

**ilic  
GEZOND  
OP HET DAK**



# **International conference 11-12 November 2008 Kiev**

## **Presentation by Jos van der Borgt The Netherlands**

# **Kiev – Brussels - Amsterdam**

**Fall prevention systems:  
rules and practical use**

# About the speaker

## Jos van der Borgt

- Carpenter
- Architecture teacher
- Trade union official
- Occupational health and safety consultant

# About SBD

- Dutch roofing industry organization
- Studies and publicises safe practices
- Founded and run jointly by employers' organizations and trade unions
- Works closely with the government and the Labour Inspectorate

# About this presentation

- Industry and accident statistics
- Photo presentation 1: work at height
- European and Dutch regulations
- Occupational health and safety
- Work at height
- Using personal fall protection equipment
- Photo presentation 2: fall protection equipment in use
- The future
- Co-operation and export opportunities

# Workers at risk of falls

- The Netherlands: 17 million people, 7 million employees, 1 million self-employed
- About 0.5 million in construction and related industries
- About 150,000 regularly work at height
- About 15,000 may use personal fall protection equipment
- Similar proportions across Western Europe, and possibly throughout the EU

# Trades most likely to use personal fall protection equipment

- Rope access specialists
- Sheeters, cladders and tilers
- Window cleaners and painters
- Other building workers
- Emergency services

# Accidents

- Source: Netherlands Labour Inspectorate database for the building industry, analysed in 2007
- Figures for 1998-2004:
  - total accidents            2,500
  - falls                            21%
- Most common causes: inadequate procedures, lack of communication, substandard equipment

# Culture/geography/economics

- Affect choice of materials and equipment when working at height
- Introduction to photo presentation:  
work at height in the Netherlands and Western Europe

# Photo presentation 1

# Amsterdam – Brussels – Kiev

- Health and safety regulations
- EU determines 85% of member states' national rules
- European Temporary Work at Height Directive
- Scope and application of the Dutch Health and Safety at Work Act

# **European Temporary Work at Height Directive (2001/45/EC)**

Formally enacted in the Netherlands in 2006

Tightens the rules on working with ladders, scaffolding and rope systems

# Dutch health and safety law

- Framework legislation
- Sets objectives
- Employers and workers
- Other groups
- Supplementary regulations

# Safe working for employers

- Risk assessment
- Company plan
- Safety-first strategy
- Ensure compliance

# Risk assessment

- Per company: all risks (industry models)
- Per building/site/project
- Per job: task risk analysis

# Company plan

- Health and safety culture
- Safety officer
- Accident and time-off-work analysis
- Specific and practical targets

# Safety-first strategy

- Tackle risks at source
- Collective protection
- Personal protection

# Supervision/compliance/ enforcement

- Certification/disciplinary measures
- Labour Inspectorate
- “The manager’s standards are the worker’s standards”

# Health and safety: a question of...

- Good organization
- Influencing human behaviour

*“Most people are the product of the context they find themselves in. They tend to ‘look up and look around’, and they do what others around them do or expect them to do.”*

*Treviño & Brown*

# Work at height

- Aids and tools
  - Vertical access
  - Fall protection equipment

# Ladders

- Approved equipment
- Stable positioning
- Fixed/secured
- No danger to others (screening)
- For use by people only

# Scaffolding

- Approved materials
- Qualified personnel
- Compulsory instruction
- Fall protection
- Laddering

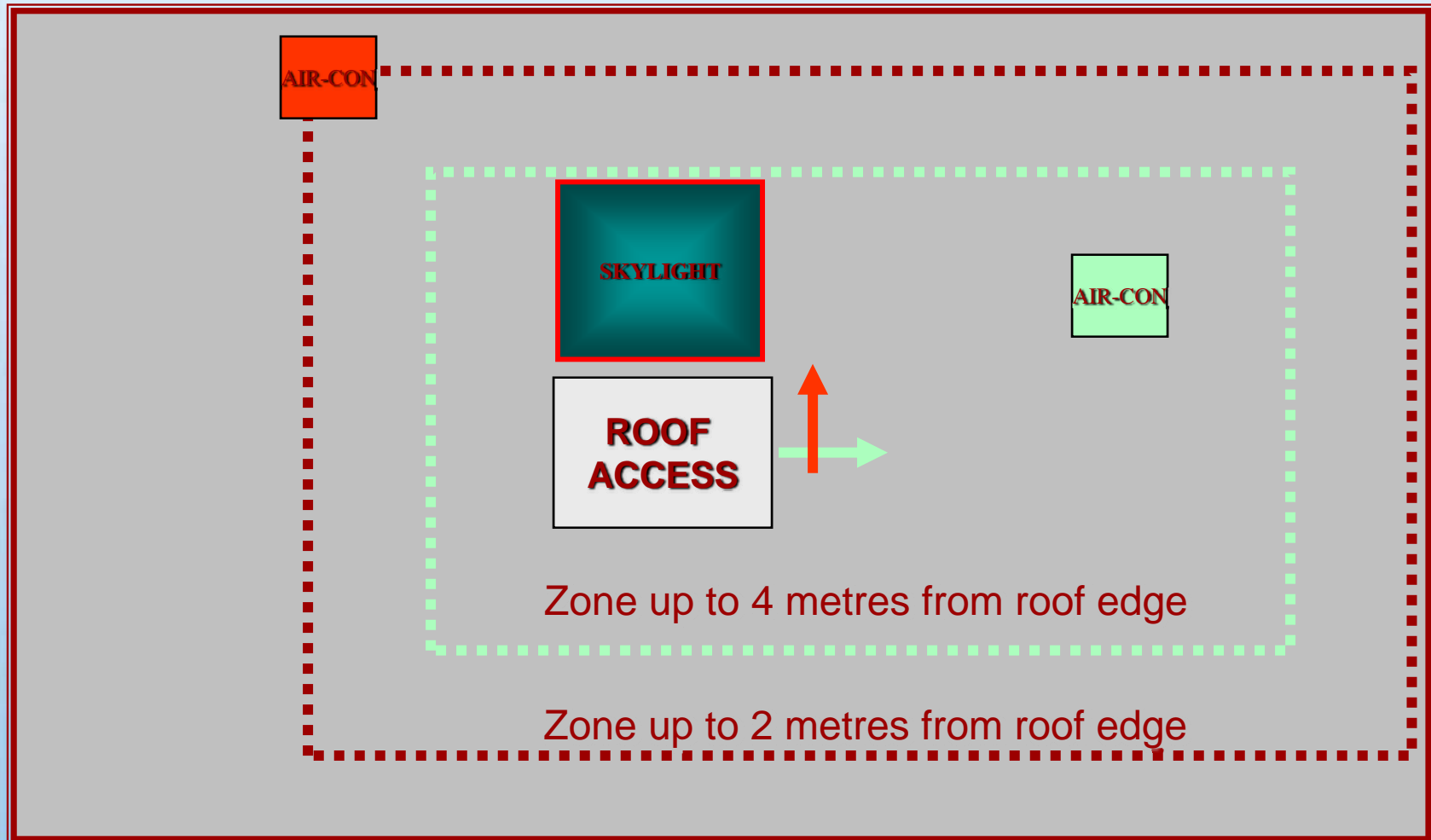
# Guard rails

- Approved materials
- Compulsory from 2.5 metres
- 1 metre high
- One intermediate rail
- Meet at corners

# Nets

- Strong material
- Correct mesh size (10 x 10 cm) to capture falling objects
- Securely attached
- Sufficient clearance underneath (no obstructions)

# COLLECTIVE FALL PREVENTION: ROOF ACCESS



# SAFETY PRECAUTIONS: COLLECTIVE AND PERSONAL



Roof  
access

4-metre zone

# Elevated work platforms

- Approved equipment
- User instruction
- Entering and leaving at height prohibited
- Stable positioning

# **Photo presentation 2**

## **Safety-first-strategy in The Netherlands**

# Arrest, restraint and rope systems

- General
- Fall arrest systems
- Work restraint systems

# Fall arrest systems: flat and pitched roofs

- Do not prevent falls, only limit the impact
- Additional precautions are therefore essential, eg. a lanyard or body harness
- On flat roofs, these precautions are sufficient to prevent falls

# **Work restraint systems: zoning of flat roofs**

- Eliminates any risk of falling from the roof
- A good means of working safely on flat roofs

# Rope access systems

- Anchor points
- Strong anchorage, safe positioning
- Dutch Standard NEN-EN 795
- Annual inspection
- Prevent lateral movement

# Rope access systems

- Secure attachment
  - Link between harness and anchor point.
- Energy-absorbing safety ropes
- Fall-arrest equipment
- Rope grabs

# Rope systems

- Lanyards

Protect against the effects of a fall, preventing injury or the user slipping out of the harness

# Arrest, restraint and rope systems: CE-marking

## European directives and CE marking

- To facilitate trade between EU member states
- Apply in all member states
- Criteria: health, safety, consumer protection, environmental protection
- When a product is covered by a relevant directive, CE marking is compulsory. When no directive applies, CE marking is prohibited
- Enforced by Labour Inspectorate

# Arrest, restraint and rope systems: personal protection

- European PPE Directive (89/686/EC)? Enacted in the Netherlands through the PPE Order under the Commodities Act
- Official definition: “Any device or appliance designed to be worn or held by an individual for protection against one or more health and safety hazards”
- This definition does not cover permanently installed anchor points
- CE marking is not possible under this directive

# Legislation

- Dutch Commodities Act, Article 18, prohibits the sale of unsafe products
- EU Construction Products Directive (89/106/EEC) covers “any product which is produced for incorporation in a permanent manner in construction works, including both buildings and civil engineering works”
- CE marking is not yet possible

**Photo presentation 3**

**Use of fall protection equipment  
in the Netherlands.**

# Opportunities for products from outside the EU

- In the future: c. 2015-2020
- More high-rise buildings
- More green roofs and energy roofs
- More roofs in everyday use
- More maintenance and upkeep

# Opportunities for products from outside the EU

- Compliance with EU legislation.
- Innovative solutions.
- Meeting needs.
- High quality.
- Collaboration with local partners.

# The Health and Safety Catalogue

A new way of helping Dutch companies  
to find the right way of minimizing risk

# Finally: some Dutch wisdom

Use your common sense

And keep both feet on the ground

Because only if you find a man who  
can fly

Have you beaten the risks of working at  
height!

**VEILIG  
& GEZOND  
OP HET DAK**



STICHTING  
BEDRIJFSTAKREGELINGEN  
DAKBEDEKKINGSBRANCHE

# Thanks for your attention!

More information:  
[www.sbd.nl](http://www.sbd.nl)