

2. MAIN CHEMICAL PRODUCTION

2.1. SULFURIC ACID PRODUCTION

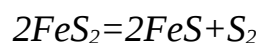
Raw materials for the production of sulfuric acid. Production and purification of sulfur dioxide. Types of furnaces for the roasting of sulfide ores and elemental sulfur. Use of waste sulfur dioxide of nonferrous metallurgy and thermal power plants, sulfur dioxide of oil refining

Sulfur gas, as a raw material for sulfuric acid production, is obtained by roasting sulfide ores, for example, in the chemical industry and non-ferrous metallurgy.

In nature, sulfur is found mainly in three forms: sulfur compounds with metals (pyrite, copper pyrite, zinc blende, etc.); native sulfur mechanically mixed with other minerals; sulfates.

Pure pyrite contains 53.5% S and 46.5% Fe. In sulfur pyrites, the sulfur content usually ranges from 35 to 50%, iron - from 30 to 40%.

Pyrite firing in a stream of air is an irreversible non-catalytic heterogeneous process that proceeds with the release of heat through the stages of thermal dissociation of iron disulfide:



and oxidation dissociation of products: