

The invention relates to a method and installation for the production of noble gases and oxygen by means of cryogenic air distillation. The method of producing noble gases and oxygen by means of distillation in a column system comprising at least one medium-pressure column (K01), one low-pressure column (K02) and one auxiliary column (K05) consists in: drawing off an intermediary flow discharge (LR1) at an intermediary level of the medium-pressure column and transferring same to the low-pressure column; drawing off a flow discharge (LR2) from the medium-pressure column, which is enriched in oxygen in relation to the intermediary flow discharge, and transferring same to the tank of the auxiliary column; drawing off a nitrogen-rich flow discharge (WN2) from the head of the low-pressure column; drawing off an oxygen-rich liquid flow discharge (CL) from the tank of the low-pressure column by way of a product, optionally after a vaporisation step in order to form a gaseous product; and drawing off an oxygen-enriched flow discharge (PURGE) from the auxiliary column, which is also enriched in krypton and xenon in relation to the second oxygen-enriched flow discharge and transferring a liquid flow discharge (5, 15) containing at least 78 % mol. of nitrogen as a reflux to the auxiliary column.