FLOW PAST A CYLINDER

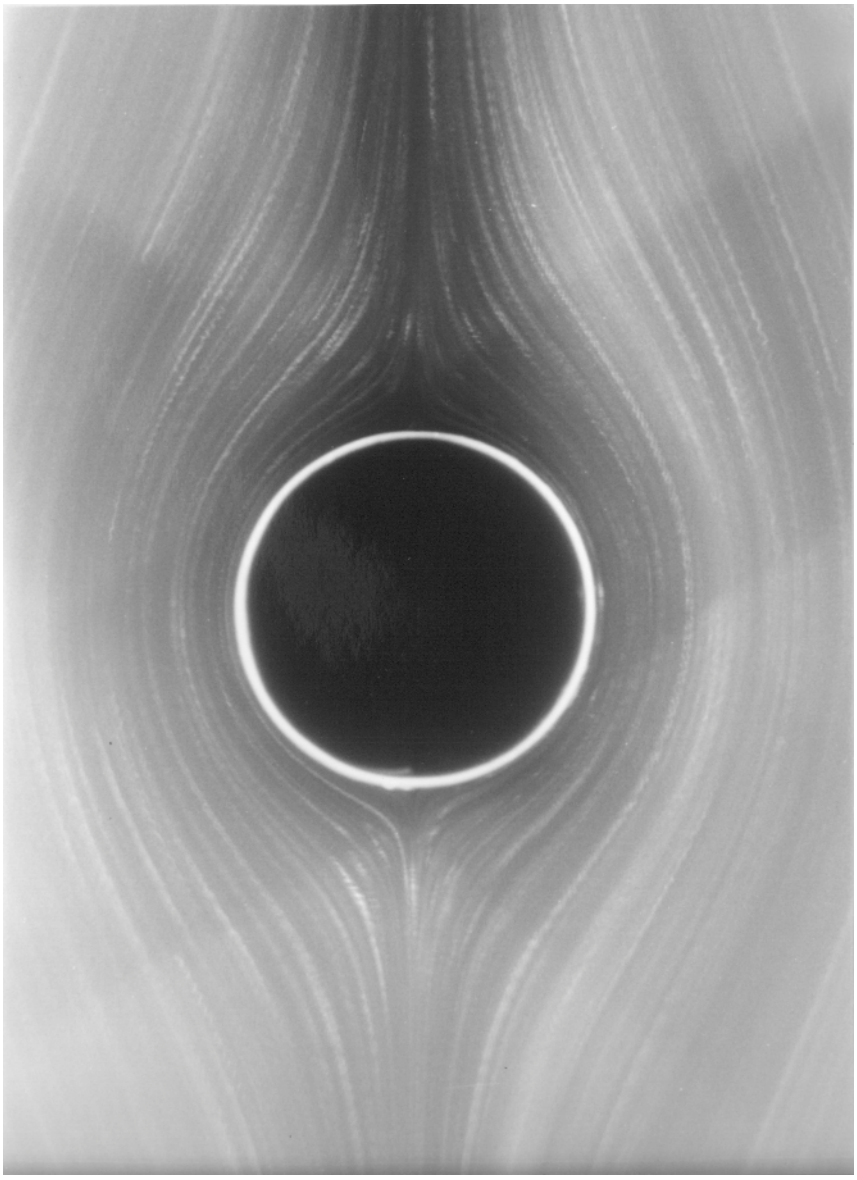

Image ID : CYL-01
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Steady flow past a cylinder (R=0.16)
Notes : Glycerine aqueous solution.
Streamline pattern visualized by suspending aluminum powder.
Camera was fixed to the cylinder.
The streamline pattern does not change even if the flow direction is reversed.

Author : S. Taneda
Published in : 1982
Copyright : S. Taneda
Reproduced from: An Album of Fluid Motion , ed. M. Van Dyke (Parabolic Press, 1982)

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

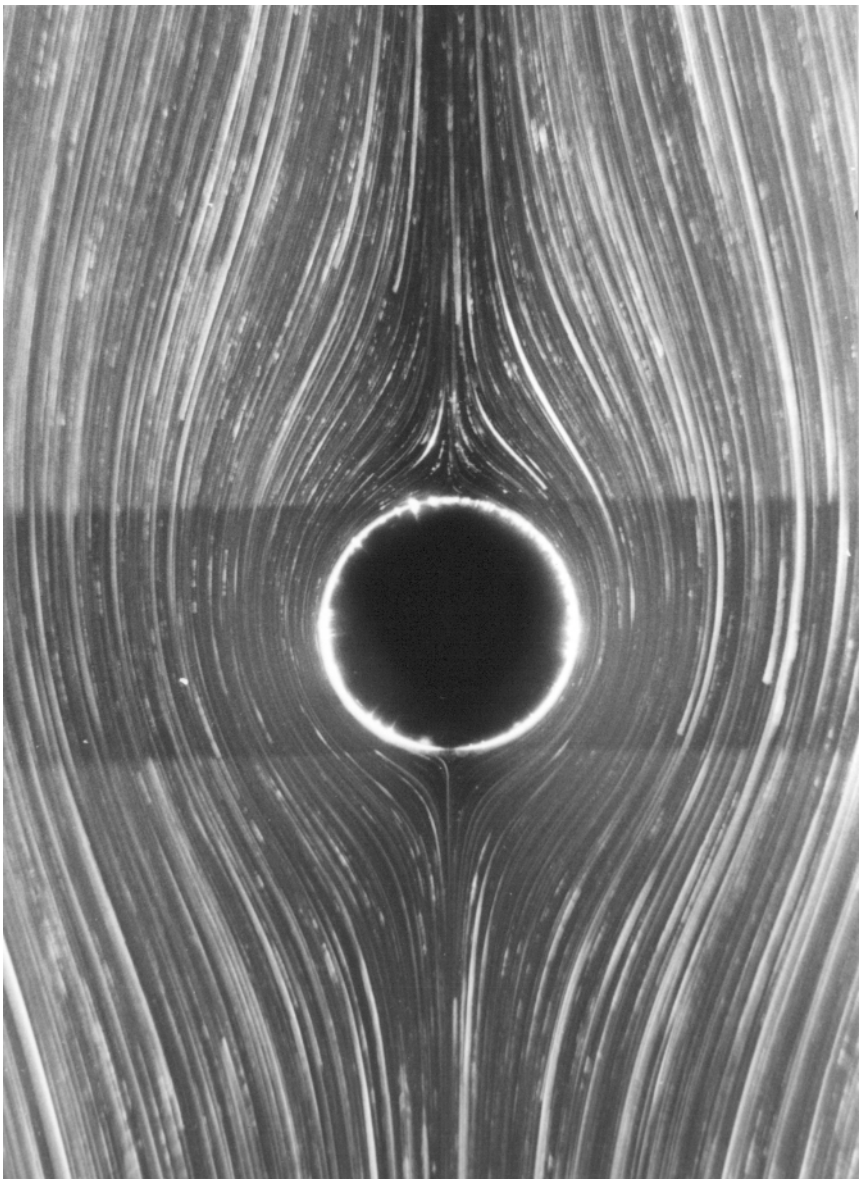

Image ID : CYL-02
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Steady flow past a cylinder (R=1.10)
Notes : Glycerine aqueous solution.
Streamline pattern visualized by suspending aluminum powder.
Camera was fixed to the cylinder.

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 : Cylinder, Fore-and-aft asymmetry

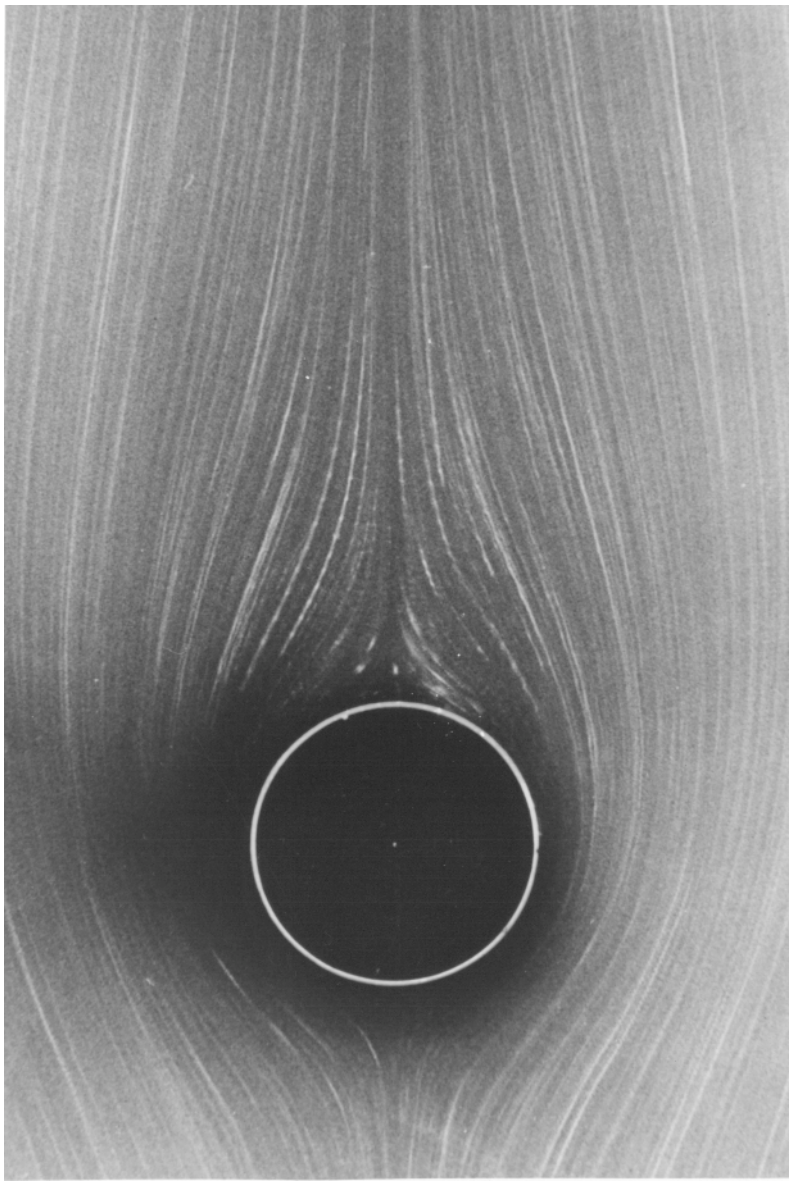

Image ID : CYL-03
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Steady flow past a cylinder (R=5.1)
Notes : Water. Streamline pattern visualized by suspending aluminum powder. Camera was fixed to the cylinder.

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Reproduced from: unpublished

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

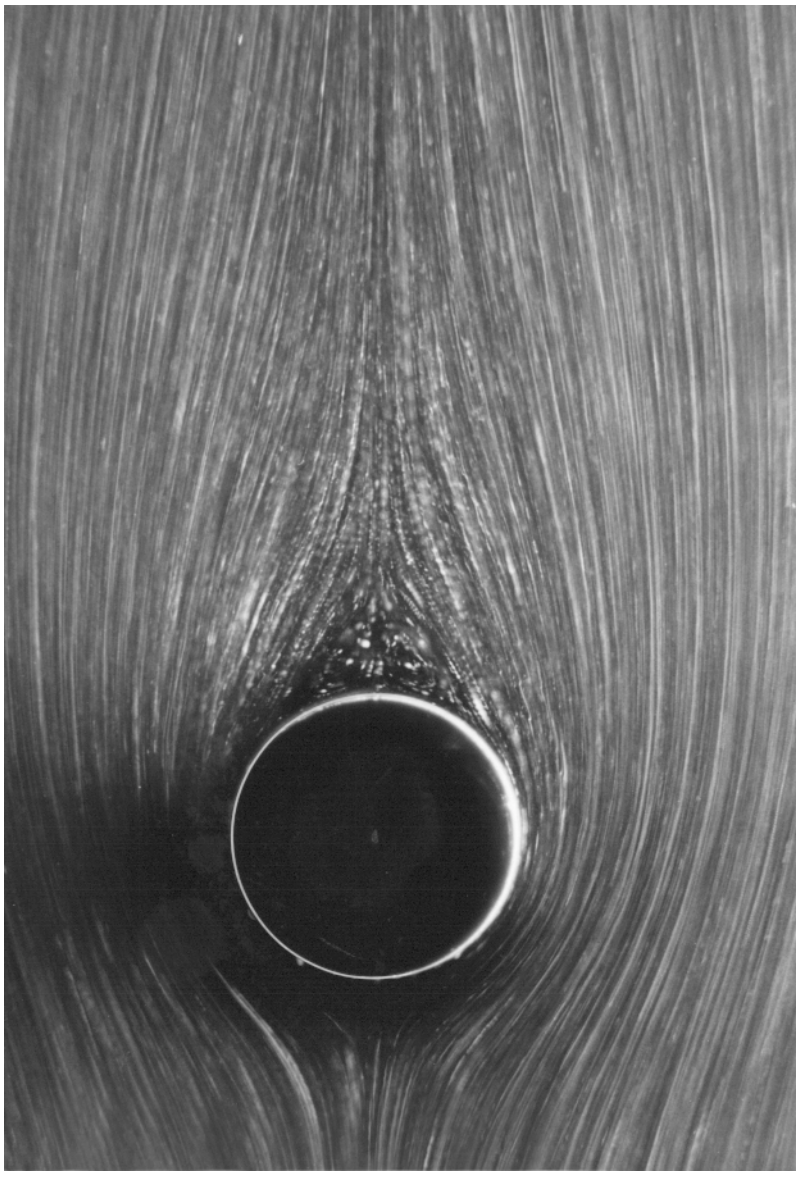

Image ID : CYL-04
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Steady flow past a cylinder (R=9.6)
Notes : Water. Streamline pattern visualized by suspending aluminum powder.
Camera was fixed to the cylinder.

Author : S. Taneda
Published in : 1982
Copyright : S. Taneda
Reproduced from: An Album of Fluid Motion, ed. M. Van Dyke (Parabolic,1982)

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streamline
Shape features : Cylinder, Separation, Spiral

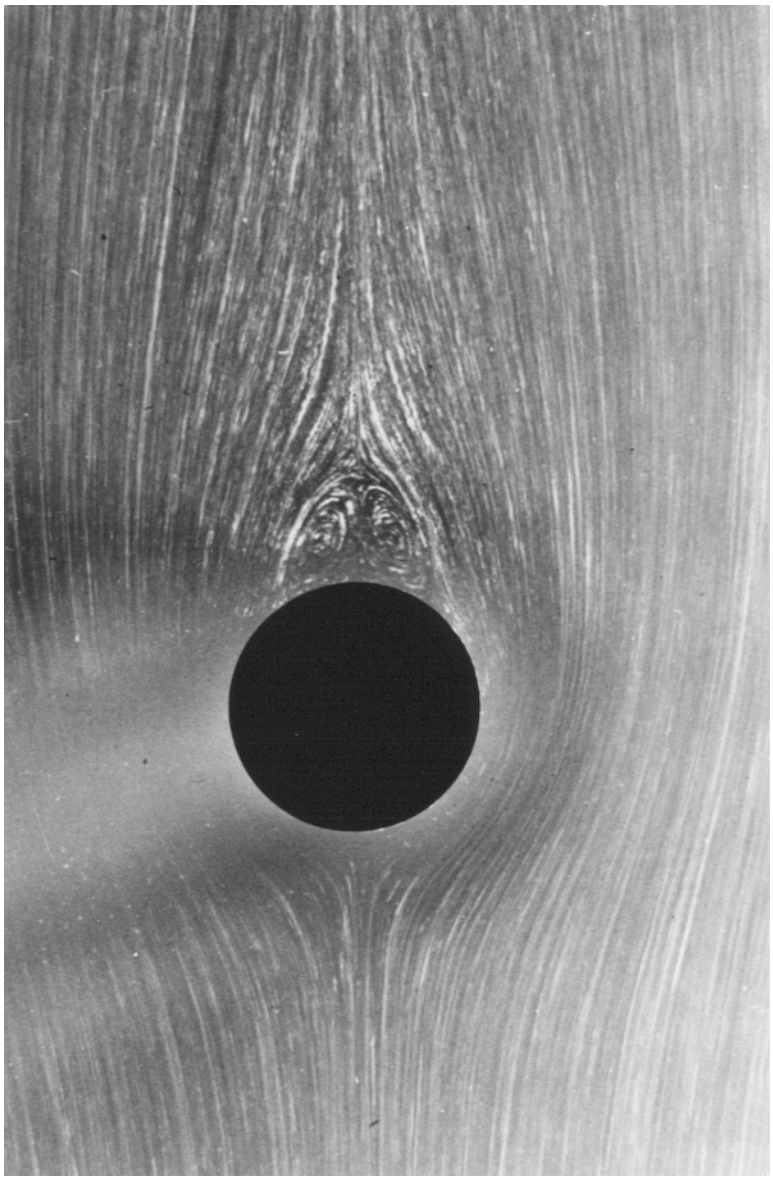

Image ID : CYL-05
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Steady flow past a cylinder (R=13.1)
Notes : Water. Streamline pattern visualized by suspending aluminum powder. Camera was fixed to the cylinder.

Author : S. Taneda
Published in : 1956
Copyright : Physical Society of Japan
Reproduced from:S.Taneda: J. Phys .Soc. Jpn, Vol.11 ,No.3 (1956) 302.

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

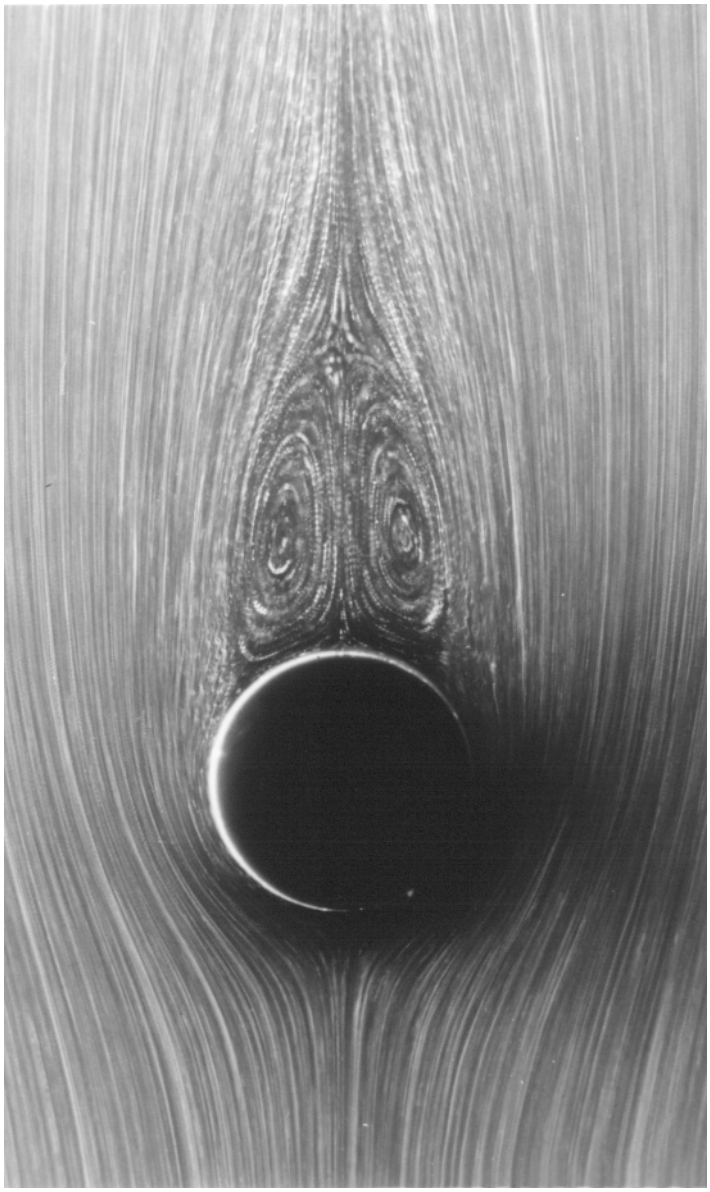

Image ID : CYL-06
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Steady flow past a cylinder (R=26)
Notes : Water. Streamline pattern visualized by suspending aluminum powder.
Camera is fixed to the cylinder.

Author : S. Taneda
Published in : 1980
Copyright : S. Taneda
Reproduced from: S. Taneda: Rep. Res. Inst. App1. Mech., Kyusyu Univ., No.89 (1980) 73.

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

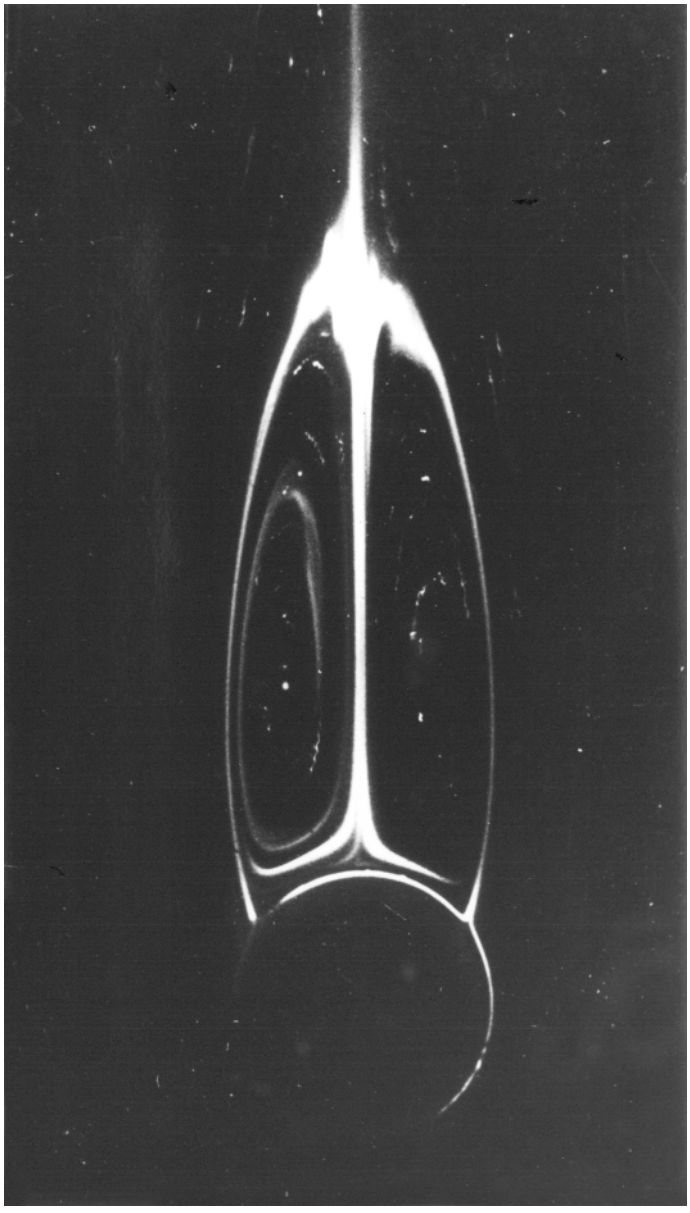

Image ID : CYL-07
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Steady flow past a cylinder (R=41)
Notes : Water. Streakline pattern visualized by putting condensed milk on the cylinder. Camera was fixed to the cylinder.

Author : S. Taneda
Published in : 1956
Copyright : Physical Society of Japan
Reproduced from: S. Taneda: J. Phys. Soc. Jpn, Vol.11, No.3 (1956) 302.

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streakline
Shape features : Cylinder, Spiral, Fore-and-aft asymmetry

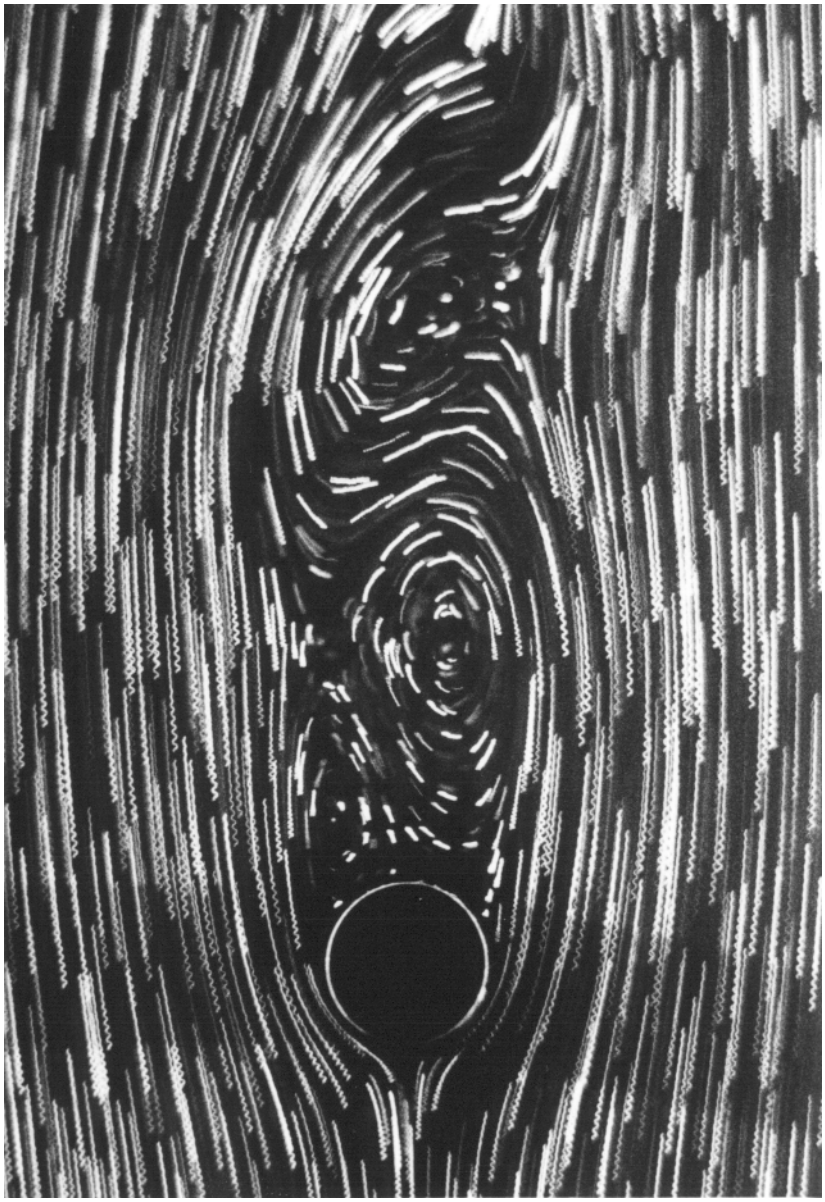

Image ID : CYL-08
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wavy flow behind a cylinder (R=136)
Notes : Water. Streamline pattern visualized by suspending polyethylene particles.
Camera was fixed to the cylinder. The wake forms Karman's vortex street.

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 : Cylinder, Spiral

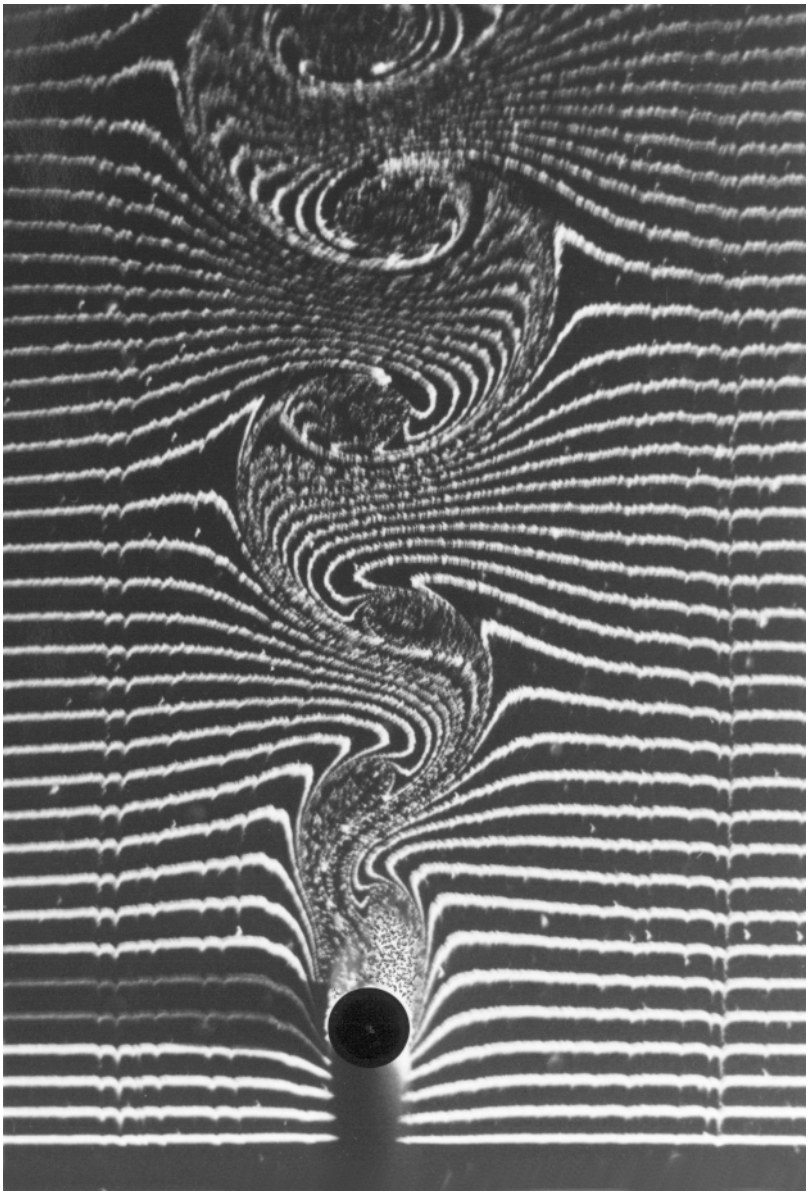

Image ID : CYL-09
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Karman vortex street behind a cylinder (R=137)
Notes : Water. Timeline pattern visualized by hydrogen bubbles.
The tungsten wire for timeline and camera were fixed to the cylinder.

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

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Timeline
Shape features : Cylinder, Spiral, Periodicity

Image ID : CYL-10
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Relation between streamline and streakline patterns in the wake of a cylinder
Notes : Water. Simultaneous visualizations of streamline pattern by suspending aluminum powder and streakline pattern by the electrolytic precipitation method. Camera was fixed to the cylinder. The wake forms Karman vortex street.

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 : Cylinder, Spiral

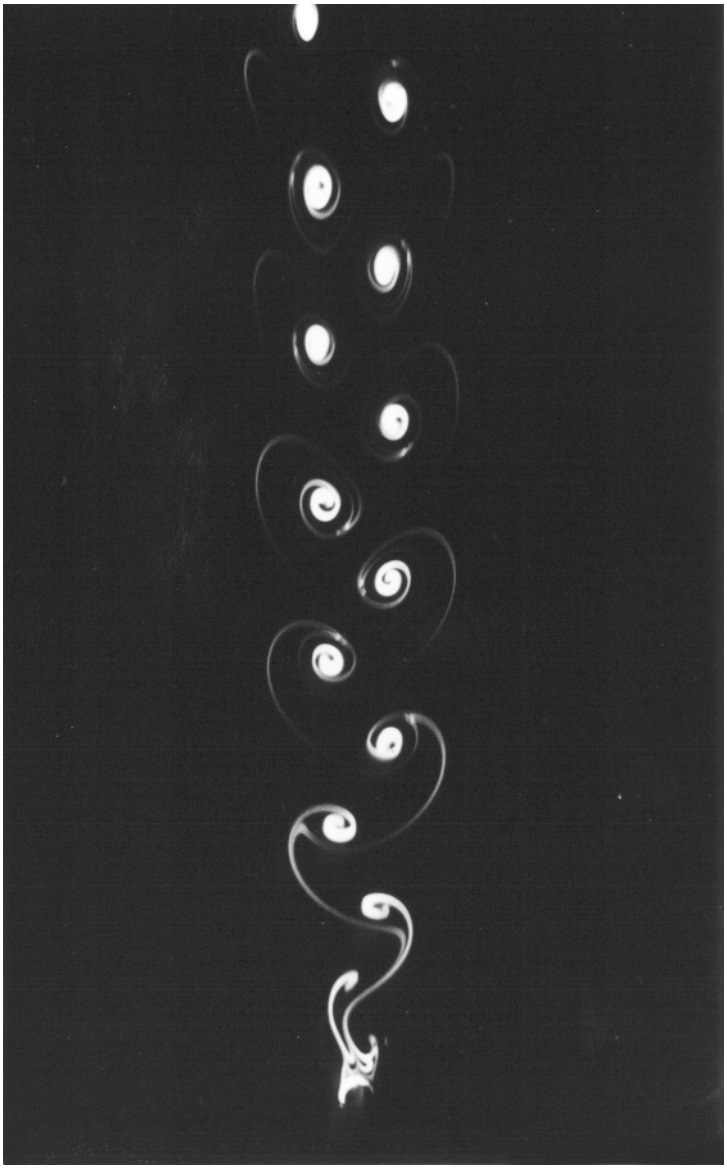

Image ID : CYL-11
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Karman vortex street behind a cylinder (R=105)
Notes : Water.
Streakline pattern visualized by the electrolytic precipitation method.
Steady state. Camera was fixed to the cylinder.

Author : S. Taneda
Published in : 1982
Copyright : S. Taneda
Reproduced from: An Album of Fluid Motion ed. M. Van Dyke (Parabolic Press,1982)

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streakline
Shape features : Cylinder, Spiral, Periodicity

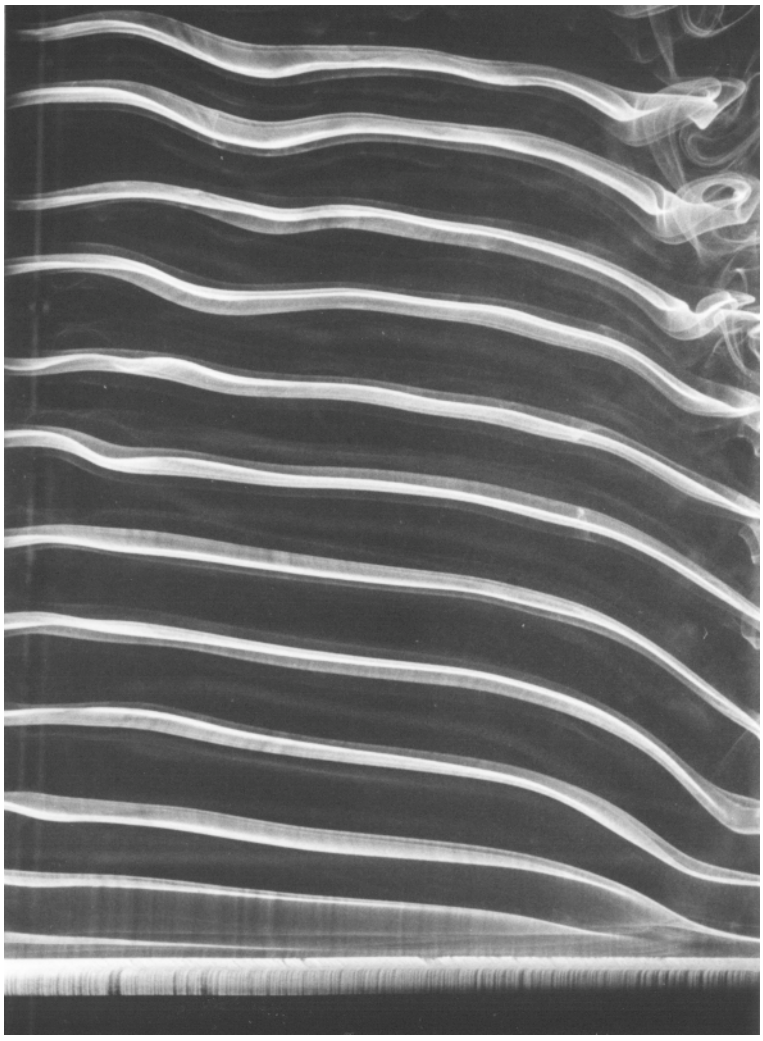

Image ID : CYL-12
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Inclinanation of Karman vortex street behind a cylinder
Notes : Water.
Unified streakline pattern visualized by the electrolytic precipitation method.
Steady state. Camera was fixed to the cylinder.

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

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streakline
Shape features : Cylinder, Spiral, Periodicity

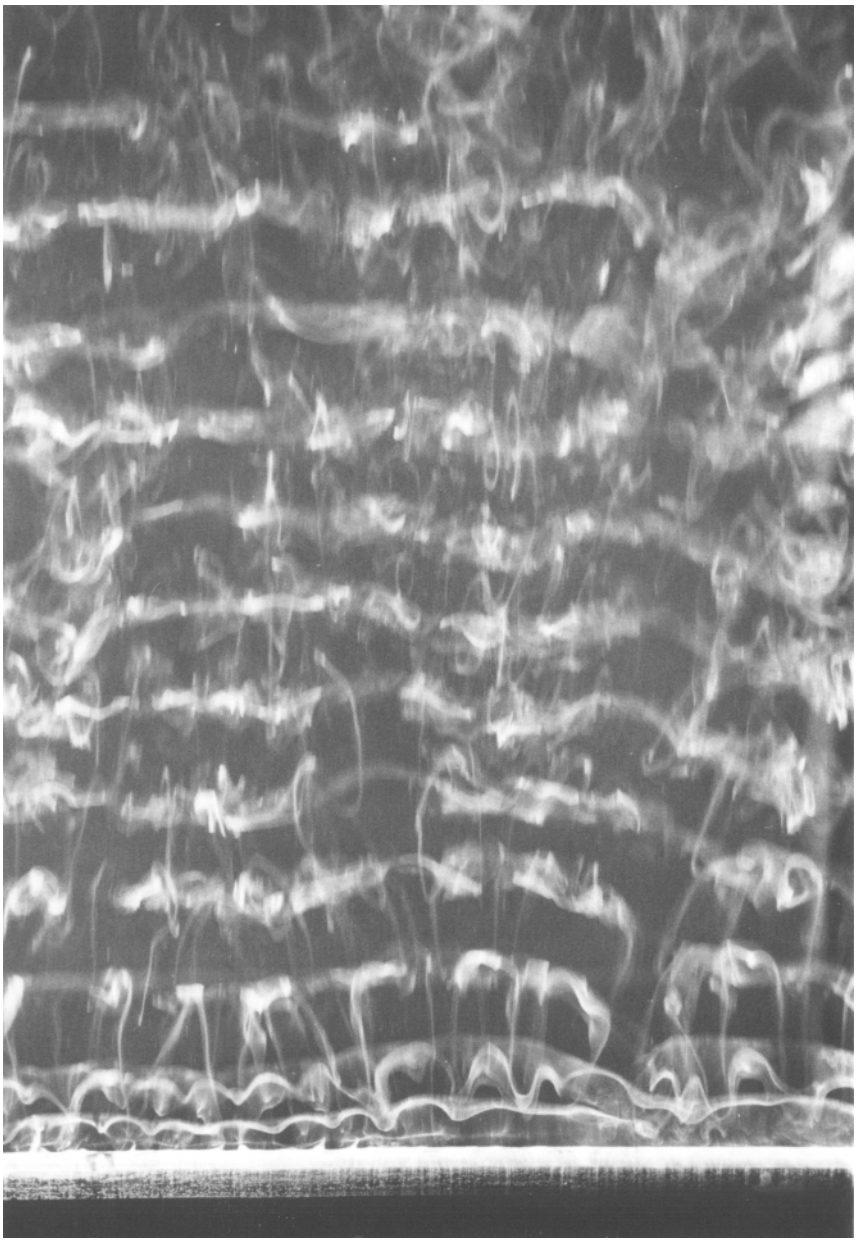

Image ID : CYL-13
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : 3-dimention micro structure of Karman vortex street behind a cylinder
Notes : Water.
Streakline pattern visualized by the electrolytic precipitation method.
Camera was fixed to the cylinder. (R=300)

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 : Cylinder, Spiral, Periodicity

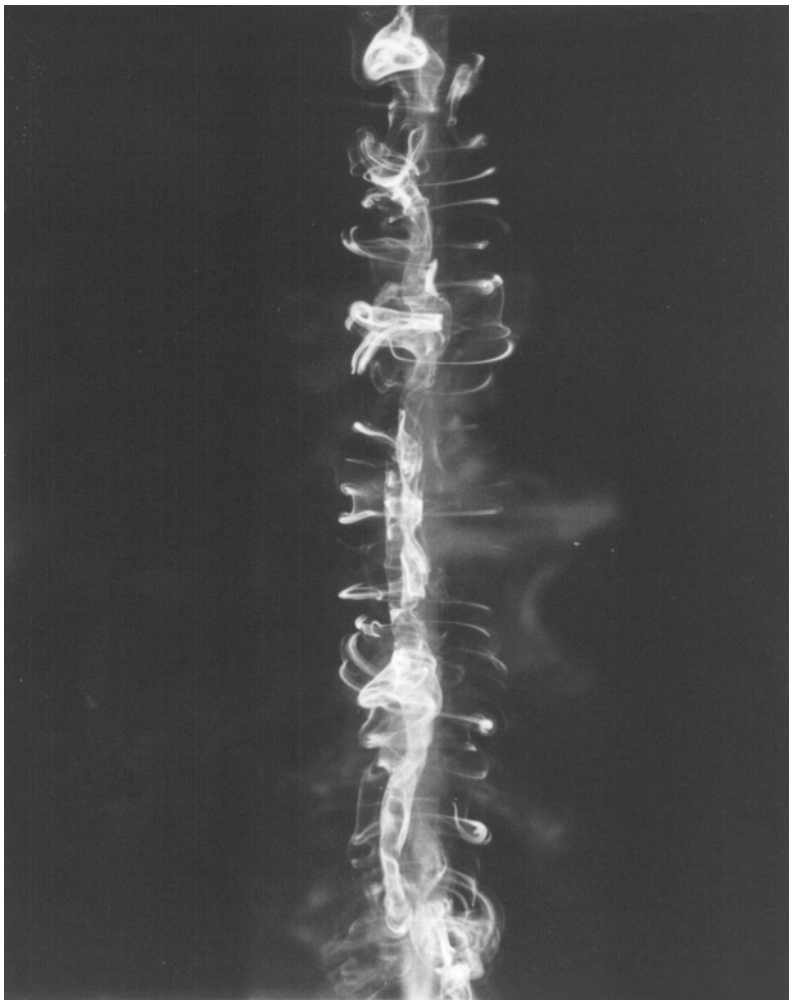

Image ID : CYL-14
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Three-dimensional fine structure of Karman vortex street (Cross section)
Notes : Water.
Cross sections of streakline pattern visualized by the electrolytic precipitation method and photographed from below. Cylinder diameter = 1.2cm. R=300, 6cm from the cylinder.

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 : Cylinder, Spiral

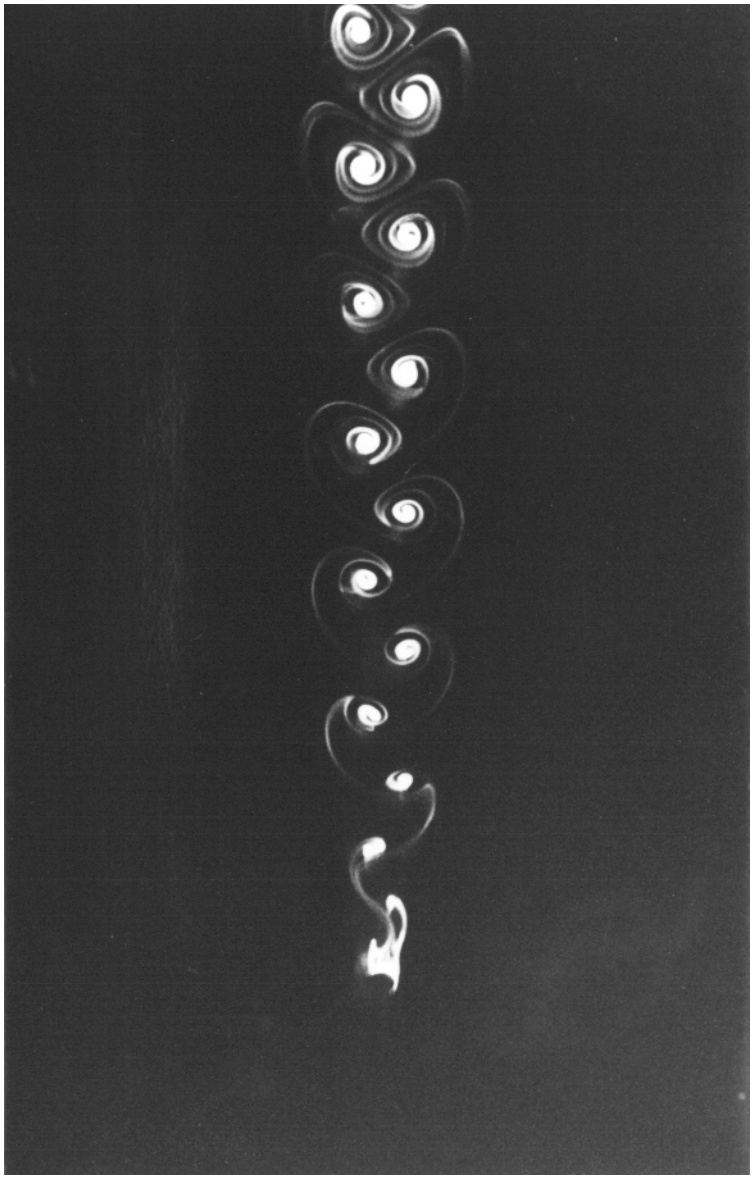

Image ID : CYL-15
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder in a stratified fluid (x/d=0~ 40)
Notes : Stable stratified solt water. Uniform slope density gradient $\beta = 0.002$ [g/cm^4]
Streakline pattern visualized by the electrolytic precipitation method.
Cylinder diameter d = 6mm, R = 112.

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 : Cylinder, Spiral, Periodicity

Image ID : CYL-16
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder in a stratified fluid (x/d=42 ~ 90)
Notes : Stable stratified solt water. Uniform slope density gradient $\beta = 0.002$ [g/cm^4]
Streakline pattern visualized by the electrolytic precipitation method.
Cylinder diameter d = 6mm, R = 112.

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 : Cylinder, Spiral, Periodicity

Image ID : CYL-17
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder in a stratified fluid (x/d=62 ~ 100)
Notes : Stable stratified solt water. Uniform slope density gradient $\beta = 0.002$ [g/cm^4]
Streakline pattern visualized by the electrolytic precipitation method.
Cylinder diameter d = 6mm. R = 112.

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 : Cylinder, Spiral, Periodicity

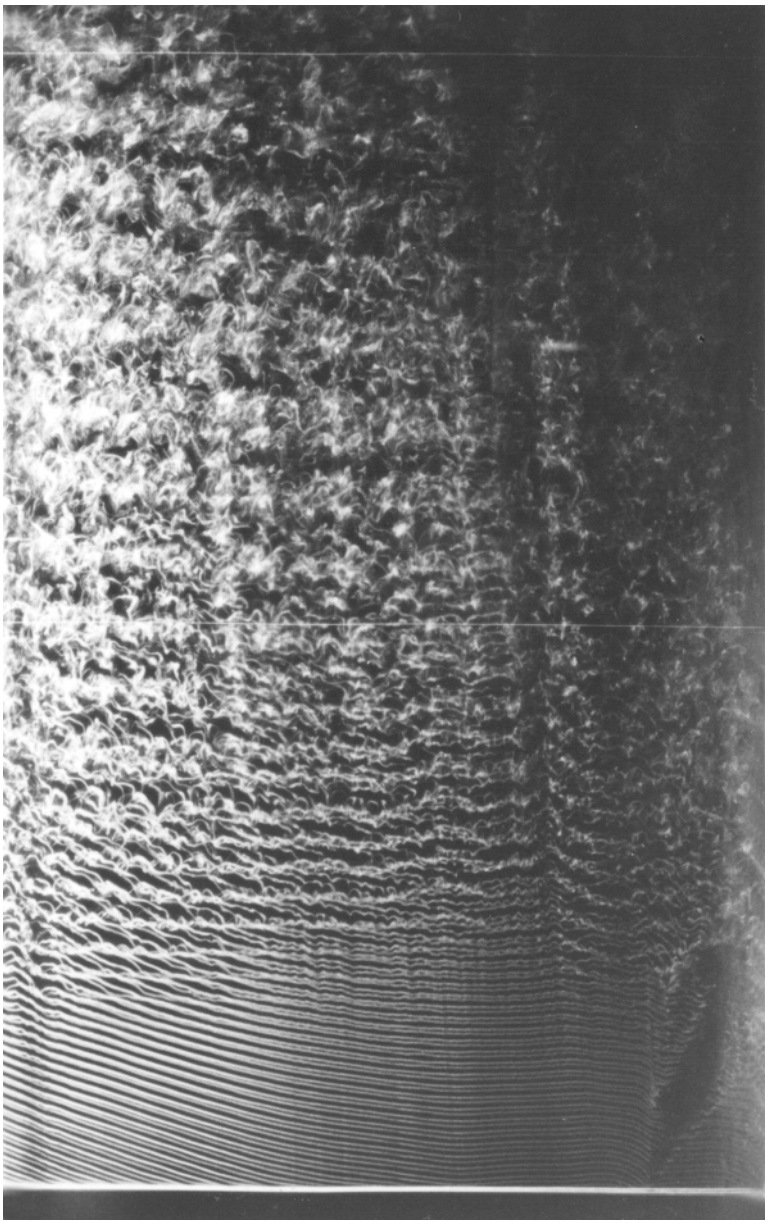

Image ID : CYL-18
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Periodic structure of a wake of a cylinder (x/d=0 ~ 400)
Notes : Wind-tunnnel experiment. Smoke wire method with liquid paraffin smoke.
Cylinder diameter 5mm. R = 350.
Wave length of two-dimensional periodic structure becomes larger in the downstream region.

Author : S. Taneda
Published in : 1985
Copyright : North-Holland
Reproduced from: S. Taneda: Theoretical and Applied Mechanics, ed. F.I. Niordson & N. Olhoff (North-Holland, Amsterdam, 1985) 399.

Research Field : Fluid dynamics
Expressed as : Tracer photograph
Shape features : Cylinder, Spiral, Periodicity

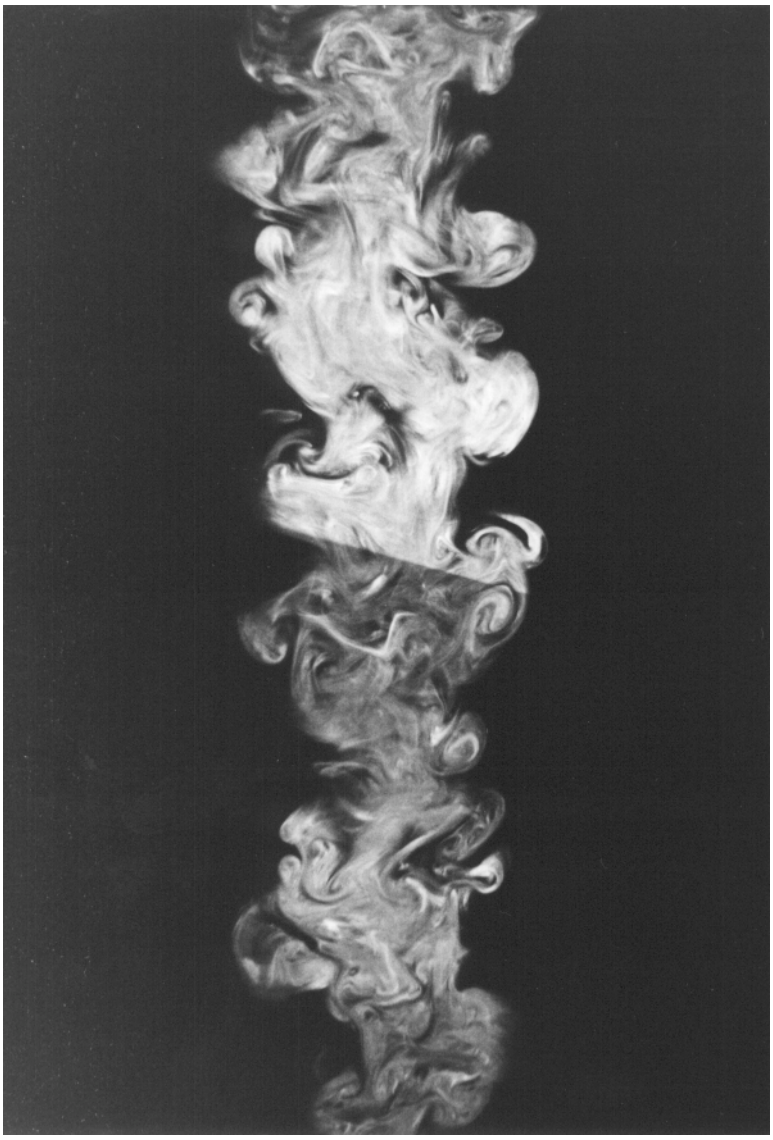

Image ID : CYL-19
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Cross section of flow past a cylinder (R=700)

Notes : Wind-tunnnel experiment. Smoke wire method with liquid paraffin smoke.
Cylinder diameter 1cm. Wind velocity 1m/s , x/d = 200.
Photographed from downstream.

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
Shape features : Cylinder, Spiral

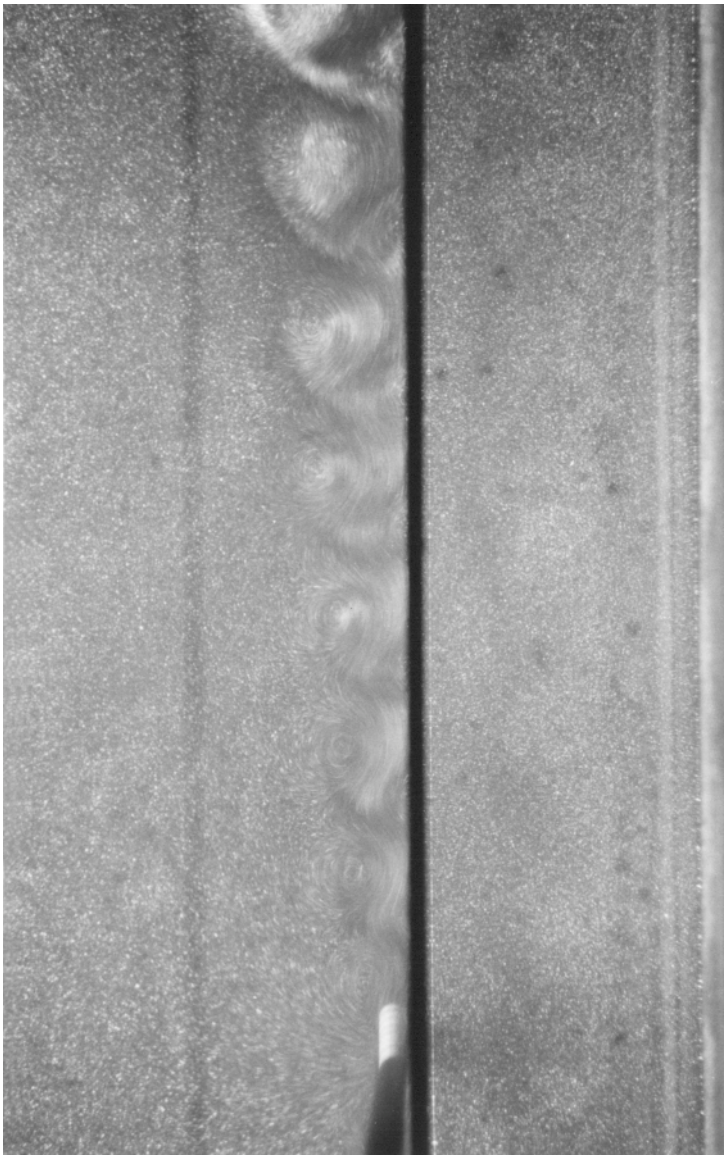

Image ID : CYL-20
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Effect of a wall on the flow past a cylinder ($\delta/d=0.6$)
Notes : Static watertank. Streamline pattern visualized by suspending aluminum powder.
Camera was fixed to the watertank.
Cylinder diameter d = 1cm. Clearance between the cylinder and the wall δ = 6mm.
R = 170.

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
Shape features : Cylinder, Spiral, Periodicity

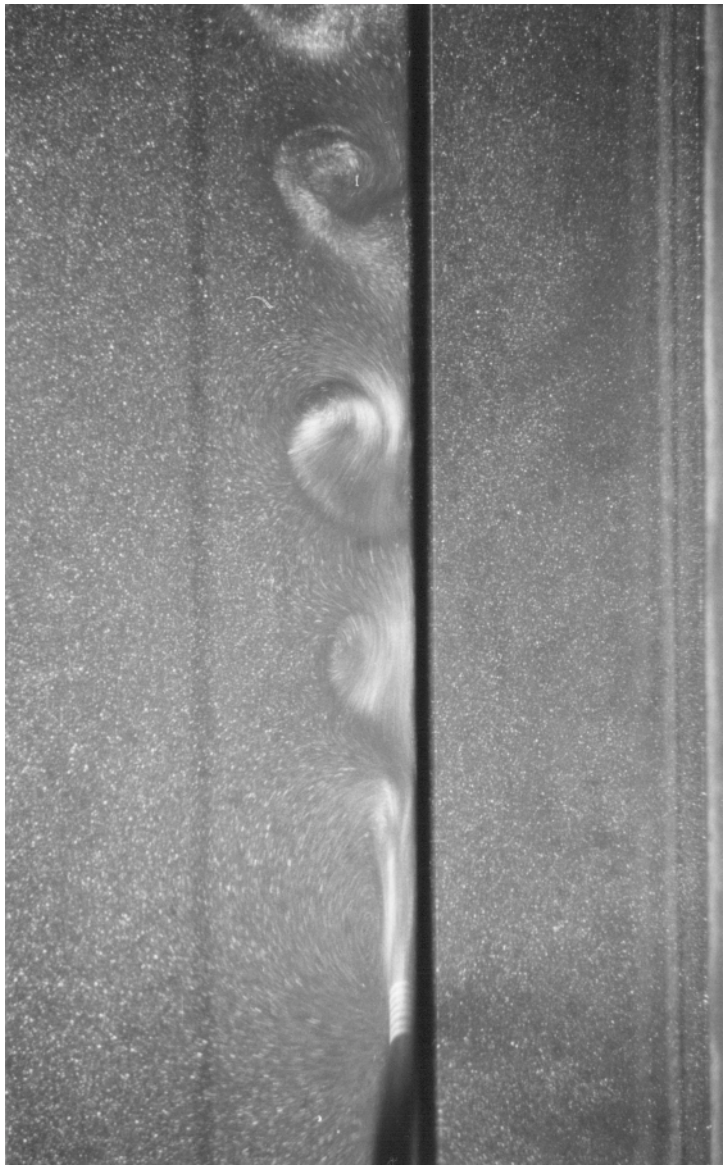

Image ID : CYL-21
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Effect of a wall on the flow past a cylinder ($\delta/d=0.1$)
Notes : Static watertank. Streamline pattern visualized by suspending aluminum powder.
Camera was fixed to the watertank.
Cylinder diameter d = 1cm. Clearance between the cylinder and the wall δ = 1mm.
R=170.

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
Shape features : Cylinder, Spiral, Periodicity

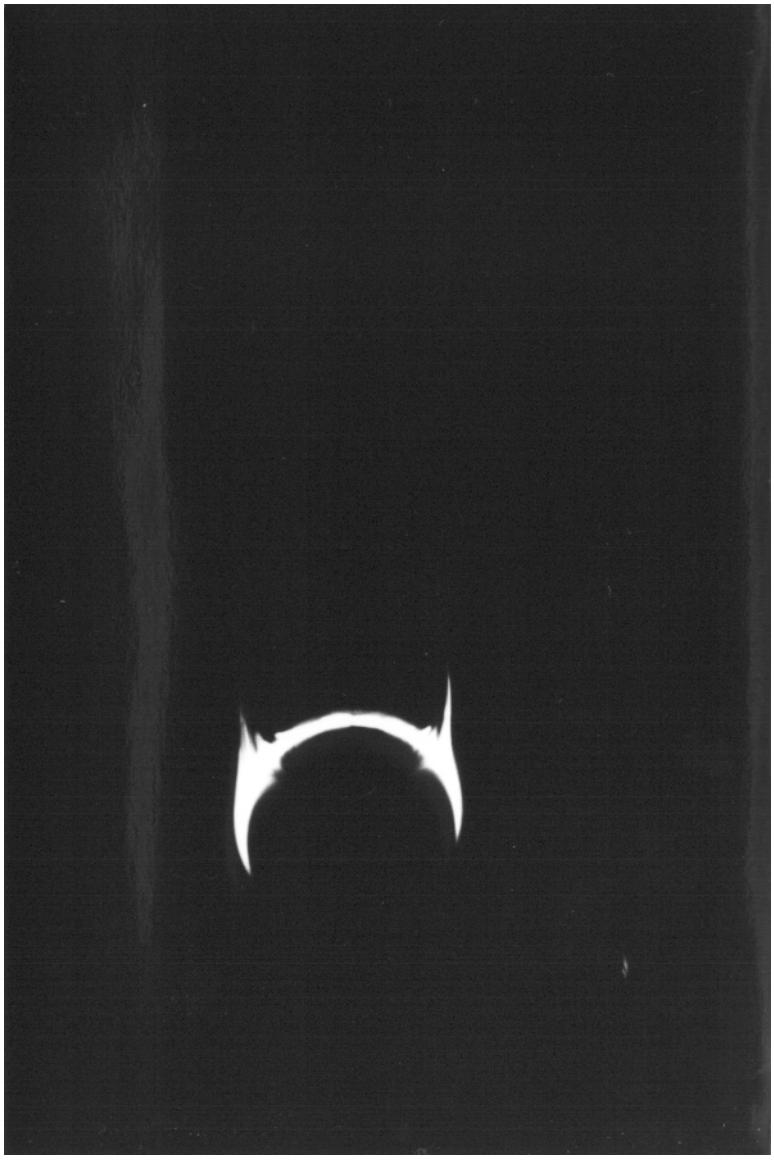

Image ID : CYL-22
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder suddenly started (x/d=2.5)
Notes : Static watertank.
Streakline pattern visualized by the electrolytic precipitation method.
Camera was fixed to the cylinder. Cylinder diameter d = 1.2cm. R = 99,
x is the distance of the cylinder motion after start.

Author : S. Taneda
Published in : 1977
Copyright : Pergamon Press
Reproduced from: S. Taneda: Prog. Aerospace Sci. Vol.17, No4 (1977) 287.

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streakline
Shape features : Cylinder, Separation

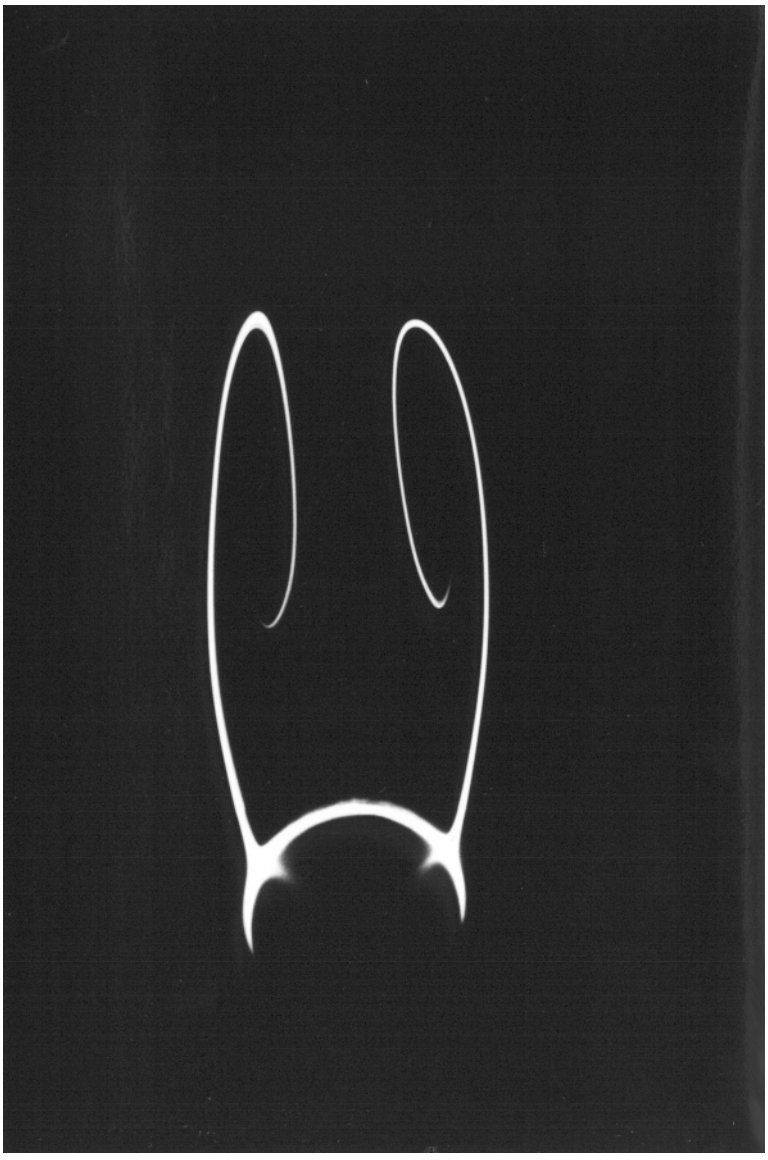

Image ID : CYL-23
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder suddenly started (x/d=10.5)
Notes : Static watertank.
Streakline pattern visualized by the electrolytic precipitation method.
Camera was fixed to the cylinder. Cylinder diameter d = 1.2cm. R = 99.
x is the distance of the cylinder motion after start.

Author : S. Taneda
Published in : 1977
Copyright : Pergamon Press
Reproduced from: S. Taneda: Prog. Aerospace Sci. Vol.17, No4 (1977) 287.

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streakline
Shape features : Cylinder, Separation

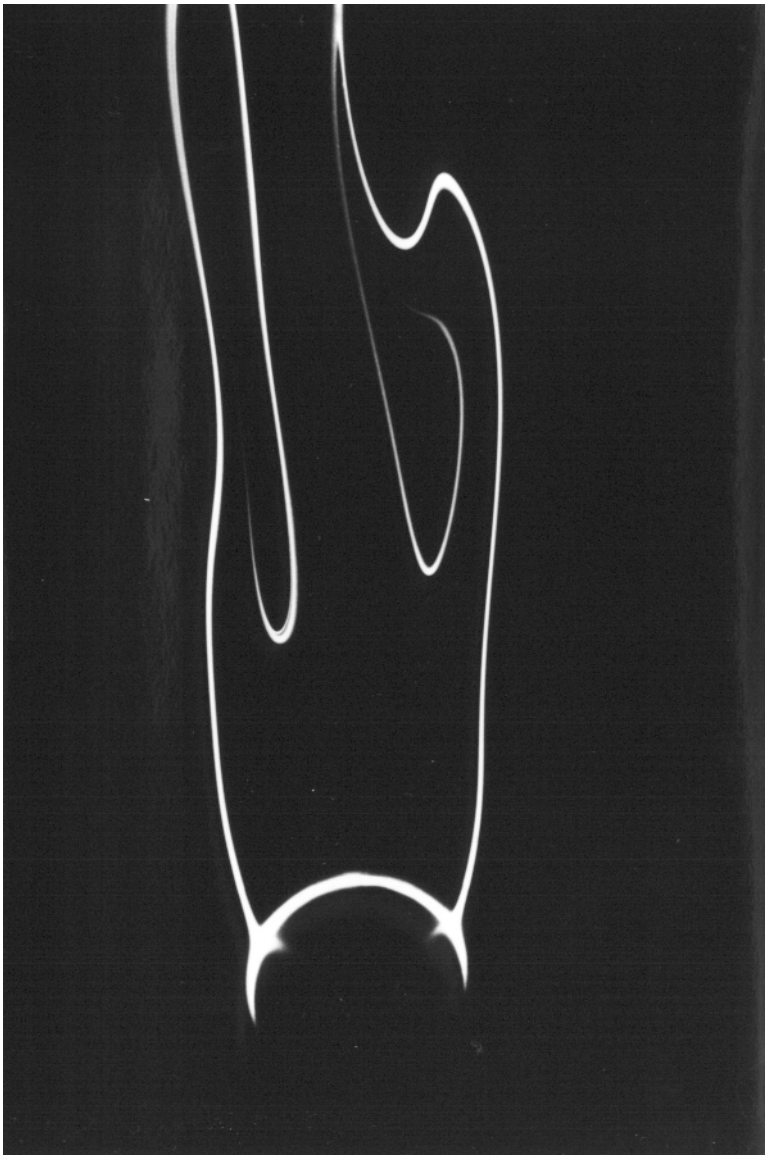

Image ID : CYL-24
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder suddenly started (x/d=19.7)
Notes : Static watertank.
Streakline pattern visualized by the electrolytic precipitation method.
Camera was fixed to the cylinder. Cylinder diameter d = 1.2cm. R = 99.
x is the distance of the cylinder motion after start.

Author : S. Taneda
Published in : 1977
Copyright : Pergamon Press
Reproduced from: S. Taneda: Prog. Aerospace Sci. Vol.17, No4 (1977) 287.

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streakline
Shape features : Cylinder, Separation

Image ID : CYL-25
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder suddenly started (x/d=30.5)
Notes : Static watertank.
Streakline pattern visualized by the electrolytic precipitation method.
Camera was fixed to the cylinder. Cylinder diameter d = 1.2cm. R = 99.
x is the distance of the cylinder motion after start.

Author : S. Taneda
Published in : 1977
Copyright : Pergamon Press
Reproduced from: S. Taneda: Prog. Aerospace Sci. Vol.17, No4 (1977) 287.

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streakline
Shape features : Cylinder, Separation

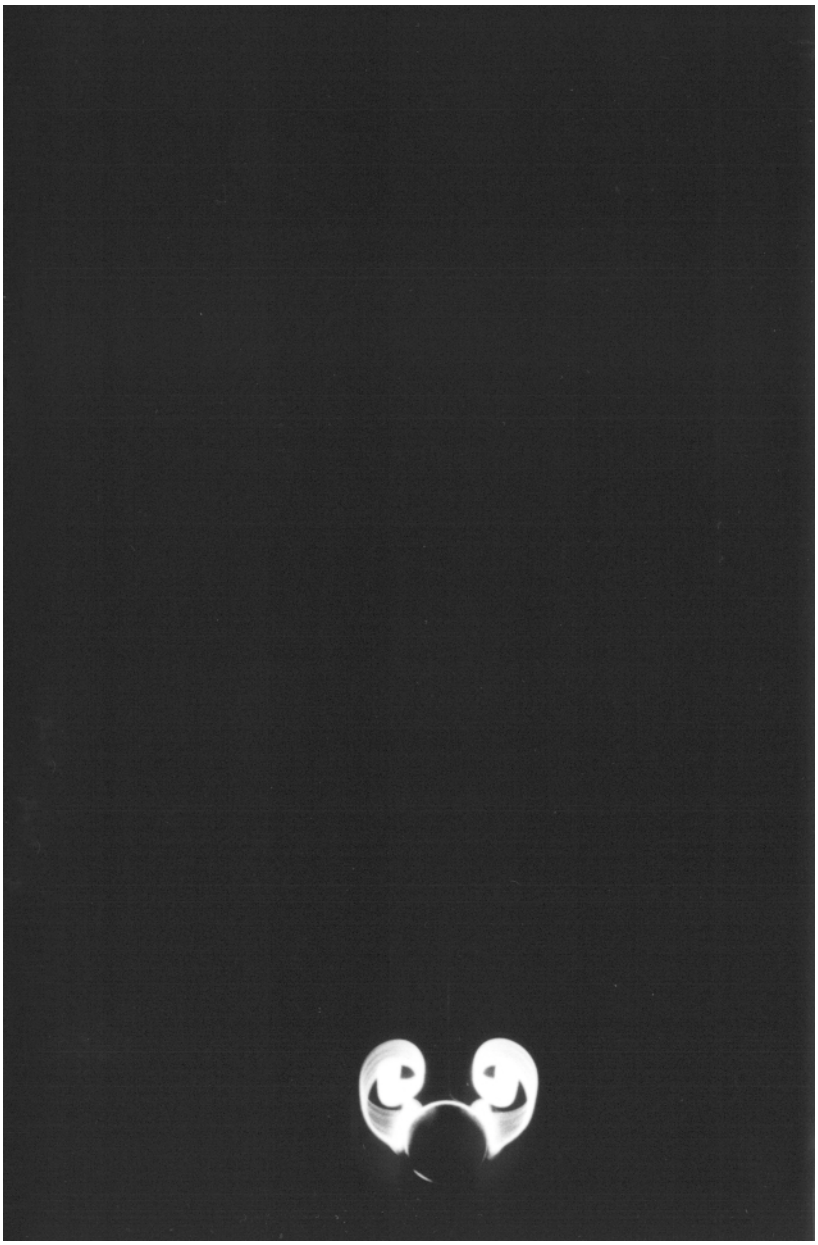

Image ID : CYL-26
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Process of growth of Karman vortex street (x/d=5)
Notes : Static watertank.
Streakline pattern visualized by the electrolytic recipitation method.
Cylinder diameter d = 1cm. R = 140.
x is the distance of the cylinder motion after start.

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 : Cylinder, Separation

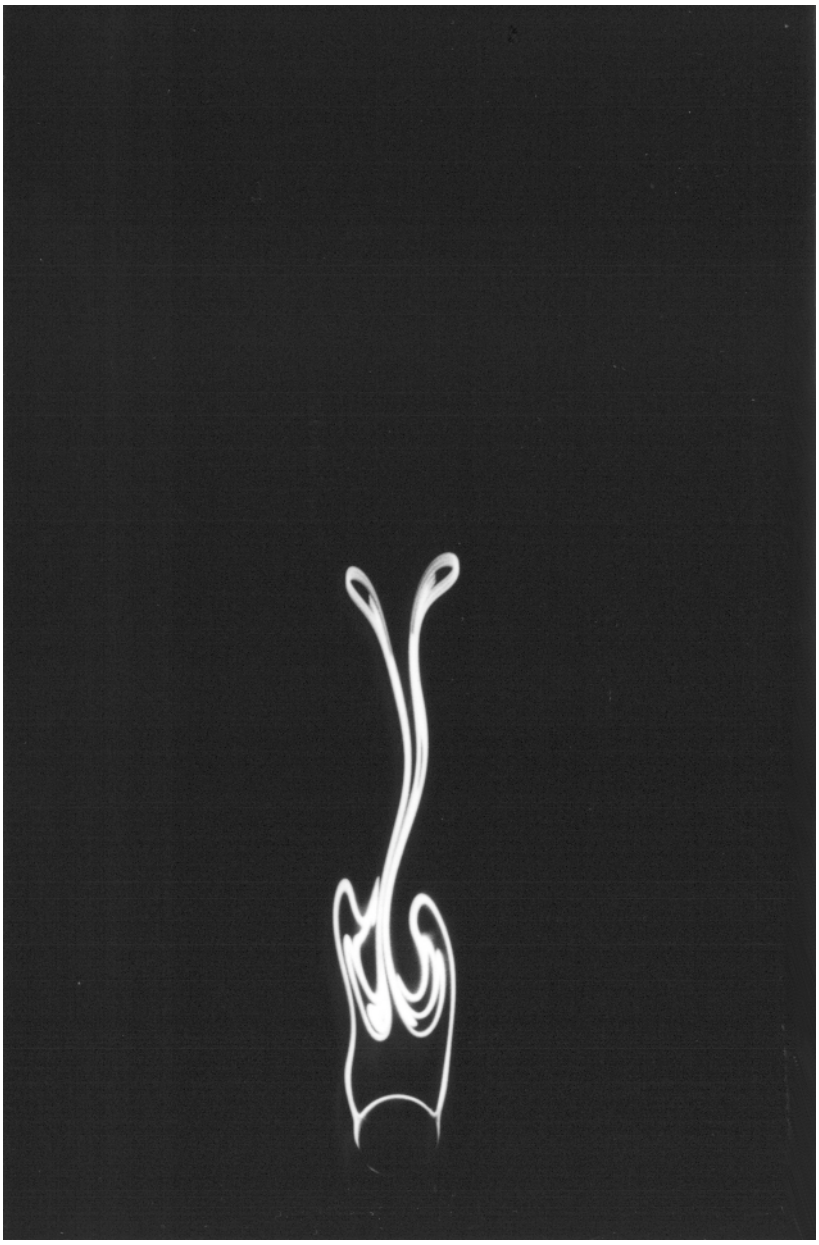

Image ID : CYL-27
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Process of growth of Karman vortex street (x/d=15)
Notes : Static watertank.
Streakline pattern visualized by the electrolytic precipitation method.
Cylinder diameter d=1cm, R=140.
x is the distance of the cylinder motion after start.

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 : Cylinder, Separation, Spiral

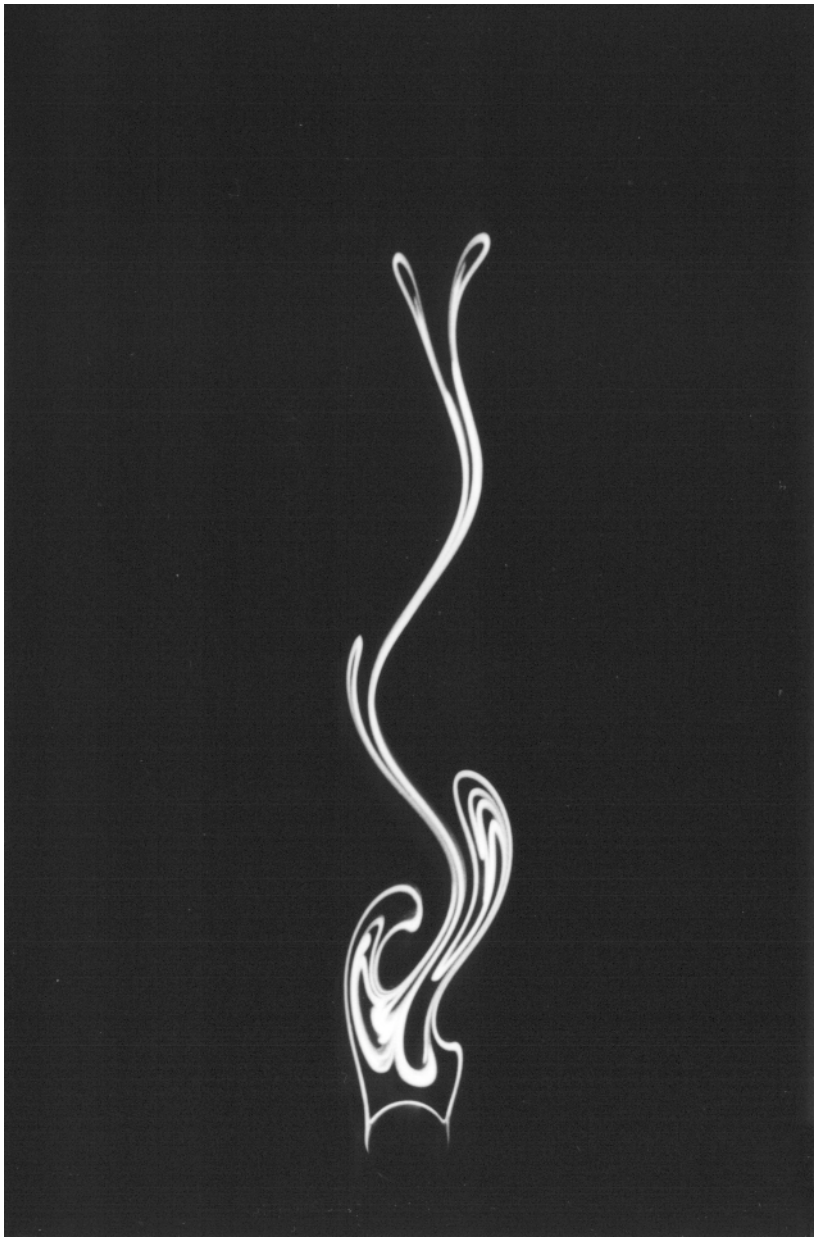

Image ID : CYL-28
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Process of growth of Karman vortex street (x/d=20)
Notes : Static watertank.
Streakline pattern visualized by the electrolytic precipitation method.
Cylinder diameter d=1cm, R=140.
x is the distance of the cylinder motion after start.

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 : Cylinder, Separation, Spiral

Image ID : CYL-29
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Process of growth of Karman vortex street (x/d=25)
Notes : Static watertank.
Streakline pattern visualized by the electrolytic precipitation method.
Cylinder diameter d=1cm, R=140.
x is the distance of the cylinder motion after start.

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 : Cylinder, Separation, Spiral

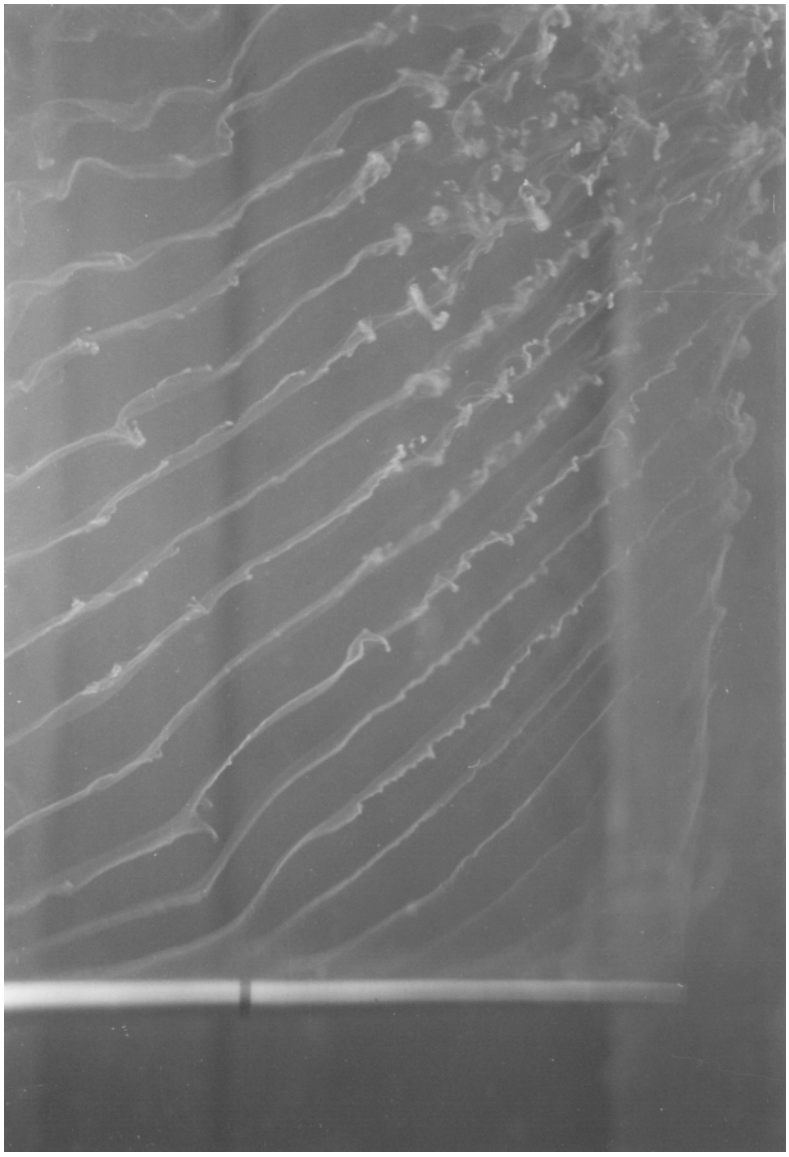

Image ID : CYL-30
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder tapered
Notes : Static watertank.
Streakline pattern visualized by putting condensed milk.
Cylinder diameter d = 0.15cm(at the lower end), 0.80cm(at the lower end). R = 20, 95

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, Streakline
Shape features : Cylinder, Spiral, Periodicity

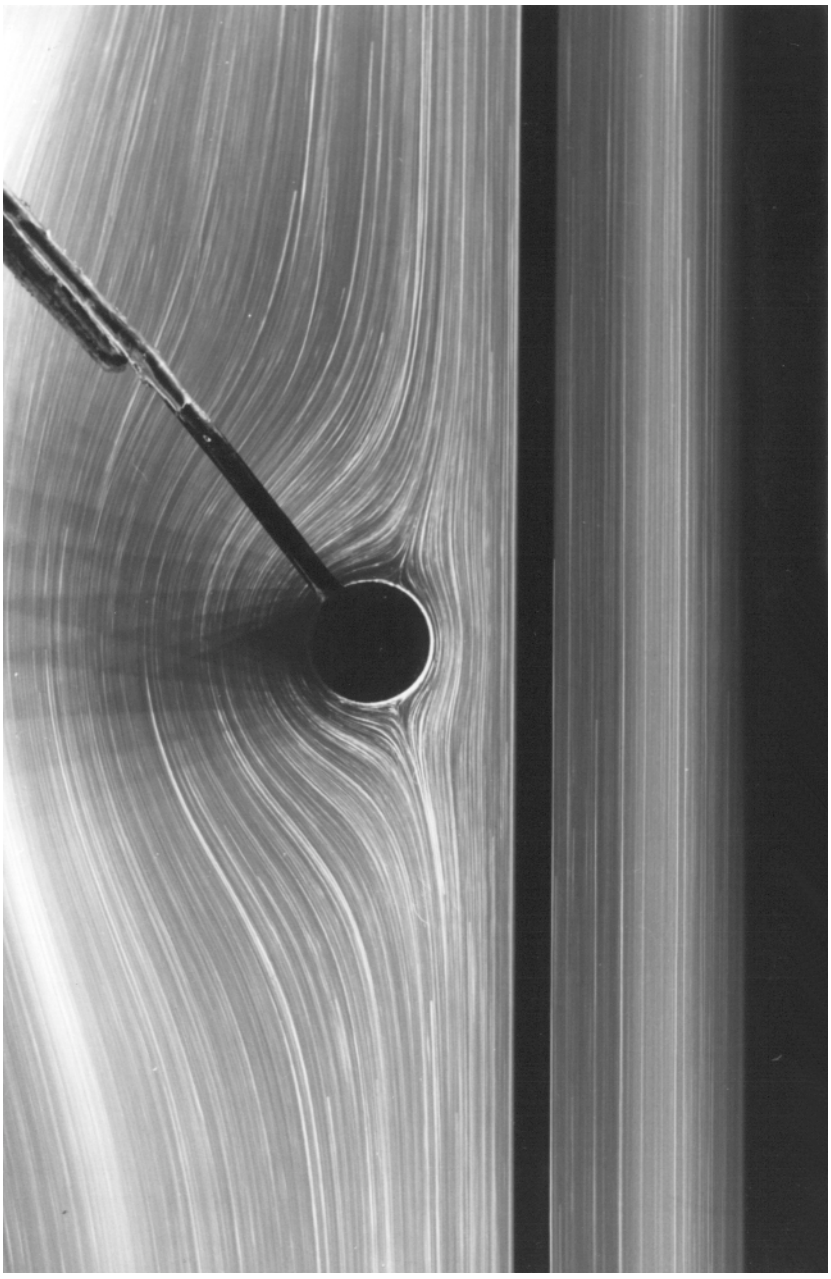

Image ID : CYL-31
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Very low speed flow run around a cylinder moving near a wall
Notes : Glycerine.
Streamline pattern visualized by suspending aluminum powder
Camera was fixed to the cylinder.
Cylinder diameter d = 1cm. Clearance = 6cm. R = 0.023

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 : Cylinder, Fore-and-aft symmetry

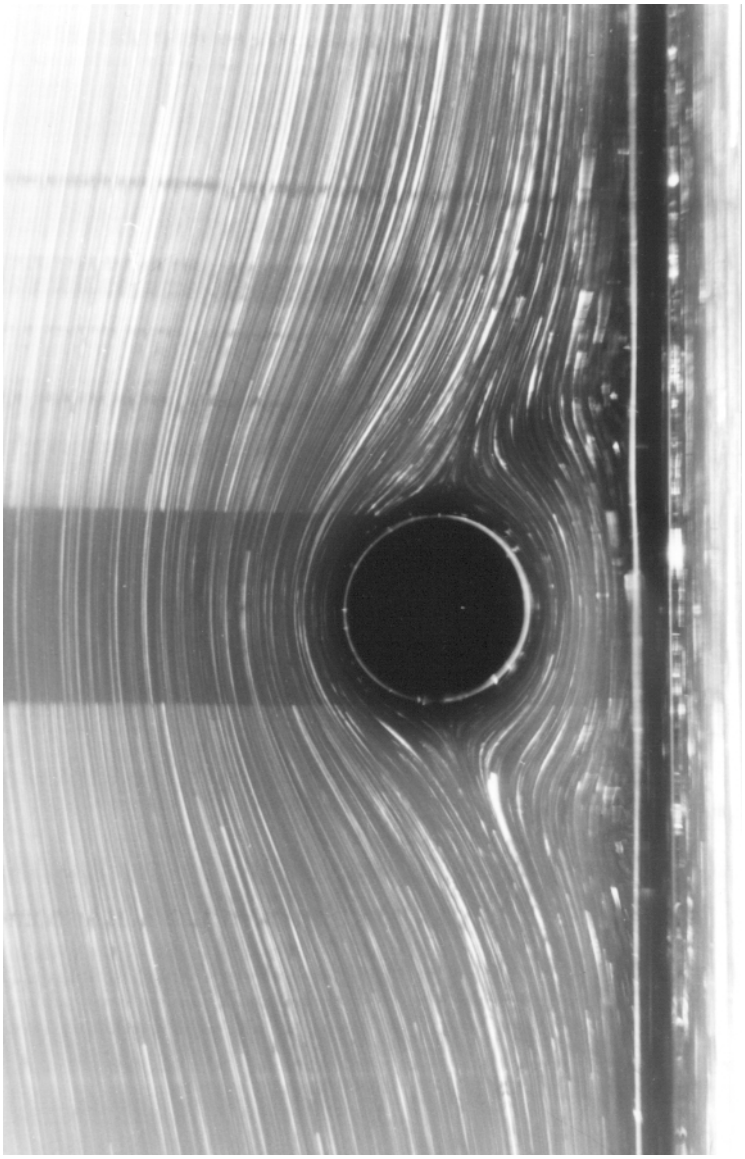

Image ID : CYL-32
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder put near a wall (ε=0.60d)
Notes : Glycerine.
Streamline pattern visualized by suspending aluminum powder
Camera was fixed to the cylinder.
R = 0.011. $\varepsilon/d = 0.6$. ε is the clearance between the cylinder and the wall.
d is the diameter of the cylinder.

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 : Cylinder, Fore-and-aft symmetry

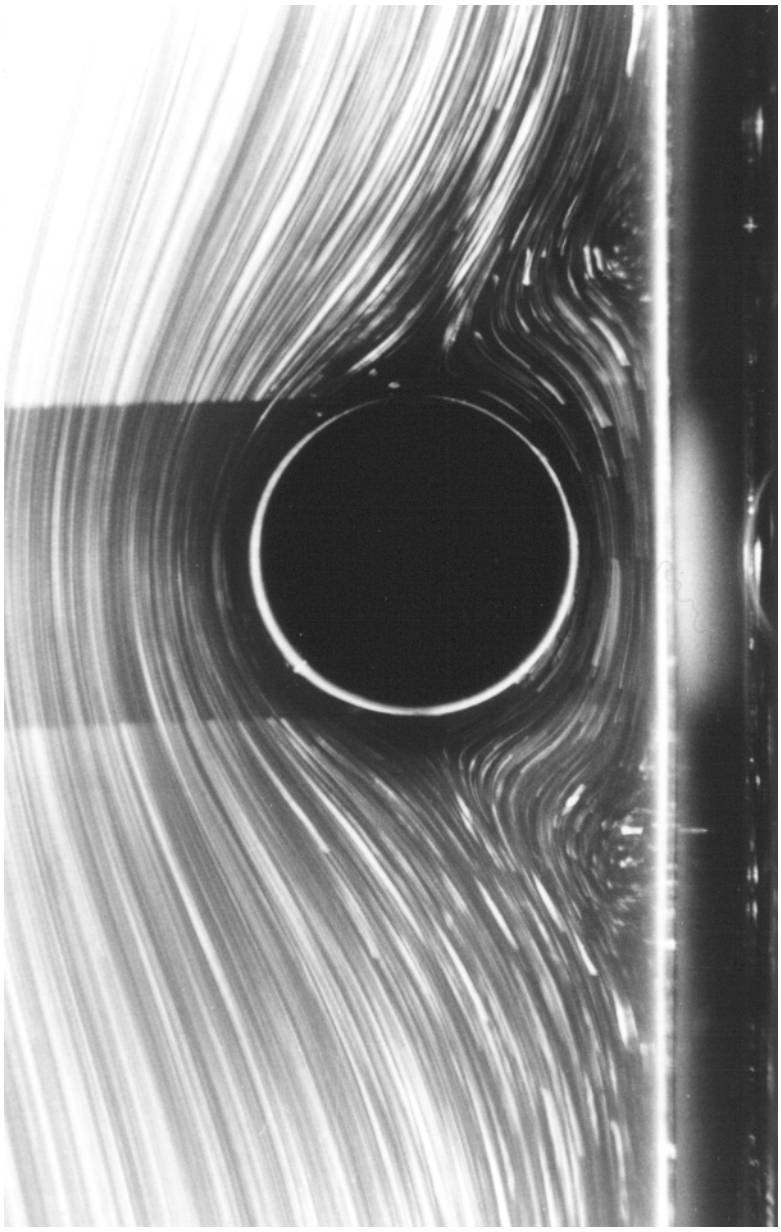

Image ID : CYL-33
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder put near a wall (ε =0.25d)
Notes : Glycerine.
Streamline pattern visualized by suspending aluminum powder
Camera was fixed to the cylinder.
R = 0.011. ε is the clearance between the cylinder and the wall.
d is the diameter of the cylinder.

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 : Cylinder, Separation, Fore-and-aft symmetry

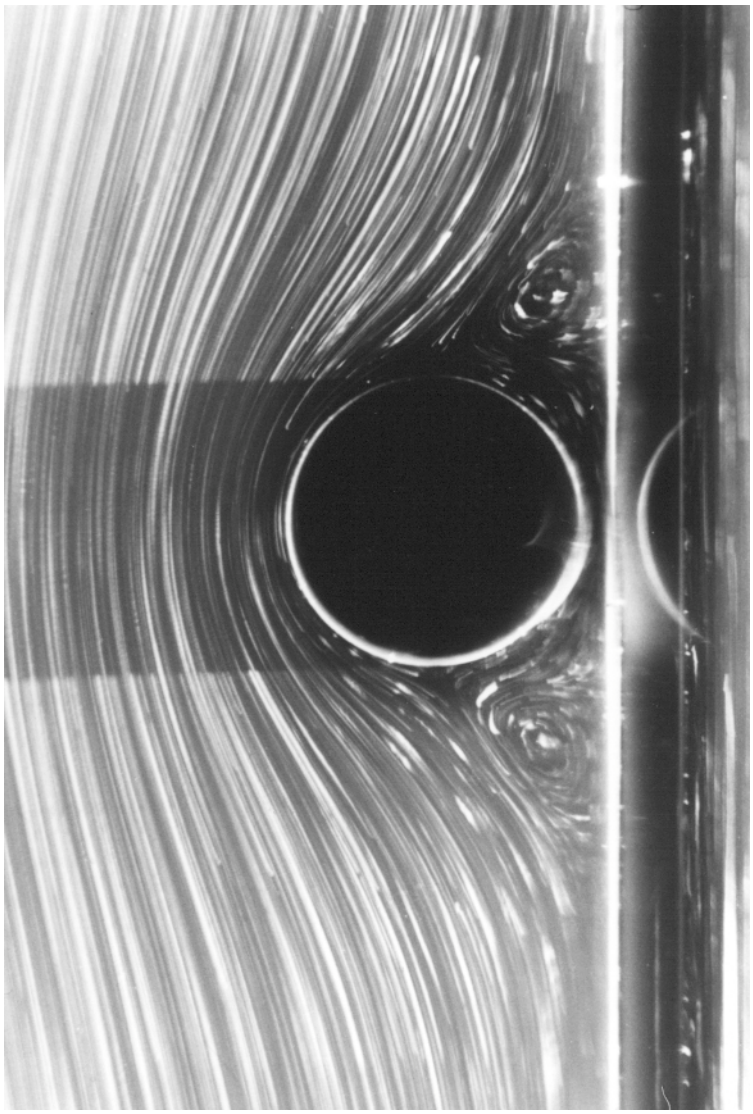

Image ID : CYL-34
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder put near a wall (ε=0.10d)
Notes : Glycerine.
Streamline pattern visualized by suspending aluminum powder
Camera was fixed to the cylinder.
R = 0.013. ε is the clearance between the cylinder and the wall.
d is the diameter of the cylinder.

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 : Cylinder, Separation, Fore-and-aft symmetry

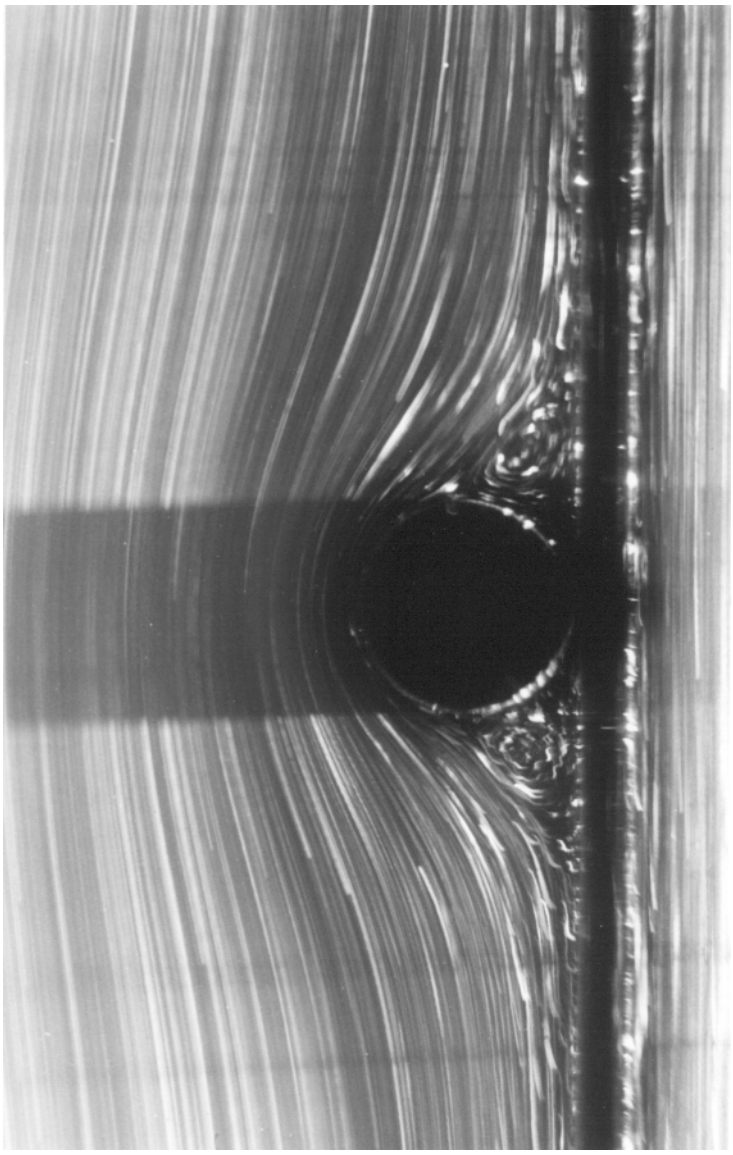

Image ID : CYL-35
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Wake of a cylinder put near a wall (ε =0)
Notes : Glycerine.
Streamline pattern visualized by suspending aluminum powder
Camera was fixed to the cylinder.
R = 0.041. ε is the clearance between the cylinder and the wall.

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 : Cylinder, Separation, Fore-and-aft symmetry

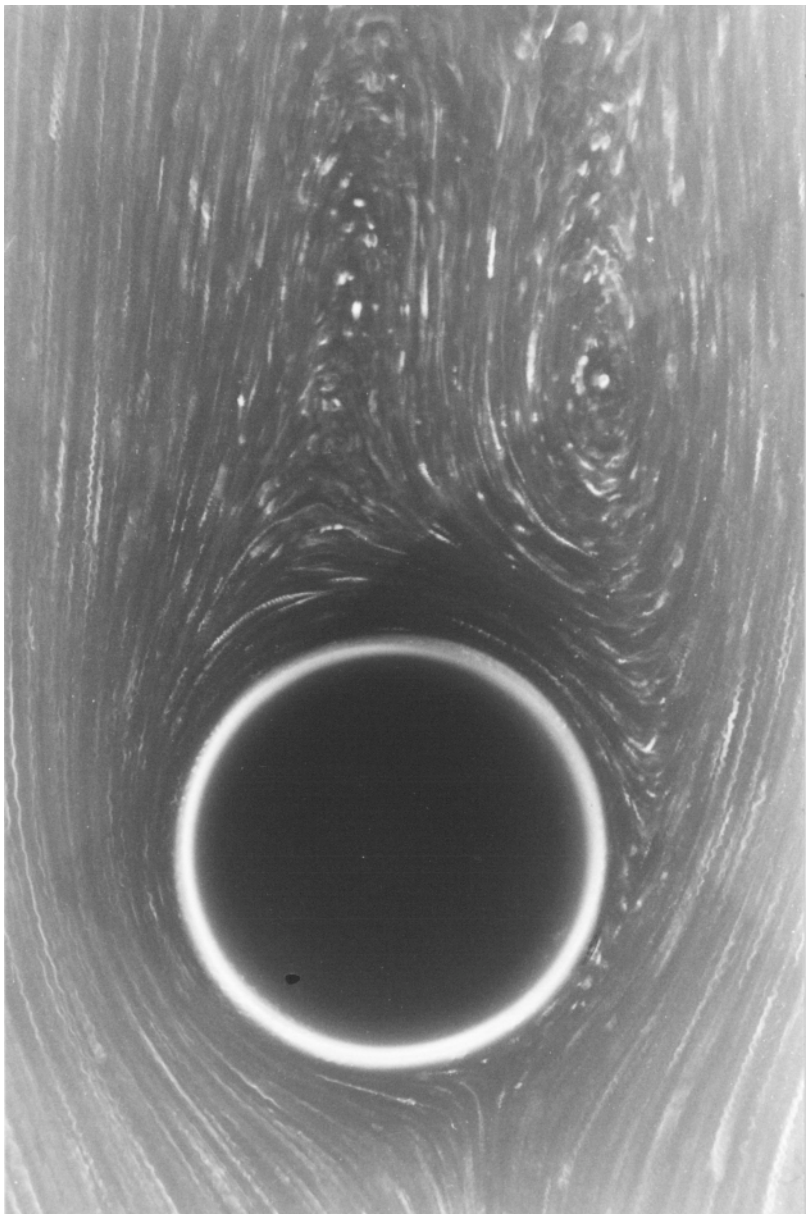

Image ID : CYL-36
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : A rotating cylinder in a uniform flow (V/U=0.63)
Notes : Static watertank. Streamline pattern visualized by suspending aluminum powder.
V and U are velocities of cylinder rotation and the uniform flow, respectively.
R = 50. The flow was stationary.

Author : S. Taneda
Published in : 1980
Copyright : S. Taneda
Reproduced from: S. Taneda: Rep. Res. Inst. Appl. Mech., Kyusyu Univ., No.89 (1980) 73.

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

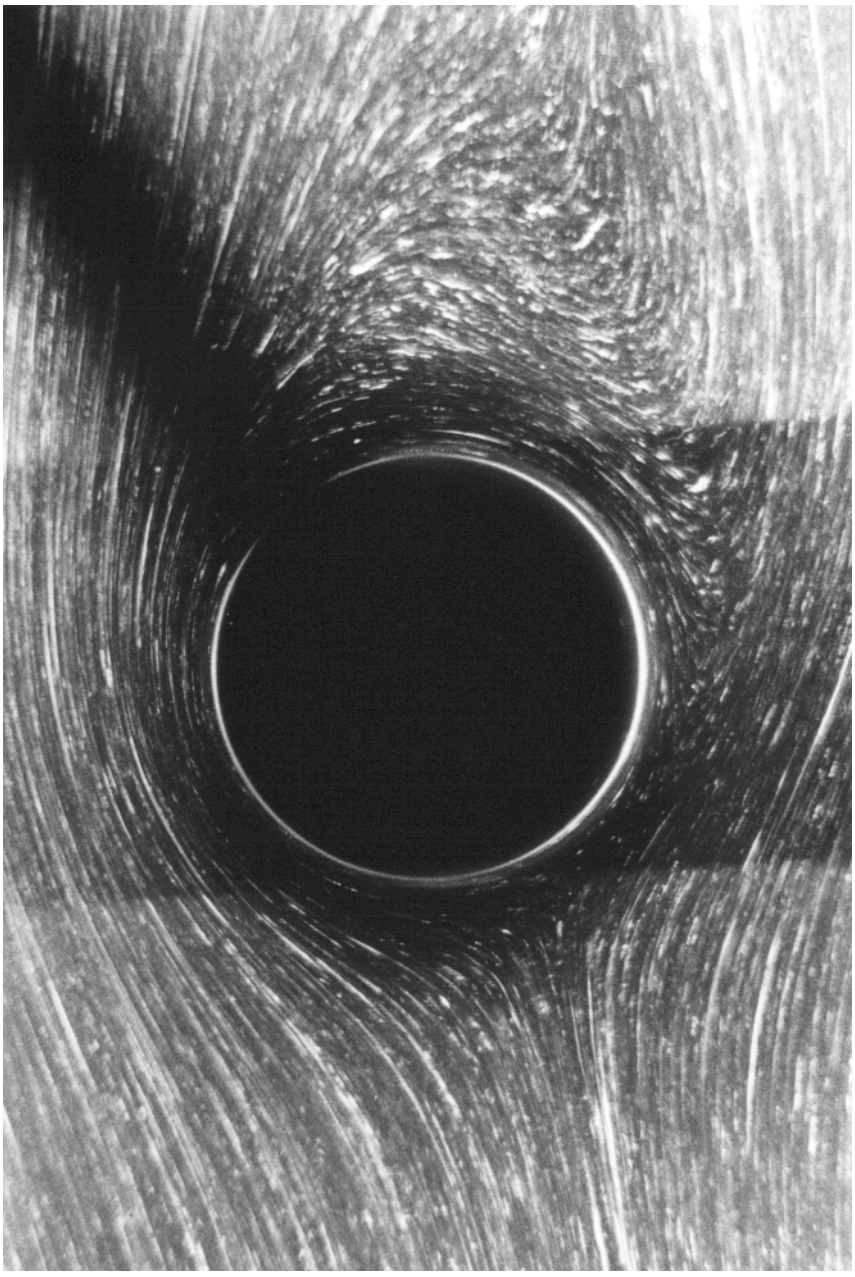

Image ID : CYL-37
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : A rotating cylinder in a uniform flow (V/U=1.01)
Notes : Static watertank. Streamline pattern visualized by suspending aluminum powder.
V and U are velocities of cylinder rotation and the uniform flow, respectively.
R = 44, The flow was stationary.

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

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streamline
Shape features : Cylinder

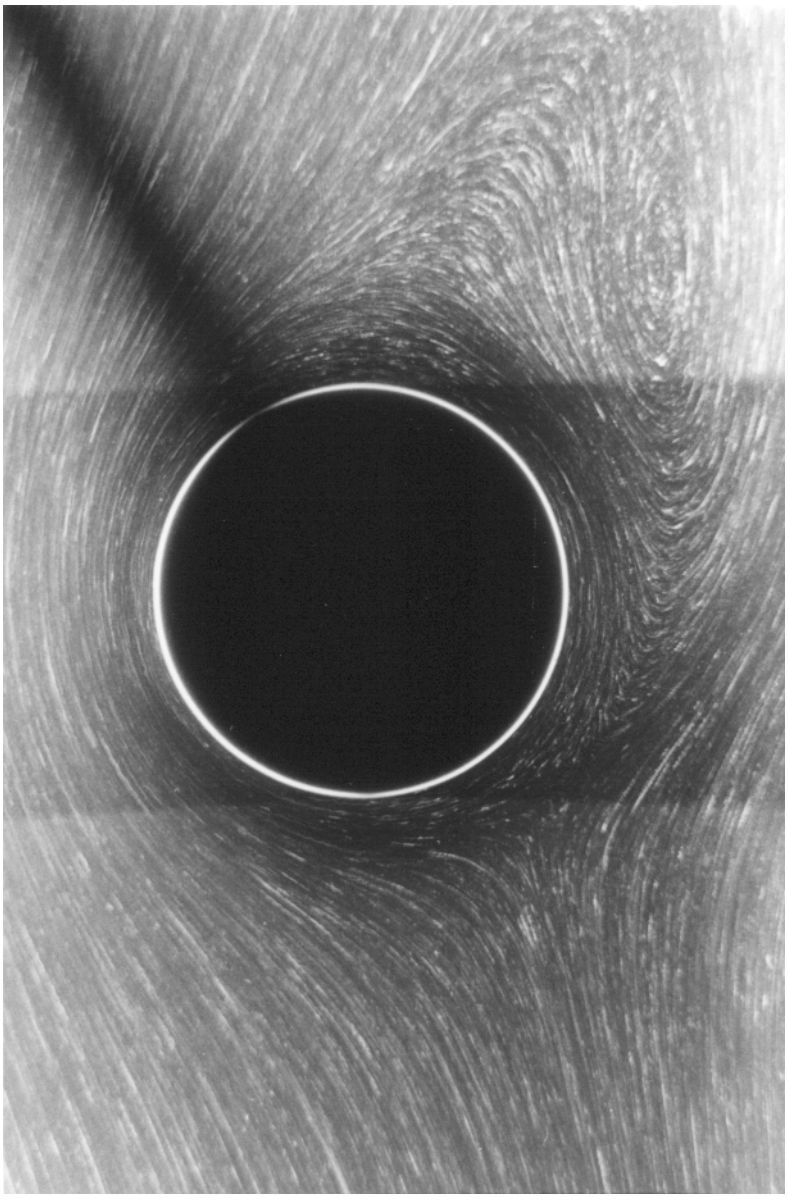

Image ID : CYL-38
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : A rotating cylinder in a uniform flow (V/U=2.06)
Notes : Static watertank. Streamline pattern visualized by suspending aluminum powder.
V and U are velocities of cylinder rotation and the uniform flow, respectively.
R = 68, The flow was stationary.

Author : S. Taneda
Published in : 1985
Copyright : North-Holland
Reproduced from: S. Taneda: Theoretical and Applied Mechanics, ed. F.I. Niordson & N. Olhoff (North-Holland, Amsterdam, 1985) 399.

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

Image ID : CYL-39
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow around a cylinder on a flat plate (Top view)
Notes : Wind-tunnnel experiment. Flat plate is 1m wide, and 2m long.
Cylinder diameter 88mm heigh 77mm. R = 2900.
Smoke of liquid paraffin was injected into the flow from 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
Shape features : Cylinder

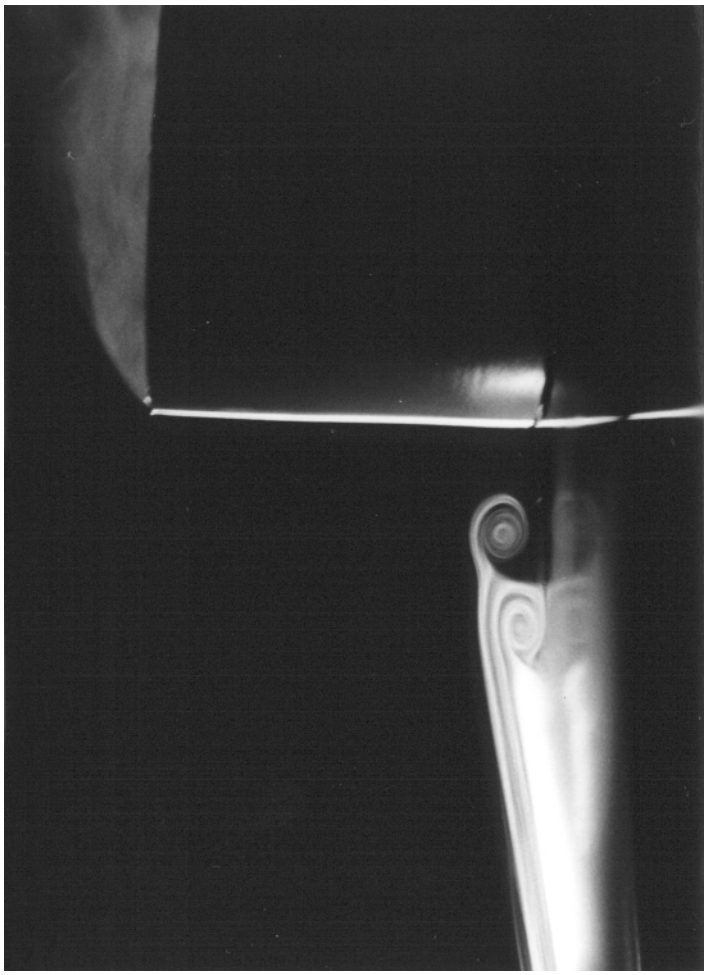

Image ID : CYL-40
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow around a cylinder on a flat plate(Vertical cross section at the center)
Notes : Wind-tunnnel experiment. Flat plate is 1m wide, and 2m long.
Cylinder diameter 88mm height 77mm. R = 2900.
The flow is visualized by smoke of liquid paraffin.

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
Shape features : Cylinder, Spiral

Image ID : CYL-41
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow around a cylinder standing upright on a flat plate(Top view)
Notes : Wind-tunnnel experiment. Flat plate is 1m wide, and 2m long.
Cylinder diameter 6cm height 12cm. R = 4000.
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: An Album of Fluid motion, ed. M.Van Dyke (Parabolic Press,1982)

Research Field : Fluid dynamics
Expressed as : Tracer photograph
Shape features : Cylinder, Spiral

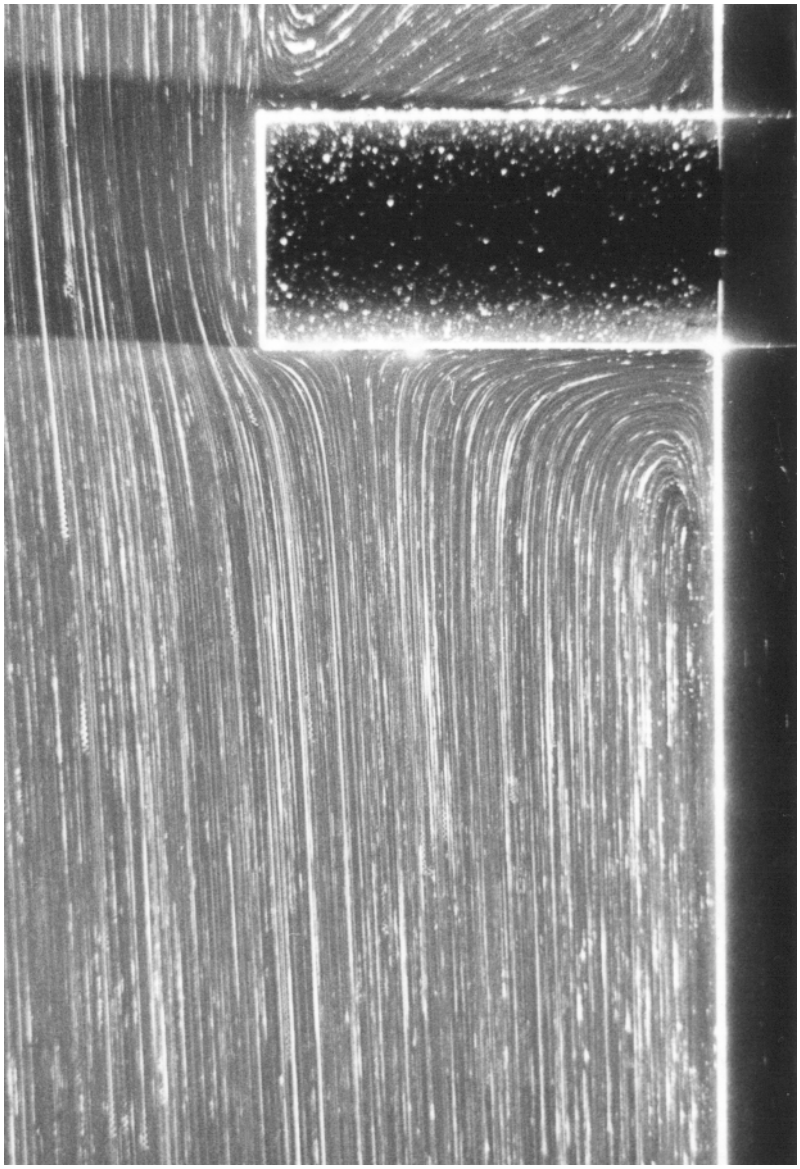

Image ID : CYL-42
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow around a cylinder standing upright on a flat plate(Vertical cross section at the center)
Notes : Static watertank. Streamline pattern visualized by suspending aluminum powder.
Cylinder diameter 1.6cm, height 3.2cm. Reynolds number R = 75.8.

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

Research Field : Fluid dynamics
Expressed as : Tracer photograph
Shape features : Cylinder, Spiral

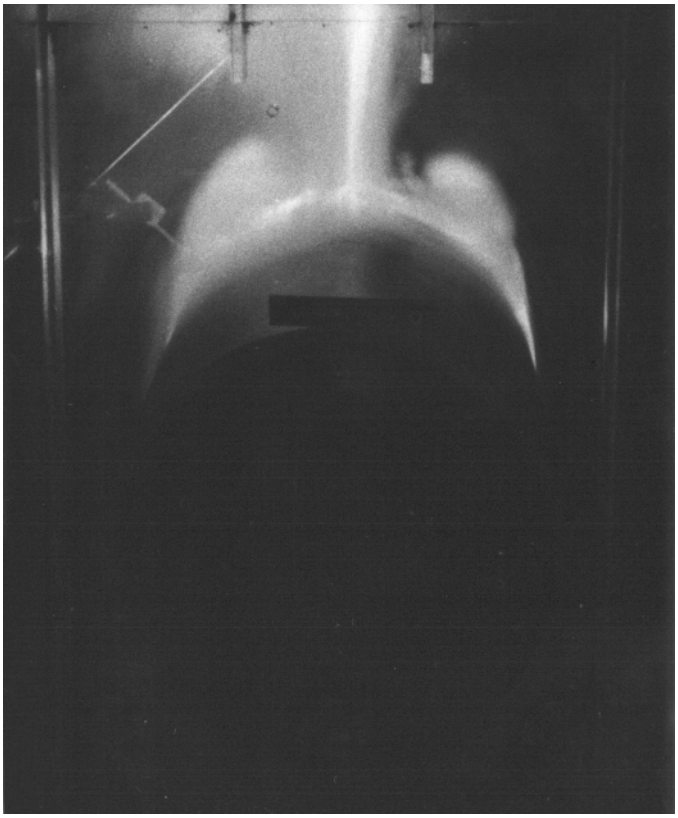

Image ID : CYL-43
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow around a cylinder with impulsive start (Ut/d = 16)
Notes : Wind-tunnnel experiment.
Visualized by smoke of titanium tetrachloride.
Cylinder diameter d = 62.8cm. R = 400000. Wind speed U = 10m/s.
t is the time after driving of the wind-tunnel.

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
Shape features : Cylinder, Separation.

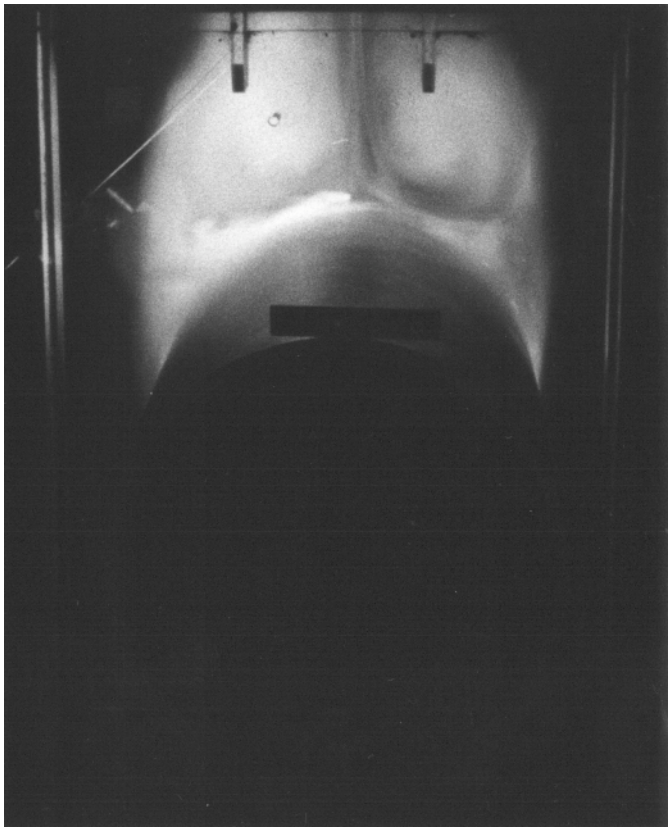

Image ID : CYL-44
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow around a cylinder with impulsive start (Ut/d = 22)
Notes : Wind-tunnnel experiment.
Visualized by smoke of titanium tetrachloride.
Cylinder diameter d = 62.8cm. R = 400000. Wind speed U = 10m/s.
t is the time after driving of the wind-tunnel.

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
Shape features : Cylinder, Separation.

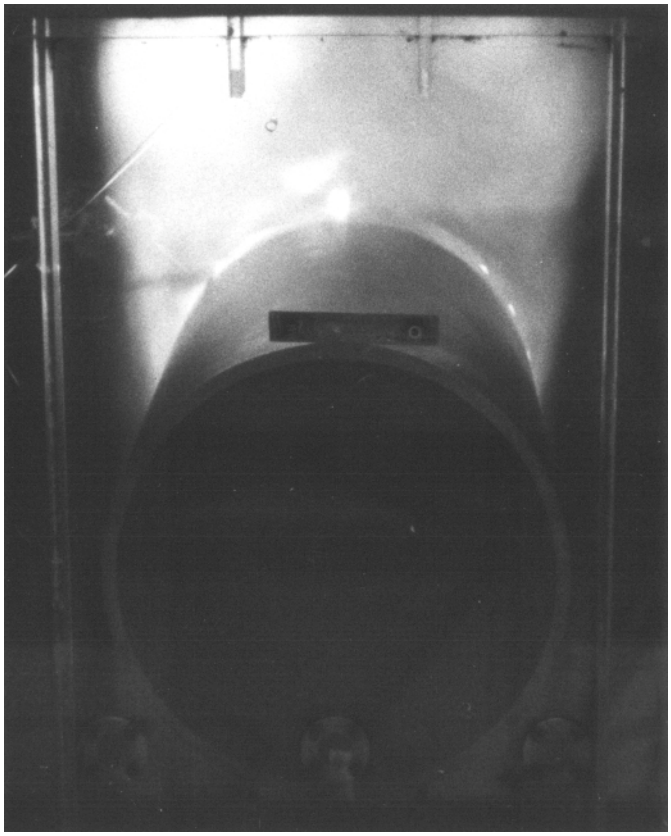

Image ID : CYL-45
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow around a cylinder with impulsive start (Ut/d = 27)
Notes : Wind-tunnnel experiment.
Visualized by smoke of titanium tetrachloride.
Cylinder diameter d = 62.8cm. R = 400000. Wind speed U = 10m/s.
t is the time after driving of the wind-tunnel.

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
Shape features : Cylinder, Separation.

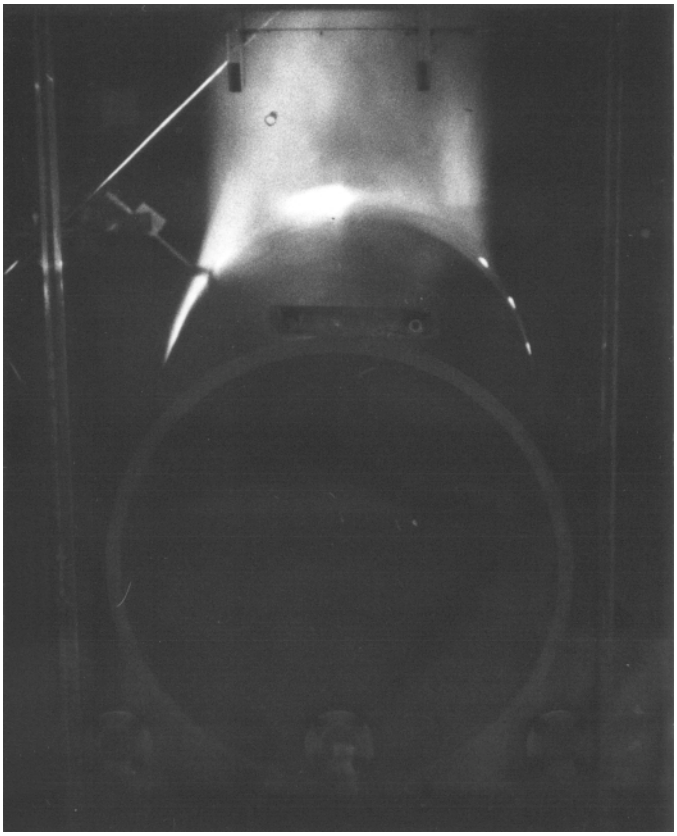

Image ID : CYL-46
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow around a cylinder with impulsive start (Ut/d = 54)
Notes : Wind-tunnnel experiment.
Visualized by smoke of titanium tetrachloride.
Cylinder diameter d = 62.8cm. R = 400000. Wind speed U = 10m/s.
t is the time after driving of the wind-tunnel.

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
Shape features : Cylinder, Separation.

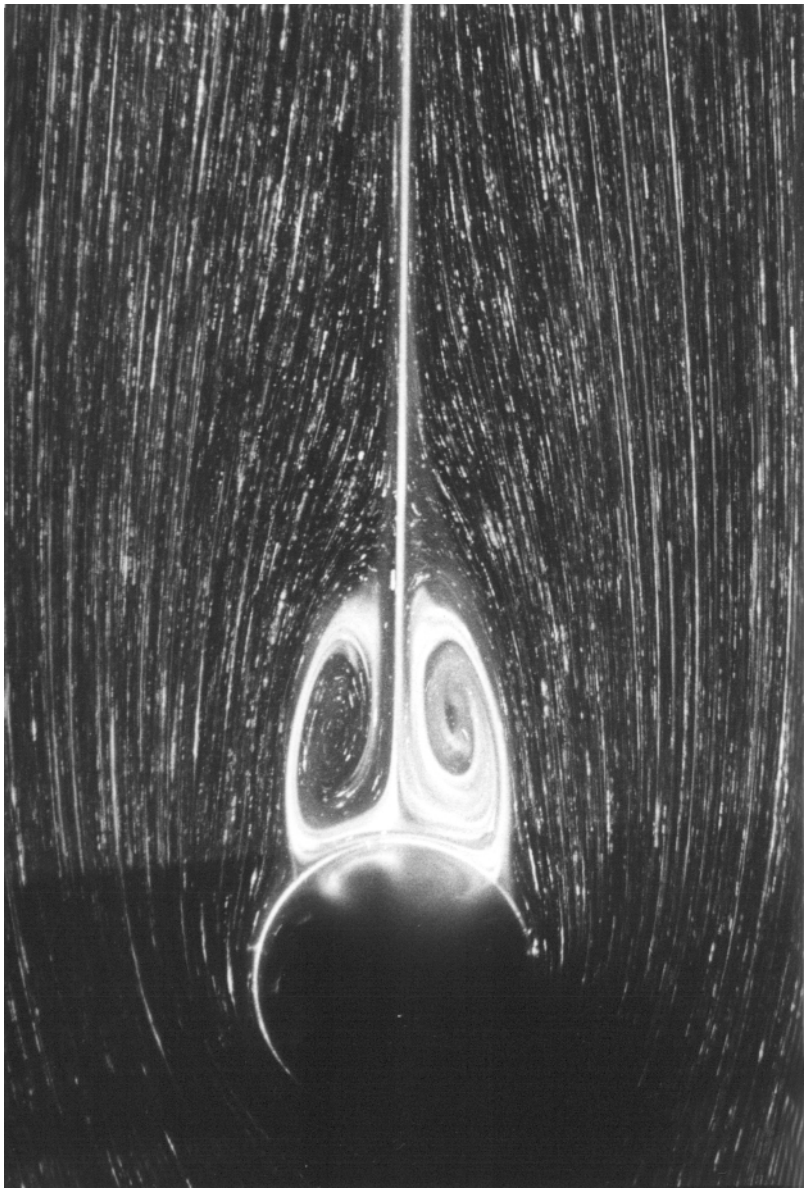

Image ID : CYL-47
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Streamline and streakline around a cylinder (Stationary flow)
Notes : Static watertank experiment.
Simultaneous visualizations and photographing of streamline pattern by suspending aluminum powder and streakline pattern by the electrolytic precipitation method.
Camera was fixed to the cylinder. R = 21.5.

Author : S. Taneda
Published in : 1985
Copyright : North-Holland
Reproduced from: S. Taneda: Theoretical and Applied Mechanics, ed. F.I. Niordson & N. Olhoff (North-Holland, Amsterdam, 1985) 399. S. Taneda:

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streamline, Streakline
Shape features : Cylinder, Spiral

Image ID : CYL-48
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow around a cylinder accelerated impulsively from a low speed motion
Notes : Static watertank experiment.
Accelerated from R = 21.5 to 149.
Simultaneous visualizations and photographing of streamline pattern by suspending aluminum powder and streakline pattern by the electrolytic precipitation method.

Author : S. Taneda
Published in : 1985
Copyright : North-Holland
Reproduced from: S. Taneda: Theoretical and Applied Mechanics, ed. F.I. Niordson & N. Olhoff (North-Holland, Amsterdam, 1985) 399. S. Taneda:

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streamline, Streakline
Shape features : Cylinder, Spiral

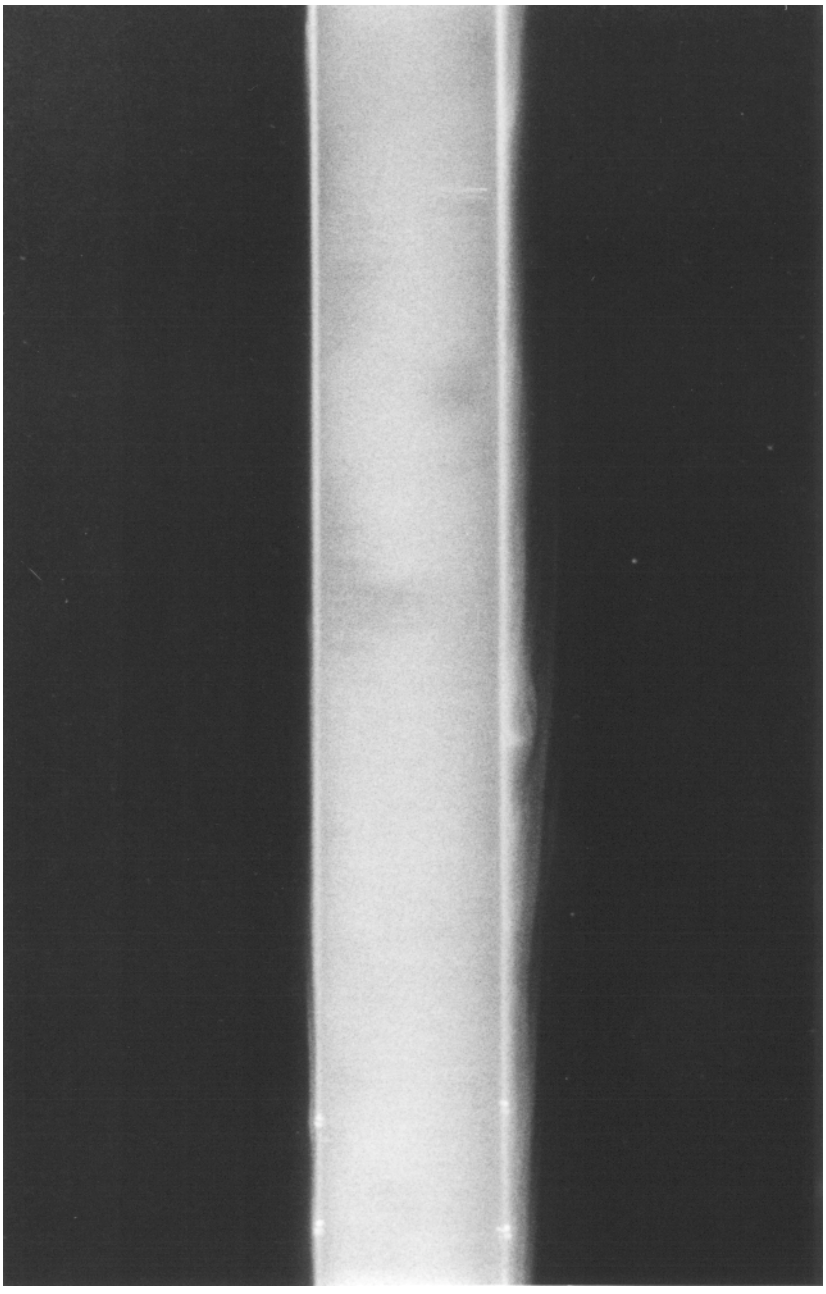

Image ID : CYL-49
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : A rotating cylinder in rest water (1.0s after the beginning of rotation)
Notes : Static watertank experiment.
Streakline visualized by the electrolytic precipitation method.
Cylinder diameter is 1cm. Rotating speed is 1 rps.

Author : S. Taneda
Published in : 1977
Copyright : Pergamon Press
Reproduced from: S. Taneda: Prog. Aerospace Sci. Vol.17, No4 (1977) 287.

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

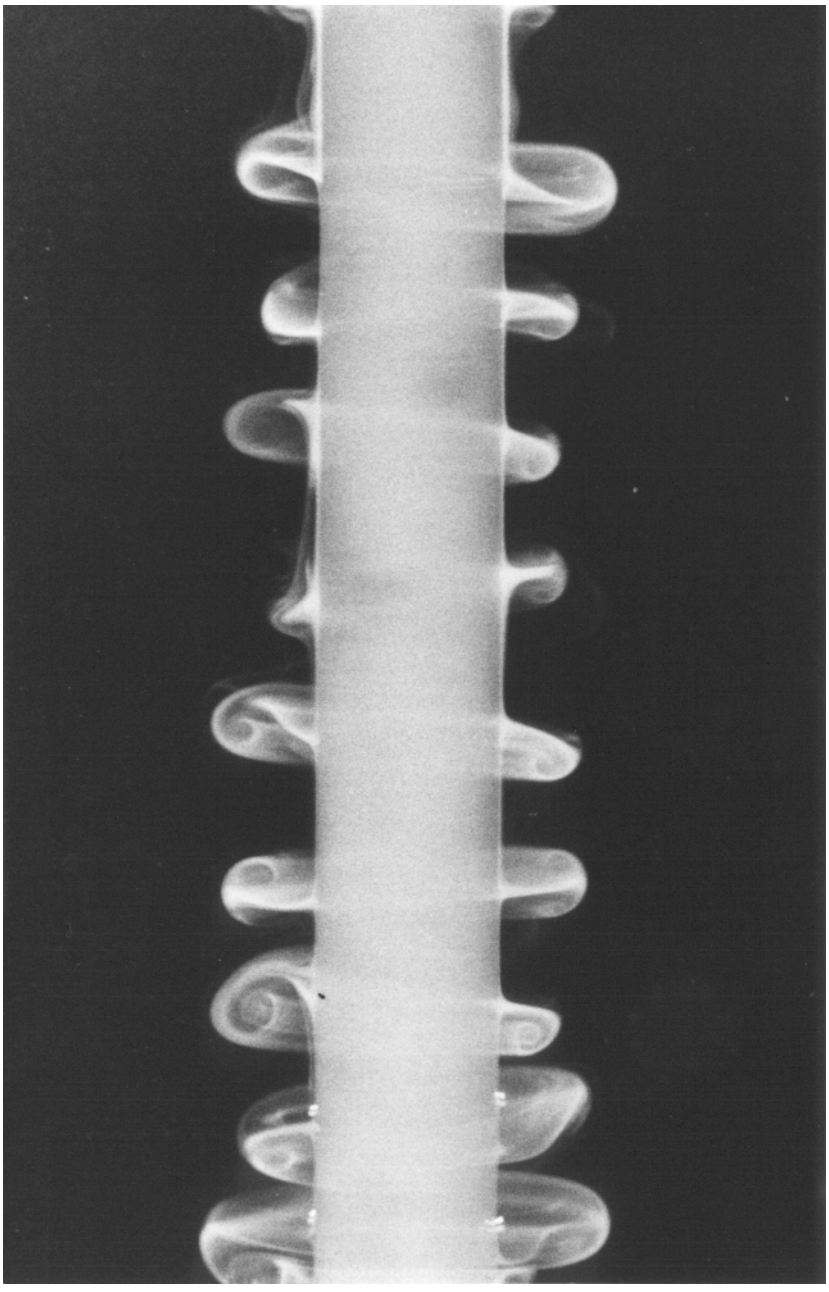

Image ID : CYL-50
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : A rotating cylinder in rest water (4.7s after the beginning of rotation)
Notes : Static watertank experiment.
Streakline visualized by the electrolytic precipitation method.
Cylinder diameter is 1cm. Rotating speed is 1 rps.

Author : S. Taneda
Published in : 1977
Copyright : Pergamon Press
Reproduced from: S. Taneda: Prog. Aerospace Sci. Vol.17, No4 (1977) 287.

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streakline
Shape features : Cylinder, Ring, Periodicity

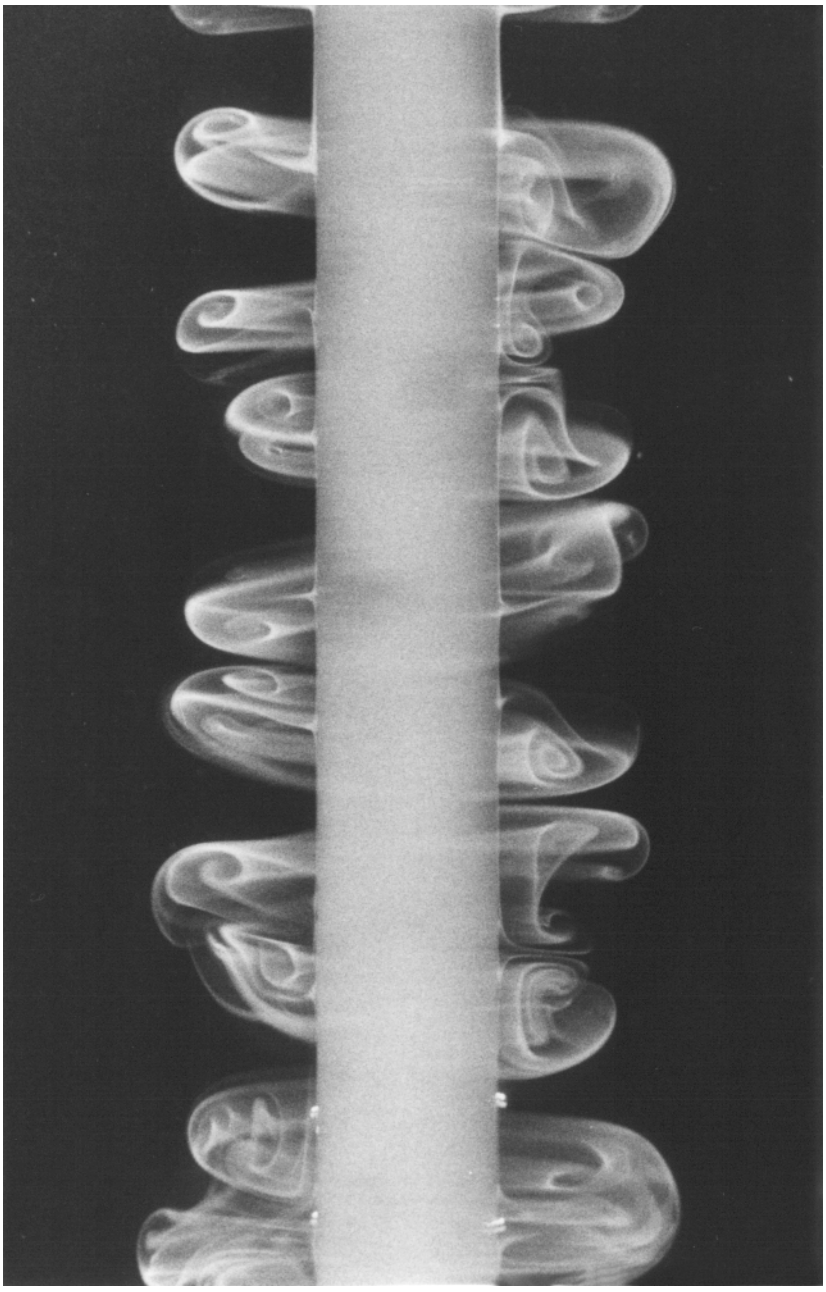

Image ID : CYL-51
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : A rotating cylinder in rest water (7.0s after the beginning of rotation)
Notes : Static watertank experiment.
Streakline visualized by the electrolytic precipitation method.
Cylinder diameter is 1cm. Rotating speed is 1 rps.

Author : S. Taneda
Published in : 1977
Copyright : Pergamon Press
Reproduced from: S. Taneda: Prog. Aerospace Sci. Vol.17, No4 (1977) 287

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streakline
Shape features : Cylinder, Ring, Periodicity

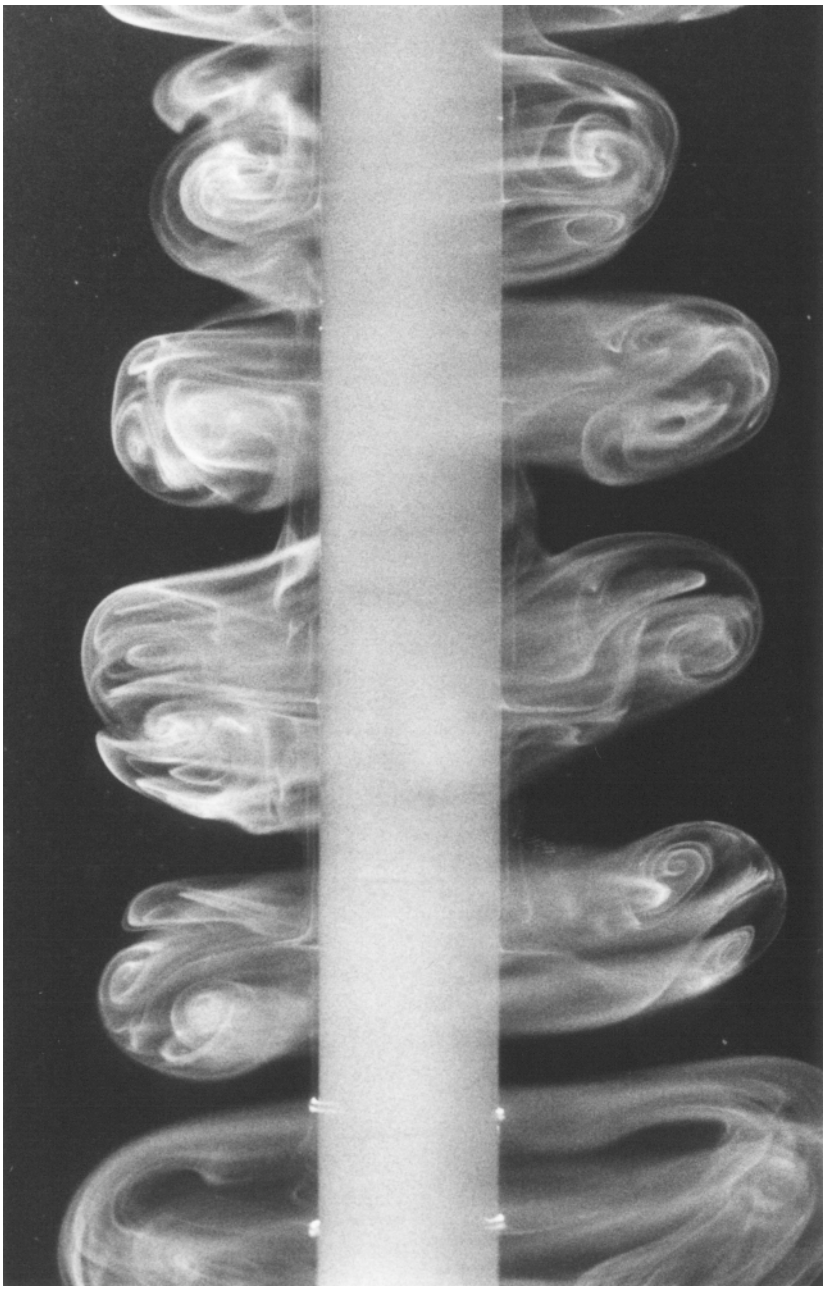

Image ID : CYL-52
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : A rotating cylinder in rest water (12.3s after the beginning of rotation)
Notes : Static watertank experiment.
Streakline visualized by the electrolytic precipitation method.
Cylinder diameter is 1cm. Rotating speed is 1 rps.

Author : S. Taneda
Published in : 1977
Copyright : Pergamon Press
Reproduced from: S. Taneda: Prog. Aerospace Sci. Vol.17, No4 (1977) 287

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streakline
Shape features : Cylinder, Ring, Periodicity

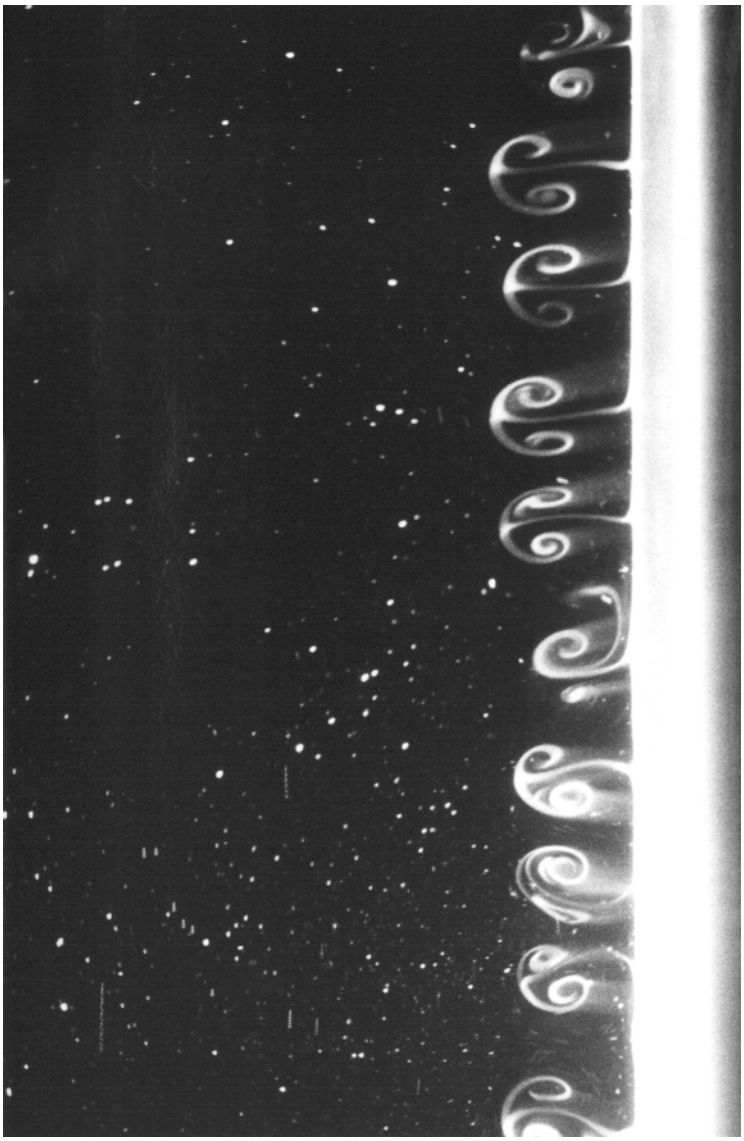

Image ID : CYL-53
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Boundary layer on a cylinder in rotatory oscillation in rest water
Notes : Static watertank experiment.
Streakline visualized by the electrolytic precipitation method.
Cylinder diameter is 3.2cm. The rotating axis is the cylinder axis.
Frequency was 0.10 Hz. Amplitude was 270 degree.
13.9s after the beginning of oscillation .

Author : S. Taneda
Published in : 1977
Copyright : Pergamon Press
Reproduced from: S. Taneda: Prog. Aerospace Sci. Vol.17, No4 (1977) 287

Research Field : Fluid dynamics
Expressed as : Tracer photograph, Streakline
Shape features : Cylinder, Ring, Periodicity

Image ID : CYL-54
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Vortex street behind a cylinder in lateral vibration (Streamline pattern)
Notes : Static watertank experiment.
Streamline pattern visualized by suspending aluminum powder.
d = 3cm. U = 25cm/s. R = 53. Frequency of cylinder vibration N = 0.6 Hz.
Nd/U = 0.072

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
Shape features : Cylinder, Spiral, Periodicity

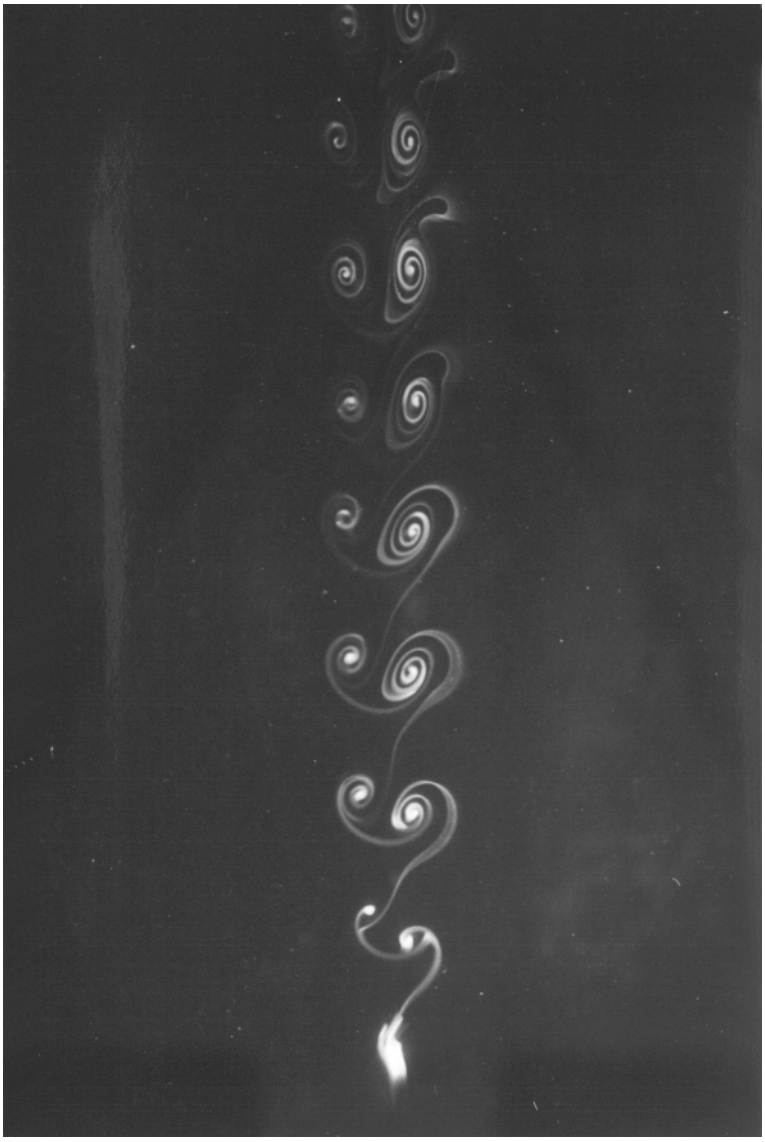

Image ID : CYL-55
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Vortex street behind a cylinder in lateral vibration (Streakline pattern)
Notes : Static watertank experiment.
Streakline pattern visualized by putting condensed milk on the cylinder surface.
Diameter d = 3cm. U = 23cm/s. R = 55. Frequency of cylinder vibration N = 0.52 Hz.
Nd/U = 0.068

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, Streakline
Shape features : Cylinder, Spiral, Periodicity

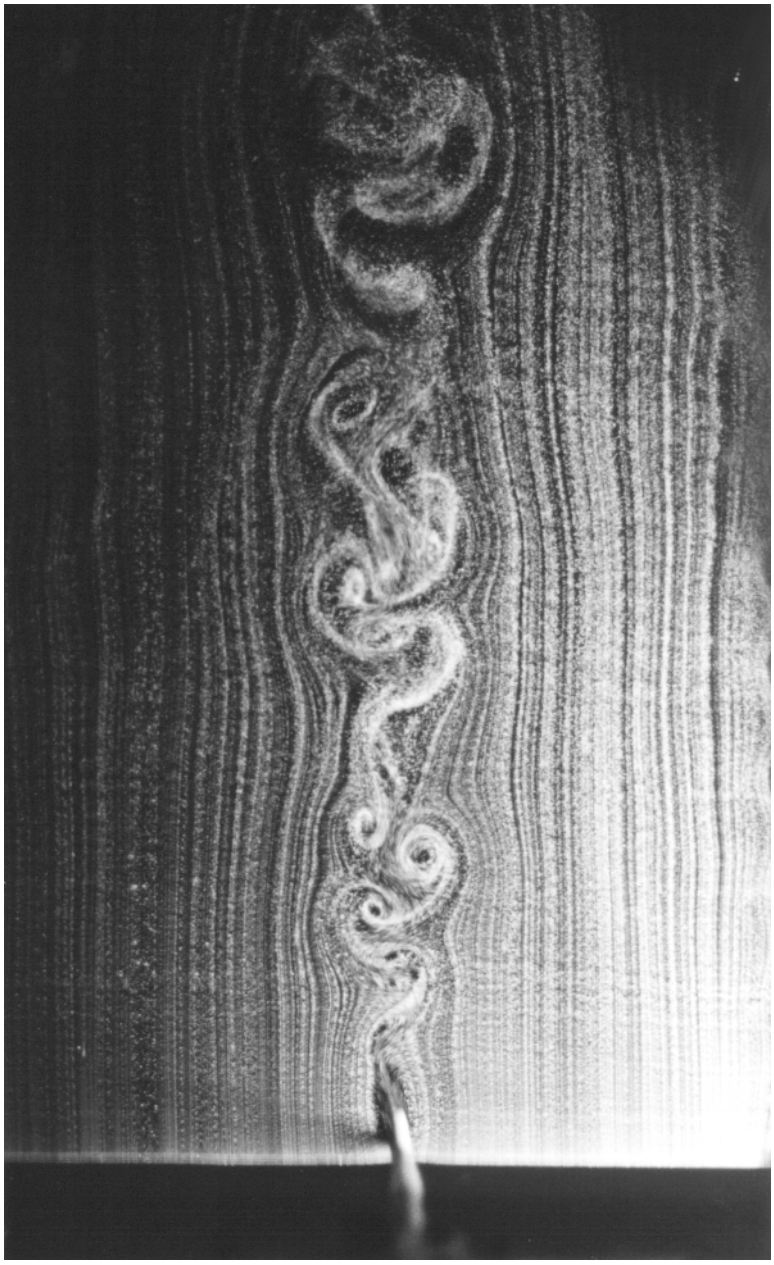

Image ID : CYL-56
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Chaotic behavor of the flow behind a cylinder in lateral vibration (Streamline pattern)
Notes : Static watertank experiment.
Streakline pattern visualized by hydrogen bubbles.
d = 5cm. Amplitude is 1cm. Frequency N = 0.6 Hz. R = 100. Nd/U = 0.12

Author : S. Taneda
Published in : 1968
Copyright : S. Taneda
Reproduced from: S. Taneda: Rep. Res. Inst. Appl. Mech., Kyusyu Univ., No.54 (1968) 211.

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

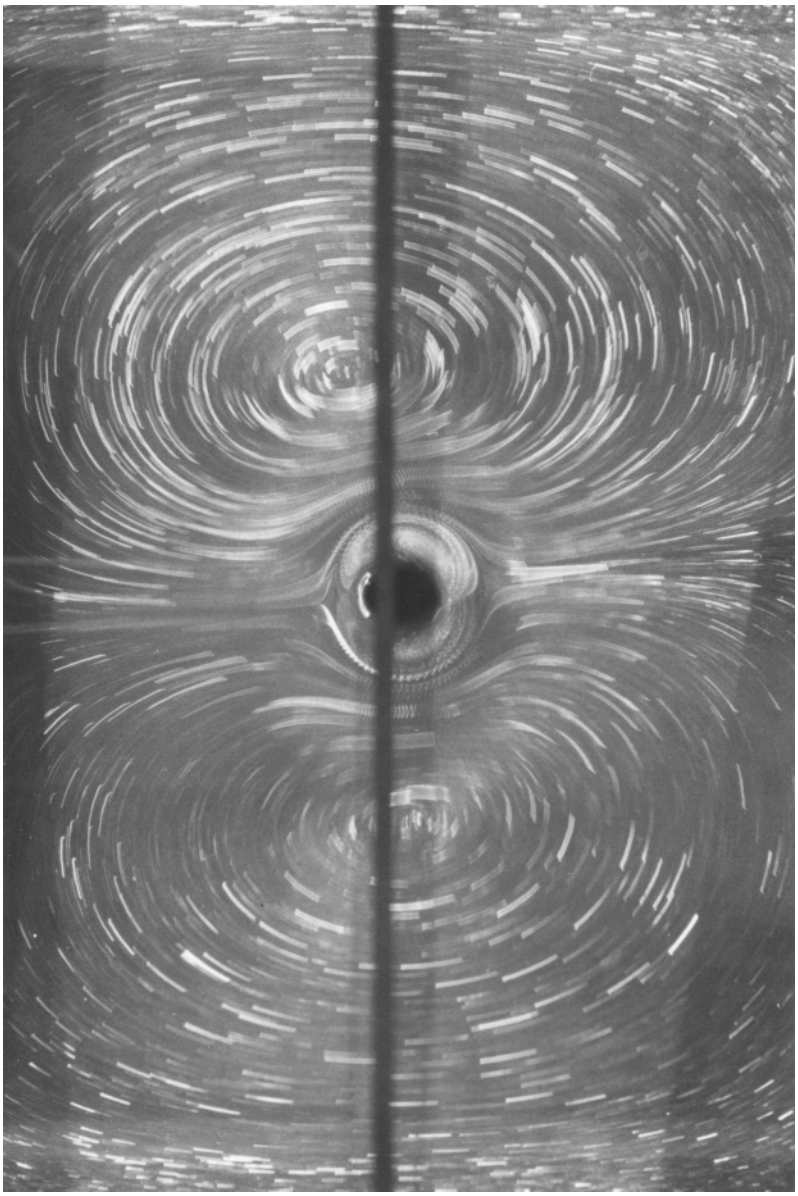

Image ID : CYL-57
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Two dimensional flow around a cylinder rotatory oscillation around an eccentric axis (δ=0.13)
Notes : Glycerine aqueous solution.
Streamline pattern visualized by suspending aluminum powder.
Thickness of the stokes layer. ν is the kinematic viscosity.
d is the diameter. N is the frequency.

Author : S. Taneda
Published in : 1980
Copyright :Physical Society of Japan
Reproduced from: S. Taneda: J. Phys. Soc. Jpn, Vol.49, No.5 (1980) 2038.

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

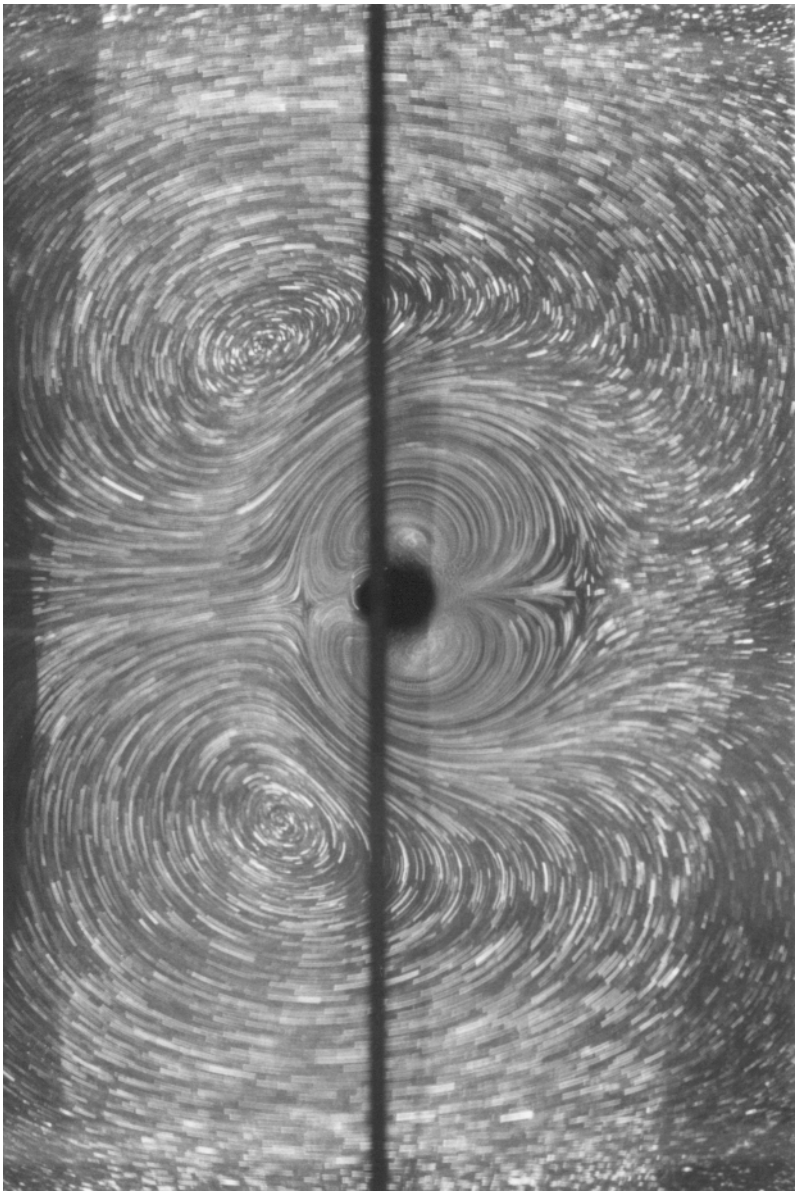

Image ID : CYL-58
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Two dimensional flow around a cylinder rotatory oscillation around an eccentric axis (δ=0.17)
Notes : Glycerine aqueous solution.
Streamline pattern visualized by suspending aluminum powder.
Thickness of the stokes layer. ν is the kinematic viscosity.
d is the diameter. N is the frequency.

Author : S. Taneda
Published in : 1980
Copyright :Physical Society of Japan
Reproduced from: S. Taneda: J. Phys. Soc. Jpn, Vol.49, No.5 (1980) 2038.

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

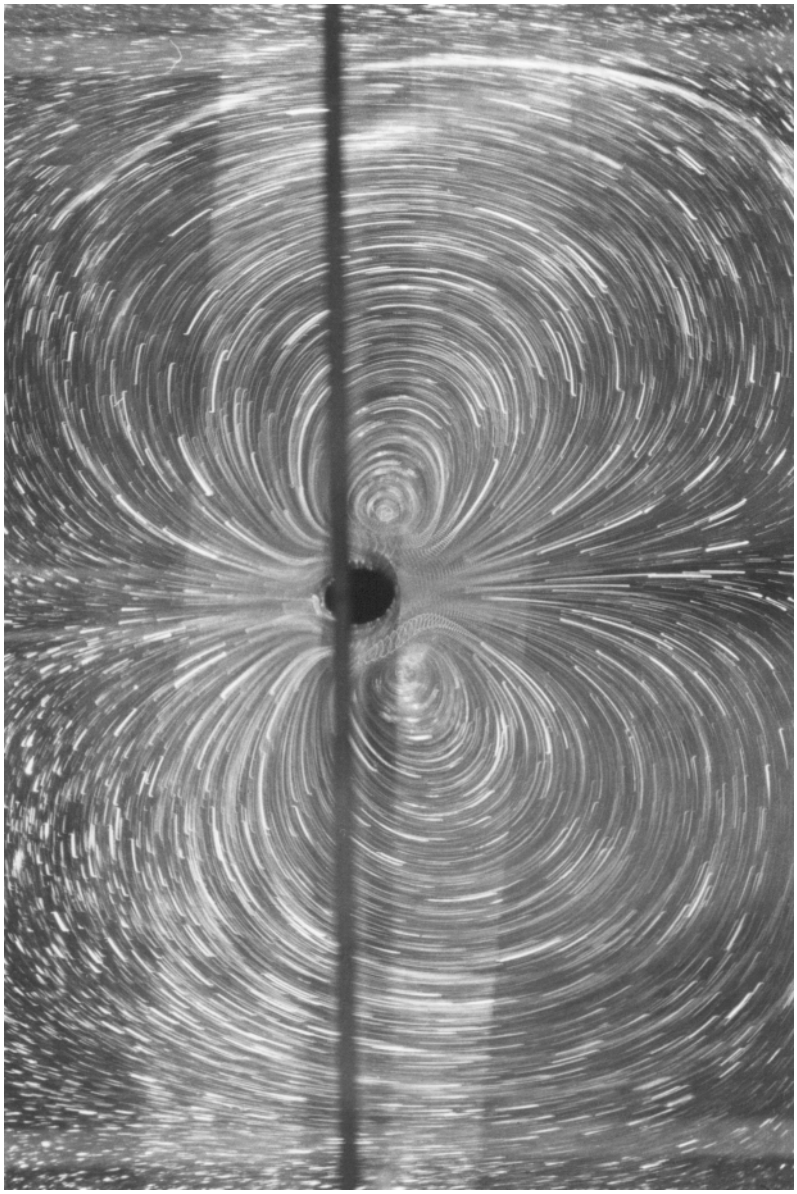

Image ID : CYL-59
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Two dimensional flow around a cylinder rotatory oscillation around an eccentric axis (δ=0.28)
Notes : Glycerine aqueous solution.
Streamline pattern visualized by suspending aluminum powder.
Thickness of the stokes layer. ν is the kinematic viscosity.
d is the diameter. N is the frequency.

Author : S. Taneda
Published in : 1980
Copyright :Physical Society of Japan
Reproduced from: S. Taneda: J. Phys. Soc. Jpn, Vol.49, No.5 (1980) 2038.

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

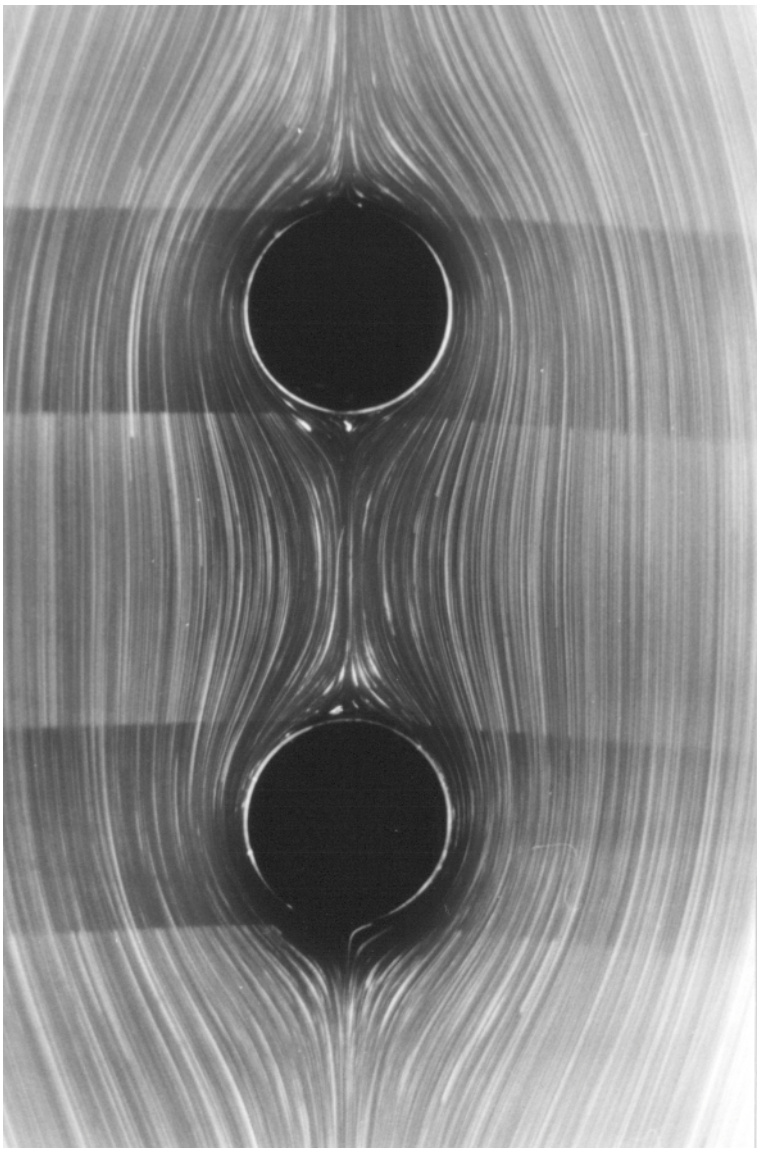

Image ID : CYL-60
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Extremely low speed flow around two cylinders arranged in the streamwise direction ($\varepsilon/d = 1.5$)
Notes : Glycerine.
Streamline pattern visualized by suspending aluminum powder.
Diameter d = 1cm. Clearance between the cylinders ε = 11.5cm
Reynolds number R = 0.008.

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 : Cylinder, Separation, Fore-and-aft symmetry

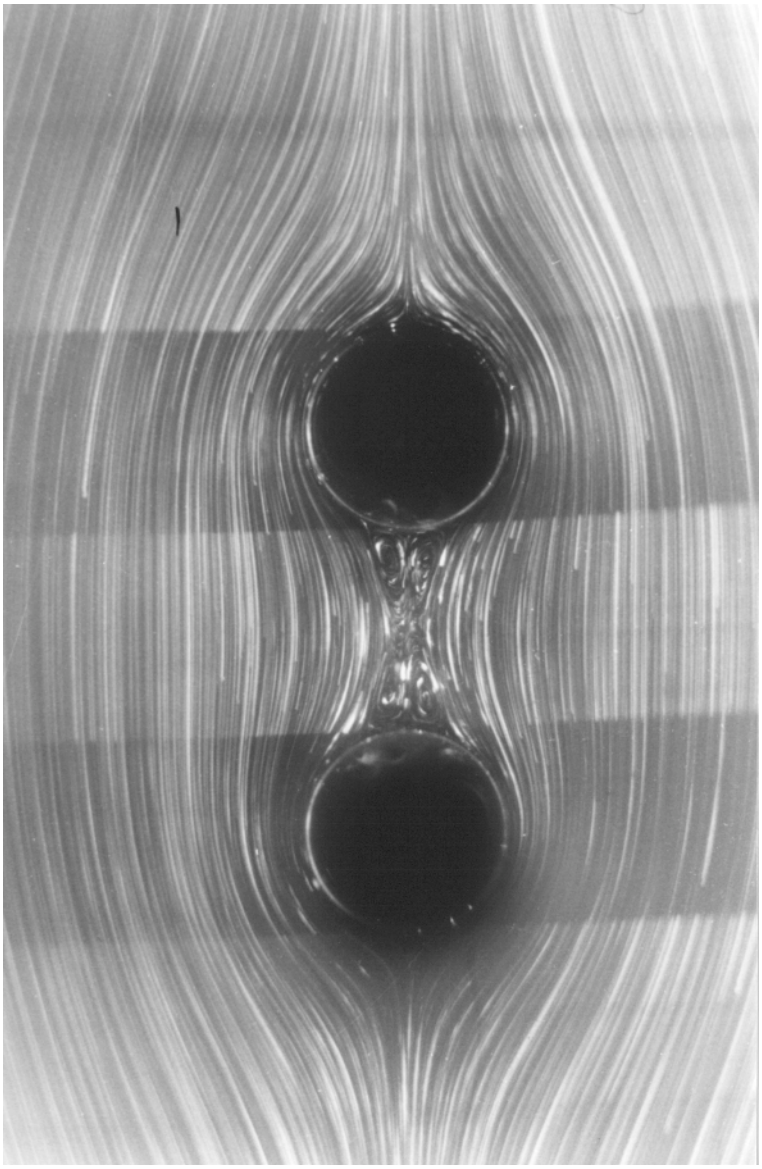

Image ID : CYL-61
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Extremely low speed flow around two cylinders arranged in the streamwise direction
(ε /d = 1.0)
Notes : Glycerine.
Streamline pattern visualized by suspending aluminum powder.
Diameter d = 1cm. Clearance between the cylinders ε = 1cm,
Reynolds number R = 0.0084.

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 : Cylinder, Separation, Fore-and-aft symmetry

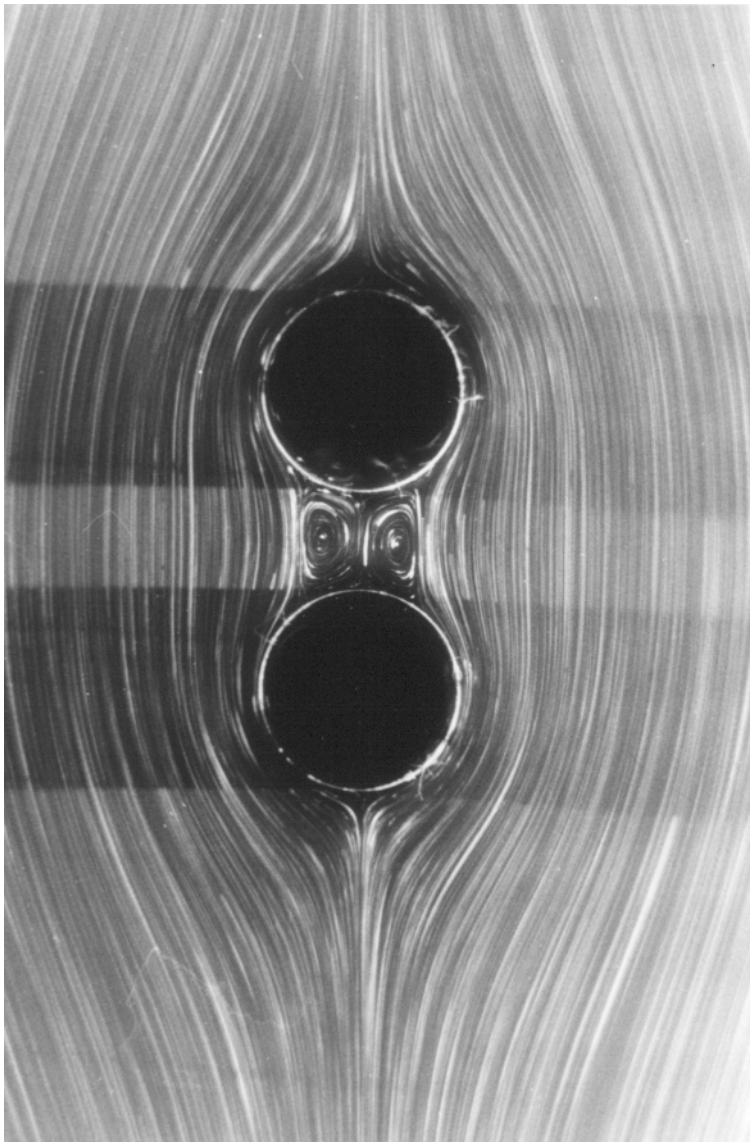

Image ID : CYL-62
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Extremely low speed flow around two cylinders arranged in the streamwise direction ($\varepsilon/d = 0.5$)
Notes : Glycerine.
Streamline pattern visualized by suspending aluminum powder.
Diameter d = 1cm. Clearance between the cylinders ε = 0.5cm.
Reynolds number R = 0.0093.

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 : Cylinder, Separation, Fore-and-aft symmetry

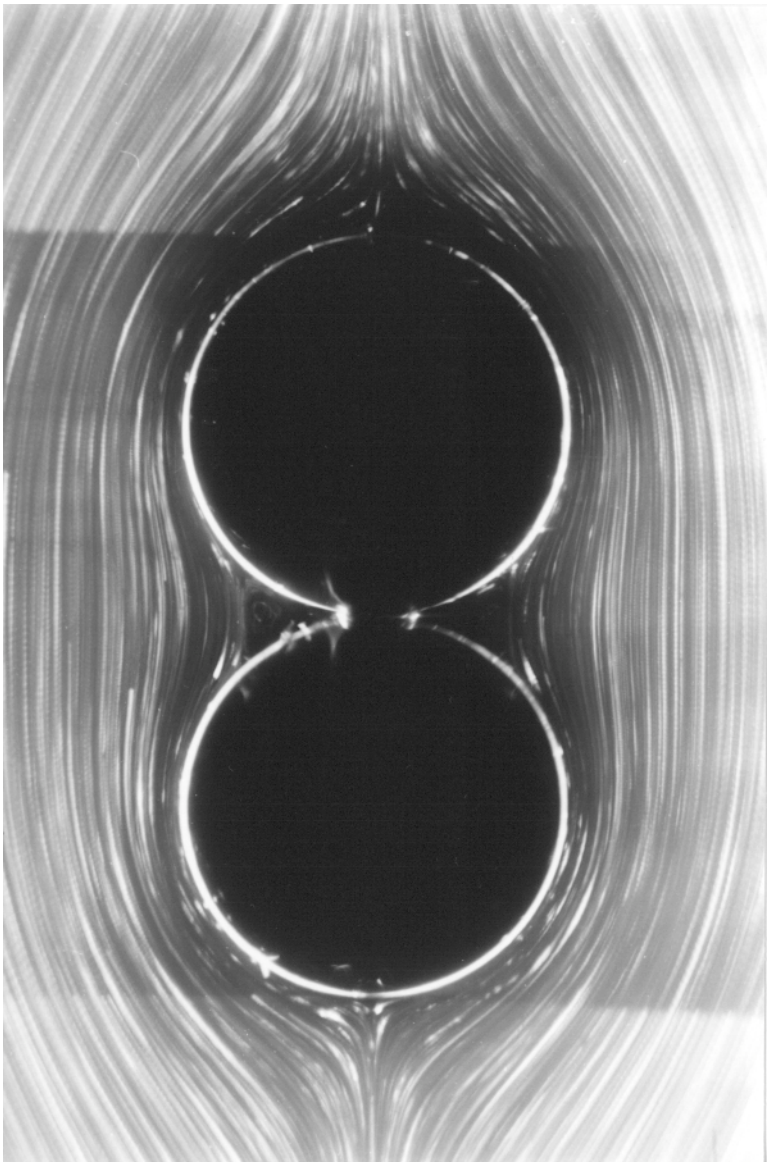

Image ID : CYL-63
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Extremely low speed flow around two cylinders arranged in the streamwise direction
(ε/d = 0)
Notes : Glycerine.
Streamline pattern visualized by suspending aluminum powder.
Diameter d = 1cm. Clearance between the cylinders ε = 0.
Reynolds number R = 0.020.

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 : Cylinder, Separation, Fore-and-aft symmetry

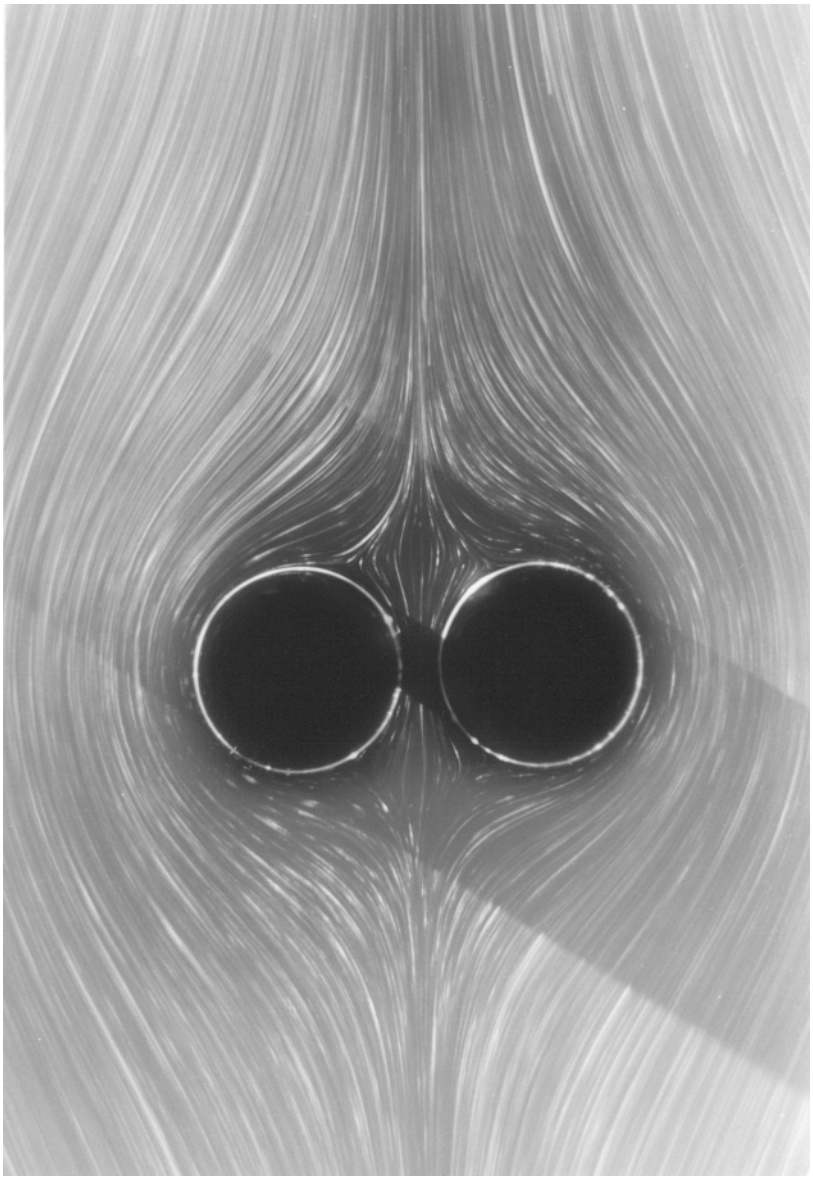

Image ID : CYL-64
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Extremely low speed flow around two cylinders arranged in the streamwise direction ($\varepsilon/d = 0.2$)
Notes : Glycerine.
Streamline pattern visualized by suspending aluminum powder.
Diameter d = 1cm. Clearance between the cylinders ε = 0.2cm.
Reynolds number R = 0.011.

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 : Cylinder, Separation, Fore-and-aft symmetry

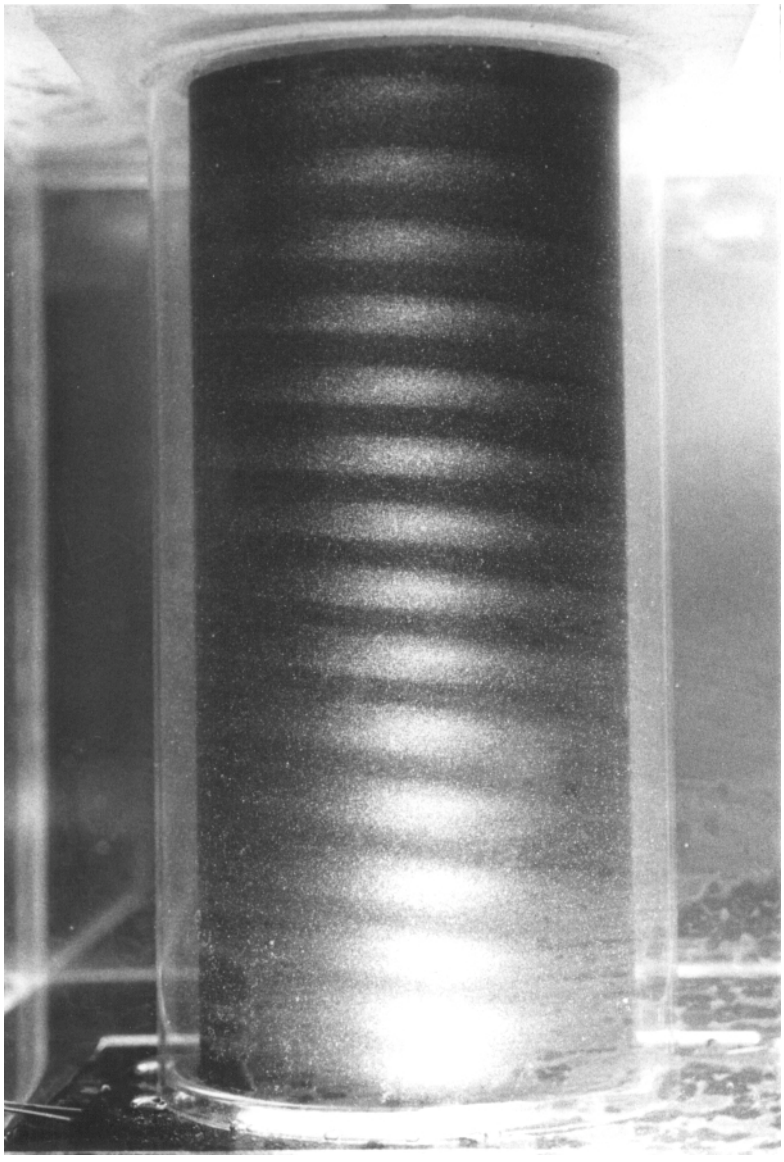

Image ID : CYL-65
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow between two rotating cylinders ($\nabla\delta/\nu = 125$)
Notes : Water. Co-axial two cylinders.
The outer cylinder is stationary. The inner cylinder is rotating.
Clearance between the cylinders $\delta = 9$cm.
Rotational velocity of the inner cylinder $v = 1.39$cm/s.
The flow visualized by suspending aluminum powder.

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
Shape features : Cylinder, Regularity

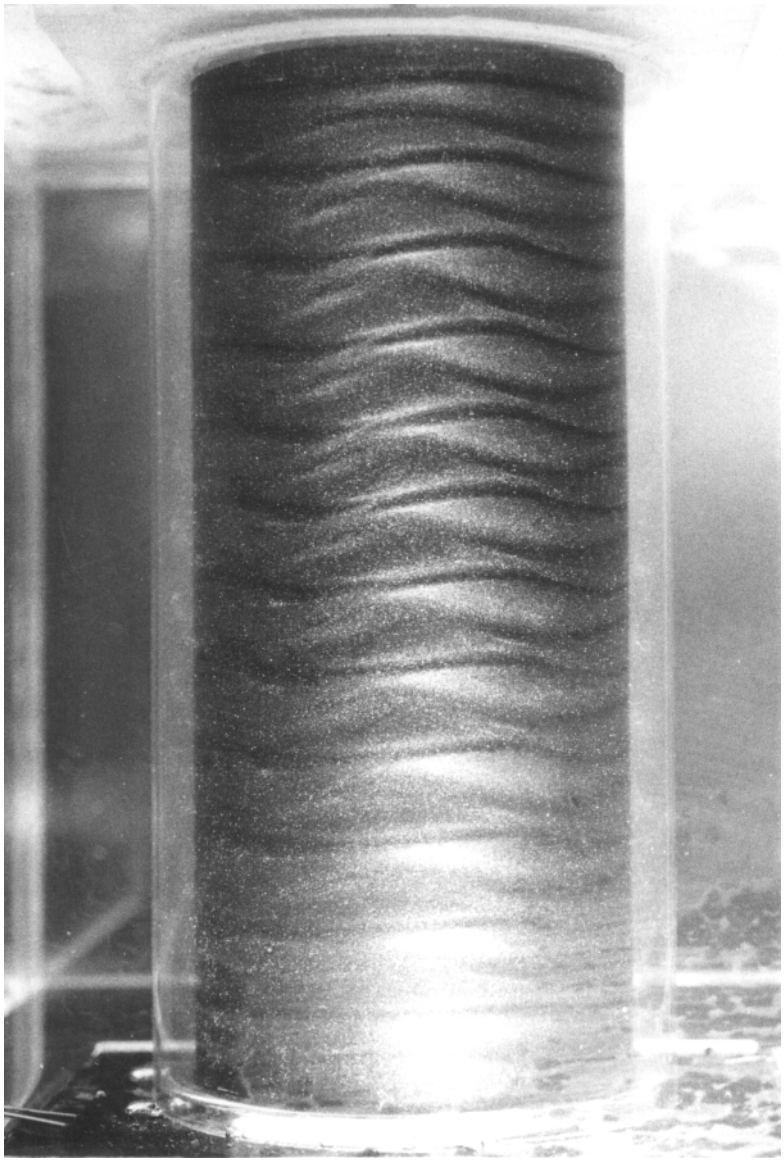

Image ID : CYL-66
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow between two rotating cylinders ($(\nabla\delta/\nu = 550$)
Notes : Water. Co-axial two cylinders.
The outer cylinder is stationary. The inner cylinder is rotating.
Clearance between the cylinders δ = 9cm.
Rotational velocity of the inner cylinder v = 6.11cm/s.
The flow visualized by suspending aluminum powderWater.

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
Shape features : Cylinder, Wave

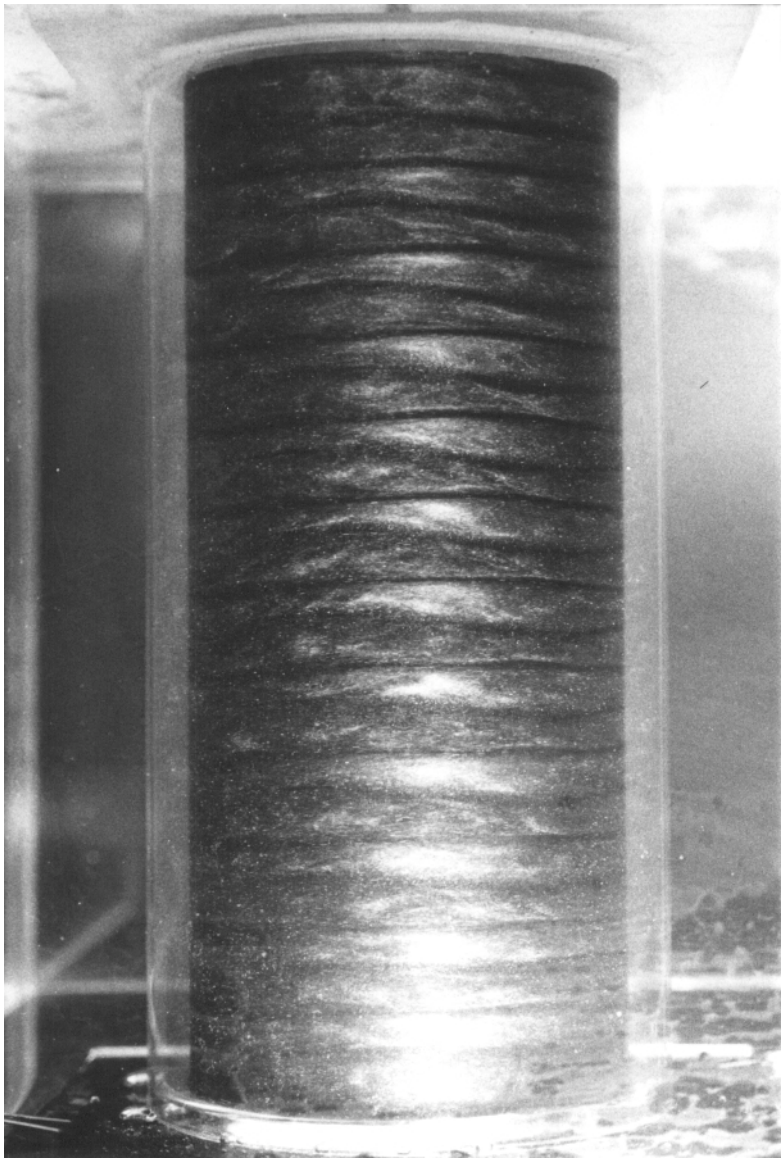

Image ID : CYL-67
Data Base Name : FLOW-VIS
Input by : S. Taneda
Input on y/m/d : 1998. 11. 25
Image Title : Flow between two rotating cylinders ($\nabla\delta/\nu = 1600$)
Notes : Water. Co-axial two cylinders.
The outer cylinder is stationary. The inner cylinder is rotating.
Clearance between the cylinders $\delta = 9$cm.
Rotational velocity of the inner cylinder v = 17.8cm/s.
The flow visualized by suspending aluminum powderWater.

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
Shape features : Cylinder, Irregularity