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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

DZ/T 0276.11-2015

Replacing DY-94

**Regulation for testing the physical and mechanical properties
of rock. Part 11: Test for determining the dissolution of rock
(English Translation)**

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Foreword

DZ/T 0276 "Testing Procedures for Physical and Mechanical Properties of Rocks" is divided into 31 parts.

- Part 1. General and general provisions;
- Part 2. Rock moisture test;
- Part 3. Rock particle density test;
- Part 4. Rock density test;
- Part 5. Rock water absorption test;
- Part 6. Rock hardness test;
- Part 7. Rock gloss test;
- Part 8. Rock antifreeze test;
- Part 9. Rock resistance to disintegration test;
- Part 10. Rock expansion test;
- Part 11. Rock erosion test;
- Part 12. Rock acid and alkali resistance test;
- Part 13. Rock specific heat test;
- Part 14. Rock thermal conductivity test;
- Part 15. Rock breakdown voltage and breakdown strength test;
- Part 16. Rock volume resistivity and surface resistivity test;
- Part 17. Rock radioactivity specific activity test;
- Part 18. Rock uniaxial compressive strength test;

- Part 19. Rock uniaxial compression deformation test;
- Part 20. Rock triaxial compression strength test;
- Part 21. Rock tensile strength test;
- Part 22. Rock flexural strength test;
- Part 23. Rock point load strength test;
- Part 24. Rock acoustic wave velocity test;
- Part 25. Rock shear strength test;
- Part 26. Rock mass deformation test (bearing plate method);
- Part 27. Rock mass deformation test (drilling deformation method);
- Part 28. Rock mass strength test (direct shear test);
- Part 29. Rock mass strength test (bearing plate method);
- Part 30. Rock mass bolt load test;
- Part 31. Rock sound wave velocity test.

This part is the 11th part of DZ/T 0276.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces DY-94 "Testing procedures for physical and mechanical properties of rocks. 15. Corrosion test". This part is compared with DY-94, the main technology the changes are as follows.

- Added two chapters "terms and definitions" and "principles";
- Increase the allowable error of the perpendicularity of the adjacent faces of the sample;
- Increased the caliper of the sample size measuring equipment and its technical indicators;
- Increased the accuracy requirements of the calculation results;
- Modified the allowable error of the non-parallelism of the opposite side of the specimen;
- Modified the dissolution test record sheet.

This part is proposed by the Ministry of Land and Resources of the People's Republic of China.

This part is under the jurisdiction of the National Land Resources Standardization Technical Committee (SAC/TC93).

1 Scope

This part of DZ/T 0276 specifies the test method for determining the dissolution of rock.

This section applies to the corrosion resistance test of carbonate rocks in rock physical and mechanical properties test.

2 Terms and definitions

The following terms and definitions apply to this document.

Dissolution the carbonate rock is placed in a high concentration carbonated water stream, and the rock is dissolved.

3 Principle

The rock sample is passed into distilled water containing a high concentration of CO₂ to interact with each other. After a period of time, the total dissolved amount of the sample or the change in the mass of the sample was measured, and compared with the volume of the sample, the specific solubility, the specific degree of dissolution, and the physical crushing amount of each sample were obtained.

4 Instruments

4.1

Diamond machine, stone cutting machine, stone grinding machine, etc.

4.2

Balance. The maximum weighing value is 200g, and the reading accuracy is 0.0001g.

4.3

Drying box. The temperature can be controlled from 105 °C to 110 °C.

4.4

Corrosion device and carbonated water preparation device (as shown in Figure 1).