

METALLURGIYA SOHASIDA KO'P QO'LLANILADIGAN AYRIM INGLIZCHA TERMINLARNING O'ZBEK TILIDA TARJIMASI BO'YICHA MULOHAZALAR

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Annotatsiya: Maqolada metallurgik terminlarning o'zbek tilida tarjimasini aniqlash bo'yicha olib borilgan izlanishlar yuzasidan ma'lumotlar keltirilgan bo'lib, bugungi kunda mamlakatimizda rivojlanib borayotgan kon-metallurgiya sohasiga yetuk mahalliy mutaxassislarni tayyorlashda muhim ahamiyat kasb etadi.

Kalit so'zlar: metal, metallurgiya, gidrometallurgiya, pirometallurgiya, rangli metallar, nodir metallar, noyob metallar, qora metallar.

Fan va texnika taraqqiyoti, turli sohalarning ravnaq topib borayotgani terminologiyaga ham katta vazifalar yuklamoqda. Unda o'rganilishi va tadqiq etilishi kerak bo'lgan ko'plab soha terminlarini tasniflash va turlarga ajratish vazifasi dolzarbligicha qolmoqda. Terminlar ilmiy kashfiyotlar, tadqiqotlar hamda nazariy va amaliy natijalarda o'z ifodasini topadi. Terminlar maxsus kasbiy sohalardagi kommunikatsiya, u yoki bu kasbiy sohada yuzaga kelayotgan hodisalar, konsepsiyalar, fenomenlarni tavsiflash vositasi sanaladi. Bu tabiiy ravishda ingliz va o'zbek tilida terminlarni tartibga solish, unifikatsiya qilish va tizimlashtirish zaruratini tug'diradi.

Quyida misol tariqasida «**Leaching**-tanlab eritish», «**Agitation leaching** - aralashtirib tanlab eritish», «**Percolation leaching** - perkolyatsion tanlab eritish», «**Bacterial leaching** - bakteriya ishtirokida tanlab eritish », «**Heap leaching**- uyumda tanlab eritish », «**Underground leaching** - yer ostida tanlab eritish» va «**Sorption leaching** - sorbsiyali tanlab eritish» kabi keng qo'llaniladiga terminlarning o'zbek tilida tarjimasini va izohini keltirib o'tamiz.

Leaching – extraction individual components of a solid material using a solvent, based on the ability of the extracted substance to dissolve better than other components during hydrometallurgical extraction of metals from ores. Solutions of ammonia, acids, alkalis, metal or chlorine chlorides, sulfates, etc. can be used as a solvent. Leaching may be accompanied by oxidation of the extracted material in order to convert sparingly soluble compounds into readily soluble ones (oxidative leaching). Gases (usually air, oxygen), liquid and solid inorganic substances (HNO₃, MnO₂, KMnO₄, etc.), bacteria (bacterial leaching) are used as oxidizers. Leaching can be carried out at atmospheric pressure or at high pressure (in an autoclave).

Tanlab eritish - ruda va boyitmalardan erituvchilar ishtirokida boshqa komponentlarga qaraganda yaxshi eriydigan komponentlarni maxsus sharoitlarda eritmaga o'tkazish jarayoni. Erituvchilar sifatida ammiak, kislotalar, ishqorlar va tuzlarning eritmaları ishlatilishi mumkin. Tanlab eritish ajratib olinayotgan metallni qiyin eruvchan birikma holidan oson eruvchan birikma holiga o'tkazish maqsadida oksidlash yo'li bilan

ham borishi mumkin. Oksidlovchilar sifatida gazlar (havo, kislorod) suyuq va qattiq anorganik moddalar (HNO_3 , MnO_2 , KMnO_4 va b.) va bakteriyalar ishlatilishi mumkin. Tanlab eritish atmosfera bosimida yoki yuqori bosimda (avtoklavda) olib borilishi mumkin.

Agitation leaching – extraction of metals from ores by their selective dissolution in solutions under intense mixing and continuously saturating the pulp with atmospheric oxygen is used to extract metals from finely ground ores at a higher rate and extent compared to percolation and heap leaching. The degree of ore grinding depends on the nature of the inclusion metal and varies from -0.3 to 0.04 mm. Pulps with Liquid:Solid=(1-2):1 are subjected to agitated leaching of gold in batch and continuous modes. At a concentration of $\text{NaCN} = 0.01-0.1\%$, $\text{CaO} = 0.01-0.03\%$ (pH = 9-11).

Aralashtirib tanlab eritish - juda mayda yanchilgan ruda va erituvchi reagent eritmasi ma'lum tezlikda mexanik aralashtiriladi. Rudaning yanchilish darajasi undagi metall zarrachalarining yirikligiga bog'liq. Aralashtirib tanlab eritish sizdirib o'tkazish usuliga qaraganda yuqori tezlikda borishi va metallni ajratib olish darajasining yuqoriligi bilan ajralib turadi. Mas: oltinni aralashtirib tanlab eritish davriy va uzluksiz rejimda borib fazalar nisbati Q:C=1:1÷2, NaCN konsentratsiyasi 0,01-0,1%, CaO konsentratsiyasi 0,01-0,03% (pH=9-11) bo'ladi.

Percolation leaching –leaching by percolation (percolation) of a liquid reagent through a fixed layer of solid. Percolation leaching is used to treat Au-containing sands with a porous structure with particles of 0.2-1.0 mm in special round (2-4 m high, 12-14 m in diameter) and rectangular (25 m long, 15 m wide) vats with a capacity on sands 800-900t.

Perkolyatsion tanlab eritish - qattiq ruda qatlamidan reagent eritmasining sizib o'tishi natijasida ro'y beradigan tanlab eritish. Perkolyatsion tanlab eritish uchun balanligi 2-4m, diametri 12-14m bo'lgan silindrsimon yoki uzunligi 25 m, eni 15 m bo'lgan to'g'ri to'rtburchakli idishlar ishlatilib, ularning sig'imi 800-900 tonnaga yetadi.

Bacterial leaching – the process of selective dissolution of minerals in an aqueous environment in the presence of microorganisms and their metabolic products for the extraction of metals. In bacterial leaching of sulfide-containing minerals, thionic chemoautotrophic bacteria are used, the only sources of energy for their vital activity - oxidation processes inorganic substances, sulfide and elemental sulfur, as well as sulfide minerals. There are heap, underground and vat bacterial leaching.

Bakteriya ishtirokida tanlab eritish - metallarni ajratib olish maqsadida minerallarni suvli muhitda mikroorganizmlar ishtirokida tanlab eritmaga o'tkazish jarayoni. Sulfidli minerallarni bakteriya ishtirokida tanlab eritishda yashashi uchun elementar oltingugurt va sulfidli minerallarning oksidlanishidan energiya oladigan tion bakteriyalar ishlatiladi. Bakteriya ishtirokida uyumda, yer ostida va chanda tanlab eritish mumkin.

Heap leaching – leaching of valuable components from waste, off-balance ores carried out in open, special areas, it is characterized by high productivity and low cost of products.

Uyumda tanlab eritish - balansdan tashqari rudalardan qimmatbaho komponentlarni ochiq maydonda tanlab eritish jarayoni. Uyumda tanlab eritish yuqori ishlab chiqarish unumdorligiga va mahsulot tannarxining pastligiga ega.

Underground leaching – leaching of non-ferrous and rare metal ores in situ. Underground leaching is effective when the ore body is accessible to the solvent, and the resulting solution accumulates upon reaching waterproof rocks (clay, granite, etc.), which allows it to be pumped to the upper horizon for subsequent concentration and processing. In-ground leaching is used to extract Cu, Mo, U and others.

Yer ostida tanlab eritish - rangli va noyob metall rudalarini joylashgan joyning o‘zida yer ostida tanlab eritish. Yer ostida tanlab eritish samarali bo‘lishi uchun ruda qatlami eritmani o‘tkazishi va metallni o‘zida eritgan eritma yuqoriga tortib olinishi uchun bir joyda yig‘ilishi zarur. Yer ostida tanlab eritish ruda qatlami 200 metrdan chuqurda joylashgan Cu, Mo, U va b. metall rudalarini tanlab eritish uchun ishlatiladi.

Sorption leaching – a process of combined sorption and leaching in one apparatus. For example: the processes of cyanidation of noble metals in pulp and sorption with ion-exchange resins are carried out together.

Sorbsiyali tanlab eritish - sorbsiya va tanlab eritish jarayonini birga bir dastgohda qo‘shib olib borish jarayoni. Masalan: bo‘tanada nodir metallarni sianlash va ionlashuvchi qatronlar bilan sorbsiyalash jarayoni birga olib boriladi.

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