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**Specifications for kaolinite, bentonite, refractory. Clay mineral
exploration
(English Translation)**

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1 Application Scope

This Standard specifies the requirements for the exploration study level and control level, exploration work quality, classification of mineral resources/reserves and type conditions, estimation of mineral resources/reserves for kaolinite, bentonite and refractory-clay mineral exploration; it proposes the ore deposit exploration types and the reference exploration engineering intervals for analogic use.

This Standard applies to the exploration of kaolinite, bentonite and refractory-clay minerals and the estimation of mineral resources/reserves; it applies to the acceptance and appraisal of the geological reports of kaolinite, bentonite and refractory-clay mineral exploration; it may also work as the basis for the assessment and estimation of mineral resources/reserves in the activities including mining right transfer and mineral exploration, development, financing and listing.

2 Normative References

The provisions in following documents become the provisions of this Standard through reference in this Standard. For dated references, the subsequent amendments (excluding corrigendum) or revisions do not apply to this Standard, however, parties who enter into an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB/T 12719-1991, Exploration Specification of Hydrogeology and Engineering Geology in Mining Areas

GB/T 13908-2002, General Requirements for Solid Mineral Exploration

3 Purposes and Tasks of Exploration

The exploration work of kaolinite, bentonite and refractory-clay is divided into four states, namely reconnaissance, general exploration, detailed exploration and prospecting. The purposes and tasks of all stages are as follows.

-- Reconnaissance. in accordance with the areal geological study results and through preliminary field inspections, tiny amounts of engineering verification, analogies and speculations of known deposits of similar geological characteristics, to come up with the areas of great potential of minerals for general exploration, in order to provide basis for the general exploration work;

-- General exploration. for the areas of great mineral potential for general exploration, using inspection, geological mapping, limited number of sampling projects, to approximately identify the geological and structural conditions of the areas for general exploration; to approximately master the morphology and occurrence of ore body and ore quality characteristics; to understand the technical conditions for mineral exploitation; to conduct analogical study of the processing- dressing properties of minerals; to come up with whether it is worthy of general exploration further or to circle out the ranges of the detailed exploration areas;

-- Detailed exploration. for the detailed exploration areas circled out in the general exploration, using large-scale geological mapping and all kinds of exploration methods and means including systematic sampling denser than in the general exploration stage, to basically identify the geology, structure and morphology, occurrence and size of major ore body and ore quality; to basically ascertain the continuity of ore body; to basically identify the technical conditions for ore deposit mining; to conduct analogies or optional tests and laboratory process test study for the processing-dressing of ore; and to make an assessment whether there is an industrial value. If necessary, circle out the exploration ranges for the use in feasibility studies, drafting mining overall plans and compiling mining

project proposals. For the mining areas which are directly developed and utilized, the degree of the processing-dressing property test shall meet the requirements for the mine construction and design;

-- Prospecting. for the ore bodies of a known industrial value or the prospecting areas circled out in the detailed exploration, by increasing all kinds of sampling projects whose interval shall ensure the continuity of ore bodies (strata), to identify in detail the geological characteristics of ore body; to ascertain the morphology, occurrence, size and spatial position of ore body and ore quality characteristics;

identify in detail the technical conditions for mining of ore body; to conduct the laboratory process test or laboratory scale-up continuous test for the processing- dressing properties of minerals and to conduct the pilot plant test if necessary, in order to provide basis for feasibility studies and mine construction and design.

4.1.1 Reconnaissance stage

Collect and study the data of regional geology and minerals; study the mineral occurrences and the distribution ranges and metallogenic prospects of mineralized points; conduct preliminary field work and prediction based on the analogies of the ore deposits of similar geological characteristics, in order to come up with the mineral potential areas for general exploration.

thickness, distribution, karsts, fractures and development degree and aquosity of structurally fractured zones. Study the groundwater recharges; the relationship between runoffs, drainage conditions and surface water bodies; the inf...

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