



# Effects of testing and certification on safer products and competitive workplaces

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## BG-PRÜFZERT

- Association of the 18 testing and certification bodies of the German Social Accident Insurance
- About 3,000 certificates issued per year. In total more than 100,000 certificates issued
- Efficient method for the social accident insurance institutions to exert influence on product safety
- Objectives:
  - help manufacturers to get their products safe
  - produce input for standardization
  - get safe and healthy products for our members and the insured people

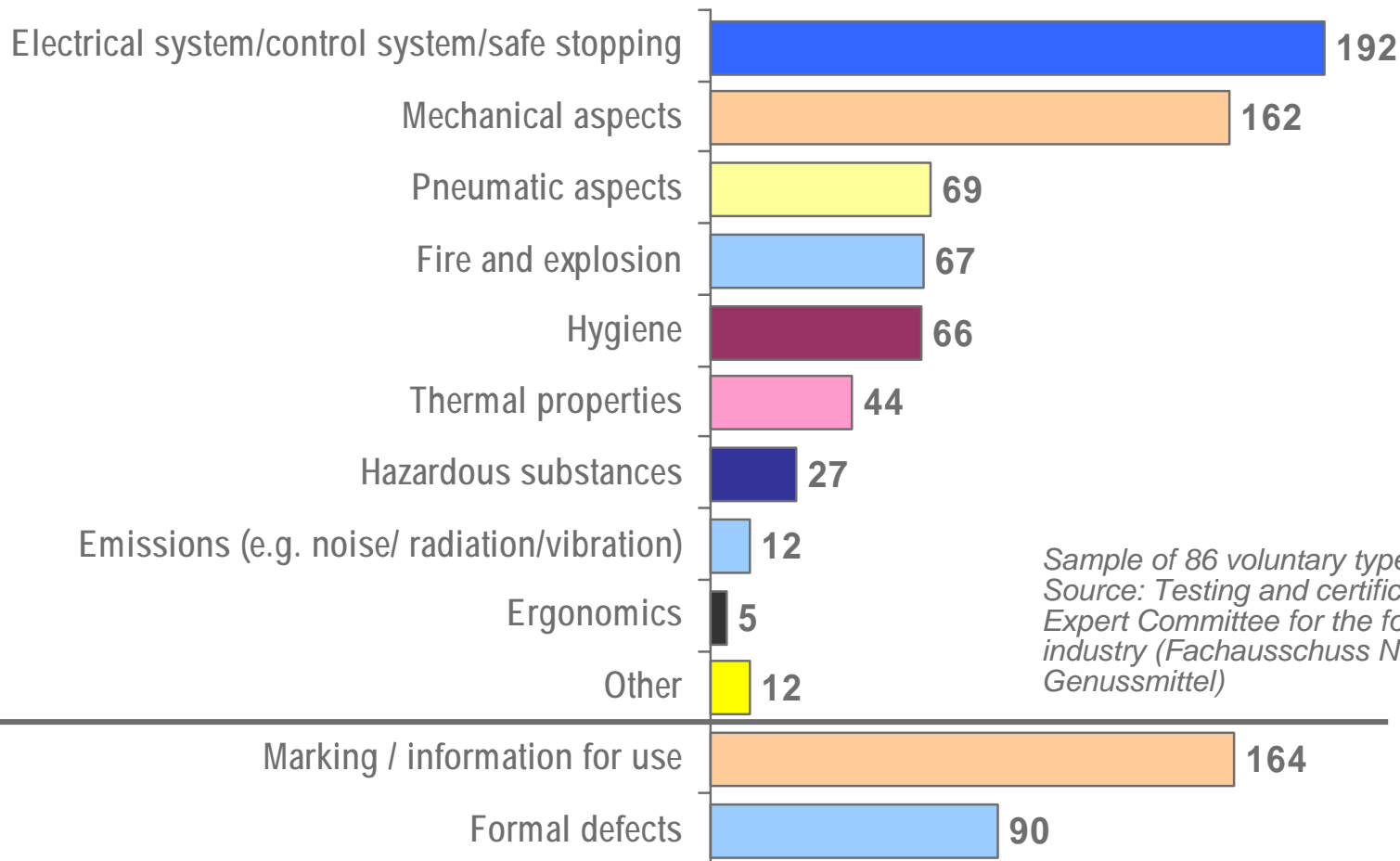


## Testing and Certification – basic aspects

- Some EC-Directives provide for EC-type testing
- Important in Germany:  
Voluntary type testing, e.g. for the GS-mark or  
the BG-PRÜFZERT-mark



## Type testing: detected defects

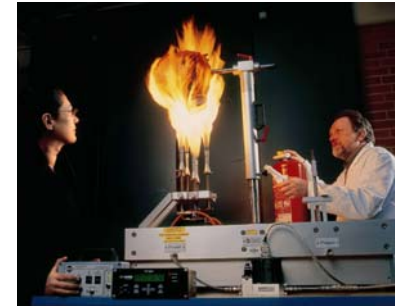


*Sample of 86 voluntary type tests  
Source: Testing and certification body of the  
Expert Committee for the food processing  
industry (Fachausschuss Nahrungs- und  
Genussmittel)*

# Impact of testing and certification

Testing and certification ...

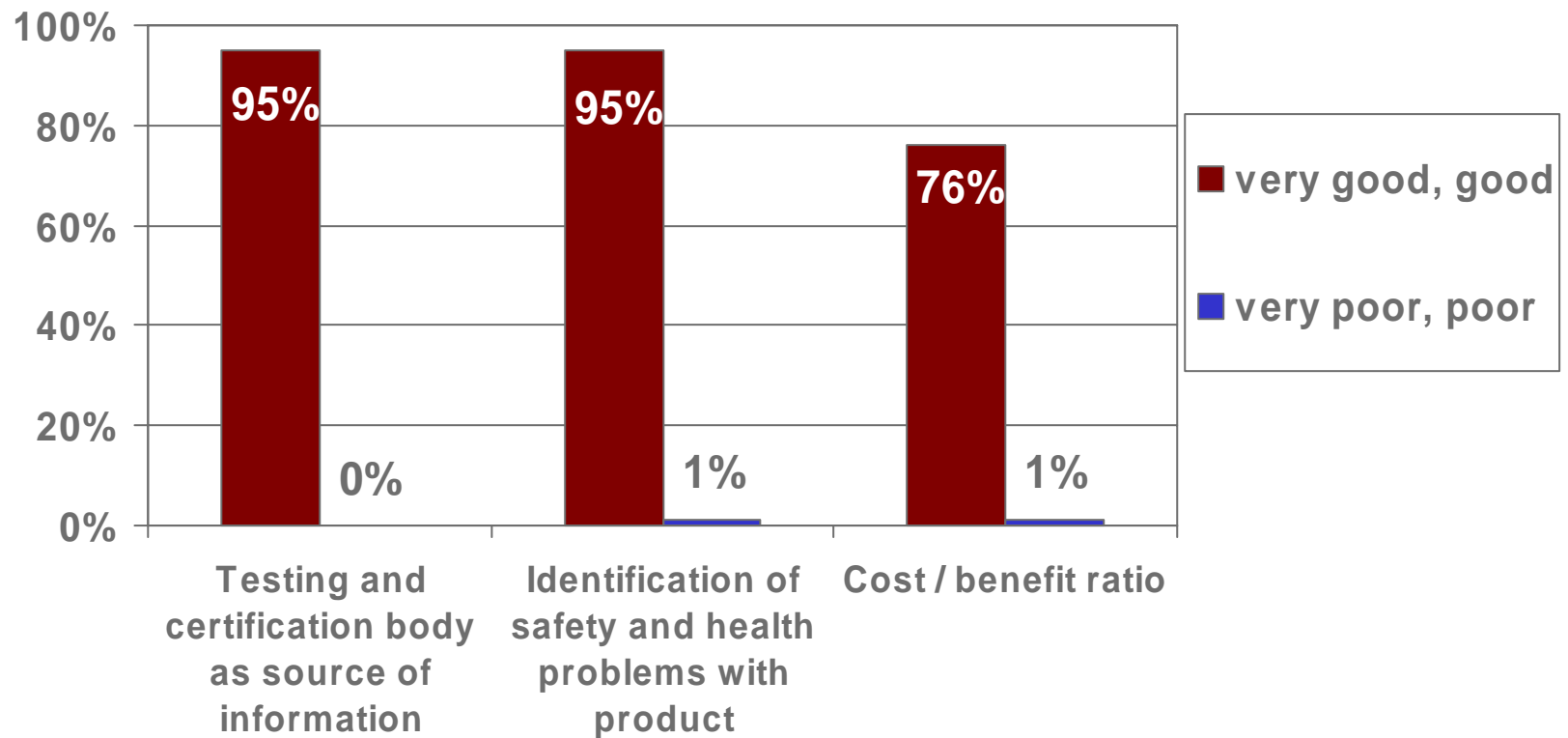
- disclose weak point of products in respect of safety
  - ⇒ „anticipated market surveillance“
  - ⇒ transfer of knowledge
- gives input to standardisation and checks standards if applicable
- assists level playing field for competition
- supports innovation





## Benefits

Results of the customer survey BG-PRÜFZERT 2007





## Study on the quantitative benefit of the type testing

Expert committee for the food processing industry

- basis: the accident investigation reports (247), fault reports (431)

- Type tested products:  
safety-related risk 13 times less than for non-certified products

- Saving of expenses for the accident insurance institution (BGN):  
5,06 Mio. € per year.

- avoided days lost in the member companies of the BGN:  
about 24.500 per year

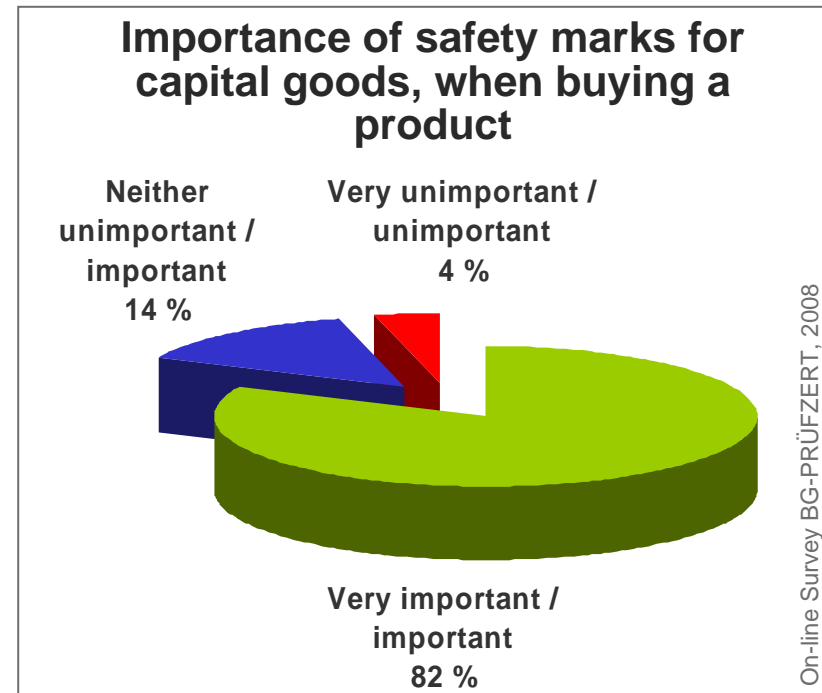
## Co-ordination of testing and certification bodies

- Co-ordination of notified bodies:  
Necessary for a common approach of all bodies
- Recommendations for use from the Co-ordination Groups:  
helpful as fast instruments to get common views

		<b>CO-ORDINATION OF NOTIFIED BODIES MACHINERY DIRECTIVE 98/37/EC AMENDED</b>  <b>RECOMMENDATION FOR USE</b>		CNB/M/01.052 Revision 06 Language : EN
		Number of pages : 1	Date of first stage : 11/09/2001	To be approved by :
Origin : VG1 Woodworking machinery		<input checked="" type="checkbox"/> Vertical Group <input checked="" type="checkbox"/> Horizontal Committee	03/05/2006 04/12/2006	To be endorsed by :
		<input checked="" type="checkbox"/> Working Group 98/37/EC Machinery	14/09/2007	Endorsed on :
Question related to : Directive 98/37/EC Article : - Annex : I EHSR (1) : 1.3.2, 1.3.6		ENprEN : EN 848-1:1998 Normative clause : 5.1.1, 5.1.7 TC concerned : CEN TC 142 and CENELEC TC 61F	Other : EN 954:1996 Other clause : -	
Key words : Single spindle molding machines; safety measures against spindle overspeed on machines with inverters or PC/CNC-control.				
Question : In 5.1.7 of EN 848-1 is required that on machines fitted with an automatic control device for infinitely varying the speed (e.g. a frequency inverter) the actual speed of the spindle shall not exceed the selected speed by more than 10 % (e.g. by means of an auxiliary electric circuit). Exceeding of the selected speed may occur e.g. by faults which cause 1. change of the data for tools and selected speed, stored in the machine control data base for machine tools, 2. falsification in data transfer between manual control, data stored in the machine control, display for the data and control of the inverter. These items are not dealt with in detail in 848-1. In 5.1.1 the level of the control is required analogous to cat. 1 of EN 954-1. Which are the requirements for the control in respect of input, storage and transfer of the data for spindle speed and monitoring of spindle speed?				
Answer : The control system shall be designed at least in cat. 2 of EN 954-1. The measures listed below cover the most important requirements for cat. 2.				

## Safety marks as aid for selecting products

- Unsafe products are found regularly on the market
- Companies can't check all safety aspects by themselves during the purchasing process  
⇒ credence goods
- Voluntary safety marks:  
A good help for manufacturers to signal the quality of their products relating to safety
- For purchasers a good aid for selecting products  
in particular helpful with innovative products



## Case studies: Cash desks / Woodworking machinery tools

- cashier at supermarkets:  
heavy workload caused by repetitive movements in a narrow space
- potential effect: chronic illness
- GS-mark for safe and ergonomically designed cash desks; introduced in 2000
- more than 50 GS-marks issued by BG-PRÜFZERT: Incentives for manufacturers and purchasers
- ergonomic situation at cash desks has be improved
- tools for wood working machinery
- safety mark since 1955
- requirements:  
centrifugal force, dimensions, return kick protection et al.
- Hand-injuries declined radically



## Case study: Laser Scanners used as protective device



### Laserscanner:

- with the first products no standard nor test requirements existed
- required: EC-type testing
- research project of the BGs: weak point analysis, formulation of requirements

- 1995: BGIA publishes testing rules
- 1996: standardisation work starts
- 1994 – 1998: BGIA tests and certifies the first systems=> testing rules affirmed
- 2001: IEC 61496-3 published

### since then:

- Used to detect the presence of persons used in several thousands applications
- no accidents known



## Results and Outlook

- Testing and certification are effective and efficient:  
Removal of defects and improving products are achieved in a sustainable way
- Voluntary safety marks can give positive incentives for purchasers and manufacturers.
- Important precondition: good quality and high technical competence of the bodies  
⇒ a good step forward with the new legislative framework
- Experiences of the users of the products should be better included (e.g. aspects of behaviour, ergonomic aspects)  
⇒ discussion fora in Euroshnet can be a good help



**Thank you for your attention!**

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