# DIN EN 1889-1:2011-10 (E)

## Machines for underground mines - Mobile machines working underground - Safety - Part 1: Rubber tyred vehicles

## Contents

Page


Foreword ..... 3

Introduction ..... 4

1 Scope ..... 5

2 Normative references ..... 5

3 Terms and definitions ..... 8

4 List of significant hazards ..... 9

5 Safety requirements and/or safety measures ..... 12
5.1 General requirements ..... 12
5.2 Design to facilitate handling ..... 13
5.3 Towing devices ..... 13
5.4 Fluid power systems ..... 13
5.5 Electrical equipment ..... 15
5.6 Vehicles powered by diesel engine ..... 18
5.7 Fuel systems ..... 18
5.8 Lighting ..... 19
5.9 Warning devices and safety signs ..... 19
5.10 Braking ..... 20
5.11 Control systems and devices ..... 22
5.12 Driver and passengers position ..... 24
5.13 Fire protection ..... 25
5.14 Noise ..... 26
5.15 Radiation ..... 26
5.16 Stability ..... 27
5.17 Maintenance ..... 27

6 Verification of safety requirements ..... 27

7 Information for use ..... 28
7.1 Instruction handbook ..... 28
7.2 Marking ..... 32
7.3 Warnings ..... 32

Annex A (normative) Brake testing ..... 34

A.1 Test conditions ..... 34
A.2 Performance of tests ..... 35

Annex B (normative) Verification data for safety requirements ..... 38

Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC ..... 45

Bibliography ..... 46