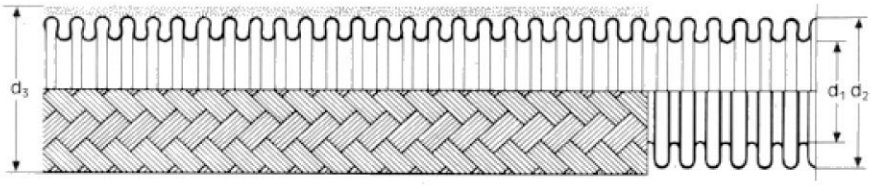
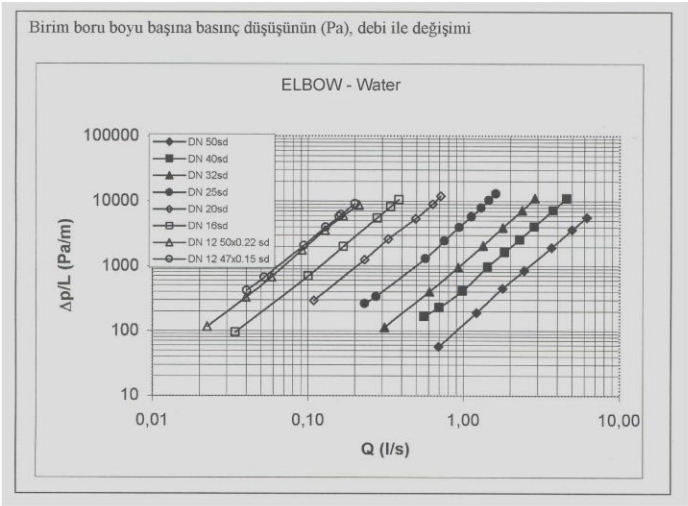
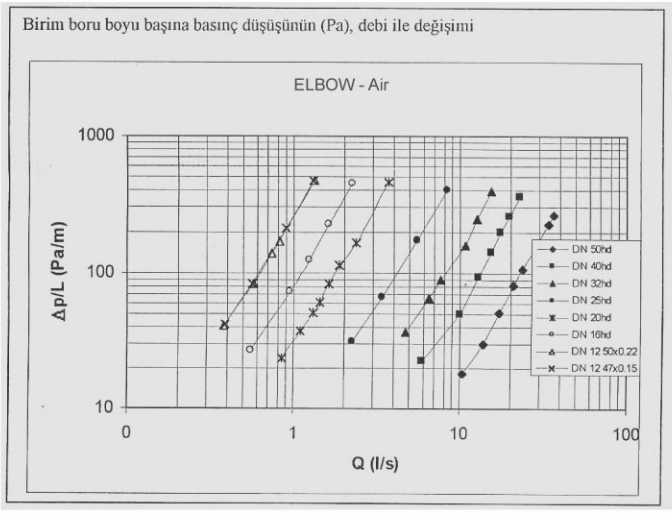
ISO 9001:2000



Pressure Drops at the metal flexible hoses:

In the experiments with water/air, below in the graphics, pressure loss (Pa) per unit length of pipe is mentioned with the exchange of flow rate (lt/sc) of water/air inside the pipe.

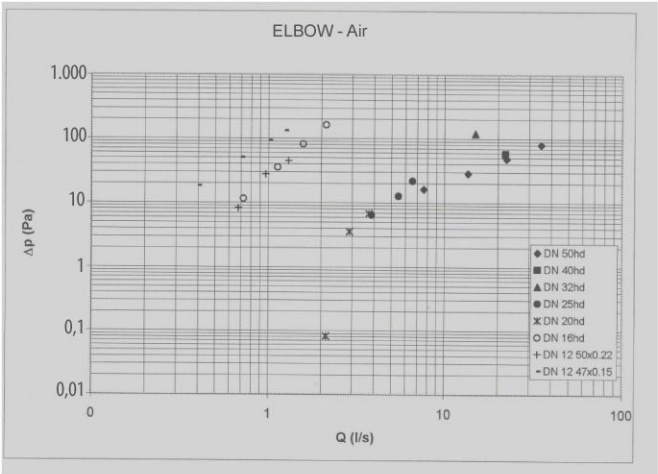




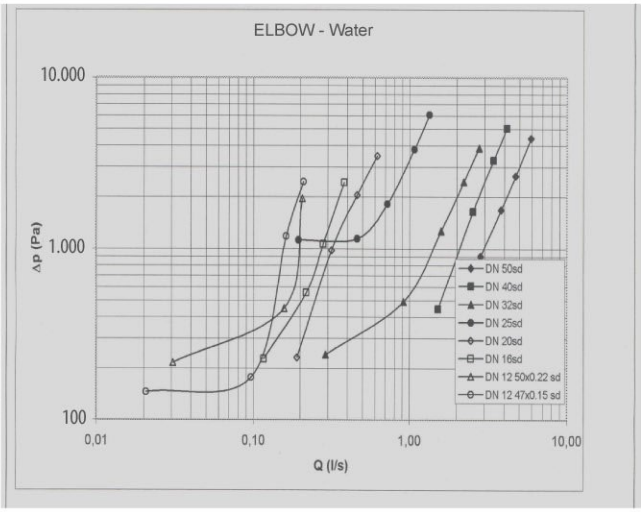
Pressure Loss for Flexible Metal Hoses with minimum bending radius:

Find below the medium pressure drop calculation for one pc 90° elbow; which has been found by deducting pressure decrease of the flexible curly hose while it is straight, from the pressure decrease of the hoses at 90° twist on the minimum twist diameter

AIR



WATER



Experiments approved by Istanbul Technical University

Exchange of Coefficients of continuous load loss to Number (Re)

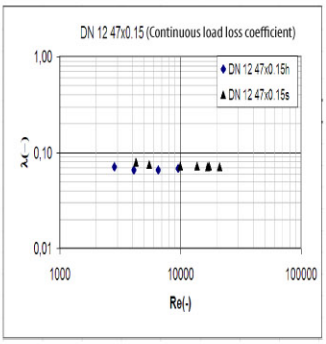
Continuous load loss coefficient (Hose friction coefficient) is defined as λ.

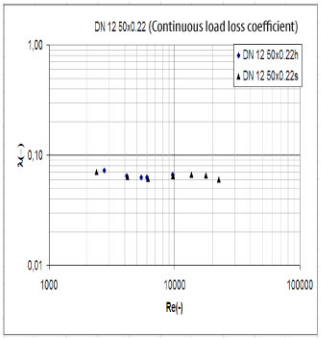
$$\lambda = \frac{\Delta P/(pg)}{v^2/(2g)}$$

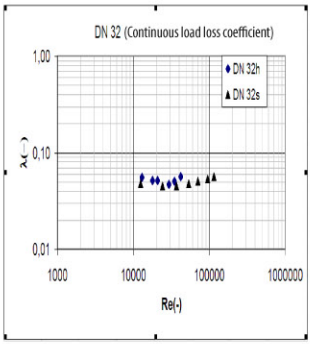
In this formula Δp defines the pressure drop b/w inlet and outlet of the flexible hose (Pa); p defines the volume of fluid (kg/m³); V defines the velocity of fluid (m/sc); g acceleration gravity. (m/sc²) Reynold number is defined as Re in this formula.

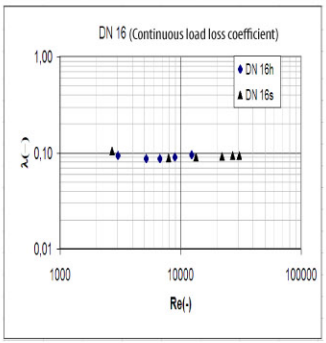
$$Re = VD/v$$

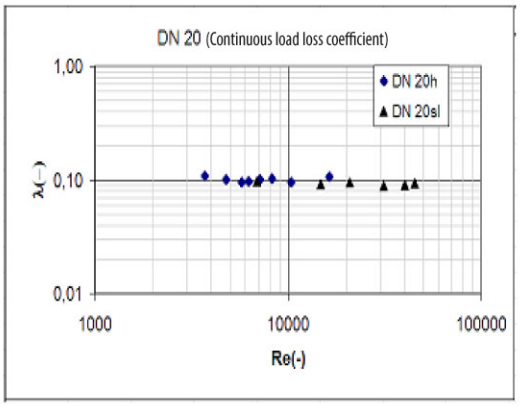
D is the nominal diameter of the hose; v is kinematical viscosity of fluid (m²/sn). Below on the charts; λ-Re variation is shown for different flexible hose types by evaluating the data from the experiment done by water and air.

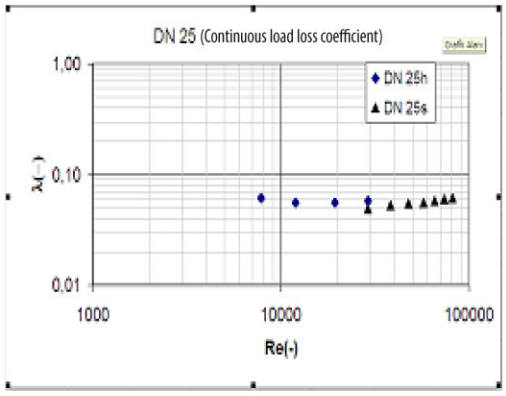


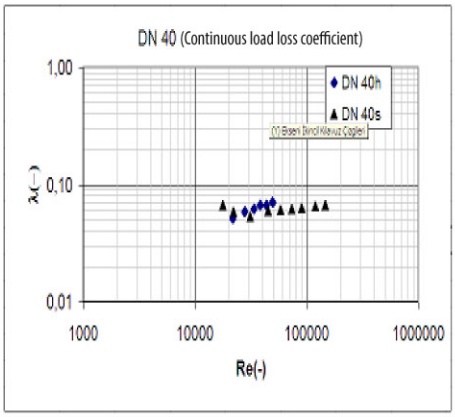


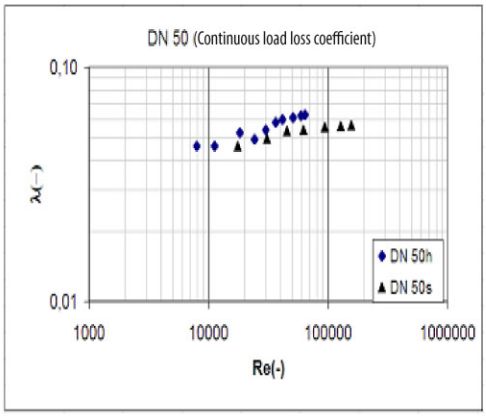


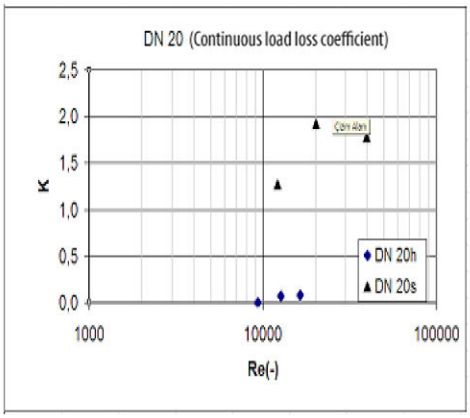


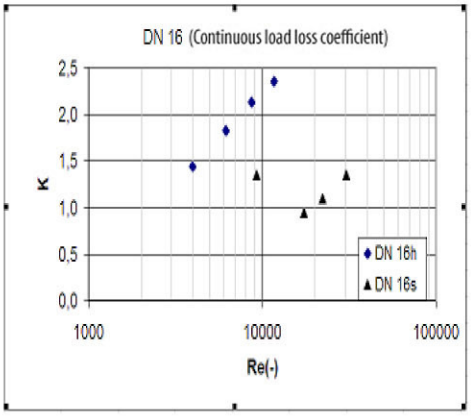


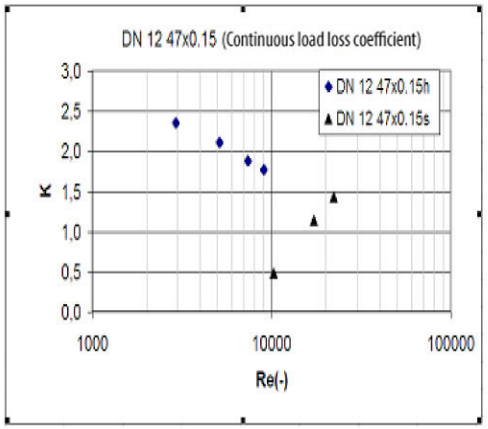


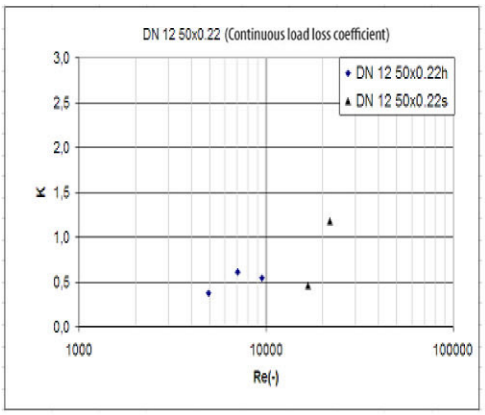


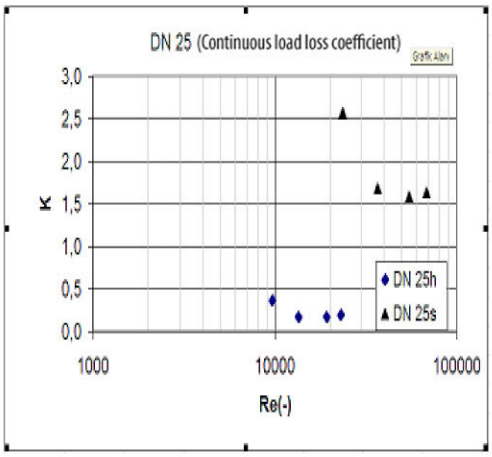


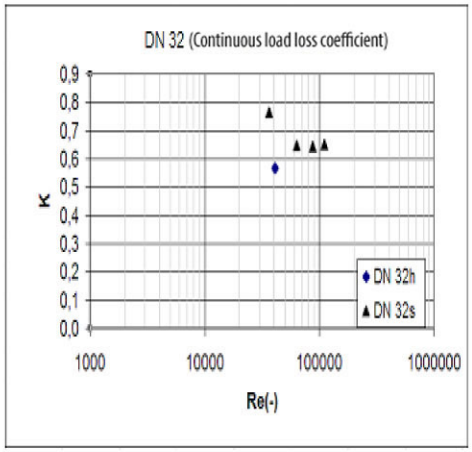

DN 20 (Continuous load loss coefficient)
K
Re(-)
DN 20h
DN 20s

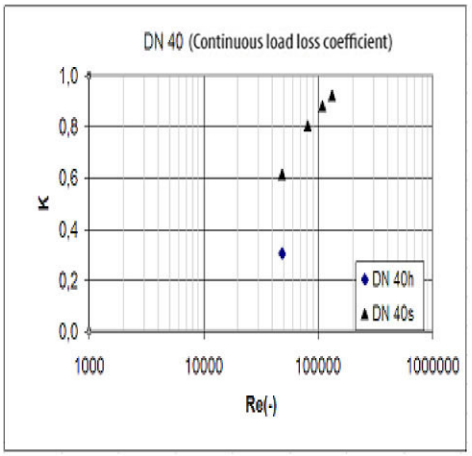

DN 16 (Continuous load loss coefficient)
K
Re(-)
DN 16h
DN 16s

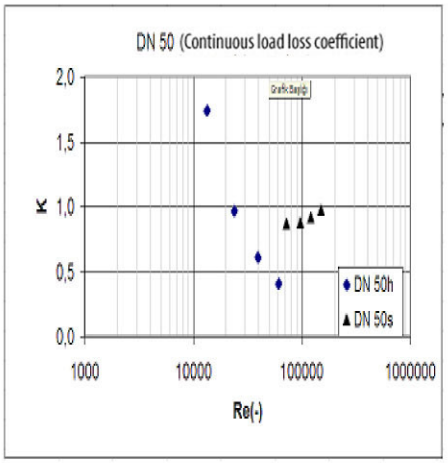

DN 12 47x0.15 (Continuous load loss coefficient)
K
Re(-)
DN 12 47x0.15h
DN 12 47x0.15s


DN 12 50x0.22 (Continuous load loss coefficient)
K
Re(-)
DN 12 50x0.22h
DN 12 50x0.22s


DN 25 (Continuous load loss coefficient)
K
Re(-)
DN 25h
DN 25s


DN 32 (Continuous load loss coefficient)
K
Re(-)
DN 32h
DN 32s


DN 40 (Continuous load loss coefficient)
K
Re(-)
DN 40h
DN 40s


DN 50 (Continuous load loss coefficient)
K
Re(-)
DN 50h
DN 50s