

## **DEVELOPMENT OF A METHOD FOR DETERMINING MICRO-LEAKS AND VOLUMETRIC EFFICIENCY IN PNEUMATIC CYLINDERS**

**PIOTR OSIŃSKI & PIOTR CEPENDA**

Institute of Machine Design and Operation, Wrocław University of Technology, Wrocław, Poland

### **ABSTRACT**

Tightness is one of the most important feature of any hydraulic or pneumatic component. Proper operation and efficiency dependent on it. This paper describes the new method for internal tightness measurement for pneumatic cylinders. Thanks to its simple design it is possible to perform fast test operations with a high quality. Versatility allows testing in few configurations to get the optimum results. Method can be successfully applied in mass production processes.

**KEYWORDS:** Micro-Leaks, Pneumatic Cylinders, Volumetric Efficiency