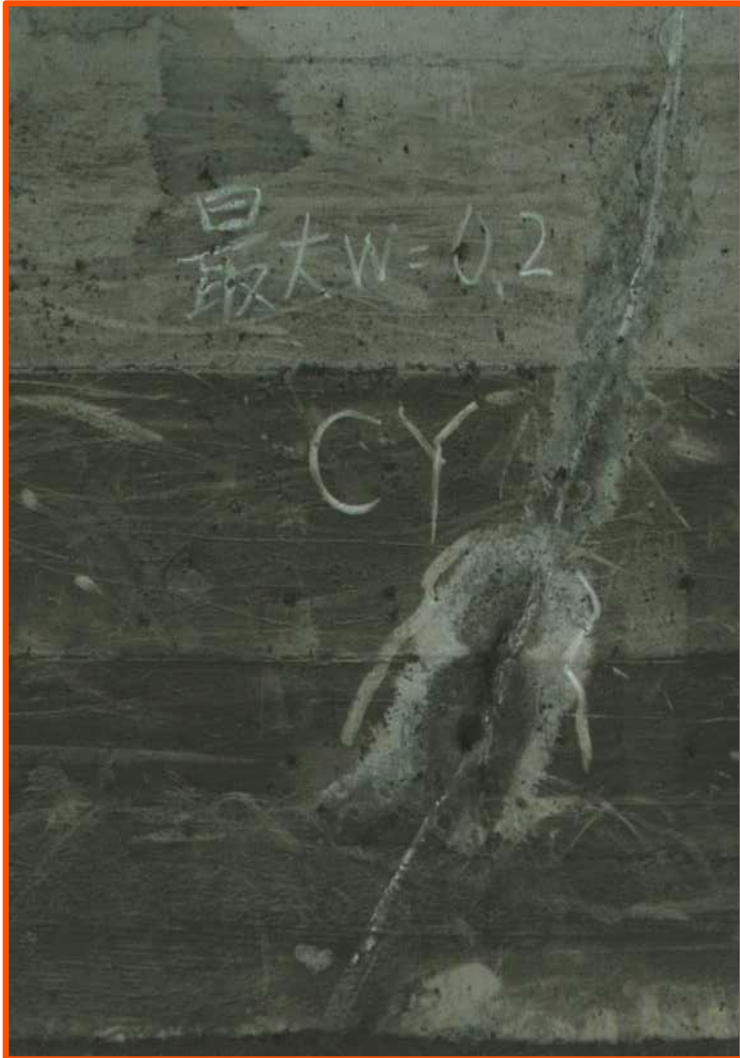
Available for taking photo 0.1mm crack !

Create Tunnel Lining Image

Data Analysis

Deficiency Map
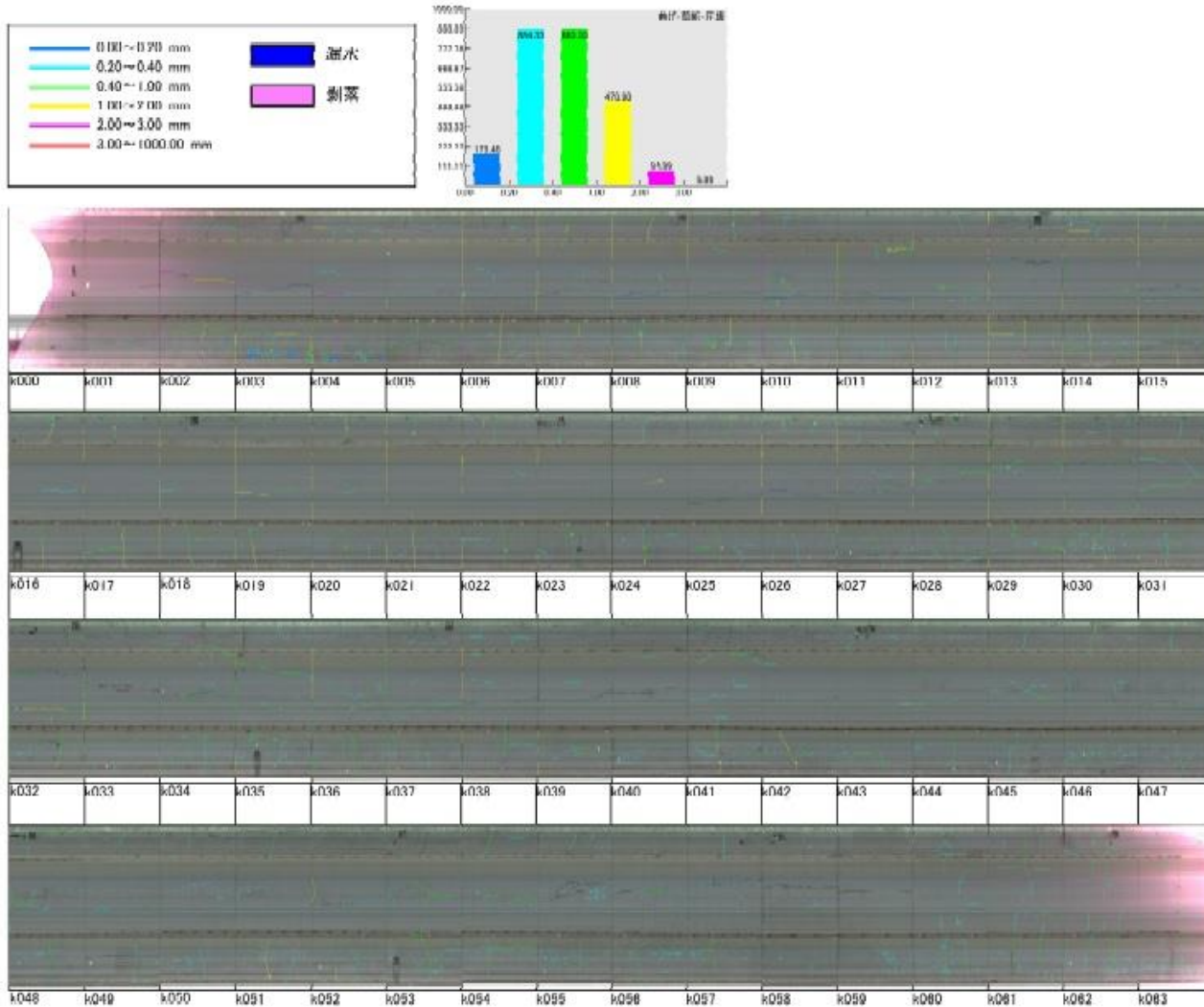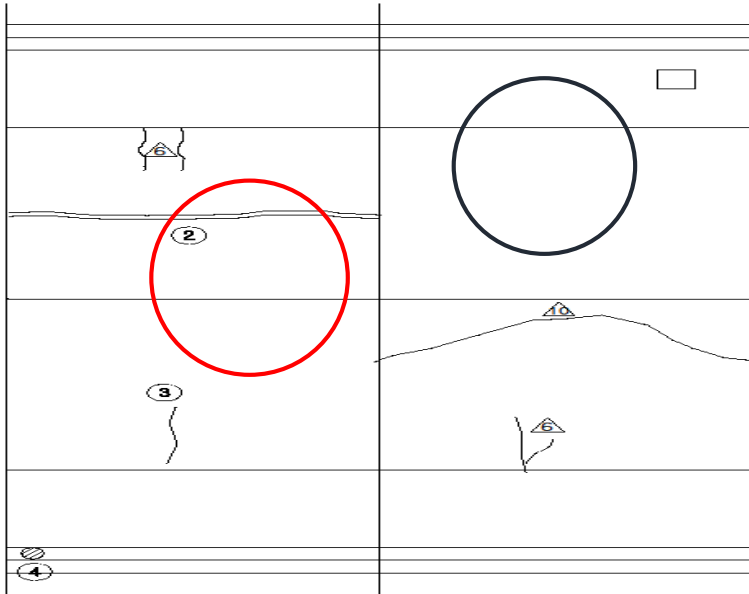
Case Study

Traditional report
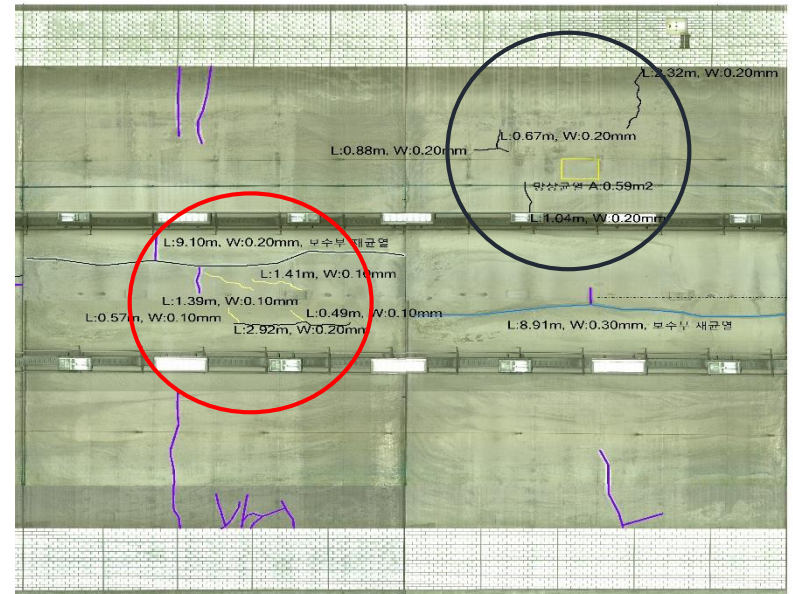
Condition		Unit	Number
Crack	<0.3mm	Meter	9
		Places	1
	>0.3mm	Meter	1.5
		Places	1
Crocodile crack		M2	-
		places	-

Tunnel scanner's report

Condition		Unit	Number
Crack	<0.3mm	Meter	20.79
		Places	10
	>0.3mm	Meter	8.91
		Places	1
Crocodile crack		M2	0.59
		Places	1