

CCS J 81

MT

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

MT/T 102-1985

**Scraper conveyor central trough test specification
(English Translation)**

Issued on: March 5, 1985

Implemented on: May 1, 1985

Issued by: State Administration of Work Safety

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Central trough of scraper conveyor Test specification this specification is applicable to the test of the middle groove of the scraper conveyor and the down-slot transfer machine in the coal mining working face.

1 Test types

a. Type test;

b. Factory test.

2 Type test shall be carried out in the following cases a. Trial production of new products (including transfer of old products to the factory);

b. When changing the design, process and materials of the product affects the performance of the product;

c. When production is resumed after two years of suspension;

d. The mass-produced products are sampled every three years according to the type test project;

e. When users have objections to product quality.

3 Test equipment and measuring instruments

3.1 The test device shall meet the requirements of the corresponding test items.

3.2 Refer to Appendix A for the test device system.

3.3 Test instruments, recording instruments, etc. shall have inspection certificates and be calibrated item by item periodically.

3.4 The accuracy of the measuring instrument is $\pm 1.5\%$.

4 Test items

Various tests of the central tank shall be carried out according to the items specified in Table 1.

Test item

Test type

Type test factory test

1 Horizontal bending test of the central slot connection mechanism x

2 Vertical bending test of the middle slot connection mechanism x

3 Various strength tests of the middle slot connector

3.1 Tensile strength test of connecting pin in the middle slot

3.2 Vertical Bend Test of Central Slot Connecting Pin x

3.3 Horizontal bending test of connecting pin in middle slot x

3.4 Tensile strength test of the middle slot connecting ear Continued Test item Test type

Type test factory test

3.5 Tensile strength test of central groove support

4 Various strength tests of the middle slot and middle plate

4.1 Bend test of middle slot and middle plate x

4.2 Arch test of middle groove in plate x

4.3 Non-axial loading test of the middle slot plate x

5 Central groove test

5.1 Compressive strength test of the central groove x

5.2 Non-axial load test of the middle slotted groove x

6 Compression strength test of the middle groove bottom plate x

8 Horizontal Bend Test of Coal Fender (or Shovel) x

Note:

means test; x means no test.

5 Test method

5.1 General requirements

5.1.1 The test schematic diagram and test requirements are carried out according to Table 2.

5.1.2 The number of measurements of each measured item shall be no less than two.

5.1.3 The middle slot of the same type, the number required for each test shall meet the requirements of the test project, and the corresponding connection parts are attached.

5.2 Horizontal bending test of the middle slot connection mechanism

5.2.1 When the groove in the middle of the test is bent horizontally, observe and record the maximum load, deformation, damage location and form.

5.2.2 Test installation method, loading head size, fulcrum size and span shall be performed according to Table 2.

5.2.3 Before loading, the horizontal bending angle should meet the design requirements.

5.2.4 The loading method is to slowly load until obvious deformation or damage occurs. Record the amount of deformation and the load at the time of failure.

5.3 Vertical bending test of the middle slot connection mechanism

5.3.1 When the vertical groove in the middle of the test is bent, observe and record the maximum load, deformation, damage location and form.

5.3.2 The test installation method, loading head, fulcrum size and span shall be performed in accordance with No. 2 in Table 2.

5.3.3 Before loading, the vertical bending angle should meet the design requirements.

5.3.4 The loading method is to slowly load until obvious deformation or damage occurs. Record the amount of deformation and the load at the time of failure.

5.4 Various strength tests of the middle slot connector

5.4.1 Tensile strength test of connecting pin

5.4.1.1 Test and record the maximum tensile load that the connecting pin can withstand in the axial direction, and observe the deformation and failure phenomena.

5.4.1.2 The sample installation shall be carried out in accordance with No. 3.1 in Table 2, using the original supporting bolts. The loading method is slow loading.

5.4.2 Connecting pin vertical bending test

5.4.2.1 Test and record the maximum bending load that the connecting pin can withstand in the vertical direction, and observe the deformation and breaking phenomenon.

5.4.2.2 The sample installation shall be carried out according to No. 3.2 in Table 2. The loading method shall be slow loading.

5.4.3 Horizontal bending test of connecting pin

5.4.3.1 Test and record the maximum bending load that the connecting pin can withstand in the horizontal direction, and observe the deformation and breaking phenomenon.

5.4.3.2 The sample installation shall be carried out according to No. 3.3 in Table 2. The loading method shall be slow loading.

5.4.4 Tensile strength test of connecting ears

5.4.4.1 Test and record the maximum tensile load that the connecting ear can withstand in the horizontal direction, and observe the deformation and breaking phenomenon.

5.4.4.2 The specimens shall be installed in accordance with No. 3.4 of Table 2, using the original design supporting bolts. The loading method is slow loading.

5.4.5 Tensile strength test of central groove support

5.4.5.1 Test and record the maximum bearing capacity of the central groove support under tensile load, and observe the deformation and damage phenomena.

5.4.5.2 The specimens shall be installed in accordance with No. 3.5 in Table 2. The loading method shall be slow loading.

5.5 Strength test of middle plate

5.5.1 Plate bending test

5.5.1.1 When the board is subjected to a vertical load during the test, observe and record the maximum load, and observe the deformation and damage.

5.5.1.2 The sample installation shall be carried out according to No. 4.1 in Table 2. The loading method shall be slow loading.

5.5.2 Middle plate arch test

5.5.2.1 When the plate is subjected to horizontal load during the test, observe and record the maximum load it can withstand, and observe the deformation and damage.

5.5.2.2 The specimens shall be installed in accordance with No. 4.2 in Table 2. The loading