Centralized European Whole-body Vibration database on the Internet

Introduction

Among others, officials from social insurance offices, company health services, clinics in occupational medicine, research departments in the field of occupational health, labour inspectorates, buying departments, engineering industry often asks for information regarding whole-body vibration levels measured on seats in different types of vehicles. Some reasons for this are a need;

- for health risk assessment due to past and/or present vibration exposure
- to constitute a basis for decisions in worker compensation cases
- to procure ”user friendly” seats in order to prevent vibration-induced disorders
- for data in research and development projects.

A long-felt want has therefore been that reported measurement results should be put together in a database. The format for such a database should fulfil at least the following requirements;

- Data must be presented in a clear, understandable and useful way
- The data base should be easily accessible for a large number of interested users
- Measurement data must pass through a quality control before insertion,
- Included data must be based on measurements conducted in accordance with a generally accepted standard, such as an ISO or a CEN standard
- New data inserted in the data base should be accessible for users as quickly as possible
- Corrections and additions must be easy to carry out
- The database must be easy to manage and maintain and not involve to heavy expenditures.

After considering different alternatives, it was concluded that a database accessible through Internet would most efficiently comply with the above stated requirements.

Data base content

At present the database contains vibration data for about 100 all-terrain vehicles measured according to ISO 2631 during normal driving at a work site. CE-declared values (i.e. vibration measured in accordance with a standardised test code) will be included as soon as such values are available. The database is available in Swedish and English.

Procedure for search and presentation of results

The search is done by a step by step procedure.

Step 1. Open the database “Home page”.
The database home page (Figure 1), reach by using a suitable web browser (e.g. Netscape Navigator, Internet Explorer), contains some general information for instance

about data base content, people responsible for administration and maintenance, collaborating organisations and some links to other informative pages.

On this page there is also a link which provide important information which should be considered entering the whole-body vibration database. The next step is to open the *"Search page"*.

Step 2. Viewing the "Search page".

Search for vibration data for a specific vehicle, or for a category of vehicles, is done by choosing or typing search arguments according to instructions given on this page (Figure 2). The result of this request is then presented on a separate "Search result" page.

Step 3. Viewing the "Search result" page.

Each row on the Search result page indicates type of vehicle (e.g. excavator, dumper, truck, loader), name of the manufacturer (e.g. Akerman, Volvo, Caterpillar) and model (Figure 3). Further information and data for an individual vehicle on this list is then presented by activating corresponding link to a "Vehicle data" page (Figure 4).

Step 4. Viewing of a "Vehicle data" page.

A *"Vehicle data" page* show some general information about the vehicle (e.g. model, manufacturer, weight, power), photograph, and vibration data. Reference to the source of information will also be showed.

Figure 1. "Home" page.

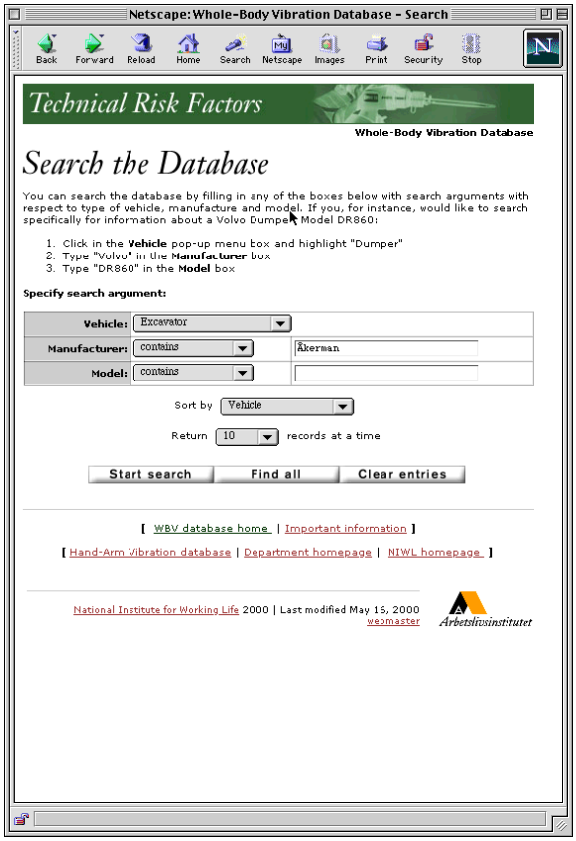

Figure 2. "Search" page.

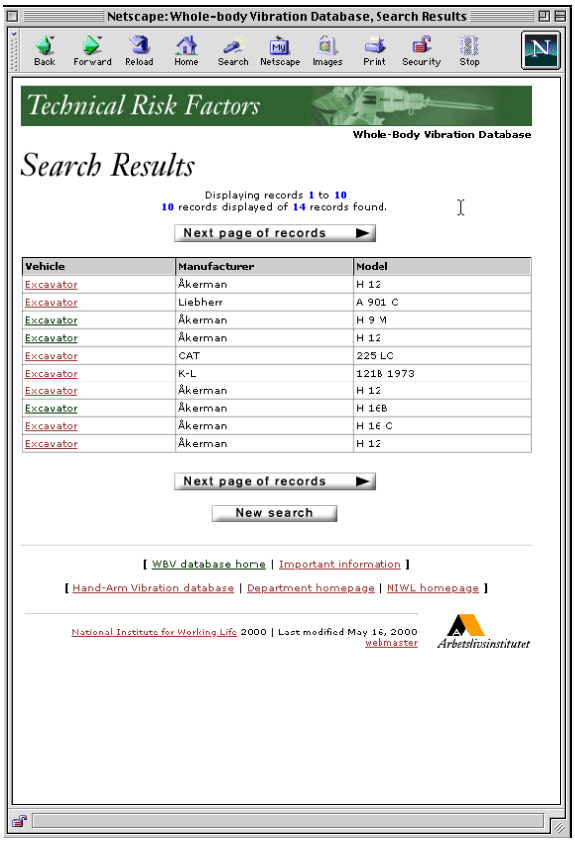

Figure 3. “Search result” page.

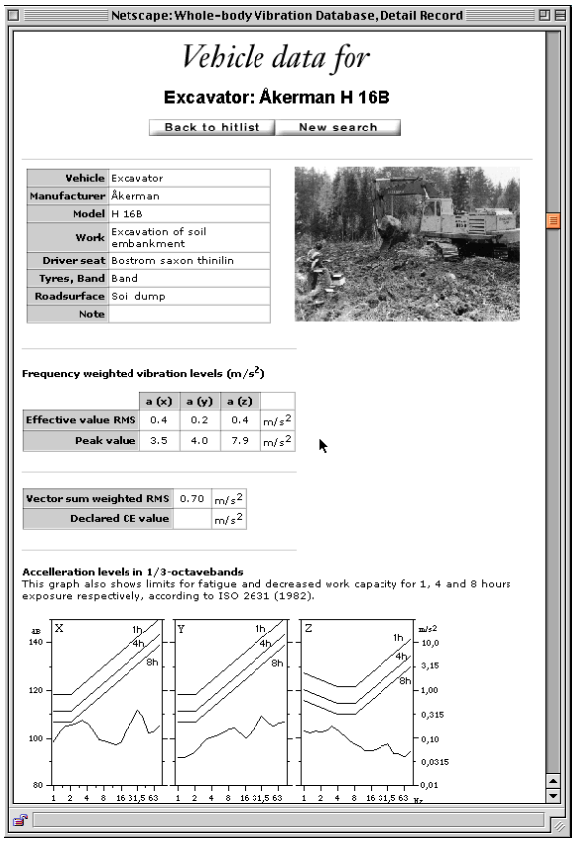

Figure 4. “Vehicle data” page.

End notes

This database has become a centralised European whole-body vibration database with support from the EU project “Network on Detection and Prevention of Injuries due to Occupational Vibration Exposures (VINET)” (Contract No. BMH4-CT98-3251 (DG12-SSMI)). Support has also been received from the Swedish Council for Work Life Research.

The database is still in a stage of development. Changes with respect to content and format will therefore most likely be conducted in the future. A routine has also been activated which enables VINET partners to submit data to the database administrator directly from the own terminals through Internet. This data is first stored on the database server as a temporary database. After inspection and approval from the database administrator submitted data is thereafter transferred to the main database.

A corresponding hand-arm vibration database, covering hand-held vibrating tools, has also been established which is available at the same Internet location as the whole-body vibration database.

Internet location

The whole-body vibration database is hosted by a web server at the National Institute for Working Life, Technical Risk Factors, Umeå, Sweden. The Internet location is: ”http://umetech.niwl.se/”.