

P3222

FLOW AROUND A BEND

INTRODUCTION

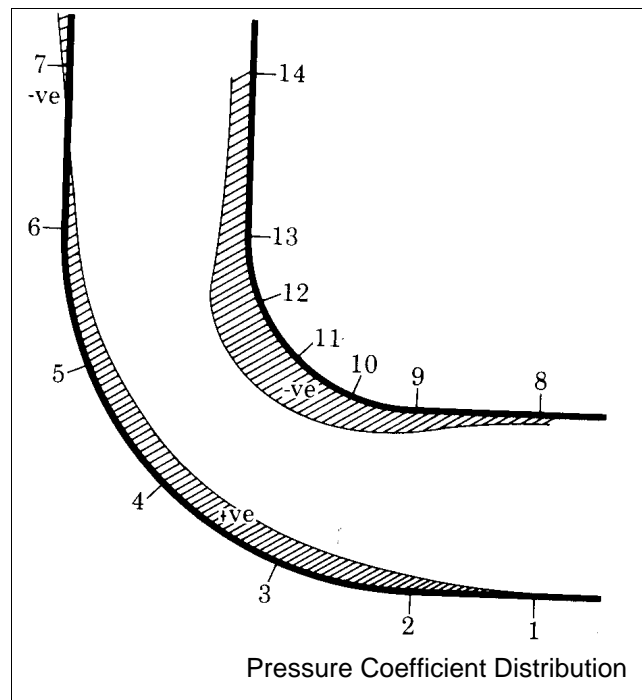
Cussons P3222 Flow Around A Bend Apparatus is an additional experiment for use with the basic P3200 Air Flow Bench, which allows the student to investigate the pressure distribution along the inner and outer walls of a bend in ductwork of rectangular cross-section.

DESCRIPTION

The unit is in two parts, a straight section followed by a regular 90° bend, in which the upper and lower sections are constructed from black acrylic material while the sides are of clear material. A cross section through the duct gives a height of 60 mm and a depth of 50 mm. Various tapping points are provided in both the upper and lower surfaces of the bend for connection to the P3202 Multitube Manometer which is a necessary accessory for this experiment.

The apparatus is designed for use on the working surface of the P3200 Air Flow Bench and is connected by hose to the 70 mm dia. 'blown' experiment duct on the fan outlet. However, it may be used as a stand alone unit by connecting it to any suitable fan with an air supply of 500 litres/sec. at a pressure of 600 Pascals and using Cussons P3202 Multitube Manometer.

TYPICAL RESULTS



Air Velocity is measured by a traversing pitot static tube, supplied with the basic P3200 bench, which is connected to the large, dual, sloping manometer. A plot of typical results which can be obtained from the experiment is shown in the above diagram.