

## عنوان مقاله:

Optimization of Tunnel Ventilation and Tunnel Safety Equipment

## محل انتشار:

چهارمین همایش و نمایشگاه سد و تونل ایران (سال: 1395)

تعداد صفحات اصل مقاله: 11

## نویسندگان:

Marco Bettelini - Amberg Engineering Ltd., Regensdorf-Watt, Switzerland

Dieter Wenner - Amberg Engineering Ltd., Regensdorf-Watt, Switzerland

Samuel Rigert - Amberg Engineering Ltd., Regensdorf-Watt, Switzerland

## خلاصه مقاله:

Safety design for road and rail tunnels is experiencing an increasing stress arising from two partly contradictory requirements, enhanced safety and life-cycle cost optimization. A variety of useful safety measures, facilities and equipment can contribute increasing safety but can have a significant cost, in terms of both CAPEX and OPEX. An optimum balance between costs and benefits is called for. Several techniques and tools support the safety engineer's optimization effort. This paper focusses on Quantitative Risk Analysis (QRA) and advanced simulation, which can greatly contribute to optimum design, particularly with respect to ventilation and safety equipment.

## کلمات کلیدی:

tunnel, ventilation, safety, equipment

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/613932>

