

oxides which are in the highest state, presumably in the form of nitric acid mist, and possibly carried on small submicron iron particles as nitrates. Nitrogen trioxide, NO_3 or hexoxide, N_2O_6 , can exist, but little is known about them.¹¹

It is possible that nitric acid can be formed in an electric arc in the presence of water vapor; hence it is not improbable that this is formed from welding gases.

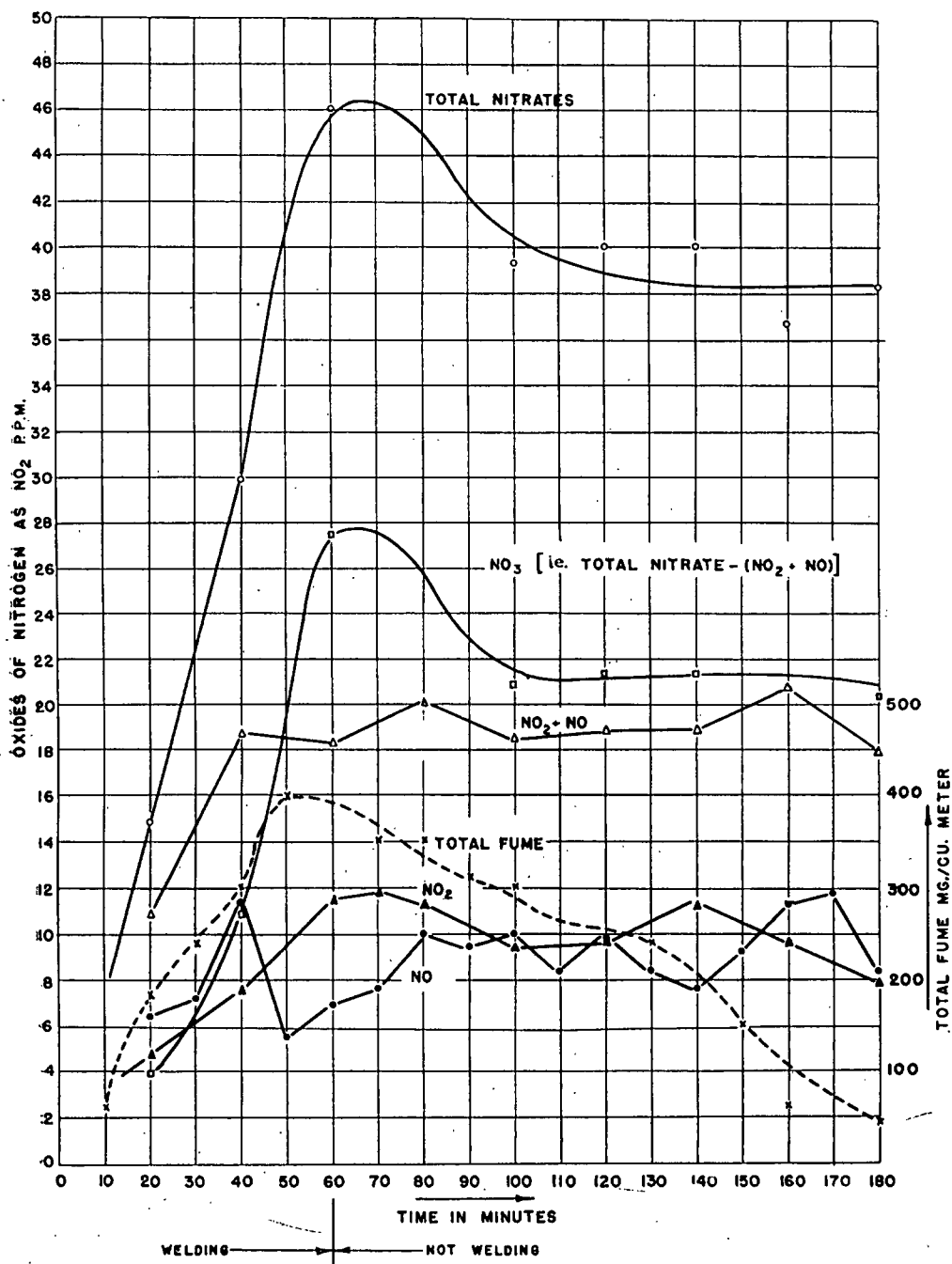


Chart 4.—Total oxides, nitric oxide, nitrogen dioxide, nitrogen trioxide and total fume concentrations during and after arc welding with coated electrodes. Recirculation of cabinet air from 60 to 180 minutes.

11. Since its absorption spectrum has been obtained, NO_3 is more nearly a substantiated compound than a hypothetical intermediate (Johnston, H. S., and Yost, D. M.: The Kinetics of the Rapid Gas Reaction Between Ozone and Nitrogen Dioxide, J. Chem. Phys. **17**:386, 1949).