Activities of IIW Commission VIII on Ergonomics in the past

Wolfgang Zschiesche

Joint Meeting of IIW – Commission VIII and the Federation of the European Ergonomic Societies (FEES)

Budapest, January 30th 2014
Working Group K „Ergonomics“

active for a long time

- providing papers
- introducing scientific literature
  (possible as IIW doc‘s only in the past)

- long-term chairman: Roland Kadefors
- long-term member: István Visontay
Working Group G
„Emission and control of optical and thermal radiation in welding“

active for a long time

- providing papers
- introducing scientific literature
  *(possible as IIW doc‘s only in the past)*

- long-term chairman: K. Kohmoto
- transfer into Comm. VIII: H. Yamaguchi
Introducing:

Papers
Authors
IIW-Doc-No

Examples on the major topics
(not concluding)
Physical workload and ergonomic design

Welding and ergonomy
Visontay
VIII-1499-89

Loading of arms in manual arc welding
Svabova et al
VIII-1368-87

Hand, arm and shoulder loads and physical characteristics of MIG welding guns
Wells et al
VIII-WG K102-95

Understanding the ergonomics of welding gun design
Tregaskiss et al
VIII-WG K103-95
Physical workload and ergonomic design

Recommendations for welding workplace design: physical workload aspects
Kadefors
VII-1672-92

Loading on the neck when welding with visors
Eklund et al
VIII-1674-93

Reference workplaces for manual welding
Kaderfors et al
VIII-1565-91

Workload and musculoskeletal problems: a comparison between welders and office clerks
Torner et al et al
VIII-1625-92
Physical workload and ergonomic design

The effect of arm support on supraspinatus muscle load during simulated assembly work and welding
Jarvholm et al
VIII-1627-92

Development of a systematic observation protocol of physical exposure of the back: a preliminary study
Tousignant et al
VIII-1958-02

Ergonomics in welding: experimental results in industrial cases
Colombo
VIII 2040-07
Physical and psychological factors at workplace (Interaction)

Epidemiological study to investigate potential interaction between physical and psychosocial factors of work that may increase the risk of symptoms of musculoskeletal disorder of the neck and upper limb
Devereux et al
VIII-1957-02

Use of cognitive psychology and muscle movement mechanics in welder’s training.
Jastrzebski et al
VIII 1959-02
Shipyards Welders

Medical wastage in shipyard welders: a forty-year historical cohort study
Wanders et al
VIII-1707-93

The welder as a strategic resource in shipbuilding
Boekholt
VIII 2056-07

Shipyards Welders – Status reports
Automation
Robots

Working during nightshifts with reduced staff
„The lonely welder“

Boekholt
Several Commission Documents
Systematic view on the whole welding process

Interventions

Automation

Future of the welding world

Comparing processes – a software model to tackle the job
Smith
VIII-1951-02

Econweld: Software to calculate acceptable positions and working times
Marconi

Health interventions for the metal working industry: which is the most cost-effective?
A study from a developing country
Salinas et al
VIII 1962-02
Systematic view on the whole welding process

Interventions

Automation

Future of the welding world

Boekholt
VIII 1838-98

Seeing to the work environment
Sveriges Verkstadsförening
VIII 1367-87

The operator’s computer –
a decentralised tool for building an efficient decentralised organisation
Gustafsson and Nonas
Paper within WG K 1996
Systematic view on the whole welding process

Interventions

Automation

Future of the welding world

Modern work organisation demands decentralised technical solutions
Nonas and Gustafsson
Paper within WG K 1996

Guideline for health and safety management in welding activities
(based on EWF health and safety management system)
Costa
VIII 1997-05
Systematic view on the whole welding process

Interventions

Automation

Future of the welding world

Proposal for a draft ISO TR – Health and safety aspects of welding – Health and safety check list for welding fabrication activities

Costa

VIII 2047-97
Optical and thermal radiation

Eyes

Protective measures

Research on hazardous optical radiation from welding arcs
Japanese Welding Engineering Society
VIII 1318-86

Light emission in thermal cutting
Andersen
VIII 1304-86 (from Comm. I)

Optical radiation hazards of laser welding processes - Part II: CO\textsubscript{2} laser
Rockwell and moss
VIII 1594-91
Optical and thermal radiation

Eyes

Protective measures

Measurement of blue-light effective radiance of welding arcs
Okuno
VIII 1424-88

Experiments of the blue light hazard
NN
VIII-1607-91
Optical and thermal radiation

Eyes

Protective measures

Case report: Photoretinitis: an underestimated occupational injury?
Magnavita
VIII 1966-02

Occupational risk factors, ultraviolet radiation, and ocular melanoma: a case-control study in France
Guenel et al
VIII 1947-02
Optical and thermal radiation

Eyes

Protective measures

Automatic scale setting welding filters
Sutter et al
VIII 1881-00

French vision enquiry
NN
VIII/WG A N 12

Extensive French study: Vision and Welding – Does welding cause ocular damage?
Introduced and furnished by Marini
Doc ....
Noise
Hearing loss

Report on the questionnaire on noise in welding
Kennebeck
VIII-1519-90

Investigataion on welding arc sound (report I) – effect of welding method and welding condition of welding arc sound
Arata et al
VIII 1340-86
Any Questions?

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Thank you for listening