Traffic emissions control with Opus Remote Sensing Devices
About Opus RSE

and

Remote Sensing Technology
Opus Remote Sensing Europe

OPUS RSE is worldwide the only ISO-17025 accredited laboratory for the remote measurement of real traffic emissions

• European partner of OPUS Inspection

• The only ISO-17025 certified laboratory

• HQ in Madrid. Responsible for the business in Europe

• 12 years of experience in Europe
Worldwide usage of Opus RSDs

Our technology has been used worldwide for decades

And it keeps growing...
Experience in Europe

12 years measuring the real-driving emissions

- **1.3 Million** vehicles
- The most reputable partners and customers
- LIFE, C-ROADS, H2020...
What is Opus RSD?

The Remote Sensing Device (RSD) is like a “super-radar”

1. Exhaust emissions, speed, acceleration and ambient readings
2. License plate picture
3. Data transfer
Validated technology

1. Proven for 30 years
2. ISO-17025, audits as laboratory
3. Performance tests to all RSDs
4. Validation from independent entities
5. Continuous analysis from the scientific community
Easy operation

Designed for different urban environments

- Portable, small, autonomous
- Deployed and collected in minutes
- No modification to the road or infrastructure
- Non-intrusive and versatile
Real-time analysis

Session statistics

Emission profile:
Low/ Medium/ High

Previous records

Last record: picture + data

Speed
Acceleration
VSP

Emissions

Weather conditions
Big Data Analytics

Cloud-based ecosystem

- Massive amount of data
- 4G transfer, automatic processing
- Web-based reporting
- Connection to traffic databases.
Total Versatility

Mobile units

Fixed units

Surprise inspections

On-road traffic and fleets
Opus’ vision for the future of Remote Sensing in Europe
Legal background

European Legislation exists to use the RSD with commercial vehicles


“Technical roadside inspections [...] measurement using remote sensing equipment and confirmed by standard test methods”

“Remote sensing measurement showing significant non-compliance”

The directive details that significant non-compliance of emissions measured by the RSD is by itself a proof of defect of the vehicle.
The advantage of mobile units

Finding NOx-cheaters on the spot with Opus Remote Sensing Devices

- Disconnection of the AdBlue injection that reduces NOx emissions
- Very hard to find. The only option is catching the cheaters in the act
- Surprise checks. Drivers warn each other
- Real-time alerting system
Mixed-LEZ emissions monitoring

- Theoretical models
- Generic policies to reduce traffic emissions

Real-Driving Emissions

- Identification of High-Emitters and intervention
- Identification of Clean Vehicles and rewarding

Semi-Mobile deployment

Fixed deployment
Market surveillance

Remote Sensing

- Fleet screening
- Fixed monitoring network or targeted sampling campaigns
- Hundreds of thousands to millions of individual vehicle emissions measurements

Chassis dynamometer

- Controlled testing to ascertain causes of high emissions
- Limited number of vehicles tested
- Basis for enforcement actions

PEMS

High numbers of the same vehicle model identified as high emitters may be indicative of systematic flaw and would warrant follow-up testing

Suspicious vehicle model

Individual high emitter

Follow-up actions to encourage vehicle repair
CONTACT
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