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	AGUILA/UNECE/TESTMATRIX/003	2018/10/24

Rédacteur : Aguila technologie Destinataires : UNECE Copie : / Date : 24/10/2018

1. Introduction

During previous GRSG-BMFE meeting, an intermediate internet meeting has been planned, in order to define, validate or ensure some points of regulation 118.

The speech will be oriented to define a measurement campaign around bus or coach blaze, to capture the best criteria for the road transport (evacuation time, toxicity, flame propagation, etc.).

2. Prerequisites

It was explained in previous meeting, it is possible bus manufacturers and/or laboratories already have some results to share with the group about similar tests.

Accidentology and statistics about bus and coach blaze of each country, can direct the configurations of the tests.

3. Apparatus

- Bus or coach
- Fuel
- Thermal video camera
- Video cameras
- Thermal sensors
- Laser thermometer
- Computers
- ...

4. Tests proposal

a. Tests place

As explained in previous meeting the tests would take place in the technical area of fire Department in Bordeaux, France.

b. Two scenarii

- Fire with enclosed vehicle
- Fire with emergency exits opening after a while (to be defined by first test)
 - At this point, in previous meeting experts mentioned that the precision of repeatability in cases of fire tests is poor.

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c. Fire localization

After doing some researches, it appears that in most cases, the fire is ignited at the rear of bus, in the engine compartment due to an electric short-circuit. Experts need to validate or invalidate this point.

d. Fire ignition and source

During the previous meeting, experts mentioned that it can be difficult to ignite a vehicle by intention. This fact imply fire improvement material is needed and is to be selected.

e. Physical properties to observe

- Fire spread:
 - along the bus (wide angle)
 - with and without opening of emergency exits

- Smoke propagation:
 - along the bus (wide angle)
 - thickness
 - density
 - with and without opening of emergency exits

- Temperatures:
 - increasement (time vs value)
 - inside vs outside

- Blaze duration:
 - with and without opening of emergency exits

- Time of live of passengers:
 - with and without opening of emergency exits

f. Emergency exits opening

Fire fighters think it would be a good exercise for them to be at the heart of action. So, they want to be placed into the burning bus in order to feel the misery of passengers in this kind of accidents. After a while (to be defined from previous tests), they will open emergency exits with an appropriate equipment.