

Summary

The Work Programme "Precision Engineering Industries" of the Joint German Occupational Safety and Health Strategy (GDA) was carried out Germany-wide in the years 2009 to 2012 by institutions of the GDA.

According to a coordinated advisory and revision concept set up by labour protection authorities of the states of Brandenburg and Saxony and the accident insurance institutions BGHM and BG ETEM, small and medium-sized enterprises which carry out precision mechanical mounting activities have been inspected. The company visits were evaluated according to a predefined questionnaire. Moreover, important indicators relating to occupational safety were documented.

The project plan included the following phases: an initial inspection in the period from January to December 2011 and a second inspection of the selected enterprises in the period from January to December 2012. In the period between first and second inspection the enterprises had the opportunity to implement the safety measures derived from the initiated processes. The advisory services inspected 586 enterprises for the duration of the work programme; 534 initial inspections and 52 second inspections were made.

The main results:

Employees: classification into categories:

- High visual demands and precision mechanical work activities: about 4,000 employees
- High visual demands and fine motor skills: about 6,000 employees
- Normal visual demands and normal force: around 23,000 employees
- Normal visual demands and excessive force: around 5,000 employees

Results regarding risk evaluation

The detailed expert assessment of individual work places resulted in the following; Most commonly referred to as stressful work activity with following characteristics:

- Physically demanding due to frequent work activities in unfavourable postures (relating to work activities with normal visual demands and increased force, the increased force is perceived as demanding)
- What was felt as mentally stressful were all work activities due to detailed technical or organisational requirements
- Design of the workplace and work environment: stressful since there is no allowance for diversity in the physical and mental load
- Under category „behaviour of employees“ it could be noticed that – contrary to the often mentioned observation – existing aids were most frequently used by employees
- The percentage of „adequately performed“ risk assessments was 69 %. The percentage of “not adequately performed” risk assessments was 16 %. A detailed assessment of precision mechanical assembly workplaces often lacked.

- The percentage of „unperformed” risk assessments (total of 10 % plus 5 % with no explanation) refers to small and micro enterprises. 101 of 183 enterprises of that size have an adequate health and safety organisation.
- Particularly in regard to appropriate safety and health organisation, the group of micro enterprises has deficits.

Second survey

- The supervisors/inspectors considered a second inspection necessary in 135 of the 586 enterprises.
- After twelve month 28 enterprises asked for advice.
- During the re-inspection 83 % of the enterprises had improved
- The enterprises could be made more aware of the importance to assess the specific risks when performing mounting activities. Yet, during risk assessment and preventive measures it became clear that greater account must be taken of the possible relation of sickness-related work absences due to prior overload and in relation with mounting activities.

Occupational medical examinations

- Only 19 % of the enterprises offer occupational examinations regarding musculoskeletal disorders.

Ergonomic workplace design

- 86 % of the enterprises stated that they involve employees in the designing of their workplaces. Extra care is taken to ergonomic workplace design and variation of work activities thus counteracting the monotony of work.
- 38 % of the enterprises that have been visited offer effective health promotion and disease prevention measures.
- Shortcomings can be observed in the health literacy of employees.

After evaluation of the work programme for the „precision engineering industries” the following recommendations were made:

The general revision of enterprises has to aim at raising awareness to counteract musculoskeletal diseases with effective occupational health and safety measures and through active health promotion. This has to be kept at the top of the agenda.

Cooperation with the GDA institutions, health insurance and pension insurance institutions should be expanded with regard to the various prevention programmes.