European regulation and worldwide positioning

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CISMA/CECE
Regulation in Europe

• **Principle**

Declaration by the manufacturer that equipment fulfils the requirements of all relevant EU directives.

• **Marking and information**
  – CE marking
  – CE declaration of conformity
  – Instruction handbook
European regulation

• Directives applicable to road building machinery
  – Safety of machinery 2006/42/EC
  – Electromagnetic compatibility 2004/108/EC
  – Outdoor noise 2000/14/EC

• Directive applicable to engines
  – Exhaust emissions 97/68/EC as amended

This regulation ➔ Strength or opportunity

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Safety of machinery

• **Principle**

  To integrate safety at design level ➔ risk analysis

  **3 Steps in the following order**
  – To avoid risk
  – To add protection systems
  – To inform

  ✤ opportunity

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Safety of machinery

Visibility
– Shape of the machinery
– Large glazed surfaces
– Mirrors, camera (rear vision)
Safety of machinery

Ergonomy
- Controls (Joysticks)
- Anti vibrating seats
- Cabins with air conditioning
Safety of machinery

ROPS
Overturning protective structure
Safety of machinery

Standardisation

Machinery directive defines

– Essential health and safety requirements in broad terms

Objective to reach

Standards give technical solutions to achieve health and safety requirements for each family of machine.

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Harmonised standards

Generally European (EN) or international (ISO)
Approved by vote after discussion between stakeholders
Their references are published in EU Official Journal
Give presumption of conformity to directive
Not necessarily indicated in declaration of conformity
Revised or confirmed every 5 years
Harmonised standards
Mobile road construction machinery

EN 500-1 : General

EN 500-2 : Milling machines

EN 500-3 : Soil Stabilizers

EN 500-4 : Compactors

EN 500-5 : Milling machines

EN 500-6 : Asphalt pavers
Electromagnetic compatibility

• Principle

Electric and electronic circuit shall not

– Be disturbed by the environment
– Disturb the environment.

❖ opportunity
Outdoor noise emissions

- **Principle**

  To reduce noise emissions from the machinery itself to a minimum (process noise not taken into account)

Guaranteed sound power level as indicated on machine

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Noise directive
Mobile road construction machinery

Milling machines

Asphalt pavers

Graders

Compactors
Countries outside Europe

• Safety of machinery
  European standards are used as basis for ISO standards under development

• Noise emissions
  Various countries are developing new regulation
  ✤ opportunity

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Thanks for your attention

Merci de votre attention