

Abstract

The invention relates to a rotary valve, comprising: a valve body provided with a first group of flow channels, a second group of flow channels and a third group of flow channels, ports of the first group of flow channels, the second group of flow channels and the third group of flow channels are disposed on a surface of the valve body; and a valve sleeve sleeved coaxially hermetically outside the valve body, and the valve sleeve is evenly opened with a plurality of through-holes, and an inner end of each through-hole is provided with a vertical groove extending up and down along an inner wall of the valve sleeve, the vertical groove is divided into three sections along the vertical direction, which communicate with the ports of the first group of flow channels, the second group of flow channels and the third group of flow channels, respectively, the first group of flow channels are in a working state, a switching valve is provided at the through-hole, and the switching valve switches one group of the second group of flow channels and the third group of flow channels into the working state. The invention also discloses a pressure swing adsorption device and a method for recovering component with weaker adsorbability from a gas mixture using the pressure swing adsorption device.

Fig. 1