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MODERNISING OF THE COLUMNED DIFFUSIVE DEVICE

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In sugar-refinery industry, the columned pullers, which consist of a diffusive column and cossette mixer, are widely used to derive of diffusive juice.

The diffusive column consists of a vertical cylindrical case with hollow pipe shaft plac in it a not from the outside of which lobes are tighten. Lobes and counterlobes create a lifting mechanism for a swaft that comes from below the columned device through the distributive gear that turns together with pipe shaft over a strainer surface. From above the sugarfree beet swaft moves through the special unloading device.

The fluid for sucrose extraction comes from upper part of columned puller and is collected from below through a strainer surface.

Deficiency of such diffusive device is that despite big metal consumption of the device considerable part of is doesn't participate in diffusive process (approximately 1/3 volumes of the device is occupied by the hollow shaft). Besides as a result of operation of a body loading force, there is considerable pressure on the upper leg of hollow pipe shaft that reduces operation time of the upper basic node, and consequently the reliability of device maintenance.

In the fundamentals of our work is the problem of increasing specific duty of the device, making operations more reliable and lowering specific metal consumption at the expense of using internal space of pipe shaft with firmware transport system at which puller becomes double-thread.

The upgraded columned diffusive device consists of a vertical cylindrical case with counterlobes and mobile pipe shaft plac inside it and attached lobes. Outside it from above there is a cylindrical case for unloading and below the device for bagasse.

It is agreed to put fix vertical strut with the counterlobes attach to it in side pipe shaft, and place pipe shaft lobes outside it for transportation of juice chips mixtures in the heel of pipe shaft that is connected by ports with the distributive gear of juice chips mixtures plac.

As a result of using the offer engineering decision, the capacity of a puller increases greatly (to one third) at the same sizes of apparatus and increasing reliability of device operation owing to the reduction of the load to the upper basic node.

KEY WORDS

diffusive device, puller, pipe shaft, lobe

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