*Appendix №3 to the Procurement Organization and Implementation Policy of Kumtor Gold Company CJSC*

**Terms of Reference for the purchase of group-3 hardness 60 mm steel grinding balls for Kumtor Gold Company CJSC**

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| --- | --- | --- |
| Item № | Requirement Parameters for Goods, Works, Services to be purchased (subject of the purchase) | Designation Notes:* 60 mm diameter balls, increased surface hardness, group 3:

60 mm ball - 3 as per GOST 7524-2015. |
| 1 | Name/Type/Quantity/Volumes/Measure Unit | 60 mm grinding balls1,200,000 kg |
| 2 | Delivery Location | For non-residents: • DAP-Balykchy, Naryn Highway-9, Kyrgyz Republic, Station Code 717703.For residents: • Price No. 1 - DAP-Balykchy, Naryn Highway-9, Kyrgyz Republic, Station Code 717703. • Price No. 2 - DAP - Kumtor Mine |
| 3 | Delivery Deadline | The deadline will be determined after the agreement has been concluded. |
| 4 | Requirements for Goods, Services and Works to be delivered |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **4.1** Basic characteristics**4.1.1** Balls shall be manufactured in accordance with the requirements of GOST 7524-2015. **4.1.2** Ball dimensions and limit deviations are given in Table 1:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| In millimeters |
| Rated diameter | Nominal diameter | Limit deviations from the nominal diameter |
|  |  |  |
|  |  |  |
|  60 |  60.0 |  +-1mm |

**4.1.3** Ball hardness after heat treatment shall comply with the values specified in Table 2.Table 2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
| Rated ball diameter, mm | Ball hardness group |
|  | 1 | 2 | 3 | 4 | 5 |
|  | Hardness, HRC/HB, not less |
|  | ball surface | at a depth of 0.5 ball radius | ball surface | volumetric |
| From 50 to 70 inclusive | 43/401 | 48/453 | 53/514 | 53/514 | 43/401 | 60/590 | 53/514 |
| Notes:1. Ball volumetric hardness value is optional. 2. By agreement of the manufacturer with the consumer, it is allowed to specify the upper limit of ball hardness. 3. The manufacturer and consumer shall use one method of determining ball hardness. |

**4.1.4** Balls shall be made of steel, in which the carbon content and carbon equivalent shall correspond to the values given in Table 3.Table 3

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Rated ball diameter, mm | Ball hardness group | Carbon mass fraction | Carbon equivalent |
|  |  | %, not less than |
| From 60 to 70 inclusive | 3 | 0.50 |  0.70 |
|  | 4.0 | 0.60 |  0.75 |
|  | 4.5 |  |  0.80 |

**4.1.5** Cracks and defects on the ball surface, which take the ball dimensions beyond the limit deviations, shall not be allowed. **4.2 Marking****4.2.1** Balls shall not be marked.**4.2.2** Transport marking shall be in accordance with [GOST 14192](http://docs.cntd.ru/document/1200006710). **4.3 Packaging****4.3.1**. 60 mm diameter balls shall be delivered in bulk or in 1 (one) ton big bags. |

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| 6 | Acceptance procedure | The Supplier shall be responsible for:* Proper quality that meets all parameters specified in the certificate of conformity,
* Timely delivery,
* Reimbursement at its own expense if any defects are identified during the warranty period.

Ensuring complete safety of the Goods from any kind of damage during all types of transportation to the Buyer's warehouse.Balls shall be accepted and delivered in batches.The batch to be tested shall consist of balls of the same size, of the same hardness group.The batch shall be accompanied by a quality document, which contains, among other things:- manufacturer's name;- product designation;- batch number;- weight of the shipped batch;- ball hardness test results;- stamp of the product quality control service. |
| 7 | Transportation and storage | Balls shall be transported by all types of transport in accordance with the applicable cargo transportation rules.Balls of different sizes and hardness groups shall not be mixed during transportation. |
| 8 | Warranty Obligations | The TOR data shall be confidential. The Contractor shall be liable for disclosure to third parties. |
| 9 | Test batch | In cases where a supplier, who has not previously delivered this type of product to the Kumtor Gold Company (KGC), successfully passes the qualification and technical evaluation, the customer is entitled to initiate the conclusion of a contract for the supply of a pilot (test) batch of the product.The volume of the test delivery is determined based on the average weekly consumption of the respective product, calculated from actual operational data, and is typically 60 or 120 tons.Once the test samples have been evaluated, the procurement initiator must provide an official document confirming the results of the testing, indicating whether the product is deemed suitable or unsuitable for production use.Product testing is conducted at the Kumtor Mine’s Gold Recovery Plant with the mandatory presence of the supplier’s representative.The price of the test batch must not exceed the price stated in the supplier’s commercial offer. |