APROSYS FINAL EVENT

Integrated Project on Advanced Protection Systems

Advanced Protection Systems

New protection systems for Vulnerable Road Users

Motorcyclist friendly barriers (roadside infrastructure)

FUNCTIONALITY

Motorcyclist friendly barriers (roadside infrastructure) to be attached to the current uropean metal guardrails to offer protection to the motorcyclist when impacting the roadside barrier.

EXPLOITATION

Technical possibility and feasibility to attach the new system at current European roadside barrier systems.

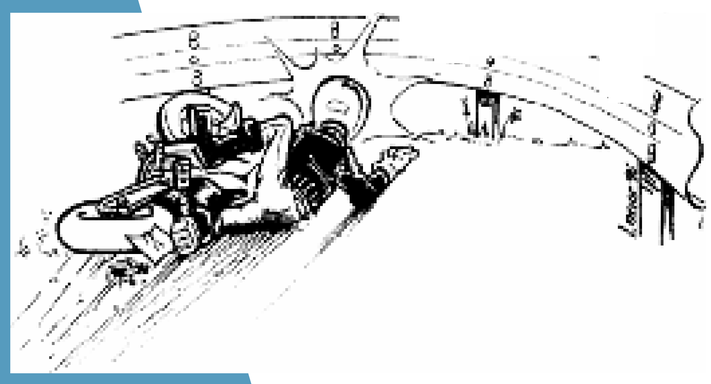
SOCIO-ECONOMIC IMPACT

Important contribution due to the high severity of the impact of motorcyclists against road infrastructure.

TECHNICAL DESCRIPTION

Objective

To reduce the number of motorcyclists killed or seriously injured in run off accidents by means of developing forgiving road infrastructure.



Approach

First of all and related directly to impact against **MPD** (Motorcycle Protective Device), a model scenario, type of injuries and some parameters to be able to count on repeatability in behaviour trials with the MPD were found.

The accident type considered, within the motorcyclist-infrastructure interaction, has been an accident by leaving the road. Leaving the road in the case when the motorcyclist falls and slides along the road. Both the motorcyclist and the motorcycle follow diverging trajectories.

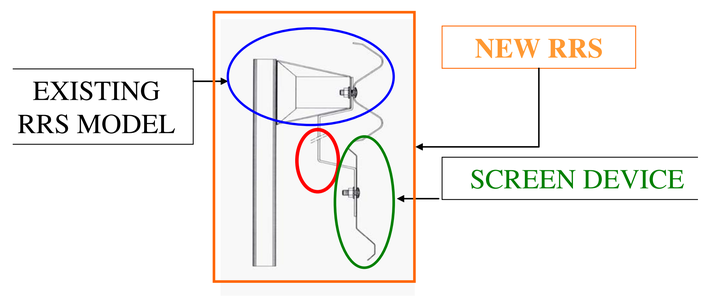
The analysis of the type of injuries focussed on head, neck and thorax without overlooking other parts of the body. Through other APROSYS work, significant geometric and cinematic parameters have been identified in order to carry out test trials in which the behaviour of the MPD can be analysed.

For the design of this MPD, a factor such as reducing the consequences for the motorcyclist leaving the road and impacting against an obstacle was taken into account. This obstacle could be protected related to other road user impacts (cars, buses and trucks) by means of safety barriers (Road Restraint Systems), although these pose a hazard for motorcyclists. This means it is necessary to work just to protect the motorcyclists from the possible impact of the motorcyclist against MPD posts or obstacles beyond the MPD in case the motorcyclist passes between the two MPD posts.

Work has been done on a continuous MPD.

Conclusions

A new MPD is ready to be attached to current European metal road barriers and to minimize motorcycles injuries.



SIXTH FRAMEWORK PROGRAMME

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