Knowledge Bank Construction Tasks

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ABSTRACT

In order to facilitate the application of health and safety information regarding construction tasks in the Dutch construction industry in daily working practice, a state-of-the-art database has been developed on the basis of knowledge gained over the past decade. Exposure to physical workload, toxic substances, noise and vibration has been evaluated and safety hazards have been listed in a uniform way. For every task relevant measures have been itemized.

INTRODUCTION

The Dutch construction industry has a relatively high rate of physical workload, time pressure, exposure to toxic substances, noise, vibrations and safety [2]. The same aggravating working conditions for construction workers apply to other countries [1]. But innovation in the construction industry is on the way. Awareness of the need to change working conditions and to make this sector of industry more attractive to new workers has been increasing over the past few years. In order to facilitate the application of health and safety information regarding construction tasks in the Dutch construction industry in daily working practice, a state-of-the-art database has been developed on the basis of knowledge gained over the past decade.

METHODS

When a job description is drawn up for inclusion in the database the following research steps are run through:

- analysis of the task by collecting literature and construction documentation.
- validation of the concept tasks by practical experts.
- determination of the risk factors (aggravating factors and risks).
- estimation of the exposure to stressful factors and risks.
- evaluation of the exposure to physical workload [3], toxic substances, noise and vibration. This evaluation is divided into three areas:
  green: basic (non-increased) health risk
  yellow: increased health risk; action may be planned in stages; immediate action preferred
  red: strong increased health risk; immediate action is necessary.
- selection of technical, organizational and individual measures.
- description of relevant standards and literature.
- drawing up of two checklists: one for the design/work preparation and one for the worksite manager.

RESULTS

At the present time 300 construction tasks are valid for inclusion in the database. The aim is to cover the whole Dutch construction industry, which will include more than 400 relevant tasks. By way of illustration for brick-laying quantitative information on the occurrence of risk factors will be presented. The risk factors for brick-laying include noise, climate, vibration, safety, toxic substances, physical workload, repetitive strain, static workload, lifting, carrying, pushing and pulling.

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