



# CERTIFICATE

This is to certify that the ViaPPS (Road Surface Monitoring Equipment) manufactured by ViaTech AS has been approved according the routines of the Swedish Yearly test of road surface monitoring equipment<sup>1</sup>. The tests were performed in October/November 2019. The ViaPPS is operated by AS Teede Tehnokeskus, Estonia.

The tests, done for this certificate, include approval of rut depth in the in the left and right wheel track and position.

The basic data used for the approval is collected from one test section (15 repetitions in three different speeds) and two project level sections (four repetitions). The results from the test section is compared with reference values and the project level sections are used for repeatability control.

Tested parameter	Approved
Rut depth left	OK
Rut depth right	OK
Position	OK

The approval is valid for the soft- and hardware versions used in the tests. Responsible for the analysis in this approval, Research Engineer Thomas Lundberg, VTI

2020-05-19

Maria Mäkitalo Research Director, Infrastructur Maintenanc... Signerat av: Maria Mäkitalo



<sup>&</sup>lt;sup>1</sup> TDOK 2014:0706, Tekniskt godkännande för objektmätning (Technical approval for project level measurement), Version 2.0, 2020-01-01, Swedish Transport Administration (in Swedish).



# **Results of the tests**

# Validity (compared with reference)

### Test section A, VIAPPS

Parameter	Results	Requirements	Approved
Rut depth left	97.67 %	75 %	ОК
Rut depth right	92.44 %	No limit	
Position	99.89 %	98 %	ОК

# Repeatability (15 runs at 3 different speeds)

#### Test section A, VIAPPS

Parameter	Results	Requirements	Approved
Rut depth left	0.12	0.20	ОК
Rut depth right	0.32	No limit	

### VIAPPS,

#### repeatability Project level, section M

	Average			Standard Deviation					
Parameter	Resu	ılts	Requirements		Results		Requirements		Approved
Rut depth left	0.19		0.45	15.5%	0.09		0.55	25.5%	ОК
Rut depth right	0.15		0.45	15.5%	0.20		0.55	25.5%	ОК

### VIAPPS,

### repeatability

### Project level, section N

	Average				Standard Deviation				
Parameter	Res	ults	Requirements		Results		Requirements		Approved
Rut depth left	0.20		0.45	15.5%	0.17		0.55	25.5%	ОК
Rut depth right	0.16		0.45	15.5%	0.13		0.55	25.5%	ОК