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car is stationary and when it is moving. J. Geisler

Determination of carbon monoxide traces in air. Gh. Ciuhandu and V. Rusu. *Rev. Chim.* (Bucharest) 16(11-12), 601-2 (1965)(Rom). The redn. of Ag *p*-sulfamidobenzoate (I) by CO in alk. soln. was improved. The gas. mixt. was contacted with the soln. of I in special wash bottles with a flat shape. The soln. was prep'd. by shaking 0.1M Na sulfamidobenzoate with 0.1M AgNO₃ and adding 0.1M NaOH (1:1:0.5 by vol.). Opalescence or brown coloration demonstrated that the ppt. of I was not shaken sufficiently before the alkalization. Samples were collected in the bottles by pouring out the water in them at the sampling place, and adding a 10-ml. aliquot of I soln. The bottle was placed on its flat side and left for 6 hrs. The absorption of the soln. with respect to a standard soln. kept in a closed tube, was measured at 420 mμ, Beer's law was obeyed for <8000 ppm. at an error of ±3%. By prolongation of the contact time, the sensitivity was increased, 20 hrs. being satisfactory for concns. <1000 ppm. (the amt. of Ag soln. was doubled at equal CO concn., indicating that the reaction rate decreased with time, in accordance with Henry's law). A less accurate but more rapid method was developed on the basis of the rate at which the reagent colored, the duration between start of the contact and appearance of the full color, in comparison to 10⁻⁴M K₂Cr₂O₇, decreasing with increasing CO content of the gas (60 min. at 250 ppm., 20 min. at 1000, 10 min. at 3000, and 1 min. at 5000 ppm.). M. Lapidot

Air pollution from waste-water treatment. Joe O. Ledbetter (Univ. of Texas, Austin). *Water Sewage Works* 113(2), 43-5 (1966)(Eng). A review of air pollution resulting from the treatment of waste waters. This pollution involves not only the notorious odors and the recognized volatiles but also the aerosol emissions. The aerosols of most interest are probably bacteria. Significant nos. of bacteria, including some pathogens, are emitted from activated sludge and trickling filter units. 17 references.

Detection of the strong carcinogens 1,2,4,5- and 3,4,9,10-dibenzopyrene in the atmosphere. P. P. Dikun (Inst. Oncol., Moscow). *Vopr. Onkol.* 12(1), 90-1(1966)(Russ). The title compds. (I and II, resp.) were sep'd. from air by the aspiration method, isolated by column or thin-layer chromatography and detected according to their fluorescent quasilinear spectra at specified wavelengths (given). Ivo Hynic

Effect of asbestos on benzo[*a*]pyrene carcinogenesis in the respiratory tract. Llonas Miller, William E. Smith, and Steven W. Berliner (Fairleigh Dickinson Univ., Madison, N.J.). *Ann. N.Y. Acad. Sci.* 132(1), 489-500(1965)(Eng). Time of appearance and yields of papillomas and carcinomas in the respiratory tract of hamsters after intratracheal injections of benzo[*a*]pyrene (I) are reported. Addn. of the chrysotile variety of asbestos to the injections gave results consistent with an hypothesis that this material promotes I carcinogenesis in the respiratory tract. Addn. of the amosite variety of asbestos to injections of I did not increase the yield of tumors in the respiratory tract. The yield of tumors in the respiratory tract of hamsters treated with a limited series of intratracheal injections of I decreased with time after discontinuation of exposure. This observation is of interest in relation to lung cancer risks in smokers who discontinue smoking.

Ozone and its importance to industrial hygiene. L. Grupinski and W. Gutsch. *Arbeitsschutz* No. 7, 170-4(1965)(Ger). A review covering max. allowable concns., ozone concns. required for efficient disinfection, and destruction of excess ozone. 44 references. Herbert Puschmann

Automatic submerged arc welding and the hazards of professional poisoning associated therewith. Stanislaw Byczkowski, Antoni Bohdanowicz, and Witold Senczuk (Med. Acad., Gdansk, Poland). *Gdanskie Towarzyst. Nauk., Wydział Nauk. Mat.-Przyrodniczych, Rozprawy Wydziału III* No. 1, 57-65(1964)(Pol). Many harmful compds. are produced by combination of fluxing agents of different compn. with the fragments to be welded. Most frequently present are CO, CO₂, N oxides and F compds. Compds. of Fe, Mn, Si, F, and others were found in the welding fumes. J. Pich

Determination of gaseous air pollution evolved in automatic submerged arc welding. Stanislaw Byczkowski, Maria Cempel, Jerzy Krechniak, and Krystyna Wrzesniowska (Med. Acad. Gdanske, Poland). *Gdanskie Towarzyst. Nauk., Wydział Nauk. Mat.-Przyrodniczych, Rozprawy Wydziału III* No. 1, 67-75 (1964)(Pol). During automatic submerged arc welding, many volatile toxic compds. are generated, esp. CO, CO₂, H₂F₂, and N oxides. Quant. detns. of these compds. were carried out in air samples taken from various places near the automatic machine. The contents of CO, CO₂ and N oxides are lower than obligatory standards, but the amts. of H₂F₂ considerably exceeds permissible concn. J. Pich

Dust concentration on the working posts during automatic submerged arc welding. Stanislaw Byczkowski, Barbara Massalska, Jerzy Krechniak, and Tadeusz Mincer (Med. Acad., Gdansk, Poland). *Gdanskie Towarzyst. Nauk., Wydział Nauk.*

(Pol). The main constituents of the welding fumes generated during automatic submerged arc welding are SiO₂, Fe oxides, and Mn, and F compds. Besides chem. analysis the concn. of generated fumes was det'd. by a gravimetric and counting method, as were the grain sizes of aerosols. The no. of allowable particles in 1 ml. of air surpassed the standard at all investigated work stations. The gravimetric permissible concn. of fumes was surpassed only at the station of the welder in the production hall. J. Pich

Some chemical examinations of blood and urine in welders operating the automatic submerged arc. Stanislaw Byczkowski, Jerzy Krechniak, Barbara Massalska, and Tadeusz Mincer (Med. Acad., Gdansk, Poland). *Gdanskie Towarzyst. Nauk., Wydział Nauk. Mat.-Przyrodniczych, Rozprawy Wydziału III* No. 1, 89-95(1964)(Pol). The degree of absorption of harmful constituents from the surroundings was investigated by measurement of some constituents in 29 welders operating automatic welding, machines an av. of 5 years. In blood, the level of F, Mn, and Fe was det'd.; in urine, the level of F, Mn and SO₄. An increased content of F in blood of 23 men was detected, in urine of 22 men. An increased level of Mn in blood was found in 24 men and in urine in 9 men. The level of blood Fe as well as of urine SO₄²⁻ remained normal in all welders exam'd. No correlations between the welding experience and a content of the constituents in the physiol. fluids could be found. J. Pich

Dynamics of the saturation of arterial blood with oxygen in silicosis patients. T. Niculescu, I. Mihaila, and Z. Ciobanu (Dept. Hyg. Travail Maladies Professionnelles, Bucharest, Romania). *Intern. Congr. Occupational Health, 14th, Madrid 1963* (2), 637-40(Pub. 1964)(Fr). Tests of pulmonary ventilation and similar procedures do not give definite data on O balance in the blood. To obtain more accurate data, tests were done with an Atlas oximeter on 46 silicosis patients. Six had suspected silicosis, while 13, 17, and 10 had silicosis of the 1st, 2nd, and 3rd degree, resp. For controls, 23 normal persons were tested. The method was to inhale pure O, det. the time required for 100% O satn. of the arterial blood, then the time required for the blood to return to initial levels of satn. In healthy controls, the av. resting satn. was 96%. The same av. value was obtained for 1st-stage silicosis. In 2nd- and 3rd-stage silicosis, the resting arterial blood O satns. were 93 and 92%, resp. The min. O satn. during apnea was 90% for 1st stage silicosis and the controls and 88% for the more advanced stages of silicosis. In normal persons, the O satn. increased by 2-3% during phys. effort, while in the silicotics it decreased to 89, 87, and 74% of max. satn. for 1st-, 2nd-, and 3rd-stage silicosis, resp. The physiol. and pathol. significance of the results is discussed. W. C. Tobie

Occupational diseases in low-pressure [intaglio] printing from the use of benzene and its homologs. P. Thomaschewski. *Intern. Congr. Occupational Health, 14th, Madrid 1963* (2), 828-30 (Pub. 1964)(Ger). Old and new data on the use of C₆H₆ and PhMe in inks of the title printing process are considered. Since C₆H₆ is of max. importance in producing occupational blood dyscrasias, the recommended solvent is PhMe contg. not over 0.3% C₆H₆. The max. allowable concn. of atm. PhMe is 200 ppm. W. C. Tobie

Progressive systemic sclerosis and pulmonary silicosis. R. Carini and N. Lo Martire (Univ. Siena, Italy). *Med. Lavoro* 56(11), 708-15(1965)(Ital). A case is reported of pneumosilicosis associated with progressive systemic sclerosis. The appearance of pulmonary micronodules in a miner was followed in a few years by a type of angioneurotic syndrome similar to that of Raynaud's and scleroderma. Rheumatoid tests were pos. and the blood protein picture was characteristic of scleroderma. Leonard D. Pagnotto

Histological aspects of the kidney in silicosis. L. Ambrosi (Univ. Bari, Italy). *Med. Lavoro* 56(11), 716-26(1965)(Ital). Histol. examn. of kidneys from 60 deceased silicotic patients between the ages of 37 and 79 revealed slight degenerate tubular changes with the formation of hyaline casts, some mucopolysaccharide material around the glomerular loops, capsular envelope and the intertubular spaces of the medullary region, and increase in mast cells and infiltration of lymphocytes and plasma cells, and changes in stromal structures. Leonard D. Pagnotto

Urinary concentration of iron and lead in a group of workers exposed to the risk of saturnism. E. Orlando, G. B. Raffi, and M. Alessandri (Univ. Bologna, Italy). *Med. Lavoro* 56(11), 732-7(1965)(Ital). Urinary Fe and Pb were det'd. on 100 ceramic workers exposed to Pb dust but who had no clin. or lab. evidence of Pb poisoning. Fe levels increased with Pb excretion and length of dust exposure. After 10 years Fe values leveled and then dropped off but were still higher than those in non-exposed individuals. Leonard D. Pagnotto

Serum protein pattern in men chronically exposed to carbon disulfide. Roman Smolik and Zdzislaw Plamieniak (Akad. Med., Wroclaw, Poland). *Med. Pracy* 16(6), 438-41(1965)(Pol). Electrophoretic examn. of serum protein pattern in 40 patients with occupational exposure to CS₂ revealed a distinct