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Industrial trucks — Sustainability —

Part 1: Vocabulary

Chariots de manutention — Durabilité —

Partie 1: Vocabulaire

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Foreword

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This document was prepared by Technical Committee ISO/TC 110, *Industrial Trucks,* Subcommittee SC 5, *Sustainability*.

A list of all parts in the ISO 23434 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Industrial trucks — Sustainability —

Part 1: Vocabulary

1 Scope

This document establishes the sustainability terms and definitions of industrial trucks.

This document is applicable to the life cycle of industrial trucks (hereinafter referred to as trucks) as defined in ISO 5053-1.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
sustainability
state of the global system, including environmental, social and economic aspects, in which the needs of the present are met without compromising the ability of future generations to meet their own needs

Note 1 to entry: The environmental, social and economic aspects interact, are interdependent and are often referred to as the three dimensions of sustainability.

Note 2 to entry: Sustainability is the goal of *sustainable development* (3.2).

[SOURCE: ISO Guide 82:2019, 3.1]

3.2
sustainable development
development that meets the environmental, social and economic needs of the present without compromising the ability of future generations to meet their own needs

[SOURCE: ISO Guide 82:2019, 3.2, modified — Note 1 to entry has been removed.]

3.3
sustainability factor
sustainability indicator
factor related to economic, environmental or social impacts

[SOURCE: ISO 21929-1:2011, 3.33, modified — In the definition, the word "indicator" has been replaced by "factor", and "sustainability factor" has been added as a preferred term.]

3.4
environmental impact
any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's, a product's or service system's *environmental aspects* (3.7)

[SOURCE: ISO 14001:2015, 3.2.4, modified — In the definition, "any" has been added and the words " a product's or service system's" have been added before "environmental aspects".]

3.5
economic impact
impact to the economy, wholly or partially resulting from *economic aspects* (3.8)

[SOURCE: ISO 15392:2019, 3.17.1]

3.6
social impact
impact to society or quality of life, wholly or partially resulting from *social aspects* (3.9)

[SOURCE: ISO 15392:2019, 3.17.3]

3.7
environmental aspect
environmental dimension
element of an organization's activities or products or services that interacts or can interact with the environment

[SOURCE: ISO 14001:2015, 3.2.2, modified — Notes 1 and 2 to entry have been removed. "Environmental dimension" has been added as an admitted term.]

3.8
economic aspect
economic dimension
element of an organization's activities or products or services that interacts or can interact with the economy

3.9
social aspect
social dimension
element of an organization's activities or products or services that interacts or can interact with society or quality of life

3.10
social responsibility
responsibility of an organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behaviour that:

— contributes to *sustainable development* (3.2), including health and the welfare of society;

— takes into account the expectations of *stakeholders* (3.11);

— is in compliance with applicable law and consistent with international norms of behaviour; and

— is integrated throughout the organization and practised in its relationships.

Note 1 to entry: Activities include products, services and processes.

Note 2 to entry: Relationships refer to an organization's active within its sphere of influence.

[SOURCE: ISO 26000:2010, 2.18]

3.11
stakeholder
individual or group that has an interest in any decision or activity of an organization

[SOURCE: ISO 26000:2010, 2.20]

3.12
life cycle
consecutive and interlinked stages of a product (or service) system, from *raw material* (3.20) acquisition or generation from natural resources to final disposal

Note 1 to entry: The life cycle stages include acquisition of raw materials, design, production, transportation/delivery, use, end-of-life treatment and final disposal.

[SOURCE: ISO 14001:2015, 3.3.3]

3.13
life cycle assessment
LCA
compilation and evaluation of the inputs, outputs and the potential *environmental impacts* (3.4) of a product system throughout its *life cycle* (3.12)

[SOURCE: ISO 14040:2006, 3.2]

3.14
life cycle impact assessment
LCIA

phase of *life cycle assessment* (3.13) aimed at understanding and evaluating the magnitude and significance of the potential *environmental impacts* (3.4) for a product system throughout the *life cycle* (3.12) of the product

[SOURCE: ISO 14040:2006, 3.4]

3.15
life cycle inventory analysis
LCI
phase of *life cycle assessment* (3.13) involving the compilation and quantification of inputs and outputs for a product, throughout its *life cycle* (3.12)

[SOURCE: ISO 14040:2006, 3.3]

3.16
useful life
time period during which all the performance requirements are met

Note 1 to entry: Note 1to entry: The determination of useful life can vary depending on user needs (e.g. economic).

[SOURCE: ISO/IEC Guide 41:2018, 3.23, modified — Note 1 to entry has been added.]

3.17
end-of-life
stage which begins when the used product is ready for disposal, *recycling* (3.39), *reuse* (3.35), etc. and ends when the product is returned to nature (combustion, deterioration), or is recycled or reused

[SOURCE: ISO 16759:2013, 3.3.3]

3.18
end-of-life machine
machine that has completed its *useful life* (3.16) and is taken out of service for end-of-life treatment

[SOURCE: ISO 16714:2008, 3.2, modified — In the definition, “end-of-life treatment” has been used instead of “disposal”.]

3.19
ecodesign
systematic approach that considers *environmental aspects* (3.7) in design and development with the aim to reduce adverse *environmental impacts* (3.4) throughout the *life cycle* (3.12) of a product

Note 1 to entry: Other terminology used worldwide includes "environmentally conscious design (ECD)", "design for environment (DfE)", "green design" and "environmentally sustainable design".

[SOURCE: ISO 14006:2020, 3.2.2]

3.20
raw material
primary or secondary material that is used to produce a product

Note 1 to entry: Secondary material includes recycled material.

[SOURCE: ISO 14040:2006, 3.15]

3.21
hazardous substance
substance which can adversely affect human health or the environment with immediate or retarded effect

Note 1 to entry: Manufacturers can determine the hazardous substances according to national or regional regulations.

[SOURCE: IEC Guide 109:2012, 3.6, modified — Note 1 to entry has been added.]

3.22
energy recovery
process that converts one kind of energy to another kind of energy and realizes *recovery* (3.42) of energy

3.23
energy consumption
quantity of energy applied

[SOURCE: ISO 50001:2018, 3.5.2]

3.24
energy efficiency
effectiveness of converting energy into useful work

[SOURCE: ISO 10987:2012, 3.11]

3.25
pollutants emission
release or discharge that negatively affects the environment

3.26
exhaust emission
pollutants contained in the exhaust gas from internal combustion engines or phenomenon of emitting such pollutants

[SOURCE: ISO 7967-12:2014, 3.1.1]

3.27
greenhouse gas
GHG
gaseous constituent of the atmosphere, both natural and anthropogenic, that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere and clouds

Note 1 to entry: For a list of GHGs, see the latest Intergovernmental Panel on Climate Change (IPCC) Assessment Report.

Note 2 to entry: Water vapour and ozone are anthropogenic as well as natural GHGs, but are not included as recognized GHGs due to difficulties, in most cases, in isolating the human-induced component of global warming attributable to their presence in the atmosphere

[SOURCE: ISO 14064-1:2018, 3.1.1]

3.28
greenhouse gas emission
GHG emission
release of a *GHG* (3.27) into the atmosphere

[SOURCE: ISO 14064-1:2018, 3.1.5]

3.29
carbon dioxide equivalent
CDE
quantity that describes, for a given mixture and amount of *greenhouse gas (GHG)* (3.27), the amount of CO_2 that would have the same *global warming potential (GWP)* (3.30)

[SOURCE: ISO 23308-1:2020, 3.3]

3.30
global warming potential
GWP
index, based on radiative properties of *GHGs* (3.27), measuring the radiative forcing following a pulse emission of a unit mass of a given GHG in the present-day atmosphere integrated over a chosen time horizon, relative to that of carbon dioxide (CO_2)

[SOURCE: ISO 14064-1:2018, 3.1.12]

3.31
noise
sound that is deemed to be unpleasant, unexpected, undesired or harmful

[SOURCE: ISO/TS 12913-2:2018, 3.6, modified — Note 1 to entry has been removed.]

3.32
vibration
mechanical oscillations about an equilibrium point

Note 1 to entry: The oscillations may be periodic or random.

[SOURCE: ISO 2041:2018, 3.2.1, modified — Note 2 to entry has been removed.]

3.33
electromagnetic compatibility
EMC
degree of immunity to incident electromagnetic radiation and level of emitted electromagnetic radiation of electrical apparatus

[SOURCE: ISO 8100-20:2018, 3.6]

3.34
safety
freedom from risk which is not tolerable

[SOURCE: ISO/IEC Guide 51:2014, 3.14]

3.35
reuse
any operation by which component parts of *end-of-life machines* (3.18) are used for the same purpose for which they were conceived

Note 1 to entry: Reuse includes *remanufacturing* (3.37).

[SOURCE: ISO 16714:2008, 3.11, modified — Note 2 to entry has been removed.]

3.36
core
component at the end of its *useful life* (3.16) that can be processed so that it can be reused

Note 1 to entry: A core has monetary value and is not waste.

[SOURCE: ISO 10987-2:2017, 3.1, modified — In the definition, the word "service" has been omitted.]

3.37
remanufacturing
industrial process which produces a product from used products or used parts where at least one change is made which influences the safety, original performance, purpose or type of the product

Note 1 to entry: The product created by the remanufacturing process may be considered as a new product when placed on the market.

3.38
refurbishing
industrial process which produces a product from used products or used parts where no change is made which influences the safety, original performance, purpose or type of the product

3.39
recycling
reprocessing in a production process of the waste materials for the original purpose or for other purposes, excluding processing as a means of generating energy

[SOURCE: ISO 22628:2002, 3.3]

3.40
recyclability
ability of component parts, materials or both that can be diverted from an *end-of-life* (3.17) stream to be recycled

[SOURCE: ISO 22628:2002, 3.7]

3.41
recyclability rate
R_{cyc}
percentage by mass (mass fraction in percent) of the new machine potentially able to be recycled, reused or both

[SOURCE: ISO 16714:2008, 3.8, modified — Note 1 to entry has been removed.]