

Variable speed limits and ramp metering on the motorway A25

Overview

In order to deal with recurrent congestion on motorway A25 when arriving in Lille, Dir Nord has decided to implement ramp metering in junction 8 combined with dynamic speed regulation over a length of 23km from Bailleul to Englos

This project is part of the dynamic traffic management program on Lille Urban Area (N89) called Allegro.

The project is co-funded by the Ministry for the Ecological and Inclusive Transition and the European Union.

Ramp metering has been commissioned in 2015, and dynamic speed regulation, which is functioning since 2016, will be extended in 2020 on the south ring road of Lille.



©DIR Nord - Dynamic speed regulation on motorway A25



©DIR Nord – Ramp metering on junction n°8 Dunkerque->Lille

Objectives

Ramp metering

Modulate the entries according to traffic to improve the insertion of vehicles entering the motorway and to delay the onset of traffic jams.

Dynamic speed regulation

Modulate the speeds on the A25 according to the traffic at rush hour in the morning and Sunday evening. This is to stabilize the flow of vehicles, limit the jolts likely to create incidents and promote optimal use of the tracks

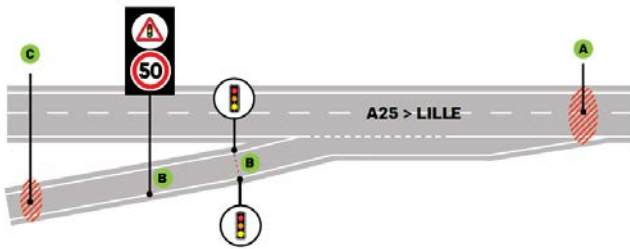
Project description

Ramp metering:

Since August 3, 2015, a couple of traffic lights on the access lanes junction n°8 at La Chapelle d'Armentières modulated the access on A25 during peak hours towards Lille.

Traffic lights have been deployed in 17 access lanes from

7 interchanges (60% of the South and East ring road) in order to regulate the ring-road access to incoming cars when the traffic density is increasing. With very short stop on the access ramp, cars will be inserted more easily, one by one.



Activation of the traffic lights on the ramp as soon as traffic intensifies on the A25.

The traffic lights operate following a total cycle of 40 seconds with duration of the red varying from 6 to 20 seconds.

The lights are turned off when traffic is fluid on the A25. The traffic light management also takes into account the saturation of the ramp in order to avoid the overflow of traffic on the secondary network.

Dynamic speed regulation:

Reduction of the authorized speed in stages of 20km/h:

- up to 90 km/h, in case of traffic jams, during peak hours in the morning on working days and Sunday evening
- up to 70 km/h, in case of event, accident, work or pollution alert

In normal traffic situation on the A25, no speed regulation triggering. Display of current speed limits on the light panels.

In case of traffic jam on the A25, activation of the speed regulation by the sensors on the highway

In case of accident, work or pollution peak, activation of the speed regulation by the traffic management operators of the DIR Nord.

Member States involved:

France DIT

Implementation schedule

Arc Atlantique 1: Start date:2013 - End date:2016

Arc Atlantique 3: Start date:2018 - End date:2020

Contact People

DIR Nord

DIR-Nord@developpement-durable.gouv.fr

Budget

Action promoter: France DIT

Total project cost covered by these decisions:

Arc Atlantique 1: 5250k€

Arc Atlantique 3 extension: 600k€

EU contribution 20 %:

Arc Atlantique 1: 1050k€

Arc Atlantique 3 extension: 120k€

Results expected

An evaluation have been carried out after 6 months

- Benefits in terms of fluidity (each user has gained 6 minutes of travel time per day)
- Less variability of travel times
- Good results in safety (less events) and environment issues
- High acceptance (from users and operator staff)
- The system is reliable and robust

Geographical Location

Ramp-metering has been implemented on junction n°8

Dynamic-metering speed regulation will be extended in 2020

