

OXYGEN CONCENTRATOR

Abstract

As an apparatus to prevent the excess adsorption of oxygen molecules caused by excess supply of raw material air and the reduction in the level of generated oxygen caused by concentration of argon, which occur when a predetermined value of an oxygen supply flow rate is in a low flow rate zone, to suppress the electric power consumption and to stably drive a compressor, the present invention provides an oxygen concentrator that is a pressure swing adsorption-type oxygen concentrator equipped with; at least one adsorption bed filled with an adsorbent capable of selectively adsorbing nitrogen relative to oxygen, an air supply device to supply compressed air to the adsorption bed, a flow channel switching device to repeat at a predetermined timing an adsorption step to supply air from the air supply device to the adsorption bed to isolate concentrated oxygen and a desorption step to depressurize the adsorption bed to regenerate the adsorbent therein, and a flow rate setting device to set a volume of concentrated oxygen supplied to a user; comprising an exhaust pipe channel equipped with a leak valve in a flow channel between the air supply device and the adsorption bed to release a part of compressed air that is to be supplied to the adsorption bed into atmosphere.

Fig. 4