

## FLOW PAST A FLAT PLATE



Image ID : PLATE-01  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : The flat plate set perpendicular to the flow( $R=0.022$ )  
Notes : Glycerine aqueous solution.  
Streamline pattern visualized by suspending aluminum powder.  
The flat plate(width 9.6cm) moves along the center of two plane walls(spacing 100cm).  
Steady flow.

Author : S. Taneda  
Published in : 1964  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda *J. Phys. Soc. Jpn*, Vol.19 ,No.6 (1964) 1024.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Fore-and-aft symmetry



Image ID : PLATE-02  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : The flat plate set perpendicular to the flow ( $R=0.334$ )  
Notes : Glycerine aqueous solution.  
Streamline pattern visualized by suspending aluminum powder.  
Camera was fixed to the flat plate.  
Steady flow. Streamline has fore-and-aft asymmetry.

Author : S. Taneda  
Published in : 1968  
Copyright : S. Taneda  
Reproduced from: S.Taneda: Rep. Res. Inst. Appl. Mech., Kyusyu Univ., No.54 (1968) 155.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Fore-and-aft asymmetry



Image ID : PLATE-03  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : The flat plate set perpendicular to the flow ( $R=1.89$ )  
Notes : Glycerine aqueous solution.  
Streamline pattern visualized by suspending aluminum powder.  
Camera was fixed to the flat plate. Steady flow.  
The flow forms stationary spirals separating from both ends of the flat plate.

Author : S. Taneda  
Published in : 1968  
Copyright : S. Taneda  
Reproduced from: S. Taneda: Rep. Res. Inst. Appl. Mech., Kyusyu Univ., No.54 (1968) 155.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Spiral

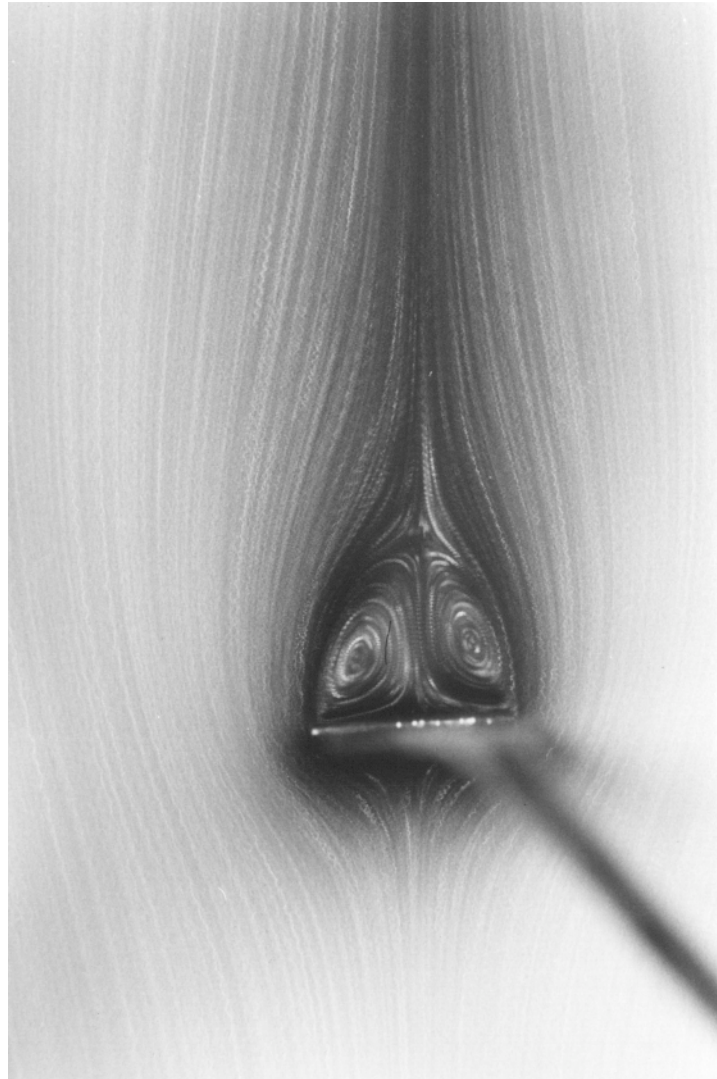




Image ID : PLATE-04  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998.11.25  
Image Title : The flat plate set perpendicular to the flow( $R=6.68$ )  
Notes : Glycerine aqueous solution.  
Streamline pattern visualized by suspending aluminum powder.  
Camera is fixed to the flat plate. Steady flow.  
The length of the twin spirals increases in proportion to  $R$ .

Author : S. Taneda  
Published in : 1968  
Copyright : S. Taneda  
Reproduced from: S.Taneda: Rep. Res. Inst. Appl. Mech., Kyusyu Univ., No.54 (1968) 155.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Spiral

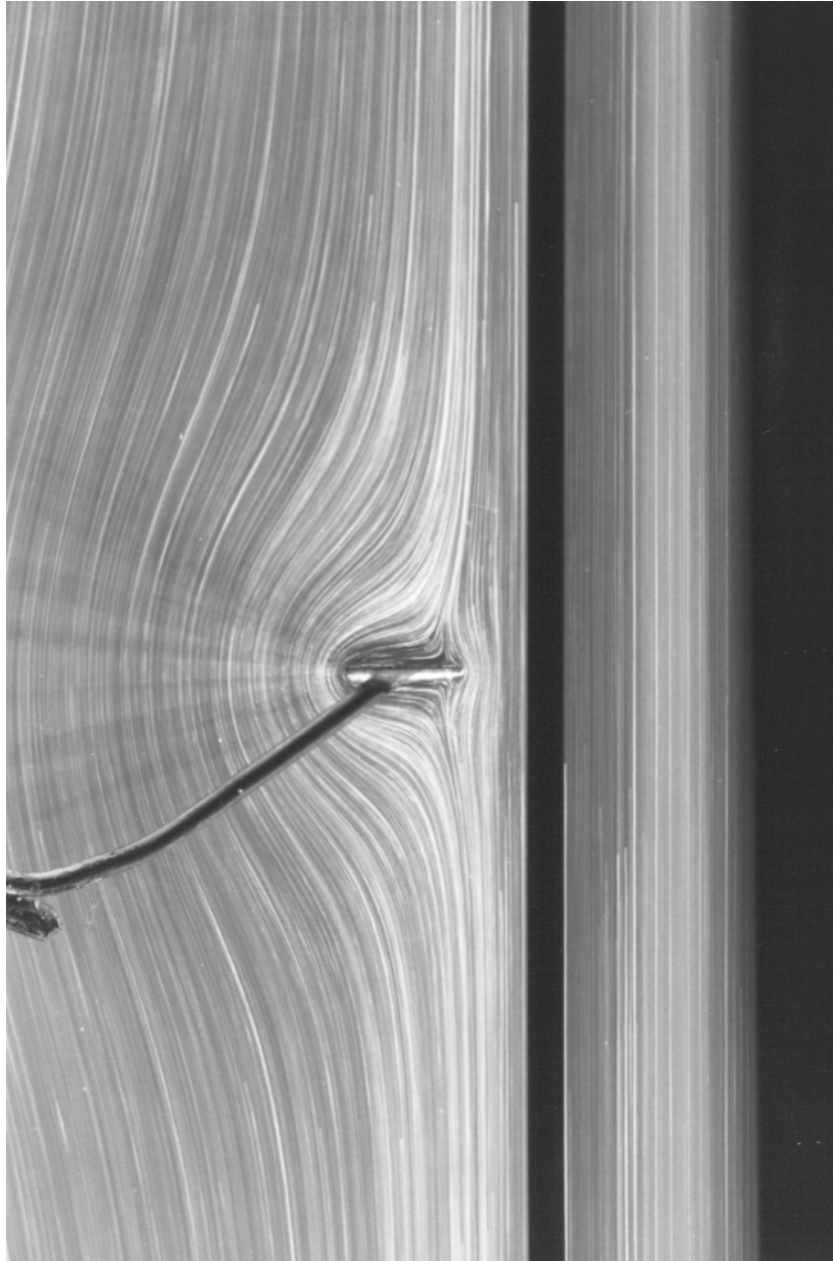


Image ID : PLATE-05  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : The flat plate moving near a wall and to the wall (streamline pattern)  
Notes : Glycerine.  
Streamline pattern visualized by suspending aluminum powder.  
Width of the flat plate  $d = 9.6\text{cm}$ .  $R = 0.0226$ . Steady flow.  
The streamline pattern does not change even if the flow direction is reversed.

Author : S. Taneda  
Published in : 1964  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda: J. Phys. Soc. Jpn, Vol.19, No.6 (1964) 1024.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Fore-and-aft symmetry



Image ID : PLATE-06  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : The flat plate moving near a wall and set parallel to the wall (streamline pattern)  
Notes : Glycerine.  
Streamline pattern visualized by suspending aluminum powder.  
Length of the flat plate  $d = 9.6\text{cm}$ .  $R = 0.0226$ .  
Steady flow. The streamlines are bent strongly by the flat plate.

Author : S. Taneda  
Published in : 1964  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda: J. Phys. Soc. Jpn, Vol.19, No.6 (1964) 1024.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Fore-and-aft symmetry

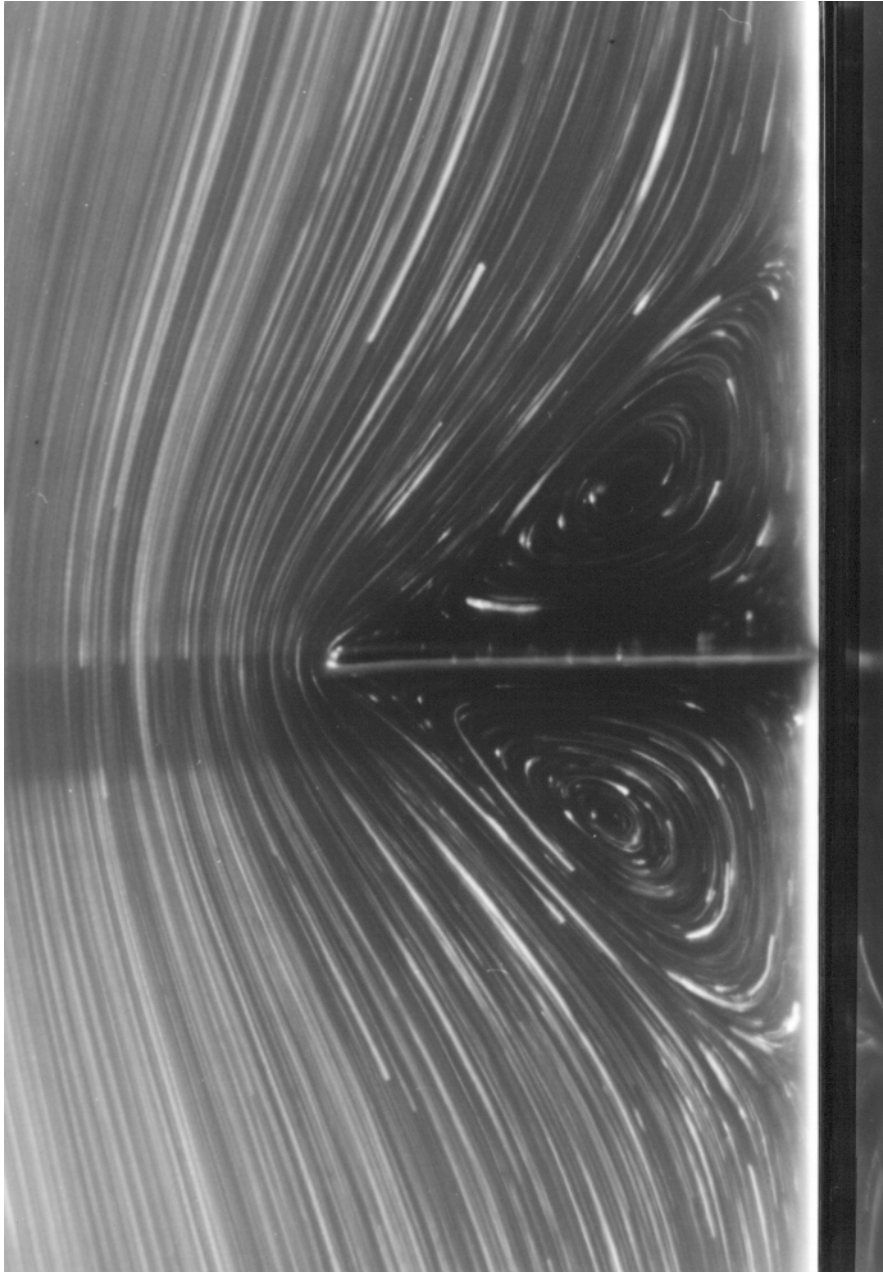


Image ID : PLATE-07  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : The flow over a flat plate set perpendicular to a wall  
Notes : Glycerine.  
Streamline pattern visualized by suspending aluminum powder.  
 $R = 0.014$ . Steady flow.  
The streamline pattern does not change even if the flow direction is reversed.

Author : S. Taneda  
Published in : 1979  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda: J. Phys. Soc. Jpn, Vol.46, No.6 (1979) 1935.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Spiral, Fore-and-aft symmetry

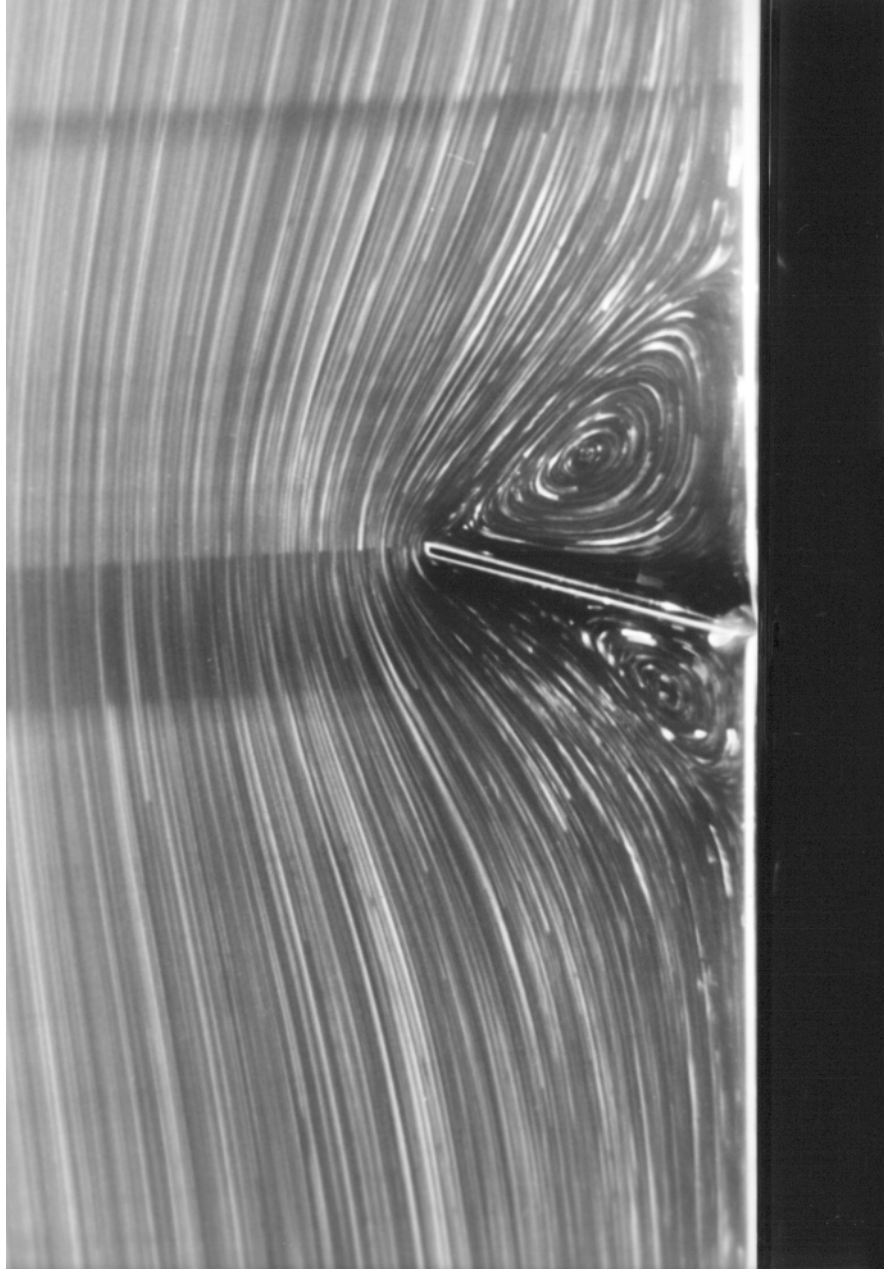




Image ID : PLATE-08  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : The flow over a flat plate set obliquely to a wall  
Notes : Glycerine.  
Streamline pattern visualized by suspending aluminum powder.  
R = 0.014. Steady flow. inclination angle of the flat plate is  $105^\circ$ .  
The streamline pattern does not change even if the flow direction is reversed.

Author : S. Taneda  
Published in : 1979  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda: J. Phys. Soc. Jpn, Vol.46, No.6 (1979) 1935.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Spiral

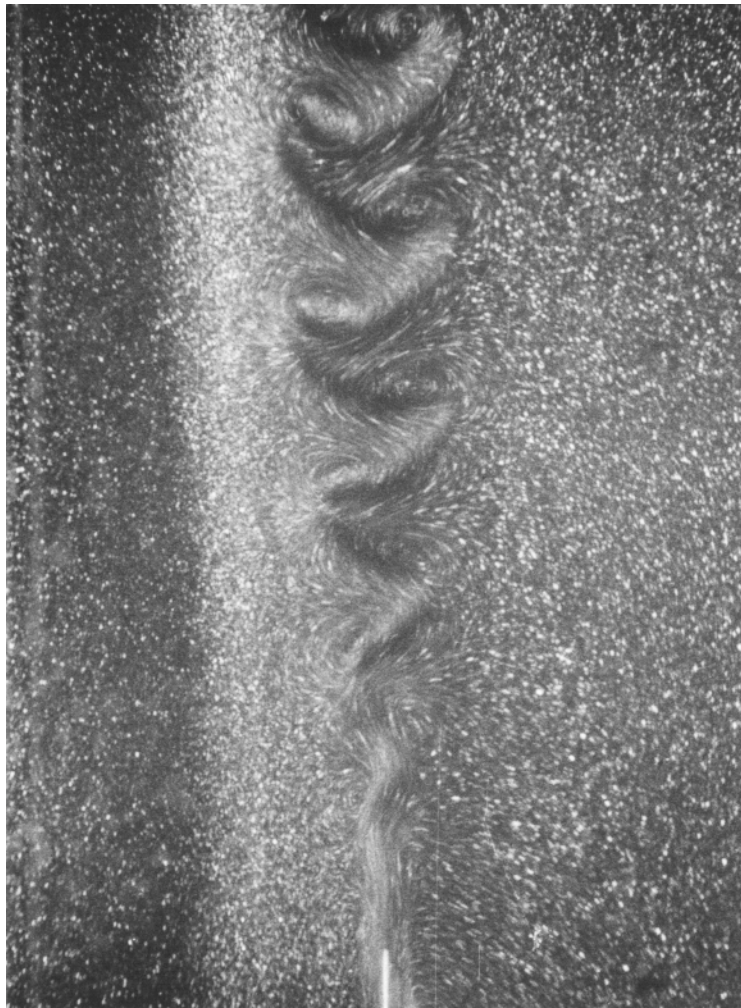


Image ID : PLATE-09  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998, 11, 25  
Image Title : The flow past a flat plate with angle of incidence is  $0^\circ$   
(just behind the flat plate)  
Notes : Static watertank experiment.  
Streamline pattern visualized by suspending aluminum powder.  
Camera was fixed to the watertank.  
Reynolds number based on the length of the flat plate  $R = 15800$ .

Author : S. Taneda  
Published in : 1958  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda: J. Phys. Soc. Jpn, Vol.13, No.4 (1958) 418.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Spiral, Periodicity

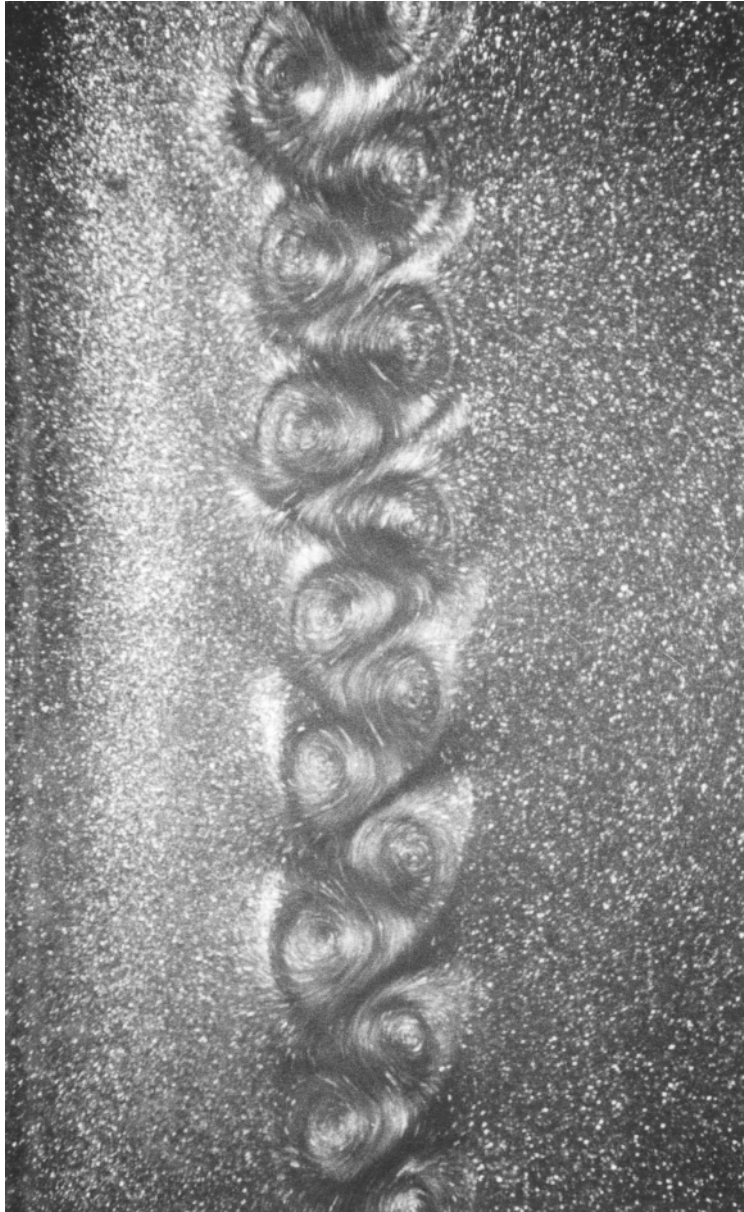


Image ID : PLATE-10  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : The flow past a flat plate with angle of incidence is  $0^\circ$   
(downstream far from the flat plate)  
Notes : Static watertank experiment.  
Streamline pattern visualized by suspending aluminum powder.  
Camera was fixed to the watertank.  
Reynolds number based on the length of the flat plate  $R = 15800$ .

Author : S. Taneda  
Published in : 1958  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda: J. Phys. Soc. Jpn, Vol.13, No.4 (1958) 418.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Spiral, Periodicity



Image ID : PLATE-11  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Streamline pattern and streakline pattern around the flow past a flat plate  
with angle of incidence is  $0^\circ$ .  
Notes : Static watertank experiment.  
Streamline pattern visualized by suspending aluminum powder.  
Camera was fixed to the watertank.  
Simultaneous visualizations of streamline pattern by suspending aluminum powder  
and streakline pattern by putting condensed milk,  
Reynolds number based on the length of the flat plate is 6600.

Author : S. Taneda  
Published in : 1965  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda: J. Phys. Soc. Jpn, Vol.20, No.9 (1965) 1714.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline Streakline  
Shape features : Flat plate, Spiral, Periodicity

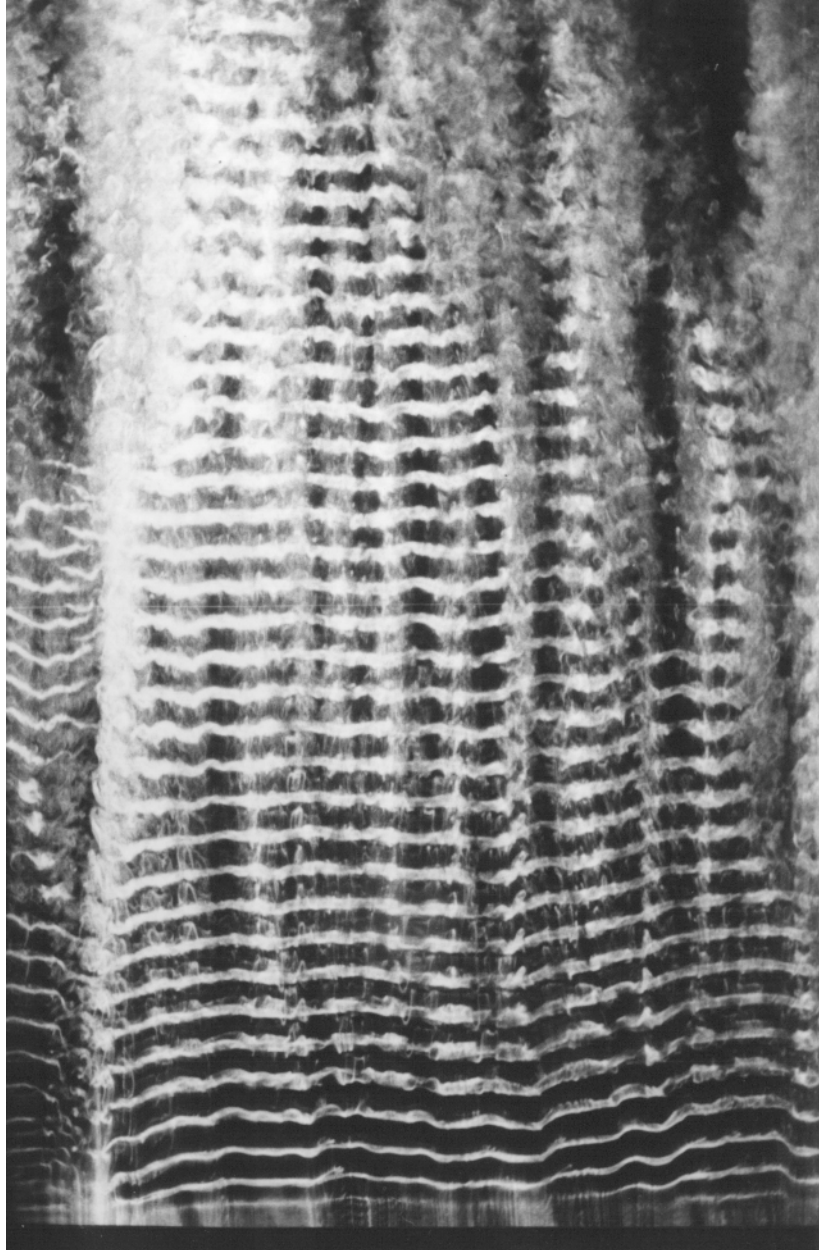




Image ID : PLATE-12  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Three-dimensional character of Karman vortex street past a flat plate  
with angle of incidence is  $0^\circ$ .  
Notes : Wind-tunnel experiment. Smoke wire method.  
The length of the flat plate is 1m. Wind velocity is 2m/s.  
Reynolds number based on the length of the flat plate is  $1.4 \sim 10^5$

Author : S. Taneda  
Published in : 1988  
Copyright : S. Taneda  
Reproduced from: S.Taneda: Fluid Dynamics Learned from Images (Asakura-Shoten, 1988)

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline pattern  
Shape features : Flat plate, Spiral, Periodicity

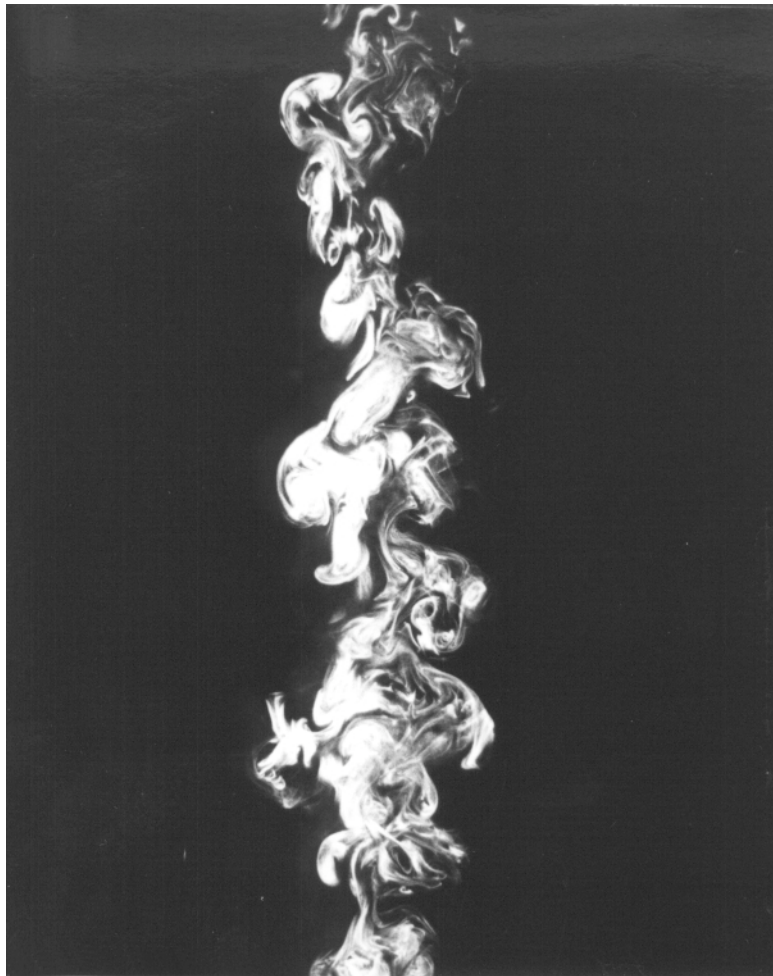


Image ID : PLATE-13  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Cross section of the flow past a flat plate with angle of incidence is  $0^\circ$ .  
Notes : Wind-tunnel experiment. Smoke wire method.  
The length of the flat plate is 50cm. Wind velocity is 1m/s.  
Reynolds number based on the length of the flat plate is  $3.5 \sim 10^4$ .  
IEA downstream of the rear edge of the flat plate.

Author : S. Taneda  
Published in : 1988  
Copyright : S. Taneda  
Reproduced from: S.Taneda: Fluid Dynamics Learned from Images (Asakura-Shoten, 1988)

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline pattern  
Shape features : Flat plate, Spiral, Randomness

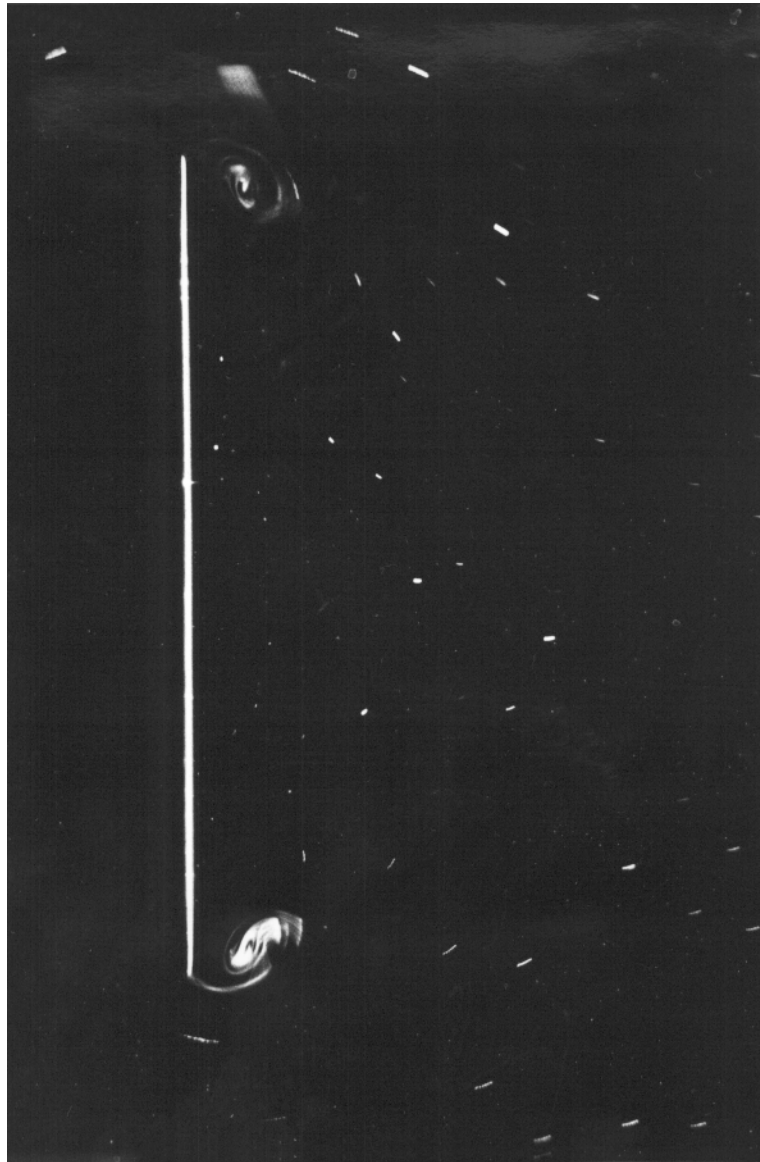


Image ID : PLATE-14  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Streakline of a flat plate with impulsive start ( $x/d=0.08$ )  
Notes : Static watertank experiment.  
Streakline pattern visualized by the electrolytic precipitation method.  
Angle of incidence of the flat plate is  $90^\circ$ . The width of the flat plate  $d = 10\text{cm}$ .  
 $R = 88$ .  $x$  is the distance of the flat plate from the point of the start.

Author : S.Taneda & H.Honji  
Published in : 1971  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda & H.Honji : J. Phys. Soc. Jpn, Vol.30, No.1 (1971) 262.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Spiral

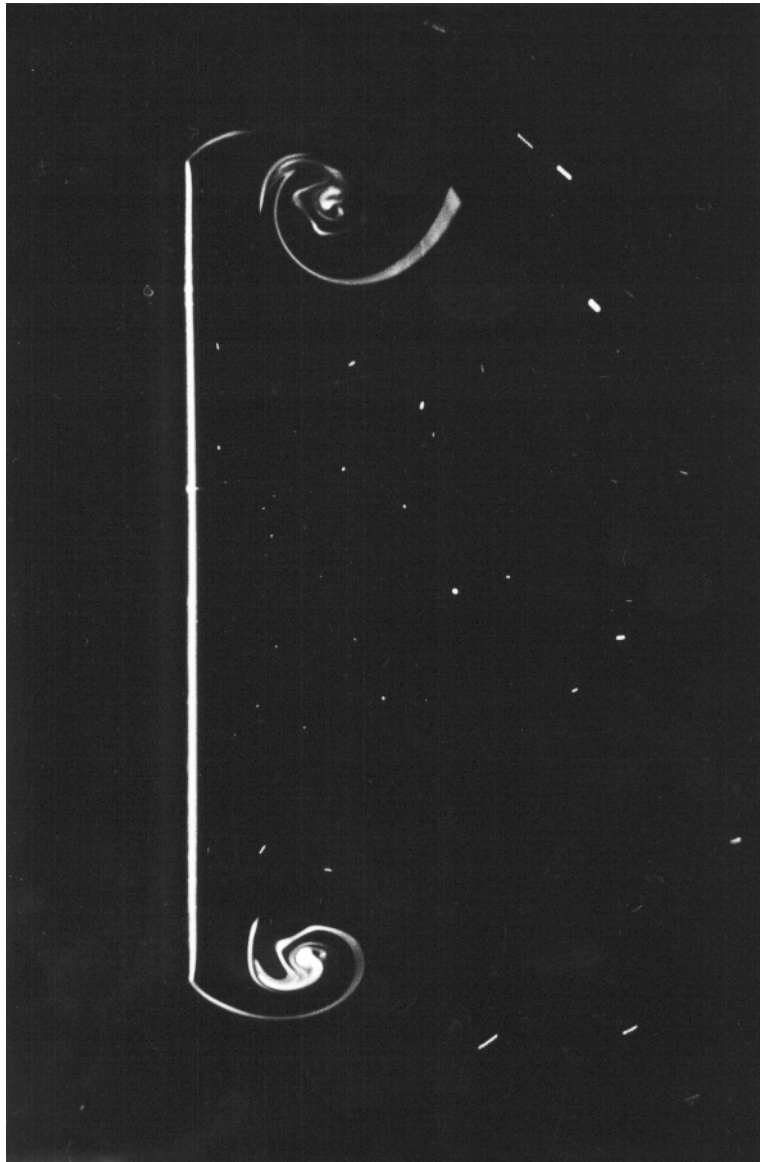


Image ID : PLATE-15  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Streakline of a flat plate with impulsive start ( $x/d=0.26$ )  
Notes : Static watertank experiment.  
Streakline pattern visualized by the electrolytic precipitation method.  
Angle of incidence of the flat plate is  $90^\circ$ . The width of the flat plate  $d = 10\text{cm}$ .  
 $R = 88$ .  $x$  is the distance of the flat plate from the point of the start.

Author : S.Taneda & H.Honji  
Published in : 1971  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda & H.Honji : J. Phys. Soc. Jpn, Vol.30, No.1 (1971) 262.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Spiral

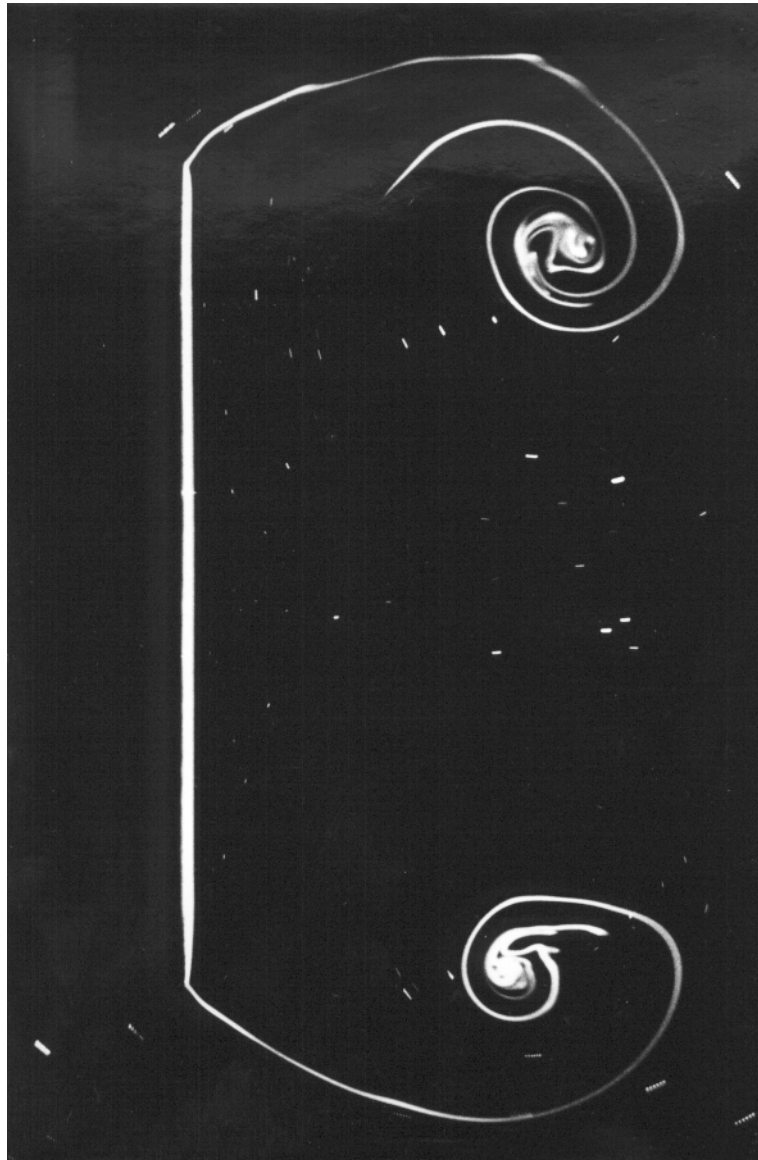




Image ID : PLATE-16  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Streakline of a flat plate with impulsive start ( $x/d=0.93$ )  
Notes : Static watertank experiment.  
Streakline pattern visualized by the electrolytic precipitation method.  
Angle of incidence of the flat plate is  $90^\circ$ . The width of the flat plate  $d = 10\text{cm}$ .  
 $R = 88$ .  $x$  is the distance of the flat plate from the point of the start.

Author : S.Taneda & H.Honji  
Published in : 1971  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda & H.Honji : J. Phys. Soc. Jpn, Vol.30, No.1 (1971) 262.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Spiral

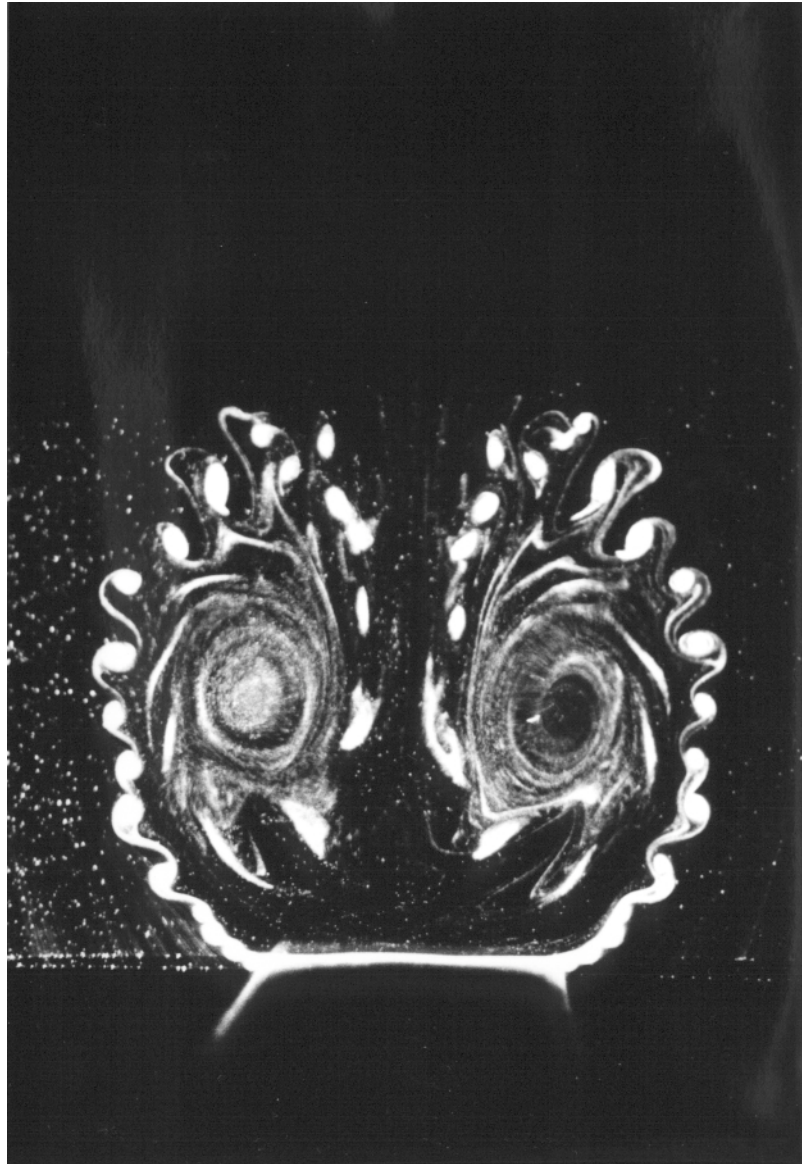


Image ID : PLATE-17  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Unstable wave of the separated shear layer from a flat plate with impulsive start ( $x/d=0.93$ )  
Notes : Static watertank experiment.  
Streakline pattern visualized by hydrogen bubbles.  
Angle of incidence of the flat plate is  $90^\circ$ . The width of the flat plate  $d = 10\text{cm}$ .  
 $R = 3860$ . The distance of the flat plate from the point of the start.  $x = 3.8d$ .

Author : S. Taneda  
Published in : 1988  
Copyright : S. Taneda  
Reproduced from: S.Taneda: Fluid Dynamics Learned from Images (Asakura-Shoten, 1988)

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Spiral

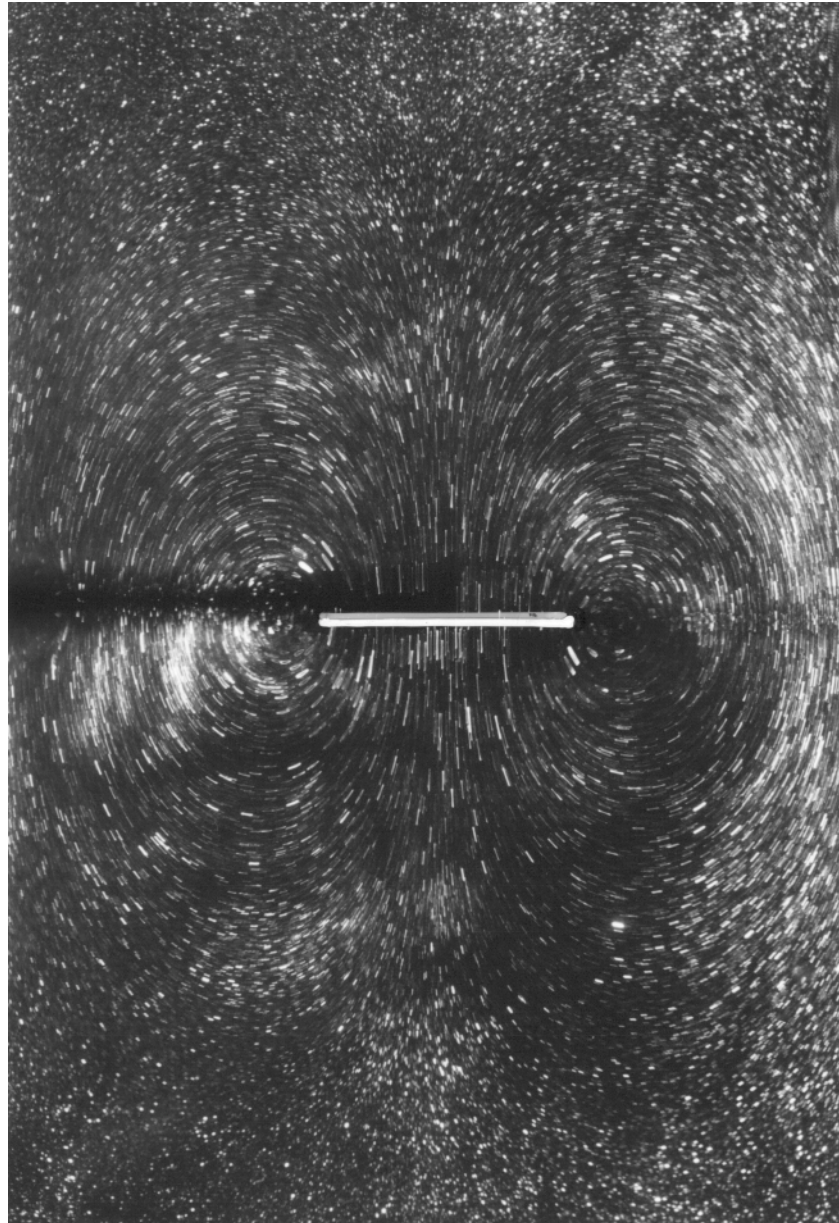


Image ID : PLATE-18  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Streamline pattern around a flat plate with translational vibration (short exposure)  
Notes : Static glycerine-tank.  
Streamline pattern visualized by suspending aluminum powder.  
The width of the flat plate is 5cm. The fequency is 0.1Hz.  
The amplitude is 3mm. Time of exposure is 50 seconds with continuous lighting.  
Two spirals can be observed.

Author : S. Taneda  
Published in : 1988  
Copyright : S. Taneda  
Reproduced from: S.Taneda: Fluid Dynamics Learned from Images (Asakura-Shoten, 1988)

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Spiral

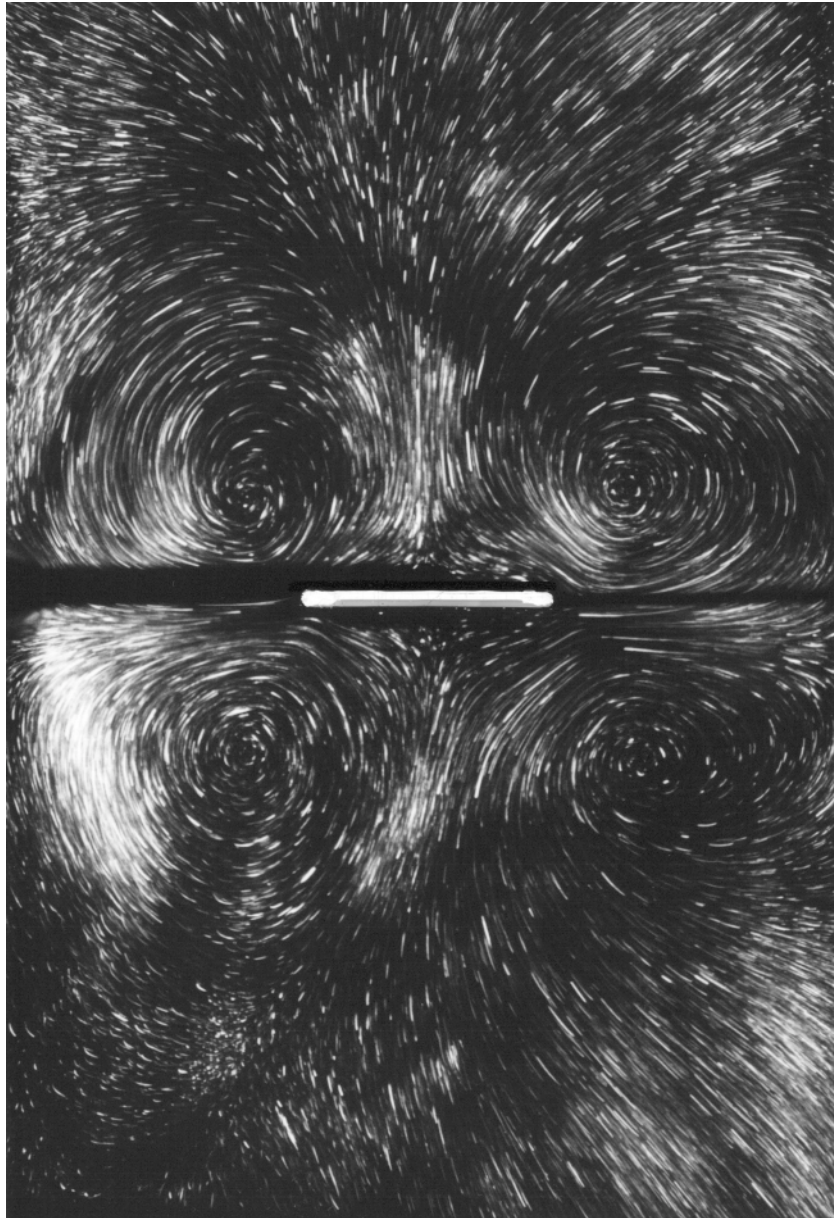


Image ID : PLATE-19  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Streamline pattern around a flat plate with translational vibration (long exposure)  
Notes : Static glycerine-tank.  
Streamline pattern visualized by suspending aluminum powder.  
The width of the flat plate is 5cm. The frequency is 0.1Hz.  
The amplitude is 3mm. Time of exposure is 1800 seconds with a strobo light.  
Four spirals can be observed.

Author : S. Taneda  
Published in : 1988  
Copyright : S. Taneda  
Reproduced from: S.Taneda: Fluid Dynamics Learned from Images (Asakura-Shoten, 1988)

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Spiral





Image ID : PLATE-20  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : A flat plate in rotational vibration around the leading edge (streamline pattern)  
Notes : Static watertank experiment.  
Streamline pattern visualized by suspending aluminum powder.  
The length of the flat plate  $l = 5$  cm. The velocity  $U = 1$  cm/s.  $R = 500$ .  
The average angle of incidence is  $0^\circ$ . The amplitude is  $30^\circ$ . The frequency is  $0.1$  Hz.

Author : S. Taneda  
Published in : 1977  
Copyright : Pergamon Press  
Reproduced from: S.Taneda: Prog. Aerospace Sci. Vol.17, No.4 (1977) 287

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Spiral



Image ID : PLATE-21  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : A flat plate in rotational vibration around the leading edge (streakline pattern)  
Notes : Static watertank experiment.  
Streakline pattern visualized by the electrolytic precipitation method.  
The length of the flat plate  $l = 5\text{cm}$ . The velocity  $U = 1\text{cm/s}$ .  $R = 500$ .  
The average angle of incidence is  $0^\circ$ . The amplitude is  $30\text{mm}$ . The frequency is  $0.1\text{Hz}$ .

Author : S. Taneda  
Published in : 1977  
Copyright : Pergamon Press  
Reproduced from: S.Taneda: Prog. Aerospace Sci. Vol.17, No.4 (1977) 287.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Spiral



Image ID : PLATE-22  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Streakline around a flat wing with impulsive deceleration  
Notes : Static watertank experiment.  
Streakline pattern visualized by the electrolytic precipitation method.  
The angle of incidence of the wing is  $10^\circ$ .  
R(before deceleration) = 2000. R(after deceleration) = 1000.  
At the distance 0.95 times of the chord length from the point of deceleration.

Author : S. Taneda  
Published in : 1977  
Copyright : Pergamon Press  
Reproduced from: S.Taneda: Prog. Aerospace Sci. Vol.17, No.4 (1977) 287.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streamline  
Shape features : Flat plate, Spiral

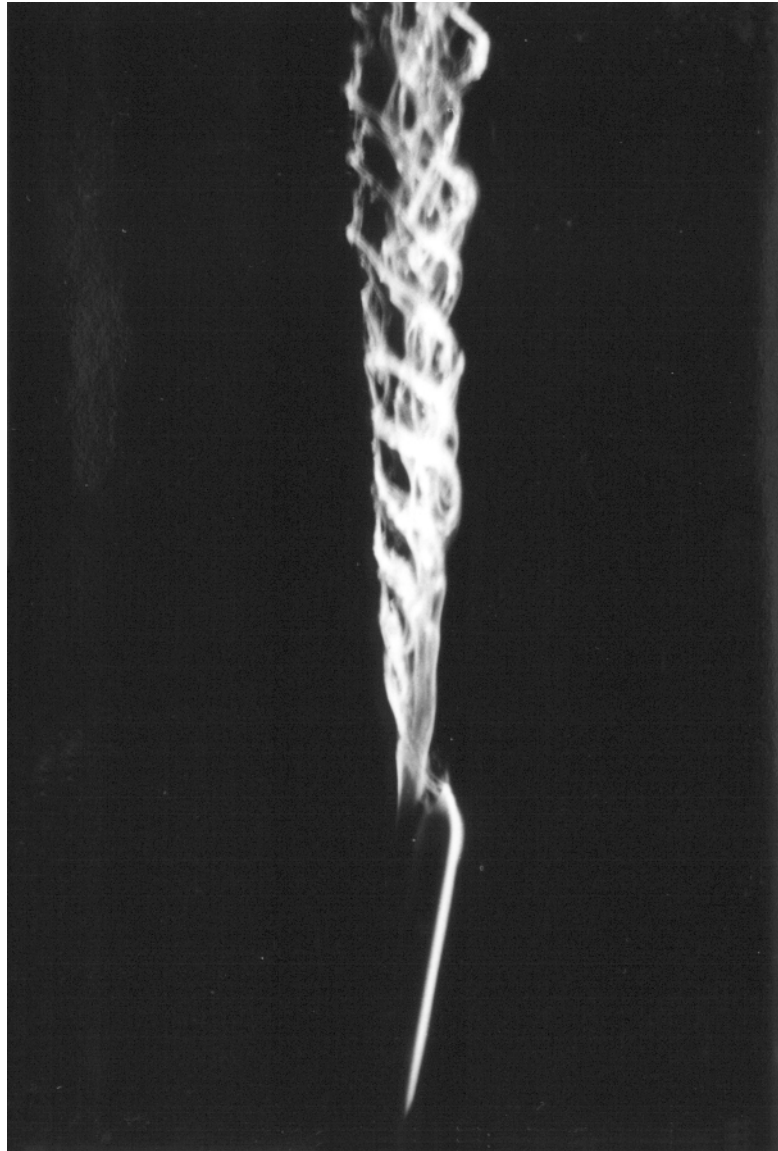


Image ID : PLATE-23  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Trailing vortex past a flat wing  
Notes : Static watertank experiment.  
Streakline pattern visualized by putting condensed milk,  
The chord length of the wing is 10cm.  $R = 3070$   
The angle of incidence of wing is  $8^\circ$ .  
The longitudinal vortices with spiral fringe are produced at the rear edge of the wing.

Author : S. Taneda  
Published in : 1988  
Copyright : S. Taneda  
Reproduced from: S.Taneda: Fluid Dynamics Learned from Images (Asakura-Shoten, 1988)

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Spiral, Helix

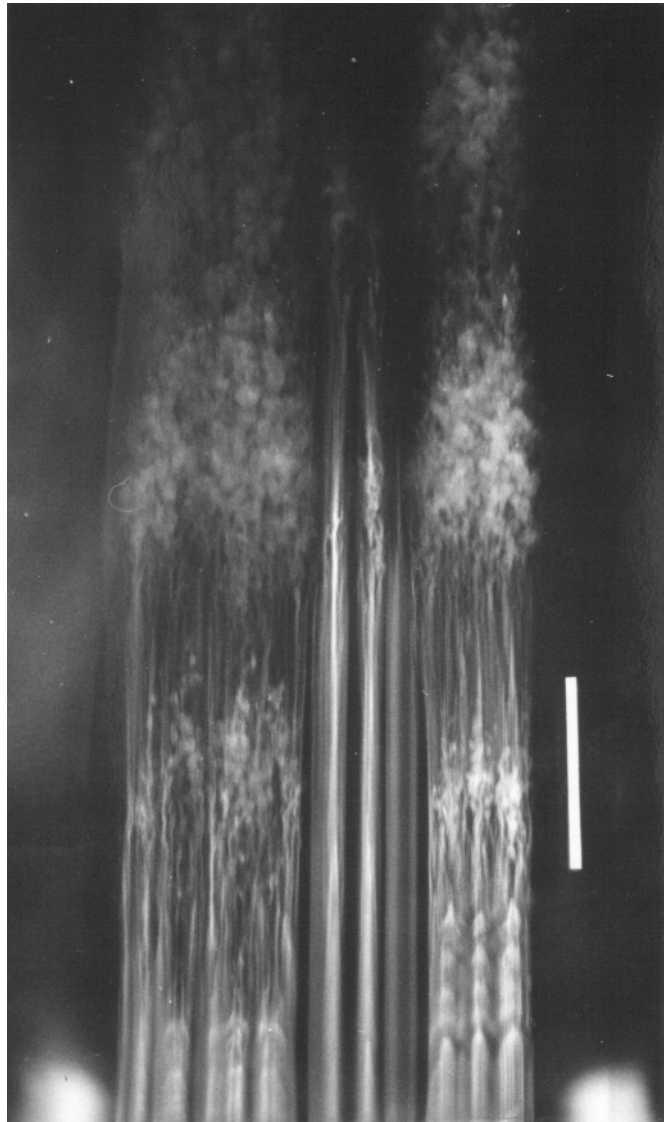




Image ID : PLATE-24  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Natural transition from laminar flow to turbulent flow in the boundary layer of a flat plate  
boundary layer  
Notes : Wind-tunnel experiment. The flat plate is 128cm wide , and 310cm long.  
Wing velocity is 3m/s.  
Visualized by smoke liquid paraffin injected at the leading edge of the flat plate.

Author : S. Taneda  
Published in :  
Copyright :  
Reproduced from: unpublished

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Irregularity

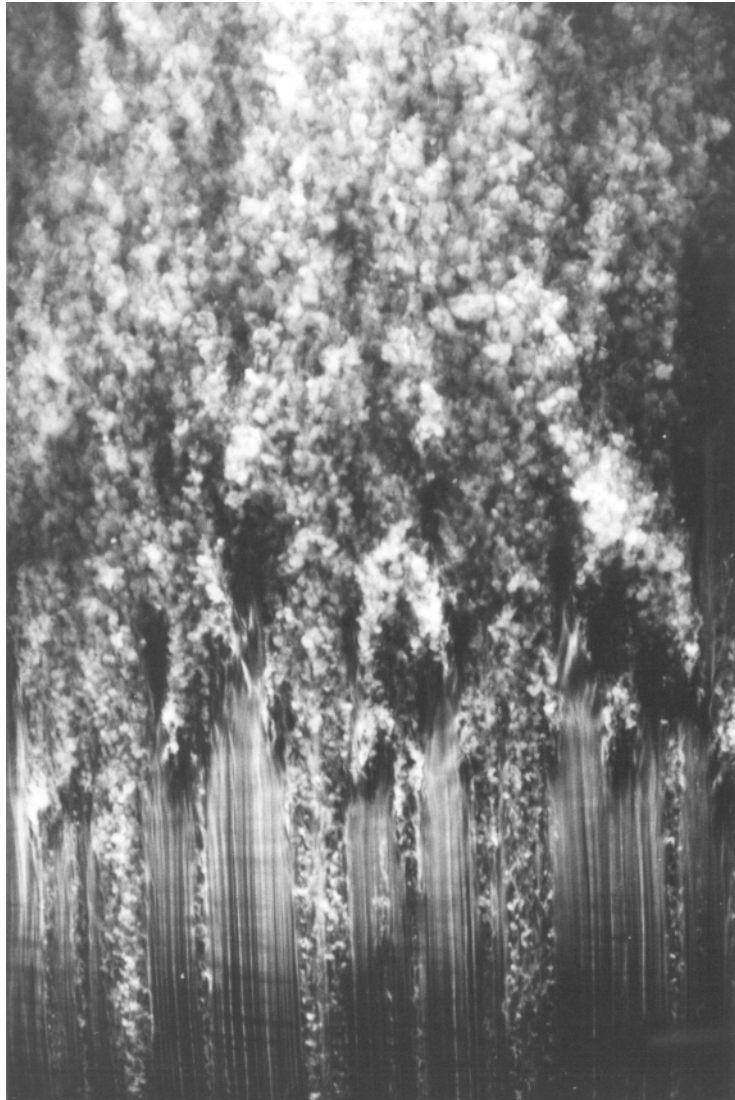


Image ID : PLATE-25  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Natural translation from laminar flow to turbulent flow in the boundary layer of a flat plate  
boundary layer  
Notes : Wind-tunnel experiment. The flat plate is 1.2cm wide , and 2.4cm long.  
Wing velocity is 3.3cm/s.  
Visualized by smoke of titanium tetrachloride put at the leading edge of the flat plate.

Author : S. Taneda  
Published in : 1988  
Copyright : S. Taneda  
Reproduced from: S.Taneda: Fluid Dynamics Learned from Images (Asakura-Shoten, 1988)

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Irregularity

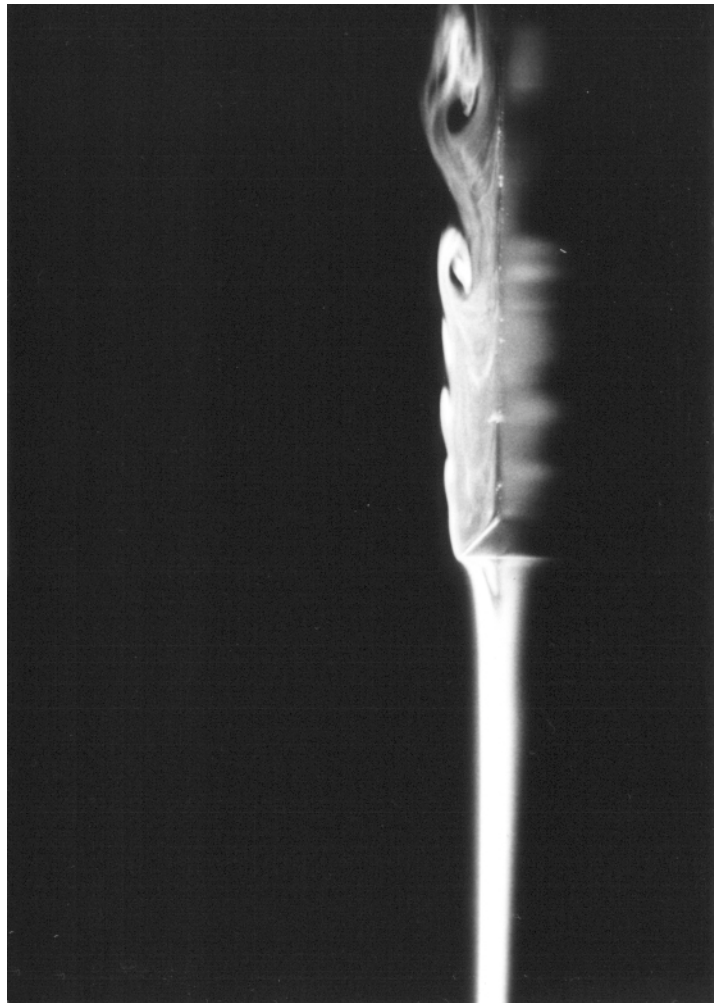


Image ID : PLATE-26  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Translation of the boundary layer behind a fence (A side view)  
Notes : Wind-tunnel experiment. The flat plate is 1.2cm wide , and 2.4cm long.  
The height of the two dimensional fence is 1cm.  
Streakline pattern is visualized by smoke of liquid paraffin.  
Wind velocity is 0.5cm/s.

Author : S. Taneda  
Published in :  
Copyright :  
Reproduced from: unpublished

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Vortex street

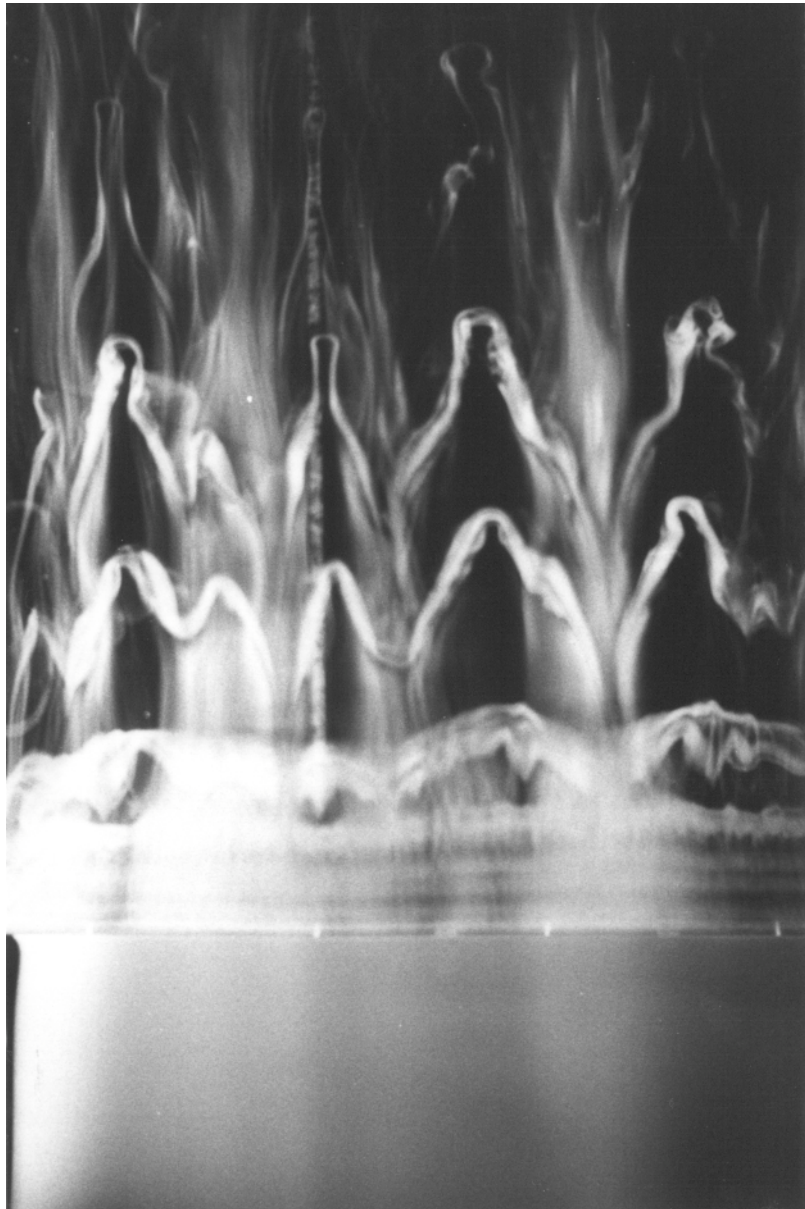


Image ID : PLATE-27  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Translation of the flat plate's boundary layer behind the fence (plane view)  
Notes : Wind-tunnel experiment. The flat plate is 1.2cm wide , and 2.4cm long.  
The height of the two dimensional fence is 1cm.  
Streakline pattern is visualized by smoke of liquid paraffin.  
Wind velocity is 0.5cm/s.

Author : S. Taneda  
Published in : 1981  
Copyright : Physical Society of Japan  
Reproduced from: S.Taneda J. Phys. Soc. Jpn, Vol.50, No.4 (1981) 1398.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Vortex street, Irregularity





Image ID : PLATE-28  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Process of development of turbulent boundary layer behind a fence  
Notes : Wind-tunnel experiment. The flat plate is 1.2cm wide, and 4.8cm long.  
The height of the fence is 1cm. Wind velocity is 1cm/s.  
 $R^* = 700$  at the center of the picture.  
Liquid paraffin smoke method.

Author : S. Taneda  
Published in : 1983  
Copyright : Physical Society of Japan  
Reproduced from: S. Taneda: J. Phys. Soc. Jpn, Vol.52, No.12 (1983) 4138.

Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Regularity, Irregularity

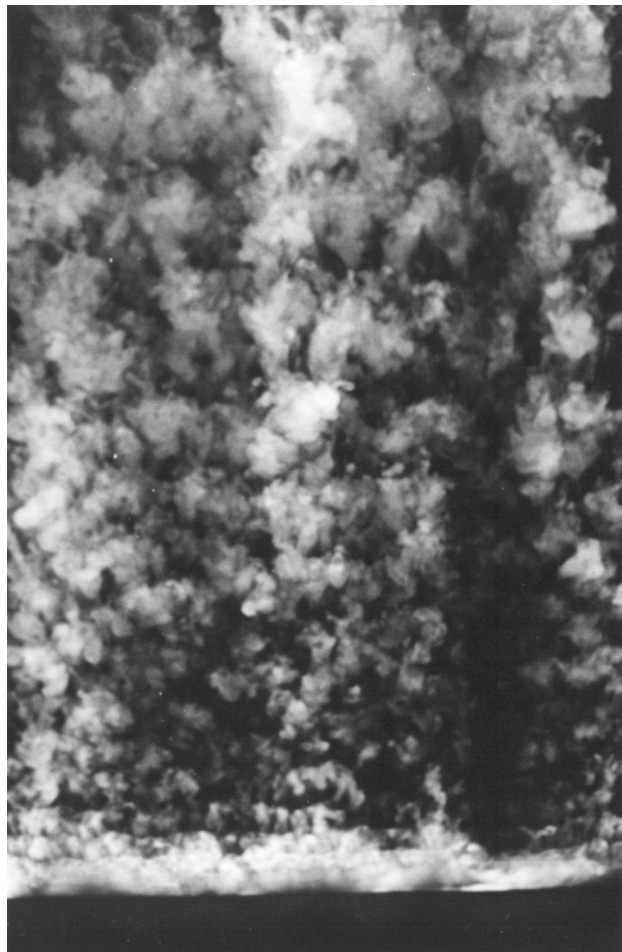


Image ID : PLATE-29  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Large-scale coherent structure of turbulent boundary layer behind a fence  
Notes : Wind-tunnel experiment. The flat plate is 1.2cm wide , and 4.8cm long.  
The height of the fence is 1cm. Wind velocity is 1cm/s.  
R\* = 800 at the center of the picture. Titanium tetrachloride smoke method.

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Published in : 1983  
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Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Regularity, Irregularity

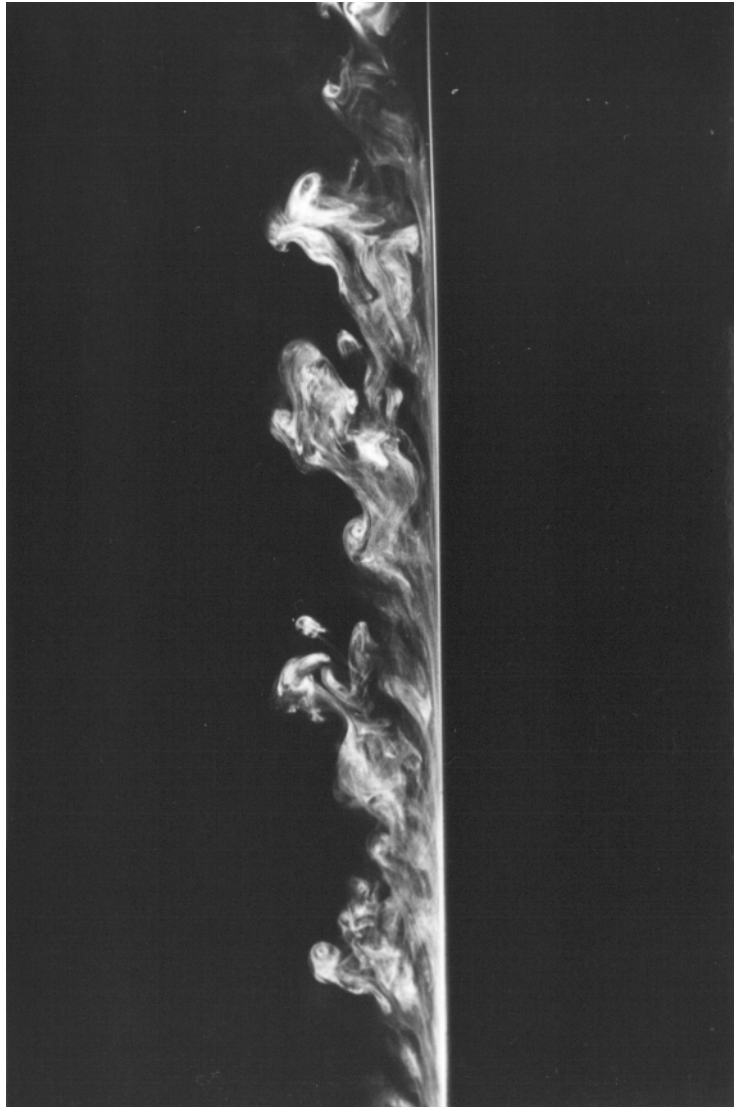


Image ID : PLATE-30  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Large-scale coherent structure of turbulent boundary layer(longitudinal cross section)  
Notes : Wind-tunnel experiment. The flat plate is 1.2cm wide , and 4.8cm long.  
Downstream 1cm from the two dimensional fence whose height is 1cm. .  
 $R^* = 400$ . Titanium tetrachloride smoke method.

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Published in : 1981  
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Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Wave, Regularity

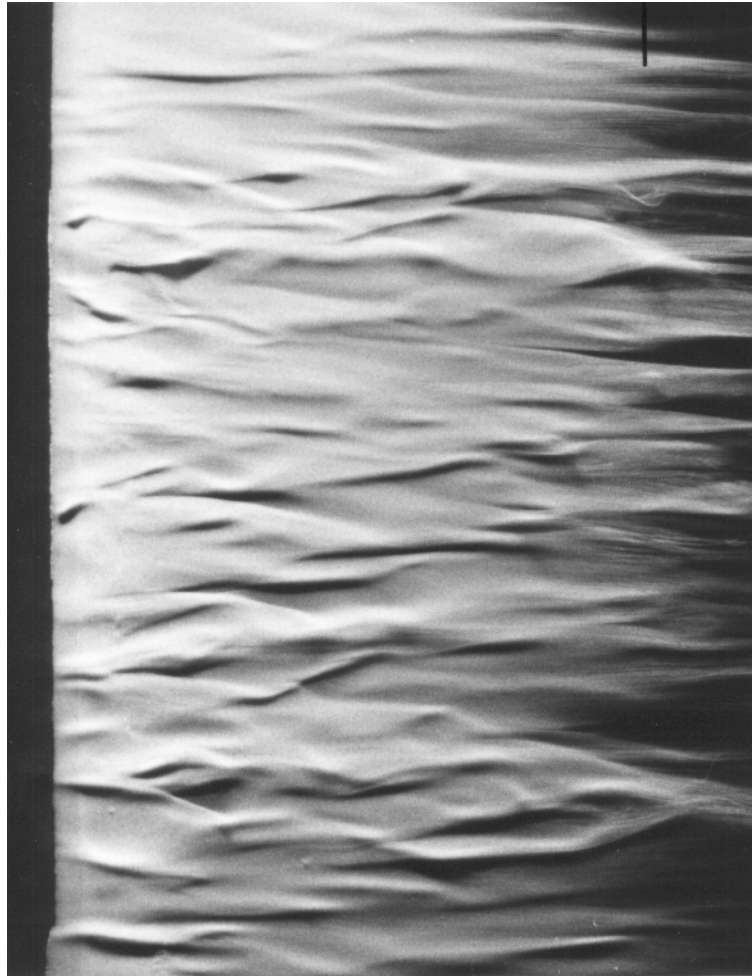


Image ID : PLATE-31  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Longitudinal streaks in turbulent boundary layer( $R^* = 900$ )  
Notes : Wind-tunnel experiment. The flat plate is 1.2m wide , and 4.8m long.  $\delta^* = 2.7E\text{\AA}$ .  
Visualized by smoke of titanium tetrachloride put on the wall near the left end of the picture.

Author : S. Taneda  
Published in : 1988  
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Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Longitudinal streak

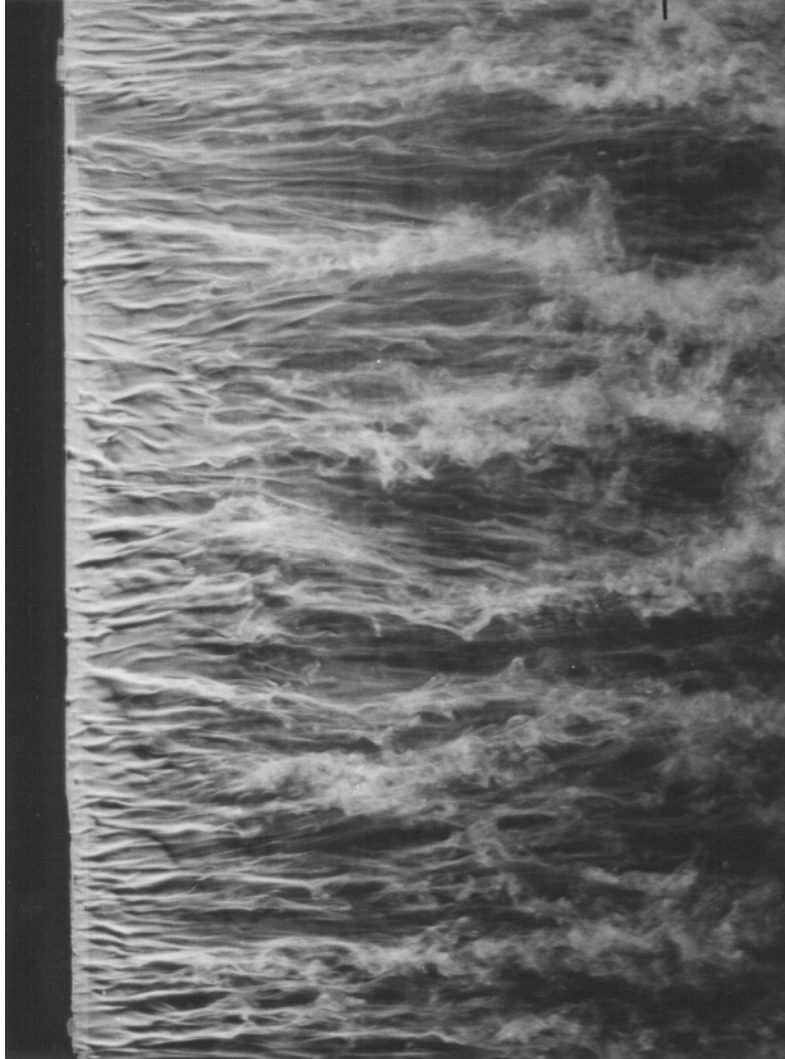




Image ID : PLATE-32  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Longitudinal streaks in turbulent boundary ( $R^* = 3600$ )  
Notes : Wind-tunnel experiment. The flat plate is 1.2m wide , and 4.8m long.  $\delta^* = 2.7$ cm.  
Visualized by smoke of titanium tetrachloride put on the wall near the left end of the picture.

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Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Longitudinal streak



Image ID : PLATE-33  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Three dimensional large-scale coherent structure of the turbulent flow boundary layer  
Notes : Wind-tunnel experiment. The flat plate is 1.2m wide , and 4.8m long.  
Wind velocity is 2m/s.  
The boundary layer in the transverse cross section is visualized by smoke of titanium tetrachloride.  $R^* = 4600$ .

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Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Longitudinal streak



Image ID : PLATE-34  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Stability of turbulent boundary layer (disturbance frequency 2Hz)  
Notes : Wind-tunnel experiment. The flat plate is 1.2m wide , and 4.8m long.  
Wind velocity is 2m/s.  $R^* = 5000$  near the center of the picture.  
The disturbance is two dimensional. Visualized by the smoke wire method.

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Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Wave, Regularity

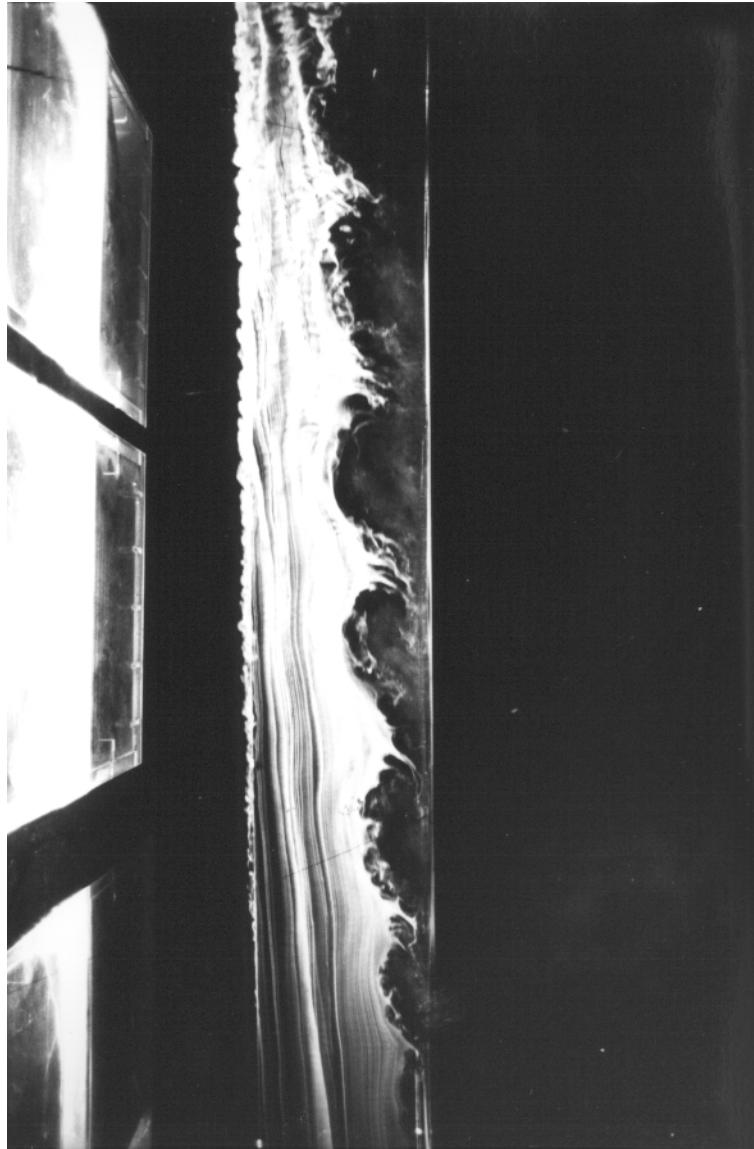


Image ID : PLATE-35  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Stability of turbulent boundary layer (disturbance frequency 4Hz)  
Notes : Wind-tunnel experiment. The flat plate is 1.2m wide , and 4.8m long.  
Wind velocity is 2m/s.  $R^* = 5000$  near the center of the picture.  
The disturbance is two dimensional. Visualized by the smoke wire method.

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Published in : 1981  
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Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Wave, Regularity

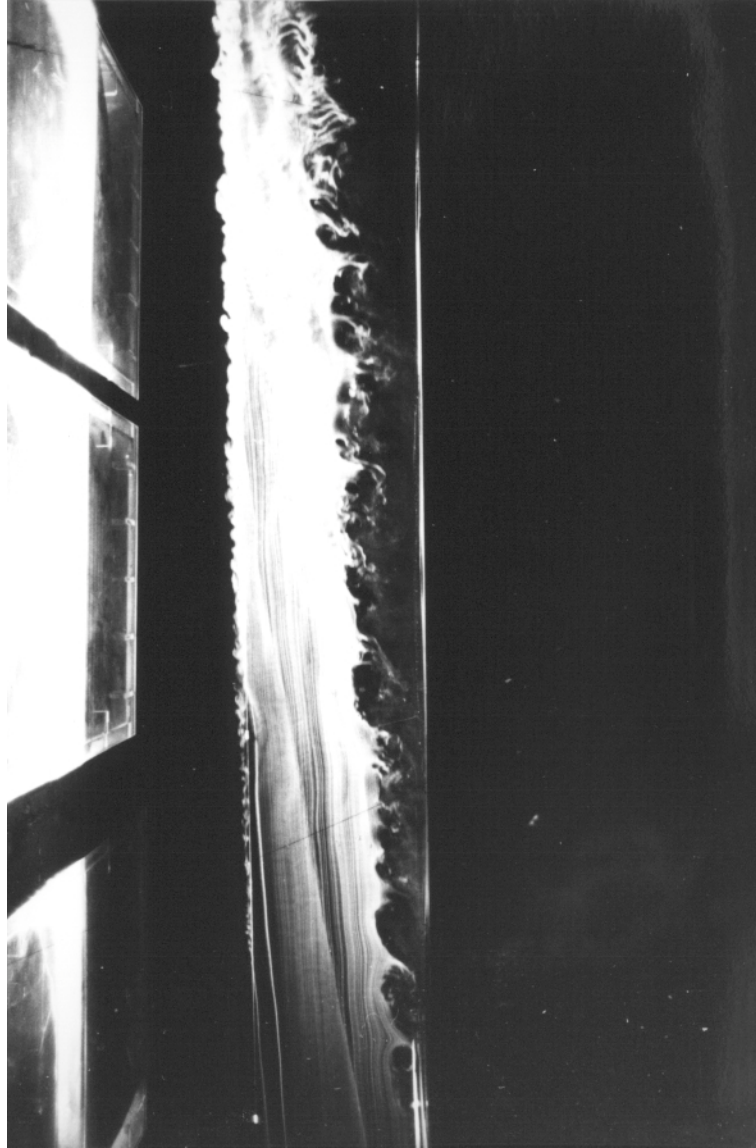




Image ID : PLATE-36  
Data Base Name : FLOW-VIS  
Input by : S. Taneda  
Input on y/m/d : 1998. 11. 25  
Image Title : Stability of turbulent boundary layer (disturbance frequency 8Hz)  
Notes : Wind-tunnel experiment. The flat plate is 1.2m wide , and 4.8m long.  
Wind velocity is 2m/s.  $R^* = 5000$  near the center of the picture.  
The disturbance is two dimensional. Visualized by the smoke wire method.

Author : S. Taneda  
Published in : 1981  
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Research Field : Fluid dynamics  
Expressed as : Tracer photograph, Streakline  
Shape features : Flat plate, Wave