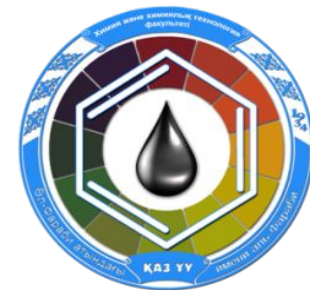




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APPARATUS OF INSTALLATIONS WITH CIRCULATING BALL CATALYST

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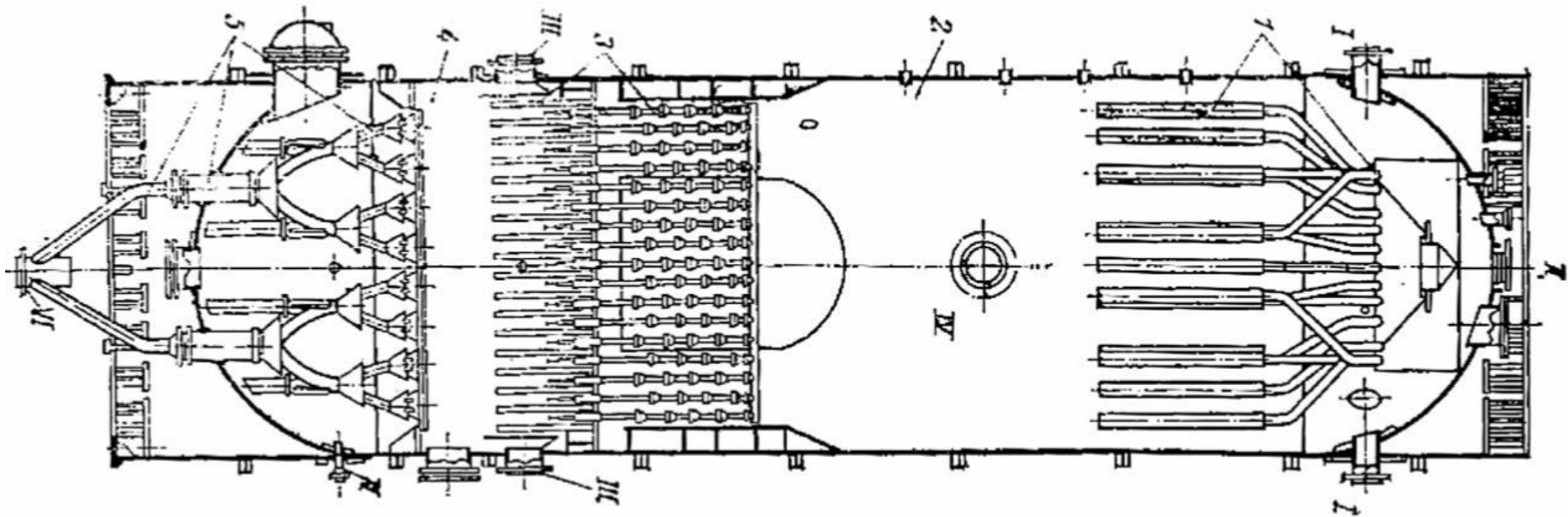
Checked by Pavlenko V.V.

ALMATY, 2019

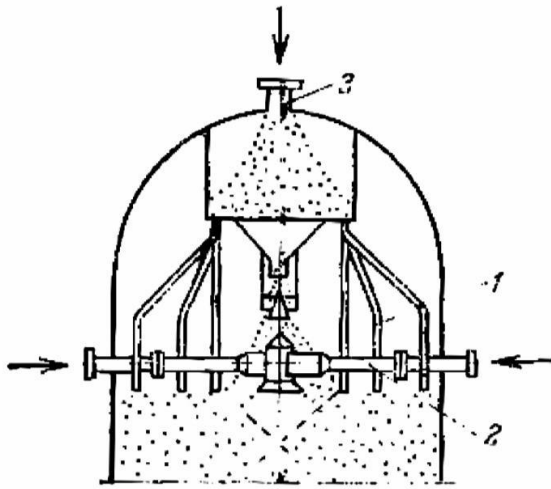
Plan

- Introduction;
- ;
- ;
- Conclusion

Reactors. Direct-flow reactors of the cracking plants with a ball of the catalyst have six characteristic zones, each of which performs a specific function.



Cracking plant reactor with ball catalyst: I - input of raw materials; II - input of catalyst; III - output of reaction products; IV - removal of catalyst; V - input of water vapor; 1 - switchgear; 2 - reaction zone; 3 - separation device; 4 - Stripping zone; 5 - precast leveling device.



From the upper hopper through the riser, the catalyst flows by gravity into the upper distribution device, which is a cylindrical shell. It is designed for uniform distribution of the catalyst flow in the reaction zone of the apparatus.

In the case of heavy raw materials, such an input design can lead to coking of the upper part of the apparatus, so the pipes of the switchgear are protected from contact with the raw material by a curtain of catalyst.

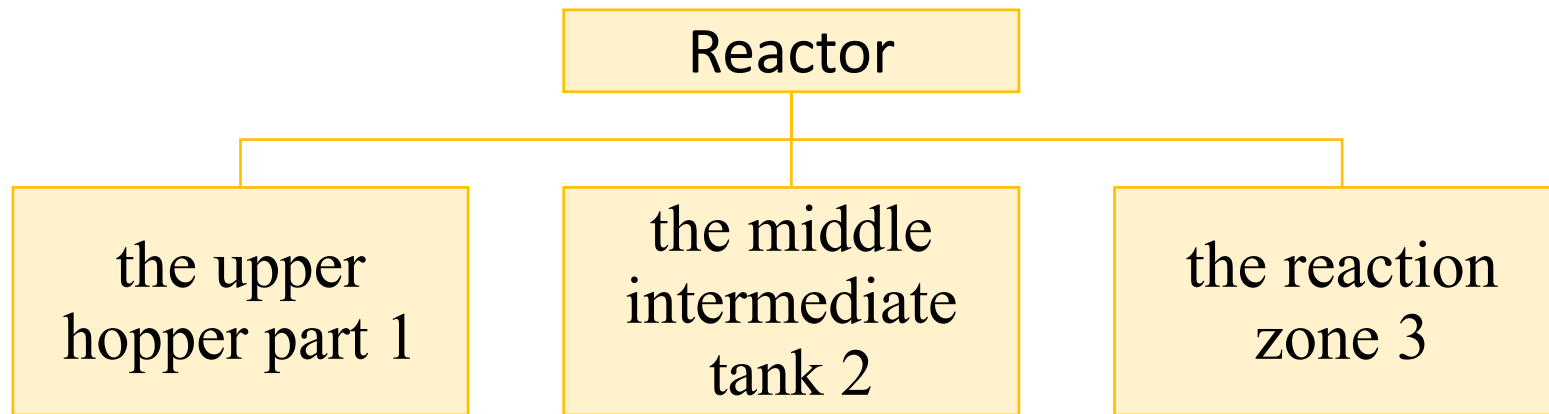
Heavy feedstock and catalyst input unit:

1 — pipe distribution device;

2-input of raw materials; 3-input of catalyst

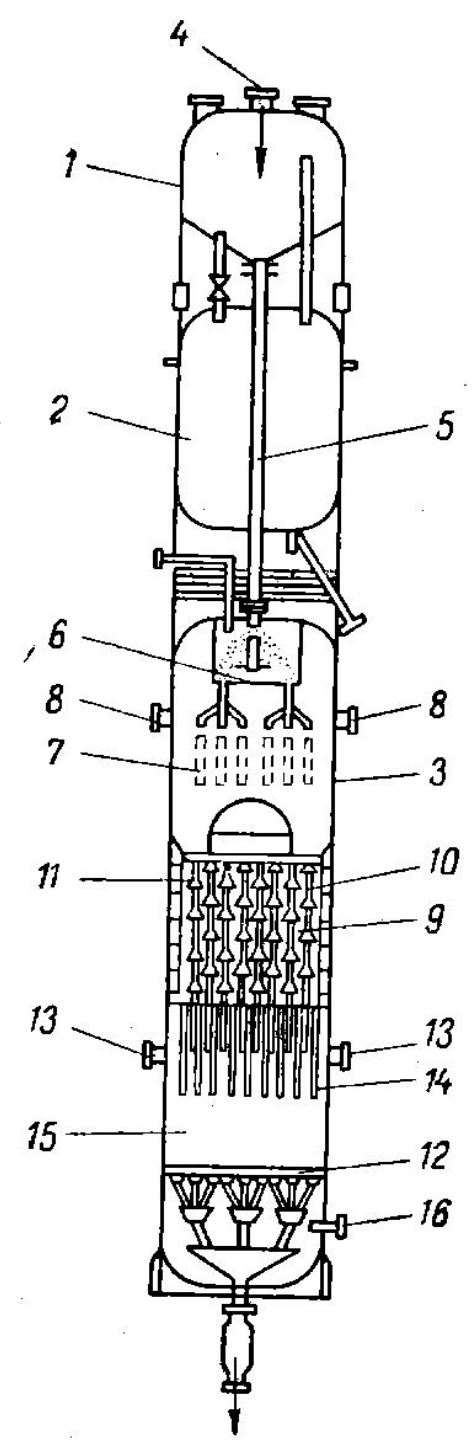
The scheme of the reactor of a catalytic cracking installation with a circulating ball catalyst

In the reactor, the vapors of the raw material are in contact with the hot ball catalyst, as a result of which their cracking is ensured.



4-pressure riser, 5-fitting, 6-distribution device, 7-overhead pipes, 8-fitting for raw materials, 9-separation device, 10-pipes, 11-caps, 12-leveling device, 13 - fittings for drainage, 14-overflow pipes, 15-Stripping zone, 16-fitting for water vapor

the catalyst equalizer plate has 64 holes with a diameter of 108 mm.



Thanks for your attention!