

107:64040y Vinyl chloride monomer and other contaminants in PVC welding fumes. Williamson, J.; Kavanagh, B. (Water Auth. Western Australia, Australia). *Am. Ind. Hyg. Assoc. J.* 1987, 48(5), 432-6 (Eng). The welding of PVC sheets at 180° (i.e. 30° below the thermal PVC decompn.) presents no health risk. The concn. of CH₂CHCl vapor in the welding area are 50.2 ppm; the HCl concns. are 0.5 to 10 ppm. Only traces of CaH₂, HCHO, and AcH can be detected by gas chromatog.

107:64041z Chemical cartridge respirator performance: 1,3-butadiene. Ackley, Mark W. (A Figgie Int. Co., Lancaster, NY 14086 USA). *Am. Ind. Hyg. Assoc. J.* 1987, 48(5), 447-53 (Eng). The performance was tested of 3 types of twin cartridges for the Scott personal respirators in removal of 1,3-butadiene (I), a carcinogen, from air. The petroleum, coconut shell, and coal-based activated C performed equally well in reducing I concns. from 100 ppm or 1000 ppm to ≤10 ppm level. The cartridge service life was decreased by high air humidity and temp. However, the cartridge regeneration with clean air was enhanced by high humidity and temp. The kinetic rate consta. of I adsorption by 3 types of Scott respirator cartridges were detd.

107:64042a Asbestos exposure during renovation and demolition of asbestos-cement clad buildings. Brown, Stephen K. (Div. Build. Res., CSIRO, Highett, 3190 Australia). *Am. Ind. Hyg. Assoc. J.* 1987, 48(5), 478-86 (Eng). The weathering of walls and roofs of asbestos fiber-contg. concrete slabs or sheets exposes asbestos fibers which become airborne during the renovation or demolition of old structures. The concn. of asbestos fibers in air during water-jet cleaning of weathered asbestos cement roofing was 0.1-0.2 fibers/mL. During demolition this concn. was 0.3-0.6 fibers/mL for roofs and <0.1 fibers/mL for walls. The use of protective clothing and respirators during these activities is recommended.

107:64043b Exposure to asbestos during brake maintenance of automotive vehicles by different methods. Kauppinen, Timo; Korhonen, Kari (Inst. Occup. Health, SF-00250 Helsinki, Finland). *Am. Ind. Hyg. Assoc. J.* 1987, 48(5), 499-504 (Eng). The background concn. (C, in fibers/mL) of airborne asbestos fibers in a brake maintenance garage was ≤0.1, but during grinding of asbestos pads to fit the brake shoes of large drum brakes, C could reach 125 (mean 56) if no local exhaust system was used. The continuous occupational exposure limit to asbestos is 0.5-2 fibers/mL in most countries. Their value was exceeded only briefly when no exhaust system was used during the grinding of asbestos pads.

107:64044c Creatinine and specific gravity adjustment of ALA in urinary spot samples: is there any need? Dell'orto, A.; Berlin, A.; Toffoletto, F.; Loaito, B.; Alessio, L. (Ist. Med. Lavoro, 25123 Brescia, Italy). *Am. Ind. Hyg. Assoc. J.* 1987, 48(5), A-331-A-333 (Eng). The relations were examd. between the Pb levels in the blood of 10 foundry and battery workers and the levels of creatinine and aminolevulinic acid (ALA) in their urine. The study showed that the usefulness of creatinine and urine d. as correction parameters in the ALA detns. is doubtful. However, creatinine and d. detns. can be useful in selecting over-dild. or over-concd. urine samples.

107:64045d Exposure to carbon disulfide and ischemic heart disease in a viscose rayon factory. Sweetnam, P. M.; Taylor, S. W. C.; Elwood, P. C. (Epidemiol. Unit, MRC, Cardiff, UK CF2 3AS). *Br. J. Ind. Med.* 1987, 44(4), 220-7 (Eng). The cohort of viscose rayon workers previously described by J. R. Tiller et al. (1968) was reconstructed and followed up to the end of 1982. The pattern of mortality at ages 45 to 64 for the period 1950-82 is similar to that for 1950-64. The spinners, the workers most heavily exposed to CS₂, have a significantly higher mortality from all causes than the least exposed group. The excess mortality is largely accounted for by ischemic heart disease (IHD). Both all cause and IHD mortality increase with increasing exposure to CS₂. When this anal. is repeated covering all ages, these trends become much less strong and only that for IHD remains significant. Over the age of 65 there is a tendency for mortality to decline with increasing exposure. This is contrary to the expectation under the hypothesis that CS₂ promotes atherosclerosis and suggests that it has some type of reversible, direct cardiotoxic or thrombotic effect. This is supported by the findings that there is a strong trend for IHD mortality to increase with increasing exposure in the previous 2 yr. Further, both IHD and total mortality show significant trends with exposure among current workers but no such trends among workers who left the industry.

107:64046e A mortality study of nickel/chromium platers. Sorahan, T.; Burges, D. C. L.; Waterhouse, J. A. H. (Cancer Epidemiol. Res. Unit, Univ. Birmingham, Edgbaston/Birmingham, UK B15 2TH). *Br. J. Ind. Med.* 1987, 44(4), 250-6 (Eng). The mortality in a cohort of 2689 Ni/Cr platers between 1946 and 1983 was investigated. All members of the cohort had some period of employment assocd. with Cr exposure. Overall, compared with the general population of England and Wales, statistically significant differences were found for cancer of the stomach, primary cancer of the liver, cancer of the nose and nasal cavities, cancers of the lung and bronchi, and all cancers. Cr bath workers are the more heavily exposed workers, and a striking difference in statistical mortality rates (SMR) was found for lung cancer among men 1st employed as Cr bath workers (SMR = 199) and men 1st employed as other Cr workers (SMR = 101). The method of regression models in life

tables was used to compare the durations of Cr-exposed employment of those dying from causes of interest with those of all matching survivors in the same year of follow-up, while controlling for sex, and for year and age of starting employment. Significant pos. assocns. were found only for cancers of the lung and bronchi and duration of Cr bath work. In this study, exposure to Ni was not an important confounding exposure.

107:64047f Organic solvents and presenile dementia: a case referent study using death certificates. O'Flynn, R. R.; Monkman, S. M.; Waldron, H. A. (Dep. Psychiatry, UMDS, London, UK SE1 9RT). *Br. J. Ind. Med.* 1987, 44(4), 259-62 (Eng). The death certificates of all men under 65 who died in England and Wales of presenile dementia were collected for 1970-9. Control death certificates were matched for age and sex. There was no significant difference between the groups with respect to said occupational exposure to either org. solvents or Pb.

107:64048g Squamous cell cancer of the maxillary sinus in Hokkaido, Japan: a case-control study. Fukuda, K.; Shibata, A.; Harada, K. (Sch. Med., Kurume Univ., Fukuoka, Japan 830). *Br. J. Ind. Med.* 1987, 44(4), 263-6 (Eng). A case-control study of squamous cell cancer of the maxillary sinus was performed in Hokkaido, Japan, with 106 cases and 212 controls matched for sex, age (within 5 yr.), and residence. Univariate analyses showed that a history of chronic sinusitis (relative risk, RR = 3.2), nasal polyps (RR = 5.0), an occupational history of being a carpenter, joiner, furniture worker, or other woodworker (RR = 2.9), and current or past smoking habits (RR = 3.0) were statistically significant risk factors for men. No single item was a significant risk factor for women.

107:64049h Potential nephrotoxic effects of exposure to silver. Rosenman, K. D.; Seixas, N.; Jacobs, I. (New Jersey Dep. Health, Trenton, NJ 08625 USA). *Br. J. Ind. Med.* 1987, 44(4), 267-72 (Eng). A cross-sectional study was conducted on workers engaged in manuif. precious metal powder. Of the 27 workers, 96% had elevated urine Ag (0.5-52.0 µg/L) and 92% had elevated blood Ag (0.05-6.2 µg/L). Nineteen percent also had raised urine Cd (1.9-76.0 µg/L). Most workers had symptoms of respiratory irritation, and nose bleeds were reported in 30% of the workers. Deposition of Ag in the cornea of the eye was detected in 93% of the long-term workers. Although not statistically significant, corneal deposition was assocd. with complaints of impaired night vision. The urinary enzyme N-acetyl-β-D-glucosaminidase (NAG) was significantly raised in 4 individuals and was correlated with blood Ag and age. The group's av. NAG was higher than that of a control population. No assoc. between age and urinary NAG was found in the control group. Estd. creatinine clearance was also significantly lower in the group exposed to Ag than in the control group. Kidney function was adversely affected by exposures at work, but because of the exposure to Cd the role of Ag could not be detd.

107:64050b Incidence of cancer among vinyl chloride and polyvinyl chloride workers: further evidence for an association with malignant melanoma. Storetvedt, S.; Daas, Hel.; Andersen, A. A.; Langard, S. (Health Dep./Res. Cent., Norsk Hydro A/S, Oslo, Norway). *Br. J. Ind. Med.* 1987, 44(4), 278-80 (Eng). An increased incidence of malignant melanoma of the skin, lung cancer, and colon cancer were found in 430 male workers exposed to vinyl chloride and PVC, thus confirming the results of a previous study that vinyl chloride may act as a multicarcinogen.

107:64051c Conjugal exposure to polychlorinated biphenyls (PCBs). Fischbein, A.; Wolff, Mary S. (Mount Sinai Sch. Med., City Univ. New York, New York, NY 10029 USA). *Br. J. Ind. Med.* 1987, 44(4), 284-6 (Eng). Anal. chem. evidence is given of 2 cases of PCB transmission from transformer maintenance workers to their wives whose household exposure occurred through PCB-contaminated clothes.

107:64052d Analysis of respirable and sedimented dust samples. Antal, L.; Hlavay, J.; Karpáti, J. (Inst. Anal. Chem., Univ. Chem. Eng., H-8201 Veszprem, Hung.). *Period. Polytech., Chem. Eng.* 1986, 30(3-4), 209-12 (Eng). In an enamel factory, 1.2-22 mg respiratory dust was collected by a personal membrane sampler. The samples contained chrysotile, Ca silicates and aluminates, brownmillite, calcite, quartz, and hematite. The av. diam. of the dust particles was 2.54 ± 0.086 µ. The metal compn. of the dust was also detd.

107:64053e Calculating fire-throttling of mine ventilation airflow. Litton, Charles D.; DeRosa, Maria; Li, Jingshu (Pittsburgh Res. Cent., Bur. Mines, Pittsburgh, PA USA). *Rep. Invest. - U. S. Bur. Mines* 1987, RI 9076, 21 pp. (Eng). Tests were conducted in an intermediate-scale fire tunnel and a large-scale fire gallery to study the effects of a fire on the ventilation system of underground mines. Based on anal. of the results, a limit fire size is predicted dependent only upon the passageway dimensions below which ventilation redns. are significant and independent of fire size. For larger fires a simplified theory based upon the measurement of CO₂ concns. is valid. Continuous monitoring of CO₂ concns. can also provide information relative to fire hazards.

107:64054f Chronic bronchitis in workers from various hazardous workplaces in a bronchoscopic examination. Vyskocil, Jiri; Uchytíl, Borivoj; Krpěnský, Antonín; Kucera, Petr; Rysánek, Jitka (Klin. Nemoci Povolání, LF ÚJEP, Brno, Czech.). *Prac. Lek.*