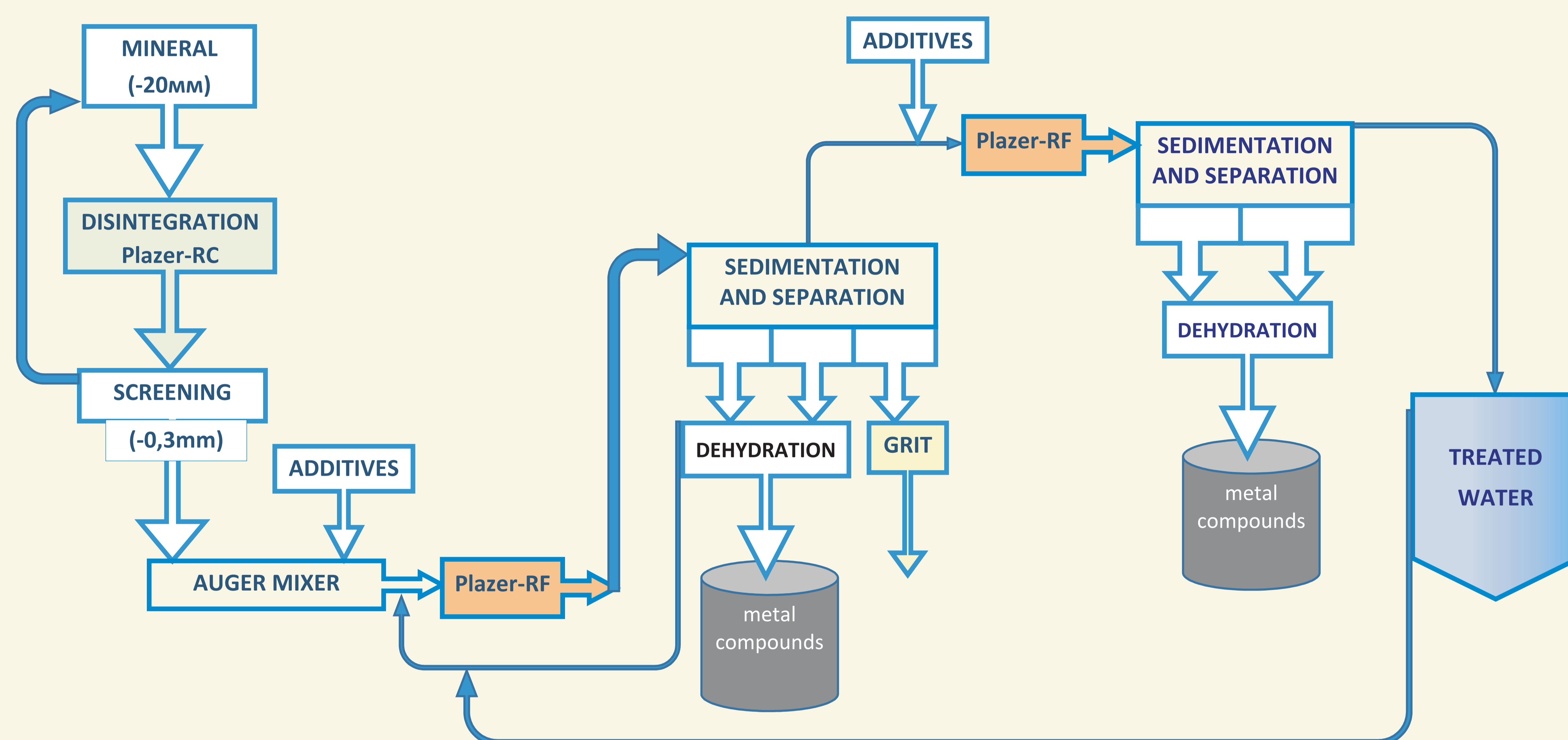


INTENSIFICATION OF THE PROCESSING OF ORE, DUMPS ROCKS

Principal diagram of the reagent processing of ores, dumps using machines Plazer-RF



The proposed technology is based on a highly efficient development of minerals (fine grinding of ore) using special equipment - grinders of special design and installations for processing in rotating magnetic fields, activating processes.

Main operations of the technological processes:

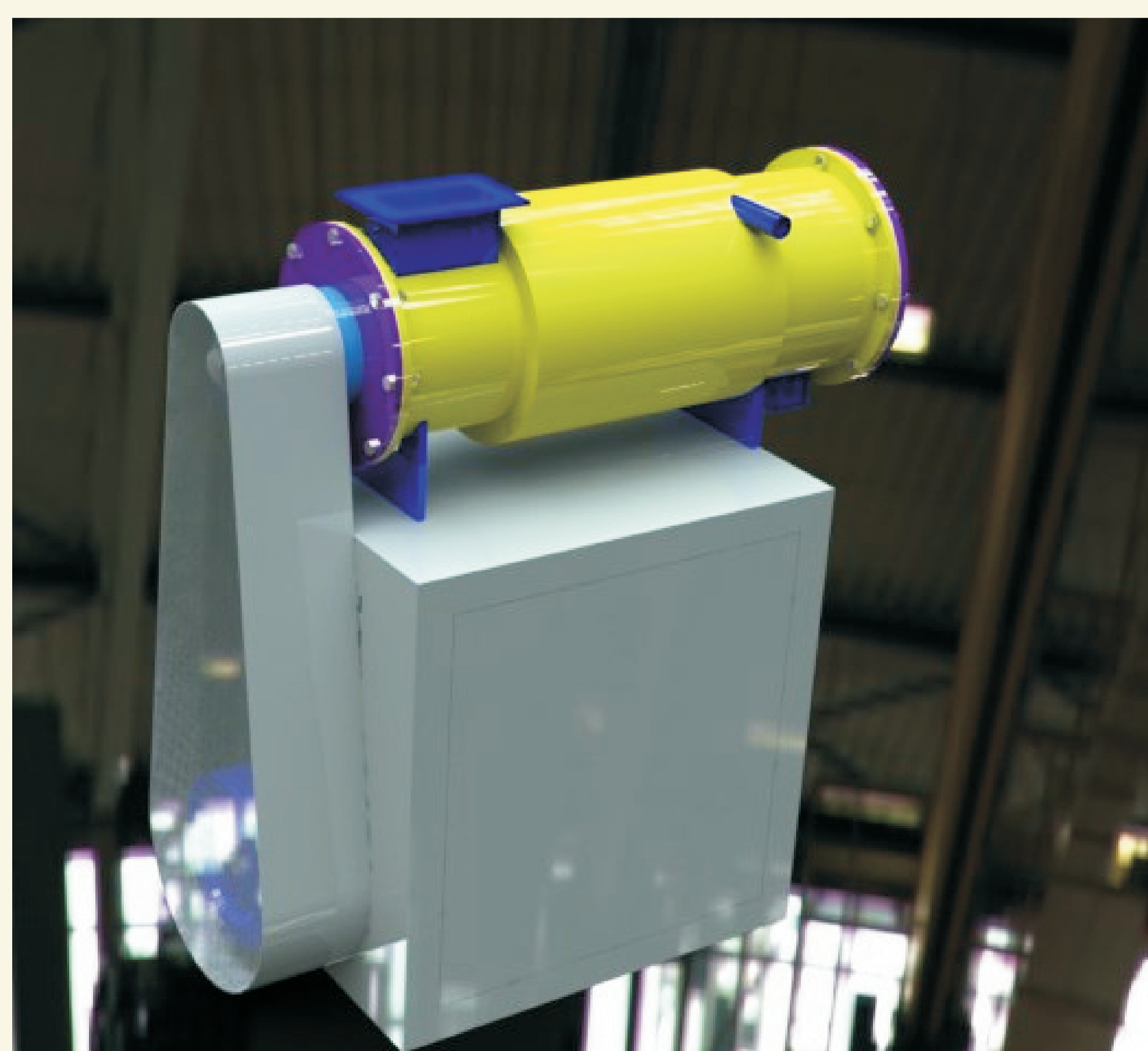
1. Grinding per one pass of ore size from 20 mm up to the size - less than 44 microns using grinders Plazer-RC.
2. Processing of pulp slurry in the installations Plazer-RF with required reagents and transformation of metals, containing in ores into solution.
3. Separation of the mineral part from the solution by sedimentation (accelerated process, in 3-10 times faster compared with traditional methods).
4. Separation of one or group of metals from the solution.

Application of the Plazer-RF machines is significantly reduces the cost of redistribution by reducing the costs for industrial buildings, reduction of material and energy costs, fullness of extraction of basic and related elements, reduce transportation costs, etc. In addition, the development of small deposits of rare metals becomes cost-effective, especially located in inaccessible areas without developed communications and transport system.

Advantages compared with traditional technologies:

1. Multiple acceleration of the processes of final grinding and dissolution. In Plazer-RF the operations are reduced up to seconds and minutes, while in the traditional methods, they often last for dozens of hours. So according to the rules the grinding of tungsten carbide in vibration mills in spirit ambient continues 96 hours and in Plazer-RF - 10-12 min. at commensurable performance.
2. Increased output of the valuable components.
3. Allocation (separation) of valuable components from dumps using the same equipment.
4. Obtaining of finely ground quartzite - marshallit as valuable by-product.
5. There is no need to use high toxic reagents for extraction of precious metals, including mercury and cyan.
6. Ability to create the mobile type sites, which greatly reduces the time for development of the whole production.
7. Areas with closed-type production are created, that prevents the losses of valuable components and removes environmental tension in the region.

Performance capacity of one set of the basic equipment (Plazer-RF and grinder) reaches 35 t / day for ore or 200 m³/day of pulp slurry.



Chopper Plazer-RC-1

| Parameters | Titan M-63 | Titan M-125 | Plazer-RC-1 | Plazer-RC-2 |
|---|-------------|--------------|-------------|-------------|
| Performance capacity, tn/h | 1-3 | 3-15 | 1-2 | 2-4 |
| Feed size, mm | up to 30 | up to 40 | up to 25 | up to 30 |
| Size of grinded product (adjustable), mm | 0,04-0,3 | 0,05-0,3 | 0,04-0,3 | 0,04-0,3 |
| Installed power capacity, kW | 110 | 305 | 7,5 | 15 |
| Dimensions, m: length x width x height | 5,5x3,0x7,6 | 7,6x4,2x15,3 | 1,0x0,5x1,1 | 1,1x0,7x1,1 |
| Weight, tn | 8 | 22 | 0,4 | 0,7 |