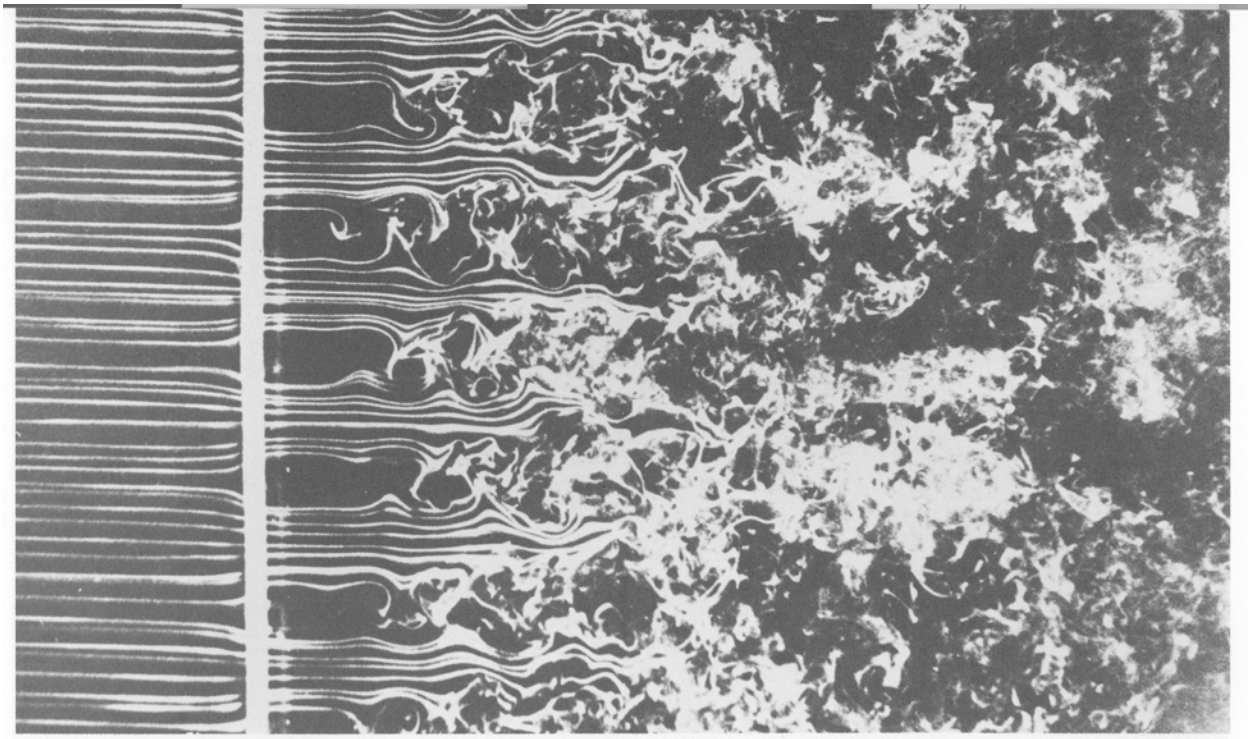
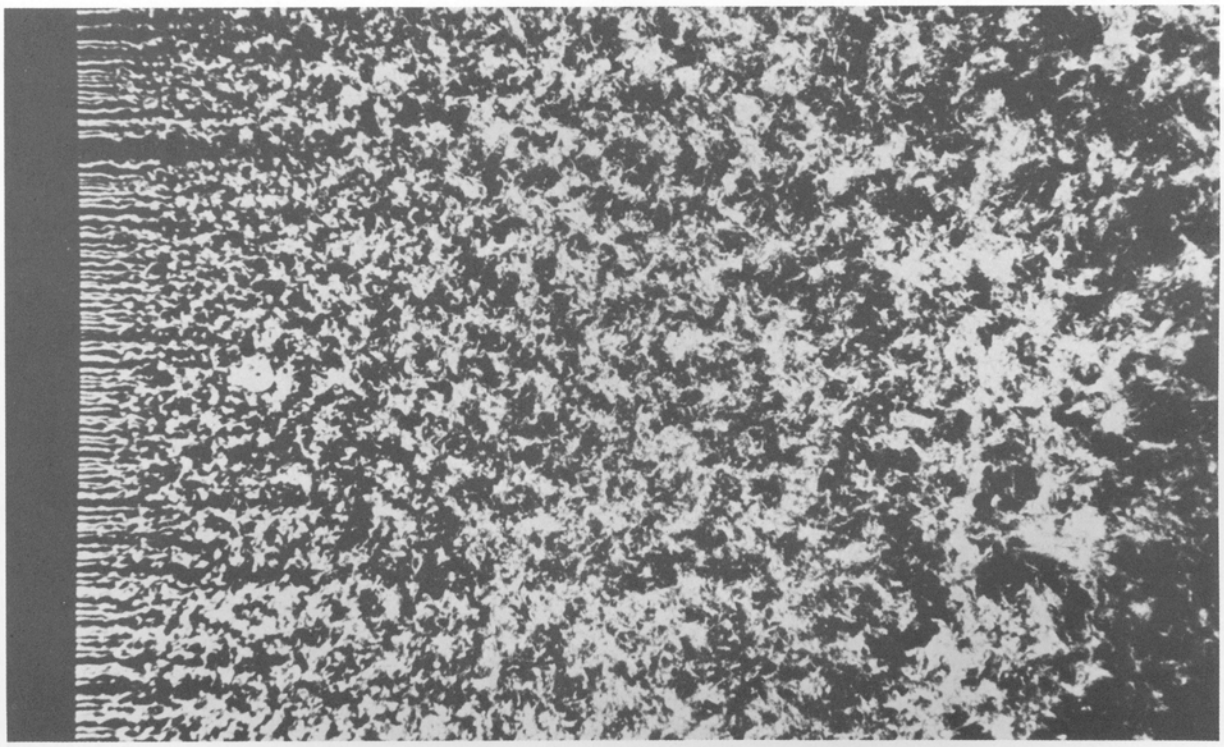
Grid Turbulence

Author: John M. Cimbala, Penn State University
Latest revision: 03 March 2008



152. Generation of turbulence by a grid. Smoke wires show a uniform laminar stream passing through a $^1/_{16}$-inch plate with ¾-inch square perforations. The Reynolds number is 1500 based on the 1-inch mesh size. Instability of the shear layers leads to turbulent flow downstream. *Photograph by Thomas Corke and Hassan Nagib*

From: Van Dyke, M., *An Album of Fluid Motion*, Stanford, CA, The Parabolic Press, 1982, p. 89.



153. Homogeneous turbulence behind a grid. Behind a finer grid than above, the merging unstable wakes quickly form a homogeneous field. As it decays downstream, it provides a useful approximation to the idealization of isotropic turbulence. *Photograph by Thomas Corke and Hassan Nagib*