Tests of clothing and equipment have been conducted in environments to -100°F. temperature. Subjects wore various types of artic clothing and respiratory equipment. In the cold environment they performed tasks simulating those which would be required in the booster interstage. The exposure times were varied from 15 to 57 minutes. The limiting parameters appear to be communications, visibility, and satisfactory respiratory protection at this temperature. -- Authors' abst.

508 Use of Packed Beds for Separation of Entrained Particles and Fumes from an Air Stream. J.S. Eckert. J. Air Poll. Control Assn. 16, 95-98 (Feb. 1966).

This paper deals with packed beds in discussion of separation of entrained particles and fumes from an air stream. Packed beds develop between the gas and liquid a maximum of contact in order to get maximum mass transfer from a gas to a liquid phase, and they are considered to be one of the better methods of scrubbing contaminants from a gas stream. -- Author's abst.

509 Guidelines to Safe Laser Welding. R.G. Daniels. Welding Engr. 50,62 (April, 1965).

Laser beam energy radiation presents serious health hazards which are listed and described; reflections and scatter from beam are dangerous; electric shock and fire hazards require fail-safe protection; occupational vision program includes thorough eye examination; a general control program for safe operation is presented. -- J. Am. Soc. Safety Eng. Absts.

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510 A Rapid Actinometer for Photochemical Air Pollution Studies. J.N. Pitts, Jr., J.M. Vernon, and J.K.S. Wan. Air Water Poll. Intern. J. 9, 595-600 (Oct. 1965).

Absolute and relative measurements of sunlight intensities in the lower atmosphere are an essential part of investigations of photochemical air pollution. Various physical and chemical actinometers have been designed and developed to measure the radiant energy received from the sun or from artificial light sources. The o-nitrobenzaldehyde actinometer, when used in photochemical air pollution studies has unique advantages: (1) the actinometer could be used in a solid, solution, vapor, or a colloidal dispersion system, (2) the absorption spectrum of o-nitrobenzaldehyde has an absorption onset at about 4000A° which coincides with the wavelength threshold for the photo-dissociation of NO_2 into NO and O atom. If a standard source of known emissions at a particular wavelength is available, the o-nitrobenazldehyde actinometer could be calibrated for any given solution or filter paper conditions to enable absolute measurements of the short wavelength intensity of sunlight received at any point. -- APCA Absts.

511 Air Pollution Impacts to Some Important Species of Pine. G.H. Hepting. J. Air Poll. Control Assn. 16, 63-65 (Feb. 1966).

In the past, many species of pine have been severely damaged by acute forms of air pollution associated with ore smelting. More recently, damage to ponderosa pine in the state of Washington has been associated with atmospheric fluoride, and this species in particular has also suffered smog damage in southern California. In the East, white pine has been declining in the vicinity of certain soft-coal-burning power plants, and in one case downwind from an oil-burning power plant: also throughout the East, an atmospheric oxidant of unknown source has caused a type of needle blight on white pine. Trash burners and city dump combustion has led to the killing of certain pine species, leaving other intermixed pine species unharmed. Localized damage to white pine from automobile exhaust has been observed. Differences in the susceptibility of neighboring trees of the same species to a given air pollutant have been observed repeatedly. There are 15 references. -- Author's abst.

512 Development of an Air Pollution Control Program at Cominco's Kimberly Operation. A.F. Snowball. J. Air Poll. Control Assn. 16, 59-62 (Feb. 1966).

During the concentration of lead and zinc sulfides from Cominco's Sullivan Mine at Kimberly, British Columbia, there is also produced an iron sulfide concentrate as a byproduct. A portion of these iron concentrates is roasted and the resulting calcine is treated in electric furnaces to produce 300 tons of pig iron per day. The sulfur dioxide produced in the roasting process is used to make sulfuric acid which is employed in the manufacture of ammonium phosphate fertilizers. Problems in the control of air pollution resulting from the iron sintering, iron smelting, and fertilizer operations at Kimberley are discussed, including those arising as a result of almost continuous expansion of these facilities since their extablishment 12 years ago. -- Author's abst.