Key elements for improving safety
Success and measures of the RAG Aktiengesellschaft in safety at work

6th Atlantic Alliance Conference:
“Global Initiatives on Safety and Health”
„Key elements for improving safety”
- Success and measures of the RAG Aktiengesellschaft in safety at work -
Dieter Mantwill
Brussels, October 20, 2010
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Accidents per 1 million working hours

- a drop of 91.7%!
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Hard coal mining areas in Germany

The Netherlands

North Sea

The Netherlands

Poland

Austria

France

Baltic Sea

North Sea

Baltic Sea

Germany

The Netherlands

North Sea

The Netherlands

Poland

Austria

France

Baltic Sea

North Sea

The Netherlands

Poland

Austria

France

Baltic Sea

North Sea

The Netherlands

Poland

Austria

France

Baltic Sea

North Sea

The Netherlands

Poland

Austria

France

Baltic Sea
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Reduction of the production capacity in million tonnes by 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2012</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>21</td>
<td></td>
<td></td>
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<tr>
<td>2012</td>
<td></td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
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Change in the number of mines by 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2012</th>
<th>2018</th>
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<td>2007</td>
<td>8</td>
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<td></td>
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<tr>
<td>2012</td>
<td></td>
<td>4</td>
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</tr>
<tr>
<td>2018</td>
<td></td>
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</table>

Change in staff numbers by 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2012</th>
<th>2018</th>
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</thead>
<tbody>
<tr>
<td>2007</td>
<td>32.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td>15.000</td>
<td></td>
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<tr>
<td>2018</td>
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</table>
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As a first step, technical measures were introduced as a focus of the safety initiative

**TECHNOLOGY**

- **Machinery**
  - Mine locomotives, passenger carriages
  - Passenger transport with conveyor systems
  - Lighting, noise protection

- **Methods**
  - Support scaffolds, support aids
  - Lifting and carrying aids
  - Safety grids in track construction

- **Equipment**
  - Dust masks, ear protection
  - Safety shoes, safety gloves
  - Safety goggles
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![Graph showing improvements from 1960 to 1990 with 416 and 30 markers.](image)
In a second step, organisational measures were introduced as a focus of the safety initiative.
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Development of accidents

Accidents per 1 million working hours

1960: 416
1990: 30
2000: 6

28.10.2010
In a third step, employee-related measures were introduced as a focus of the safety initiative.

- **Financial incentives (bonus system)**
- **Safety campaigns**
- **Board statements**

- **Training courses, briefings**
- **Management development (career stage: occupational health and safety officer)**

- **Target dialogues**
- **Return dialogues**

- **Motivation**
- **Behaviour**

- **Training Qualification**

- **Information Communication**
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The success based on three pillars – the „TOP-model“ in our company
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Accidents per 1 million working hours

On the way to reach „0“ accidents…
„It is the nature of every man to love live and dread early death, to love safety und dread danger, to love honours and dread disgrace, to love peace and dread hardship.“

Lü Buwei (ca. 300 BC till ca. 235 BC)
Chinese merchant, politician and philosopher
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Lessons learned

- Safety at work must be an integral part of our daily work
- Consistency, discipline and responsible action are vital
- Safety at work is a prerequisite for profitable production
- „Zero“ accidents are only possible by involving all the action fields – Technology, Organisation and People
- Full commitment of all managerial staff is needed
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“Everyone goes home safe and healthy. Every day.”
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Thank you very much.

Glückauf !