

MINING AND MINERALS SECTION

DRAFT TANZANIA STANDARDS FOR PUBLIC COMMENTS, JANUARY 2017.

1. TBS/MMDC 3 (4725) P2 / ISO 17246:2010(E) Coal — Proximate analysis

Scope: This International Standard establishes a practice for the proximate analysis of coal and is intended for general utilization by the coal industry to provide a basis for comparison of coals.

2. TBS/MMDC 3 (4726) P2 / ISO 17247:2013(E) Coal — Ultimate analysis

Scope: This International Standard establishes a practice for the ultimate analysis of coal and is intended for general utilization by the coal industry to provide a basis for comparison of coals.

3. TBS/MMDC 3 (4727) P2 / ISO 562:2010 (E) Hard coal and coke — Determination of volatile matter

Scope: This International Standard specifies a method of determining the volatile matter of hard coal and of coke. It is not applicable to brown coals and lignites.

4. TBS/MMDC 3 (4728) P2 / ISO 589:2008 (E) Hard Coal — Determination of total moisture

Scope: This International Standard describes two methods for determination of the total moisture content of hard coals, a two-stage method and a single-stage method. For either method there is a choice between drying in air and drying in a nitrogen atmosphere. Depending on the coal rank, there may be systematic differences between the results obtained by drying in the different atmospheres on subsamples of the same sample. Drying in a nitrogen atmosphere is suitable for all hard coals, while drying in air is only suitable for hard coals not susceptible to oxidation.

NOTE The term “not susceptible to oxidation” cannot be defined easily. Usually, high-rank coals such as anthracites are not oxidized under the conditions described in this International Standard. For all other types of coal, this has to be verified by experiments.

5. TBS/MMDC 3 (4729) P2 / ISO 625:1996 (E) Solid mineral fuels — Determination of carbon and hydrogen – Liebig method

Scope: This International Standard specifies a method of determining the total carbon and the total hydrogen in hard coal, brown coal and lignite, and coke, by the Liebig method.

The results include the carbon in the carbonates and the hydrogen combined in the moisture and in the water of constitution of silicates. A determination of moisture is carried out at the same time, and an appropriate correction is applied to the hydrogen value obtained by combustion. A determination of carbon dioxide may also be made and the total carbon value corrected for the presence of mineral carbonates.

6. TBS/MMDC 3 (4730) P2 / ISO 1170:2013 (E) Coal and coke — Calculation of analyses to different bases

Scope: This International Standard gives equations that allow analytical data relating to coal and coke to be expressed on the various different bases in common use. Consideration is given to corrections that can be applied to certain determined values for coal prior to their calculation to other bases.

7. TBS/MMDC 3 (4741) P2 / ISO 1171:2010(E) Solid mineral fuels — Determination of ash

Scope: This International Standard specifies a method for the determination of the ash of all solid mineral fuels.

8. TBS/MMDC 3 (4763) P2 / ISO 5069-2:1983 (E) Brown coals and lignites - Principles of sampling - Part 2: Sample preparation for determination of moisture content and for general analysis

Scope: This part of ISO 5069 specifies methods of preparation of laboratory and analysis samples of brown coals and lignites for the determination of moisture content and for general analysis.

This document should be read in conjunction with ISO 5069/1.

9. TBS/MMDC 3 (4743) P2 / ISO 1928:1992(E) Solid mineral fuels — Determination of gross calorific value by the bomb calorimetric method and calculation of net calorific value

Scope: This International Standard specifies a method for the determination of the gross calorific value of a solid mineral fuel at constant volume and at the reference temperature of 25 °C in a bomb calorimeter calibrated by combustion of certified benzoic acid.

The result obtained is the gross calorific value of the analysis sample at constant volume with all the water of the combustion products as liquid water. In practice, fuel is burned at constant (atmospheric) pressure and the water is not condensed but is removed as vapour with the flue gases. Under these conditions, the operative heat of combustion is the net calorific value of the fuel at constant pressure. The net calorific value at constant volume can also be used; equations are given for calculating both values.

General principles and procedures for the calibrations and the fuel tests are presented in the main text, whereas those pertaining to the use of a particular type of calorimetric instrument are described in Annexes A to C. Annex D contains checklists for performing calibration and fuel tests using specified types of calorimeters. Annex E gives examples illustrating some of the calculations.

NOTE Descriptors: solid fuels, coal, coke, tests, determination, calorific value, rules of calculation, calorimetry.