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Building construction machinery and equipment — Mobile crushers —

Part 1: Terminology and commercial specifications

Machines et matériels pour la construction des bâtiments — Concasseurs mobiles —
Partie 1: Terminologie et spécifications commerciales

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Foreword

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 195, *Building construction machinery and equipment*.

This second edition cancels and replaces the first edition (ISO 21873-1:2008), which has been technically revised.

ISO 21873 consists of the following parts, under the general title *Building construction machinery and equipment — Mobile crushers*:

— *Part 1: Terminology and commercial specifications*

— *Part 2: Safety requirements*

Introduction

This part of ISO 21873 deals with mobile crushers which are used for crushing rocks or reprocessing construction materials.

Building construction machinery and equipment — Mobile crushers —

Part 1: Terminology and commercial specifications

1 Scope

This part of ISO 21873 specifies terminology and commercial literature specifications for mobile crushers used for crushing rocks or reprocessing construction materials and capable of relocation between worksites.

It applies to mobile crushers that are either

— self-propelled (mounted on a chassis),

— lorry (truck) mounted, or

— semi-trailer mounted.

It does not apply to the following:

— fixed (stationary) crushers;

— large mining-type movable crushers.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 16754:2008, *Earth-moving machinery — Determination of average ground contact pressure for crawler machines*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
mobile crusher
machine affixed to a chassis which is typically composed of a feed device, a crushing device, a control system, a prime mover, a transmitting device, and a travel device designed for reducing the size of mineral-based material to particles meeting a desired specification

3.1.1
self-propelled mobile crusher
machine mounted to a chassis capable of propelling itself to another location

3.1.2
lorry-[truck-] mounted mobile crusher
machine mounted on and capable of being relocated on a lorry [truck] chassis

3.1.3
semi-trailer mounted mobile crusher
machine mounted on and capable of being relocated on a semi-trailer chassis

3.2
feed hopper
receptacle that takes in feed material transitorily and charges it into the feed device

3.3
feed device
feeder
device that supplies feed material to the crushing device

EXAMPLE Vibrating (grizzly) feeder, belt feeder, apron feeder, reciprocating plate feeder, roller grizzly, push feeder, vibrating screen.

3.4
crushing device
crusher
mechanism that reduces the size of feed material by fracturing larger pieces into multiple smaller pieces

3.4.1
jaw-type crushing device
jaw-type crusher
device which reduces material size by compression forces consisting of a fixed jaw and a movable jaw which moves so as to increase and decrease the gap between the two jaws

3.4.2
horizontal shaft impact crushing device
HSI crushing device
HSI crusher
device in which material is fragmented by kinetic energy applied by a rotor or impeller disc mounted on a horizontal shaft which rotates at high speed to the feed material which is propelled against a fixed surface

3.4.3
cone-type crushing device
cone-type crusher
device which reduces material size by compression forces consisting of a moving member rotated eccentrically within the fixed member; both moving and fixed members are in a form of truncated cones

3.4.4
vertical shaft impact crushing device
VSI crushing device
VSI crusher
device in which material is fragmented by kinetic energy applied by a rotor or impeller disc mounted on a vertical shaft which rotates at high speed to the feed material which is propelled against a fixed surface

3.5
discharge device
mechanism that removes processed material

EXAMPLE Belt conveyor, screw conveyor, chute, vibrating feeder, reciprocating plate feeder.

3.6
control system
system for controlling the crushing operation

Note 1 to entry: This system includes an operator interface and mechanical or electronic systems for controlling the operation of the mobile crusher.

3.7
prime mover
engine, motor or other device which provides mechanical energy for linear or rotational movement

EXAMPLE Internal combustion engine, electric generator, electric motor, external power plant.

3.8
transmitting device
transmission
translates or controls power source energy to the feed device and/or crushing device

EXAMPLE Hydraulic system, fluid coupling, torque converter, clutch, v-belts and sheaves, drive shaft.

3.9
travel device
chassis used for re-locating the mobile crusher

3.10
feed material
charged material
material which has been loaded into the receiving hopper and/or the feed device

3.11
by-pass device
system that diverts material separated from the crusher feed directly to the discharge device

Note 1 to entry: Chute, belt conveyor, vibrating screen.

3.12
pre-screen side conveyor
device for discharging material separated from the crusher feed material

3.13
return conveyor
device used to transfer oversized material back to the crushing device or feed device for additional processing

3.14
magnetic separator
device for removing ferrous contaminants from the material processed by the crusher using magnets e.g. permanent or electric

3.15
dust suppression system
device or set of components used to reduce the amount of fugitive dust emission from a mobile crusher

EXAMPLE Water spray system, suction filter system (e.g. bag filter).

3.16
machine mass in operating mode
mass of the machine without operator and without feed material with the feed device, crushing device and attachments designated by the manufacturer, full fuel tank, and full lubricating, hydraulic and cooling systems

Note 1 to entry: When specifying the mass of a machine where the operator is at an operator station on the machine, a mass representing the operator equal to 75 kg should be added.

3.17
machine mass in transporting mode
mass of the machine without an operator and without feed material with feed device, crushing device and attachments designated by the manufacturer, with half-full fuel tank, and full lubricating, hydraulic and cooling systems

Note 1 to entry: Where parts are removed or attached for transporting, their weights are deducted or included in the machine mass.

3.18
ground clearance in transporting mode
height of the lowest point of the machine from the ground

3.19
operating mode
configuration as defined by the manufacturer where the machine is ready to perform its intended functions

3.20
transporting mode
configuration of the machine as defined by the manufacturer where the machine is ready to be transported from one location to another

3.21
net feed opening
indication of the crushing device's ability to accept feed without bridging

Note 1 to entry: The net feed opening is not intended to define crushing device feed size (which is determined by the crusher manufacturer).

4 Commercial literature specifications

4.1 General data

The following general data shall be presented:

a) manufacturer or importer (if imported);

b) model;

c) prime mover type (internal combustion engine, electric motor);

d) power installed kW;

e) overall dimensions in operating mode:

— length (see L_0 in Figures A.2, A.3 and A.4) mm;

— width (see W_0 in Figures A.2, A.3 and A.4) mm;

— height (see H_0 in Figures A.2, A.3 and A.4) mm;

f) machine mass in operating mode kg;

g) overall dimensions in transporting mode:

— length (see L_1 in Figures A.2, A.3 and A.4) mm;

— width (see W_1 in Figures A.2, A.3 and A.4) mm;

— height (see H_1 in Figures A.2, A.3 and A.4) mm;

h) machine mass in transporting mode kg;

i) ground clearance (see H_4 in Figures A.2, A.3 and A.4) mm;

j) average ground contact pressure (crawler type only) (determined in accordance with ISO 16754:2008, 4.2) kPa.

4.2 Detailed data for mobile crusher components

4.2.1 Prime mover

4.2.1.1 Internal combustion engine

The following data shall be presented:

a) manufacturer;

b) model name;

c) swept capacity cm^3;

d) net power (according to the standard specified by manufacturer) kW;

d) rated revolutions r/min;

e) fuel type;

f) fuel tank capacity l.