

Guest Editorial

Research in the literature and the Internet quickly reveals that ergonomic design of inspection workplaces has not been getting the attention it deserves. Although certain very specific subjects – such as lighting conditions – are being discussed, fundamental questions like where inspection tasks and the stresses created by them should be classified in an overall scheme of work forms and what evaluation and design criteria should apply to them have not been addressed. We have been unable to discover any published statements on a generally applicable *model of inspection* other than Colin Drury's paper *Human Factors and Ergonomic Audits* (2006) or older publications by him and former members of his research group to which, unfortunately, industry did not pay adequate attention.

The result is that industrial job designers will in most cases tend to lump this type of job together with normal production and assembly jobs. This is frequently an incorrect approach in view of the high degree of sensory stress involved and the psycho-mental stresses caused by the job-related decision algorithms. The result is uncertainty as to whether an ergonomic optimum is being attained or even has a chance of being attained on the factory floor.

The theoretical and practical deficits uncovered by our search prompted us to organise a session on 'Ergonomics of Inspection Tasks' at the 2005 ISOES Conference in Las Vegas. The response to the papers presented there was so strong that we decided to publish a special issue of *Occupational Ergonomics* dealing with this theme.

This special issue starts with a basic review by Goebel et al. with special reference to the theoretical basis of inspection work systems and the perceptive and cognitive procedures used in them. Brombach et al. report on surface-specific lighting scenarios enhancing the perceptibility of three-dimensional flaws and present interesting proposals for illumination of inspection workplaces from three different light sources. Schuette's paper looks at the degree to which error probability and feedback of results influence the decisions of quality inspectors. The contribution from Landau and Peters is devoted to analysis and design of inspection jobs in the automotive industry. Winter et al. also focus on the automotive industry, in this case on forms of physical work involved in assembly and inspection.

An article by Landau et al. addresses the question of job enrichment aspects of inspection tasks in the consumer goods industry. This article will appear in the next issue of *Occupational Ergonomics*.

Guest Editors

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