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# Glossary

## Grinding solutions

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# Introduction

This document provides the definitions and spelling of the most common terms and acronyms used for grinding solutions.

## Categories

A tag is allocated to each term to define the context where the term is used. It guides the reader to understand quickly in which category the term is applied.

- application
- system
- product
- service
- general

## Reasons for a glossary

### Consistency = key

Consistency in the language and messages we use demonstrates

- our focus,
- improves recognition of ABB and our products,
- gives our products a clear profile
- and thus a more professional and authentic/reliable appearance.

## Main rules

- We use US spelling.
- We capitalize only proper nouns, proper names (of persons, countries, companies, etc.), derivatives (“he is American”, etc.), formal titles (Country Manager, etc.) and product names (GAP-Watch™, Expert Optimizer, Knowledge Manager, AC800PEC) or acronyms/abbreviations.
- We apply the rules to everything we write.

# List of acronyms

AC	alternating current	MCB	main circuit breaker
AG	autogenous mill	MLCP	mill local control panel
AI	analog input	MMS	manufacturing message specification
AO	analog output	MCC	motor control center
ARU	active rectifier unit	MTBF	mean time between failure
BOD	break over diode	MTTR	mean time to repair
CRB	controlled rollback	NS	norms and standards
CCT	cycloconverter control terminal	OLE	object linking and embedding
DC	direct current	OPC	OLE for process control
DCS	distributed control system	PD	partial discharge
DI	digital input	PEC	power electronics controller
DIRIS®	diagnostic inspection with rotor in situ	PF	power factor
DO	digital output	PFC	power factor correction
DTC	direct torque control	PROFIBUS	process field bus
eg	exempli gratia	PLC	programmable logic controller
FAT	factory acceptance test	RMD	ring-gear mill drive
GMD	gearless mill drive	SAG	semiautogenous mill
HF	harmonic filter	SC	static converter
HPGR	high pressure grinding rolls	SC	synchronous condenser
HVAC	heating, ventilation and air conditioning	TI	test instruction
HMI	human machine interface	TC	test certificate
HSS	high-speed solution	TEC16	tension easy check
ie	id est	UPS	uninterruptible power supply
ITP	inspection and test plan	VMS	video monitoring system
IO	input output	VSI	voltage source inverter
LSS	low-speed solution	WI	work instruction
LV	low voltage	WAZ	Wechselstrom Antrieb / Achsial Zement
MV	medium voltage		

# Terminology

## A

Term **AC800M**  
Acronym n/a  
Category product  
Application GMD, RMD  
Definition Automation controller 800 modular. Embedded control platform used for the controls of digital and analogue signals necessary to control, protect and monitor the gearless mill drive system.

Term **AC800PEC**  
Acronym n/a  
Category product  
Application GMD, RMD  
Definition Automation controller 800 power electronic control. Embedded control platform used for the control of the frequency converter and with this the electrical motor of the mill drive system.

Term **ACS1000**  
Acronym n/a  
Category product  
Application RMD  
Definition Medium voltage, VSI topology based, variable-speed frequency converter used for ring-gearred drive solutions.

Term **ACS6000**  
Acronym n/a  
Category product  
Application RMD  
Definition Medium voltage, VSI topology based, variable-speed frequency converter used for ring-gearred drive solutions.

Term **active rectifier unit**  
Acronym ARU  
Category product  
Application RMD  
Definition ARU is a modular part of the ACS6000, which actively rectifies the AC line voltage and charges the DC link capacitors. The ARU allows four-quadrant operation for regenerative braking, which reduces the overall energy consumption. It can control the power factor to unity or lead in the whole operating range.

Term **air clutch**  
Acronym n/a  
Category product  
Application RMD  
Definition A mechanical device using air to gradually start or stop the transmission of power from a usually synchronous motor.

Term **air gap**  
Acronym n/a  
Category system  
Application general  
Definition Distance between the stator and the rotor of the motor where the magnetic flux is built. In the gearless mill motor the distance is monitored and protected within the permitted limits by the AC800PEC controller.

Term **alignment**  
Acronym n/a  
Category system  
Application RMD  
Definition The accurate positioning of the mechanical component. In case of the RMD, the accurate positioning of the motor shaft with the gearbox or the mill pinion shaft.

Term **alternating current**  
Acronym AC  
Category system  
Application general  
Definition Bi-directional flow or movement of electric charge whose polarity changes.

Term **autogenous mill**  
Acronym AG  
Category system  
Application GMD, RMD  
Definition Rotating drum used to reduce the size of raw material by the projection and the self-gravity of the material itself. The mill works without use of additional metallic balls charge.

Term **automatic positioning**  
Acronym n/a  
Category application  
Application GMD, RMD  
Definition Functionality to rotate the mill at a specific angle.

Term **auxiliary controller**  
Acronym n/a  
Category product  
Application GMD, RMD  
Definition Device used to locally control the function of auxiliary equipment as the cooling pumps or fans etc.

## B

Term **ball mill**  
Acronym n/a  
Category system  
Application GMD, RMD  
Definition Rotating drum used to reduce the size of raw material by the projection and the self-gravity of the material itself. It works with the use of additional metallic balls. A ball mill has generally 30% to 45% ball charge.

Term **break over diode**  
Acronym BOD  
Category product  
Application GMD  
Definition Gate-less two-terminal power semiconductor switch in which transition from a conducting state is triggered by a  $dV/dt$  pulse to the anode.

## C

Term **circuit breaker**  
Acronym n/a  
Category product  
Application general  
Definition Automatic switch that stops the flow of electric current in a suddenly overloaded or otherwise abnormally stressed electric circuit. Also referred to as breaker.

Term **close-loop control**  
Acronym n/a  
Category system  
Application general  
Definition Type of control system that automatically changes the output based on the difference between the feedback and the reference signal.

Term **controlled rollback**  
Acronym CRB  
Category application  
Application GMD, RMD  
Definition Function used to avoid oscillation of the mill while stopping. Also called “reduce mill rocking”.

Term **coupling supervision**  
Acronym n/a  
Category application  
Application RMD  
Definition Monitors deviations in torque to detect a failure or a slippage of the couplings between the motors and mill on dual pinion drives. Monitors the derivatives of torque and actual speed on single pinion drives. In case a failure is detected, the drive stops the motor, preventing damage to the drive train.

Term **creeping**  
Acronym n/a  
Category application  
Application GMD, RMD  
Definition Mill speed used during maintenance when changing the mill liners or during mechanical inspection. The mill creeping speed range is between 0.3 ... 2 rpm.

Term **cycloconverter**  
Acronym n/a  
Category product  
Application general  
Definition Type of frequency converter topology especially suitable for low frequency and high current application. It is used to run the gearless mill drive.

Term **cycloconverter control terminal**  
Acronym CCT  
Category product  
Application GMD  
Definition Touch screen panel mounted inside the MLCP to control and monitor the GMD system locally.

## D

Term **diagnostic inspection with rotor in situ**  
Acronym DIRIS®  
Category product  
Application GMD  
Definition A technology offering effective inspections of the motor slot wedges while the rotor remains in place.

Term **diode bridge**  
Acronym n/a  
Category product  
Application RMD, HPGR  
Definition Type of rectifier built of diodes that converts AC to DC voltage. Allows two-quadrant operation (motoring in two directions with no regenerative braking), maintains the power factor at 0.96 in the whole operating range.

Term **direct current**  
Acronym DC  
Category system  
Application general  
Definition Uni-directional flow or movement of electric charge whose polarity never reverses.

Term **direct torque control**  
Acronym DTC  
Category product  
Application RMD, HPGR  
Definition Direct torque control is an optimized motor control method for AC drives that allows direct control of all the core motor variables. In DTC, stator flux and torque are used as primary control variables. The motor state calculations are updated 40'000 times per second in the advanced motor software model by the high-speed digital processor. Due to the continuous updating of the motor state and the comparison of the actual values to the reference values, every single switching in the inverter is determined separately.

Term **distributed control system**  
Acronym DCS  
Category product  
Application general  
Definition System controlling industrial or manufacturing process in which the controller elements are not located centrally but distributed throughout the system with each component sub-system controlled by one or more controllers. The entire system of controllers is connected by networks for communication and monitoring. For example: The GMD system is connected to the DCS as part of the overall process control.

Term **downtime**  
Acronym n/a  
Category application  
Application GMD, RMD, HPGR  
Definition Time for which the mill is not operating.

Term **drive**  
Acronym n/a  
Category product  
Application general  
Definition A drive is an electronic device used to regulate the performance of an electric motor. It works by controlling frequency and voltage of the motor. The energy is supplied to the process through the motor shaft. Two physical quantities describe the state of the shaft: torque and speed. To control the flow of energy we must, therefore, ultimately, control these quantities.

Term **DriveMonitor™**  
Acronym n/a  
Category product  
Application RMD  
Definition An intelligent monitoring and diagnostics system, which allows secure access to the drive from any location in the world.

## E

Term **E-house**  
Acronym n/a  
Category product  
Application GMD, RMD, HPGR  
Definition Electrical container including all required equipment to control, monitor and protect the GMD or RMD system. It is pre-tested and pre-commissioned prior to shipment to reduce commissioning time on site.

Term **end user**  
Acronym n/a  
Category general  
Application general  
Definition Hyphenate (-) only when used as an adjective (end-user conference).

Term **exempli gratia**  
Acronym eg  
Category general  
Application general  
Definition Abbreviation stands for exempli gratia, meaning "for example".



## F

Term **factory acceptance test**  
Acronym FAT  
Category application  
Application general  
Definition Test made in the factory to approve the design and the manufacturing in accordance with the requirements.

Term **fire-fighting system**  
Acronym n/a  
Category product  
Application general  
Definition Equipment used to prevent, extinguish, localize, or block fires in enclosed spaces. Fire-fighting systems are installed in buildings and rooms where the fire hazard is comparatively high. A fire-fighting system includes a sensor capable of detecting combustion, alarm signaling devices, fire-extinguishing equipment, starting and stopping devices, and feeders for the fire-extinguishing substance; in some cases, it includes control equipment for the production process being protected. Atomizers, foam generators, and pipe nozzles form and direct the stream of the fire-extinguishing substance, which may be a liquid, foam, powder, or gas. Fire-extinguishing substances are fed into the system from a centralized supply from self-contained or combined feeders.

Term **frequency converter**  
Acronym n/a  
Category product  
Application general  
Definition see drive

Term **firing angle**  
Acronym n/a  
Category product  
Application GMD  
Definition Control angle representing the start of thyristor conduction.

Term **foot mounted**  
Acronym n/a  
Category system  
Application GMD  
Definition Ring motor is mounted on the base. This design is used for mills up to 26 feet in diameter.

Term **frozen charge protection**  
Acronym n/a  
Category application  
Application GMD, RMD  
Definition Detection during the mill starting process to prevent any sedimented and/or frozen charge to break the mill/motor arrangement.

Term **frozen charge remover**  
Acronym n/a  
Category application  
Application GMD, RMD  
Definition When the mill charge is sedimented and/or frozen, this function allows to release the load and to cascade it at the design value.

## G

Term **GAP-Watch™**  
Acronym n/a  
Category product  
Application GMD  
Definition Monitoring system designed to constantly measure the length of the air gap between the stator and the rotor of the ring motor while the mill is rotating. The measurement provides a real-time overview of the air gap along the complete circumference of the motor.

Term **gearbox**  
Acronym n/a  
Category system  
Application RMD  
Definition Mechanical equipment that consist of gears and gear trains. It transmits mechanical energy by converting speed and torque from the motor to the mill pinion.

Term **gearless mill drive**  
Acronym GMD  
Category system  
Application GMD  
Definition System solution used in the cement and mineral industry to drive grinding mills, consisting of converter transformers, frequency converter, ring motor and auxiliaries. Especially suited for large power requirement, it has a high value of efficiency and availability.

Term **greenfield**  
Acronym n/a  
Category application  
Application general  
Definition Site project earmarked for commercial and/or industrial development, with no need to demolish or rebuild existing structures or without the need to consider any prior work.

## H

Term **harmonic**  
Acronym n/a  
Category system  
Application general  
Definition Signal with a frequency which corresponds to a multiple (integer or not) of the base frequency.

Term **harmonic filter**  
Acronym HF  
Category system  
Application general  
Definition Device used to damp the harmonics created by an electrical circuit.

Term **heating, ventilation and air conditioning**  
Acronym HVAC  
Category system  
Application general  
Definition Technology of indoor or automotive environmental conditions.

Term **high pressure grinding rolls**  
Acronym HPGR  
Category drive system  
Application HPGR  
Definition Grinding equipment that consists of two counter rotating rolls (one floating, one fixed) enclosed in a strong frame. Pressure is applied to the floating roll by means of a hydro-pneumatic spring system while the other is fixed in the frame. The material feed is introduced by a hopper mounted above the rolls, between which it is compressed under high pressure giving rise to breakage amongst the individual particles. This process is called inter-particle comminution.

Term **high-speed solution**  
Acronym HSS  
Category system  
Application RMD  
Definition A drive system, which consists of a transformer, a drive, a mill controller and one or two high-speed machines (typically 900-1200rpm) connected to a gearbox, which transmit the required torque to the mill pinion (see also low speed solution) with lower speed.

Term **human machine interface**  
Acronym HMI  
Category product  
Application general  
Definition The user interface in a manufacturing or process control system. It provides a graphics-based visualization of an industrial control and monitoring system. It resides in an office-based computer that communicates with a specialized computer in the plant such as a programmable logic controller (PLC) or distributed control system (DCS).

## I

Term **id est**  
Acronym ie  
Category general  
Application general  
Definition id est means “that is”

Term **Insulated Gate Bipolar Transistor**  
Acronym IGBT  
Category product  
Application RMD  
Definition Power electronic semiconductor, acts like a commutating switch.

Term **Integrated Gate Commutated Thyristor**  
Acronym IGCT  
Category product  
Application RMD  
Definition Power electronic semiconductor, acts like a commutating switch.

Term **induction motor**  
Acronym n/a  
Category product  
Application RMD  
Definition see Machines

Term **inspection and test plan**  
Acronym ITP  
Category product  
Application general  
Definition Plan defining the test (routine, type and witness test) made on equipment before shipment.

Term **inching**  
Acronym n/a  
Category application  
Application GMD, RMD  
Definition Running the mill at very low speed for maintenance purposes.

Term **interlock**  
Acronym n/a  
Category system  
Application general  
Definition Arrangement of hard-wired signal preventing unexpected start-up of the system.

Term **inverter**  
Acronym n/a  
Category product  
Application RMD  
Definition An electrical device for converting direct current (DC) into alternating current (AC)(Also see rectifier).

## J

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# K

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# L

Term **life cycle**  
Acronym n/a  
Category application  
Application general  
Definition Cycle time between conception and obsolescence of equipment and/or project. The main phases of the life cycle are conception, design, realization and service.

Term **load sharing**  
Acronym n/a  
Category system  
Application RMD, HPGR  
Definition Capability of sharing the torque equally between the pinions in a dual pinion ring-gearred mill configuration.

Term **low voltage**  
Acronym LV  
Category system  
Application general  
Definition Write “low voltage”, but when used as adjective: low-voltage switchgear.  
According to IEC, voltage range between 50 VAC and 1 kVAC or 120 VDC and 1.5 kVDC.

Term **low-speed solution**  
Acronym LSS  
Category system  
Application RMD  
Definition Drive system, which consists of transformers, a drive, a mill controller and one or two low-speed machines (typically 180-200rpm) connected directly to the mill pinion (see also high-speed solution).

# M

Term **machines**  
Acronym n/a  
Category product  
Application general  
Definition Motors and generators are collectively referred to as “machines” or “electric machines.” Motors are machines that convert electrical energy into mechanical work in the form of a rotating shaft, while generators convert the mechanical work of a rotating shaft into electricity. The speed of a “synchronous” machine, i.e., the rate at which its shaft rotates, is dictated by the frequency of electricity in the grid to which it is connected. The speed of a synchronous machine is accurately predictable. This means that it maintains its speed irrespective of the load placed on it. The speed of an asynchronous machine is slightly slower than the frequency of the electricity it consumes or generates. Asynchronous motors slow down as their load increases and asynchronous generators change speed with the torque (rotational force) that is applied to their rotors. Asynchronous machines are also referred to as induction motors.

Term **main circuit breaker**  
Acronym MCB  
Category product  
Application GMD, RMD, HPGR  
Definition Circuit breaker controlling the main supply of the GMD and RMD system.

Term **manufacturing message specification**  
Acronym MMS  
Category product  
Application general  
Definition International standard dealing with messaging system for transferring real-time process data and supervisory control information between networked devices and/or computer applications. The data exchange between the AC800PEC drive controller and the ABB PLC is based on the MMS protocol which uses Ethernet as the physical data transport layer.

Term	<b>medium voltage</b>
Acronym	MV
Category	system
Application	general
Definition	Write “medium voltage”, but when used as adjective: medium-voltage switchgear. According to ANSI/IEEE, voltage range between 1 kVaAC and 35 kVDC.
Term	<b>mill controller</b>
Acronym	n/a
Category	system
Application	GMD, RMD
Definition	Specific controller used to control all grinding mill functionalities and protection.
Term	<b>mill local control panel</b>
Acronym	MLCP
Category	product
Application	GMD, RMD
Definition	Panel installed locally at the motor to control and monitor the GMD or RMD system locally during maintenance mode.
Term	<b>mill overload detection</b>
Acronym	n/a
Category	application
Application	RMD, GMD
Definition	If the mill is overloaded, the drive protects itself from overcurrent by reducing the speed. For mill applications, if the speed reduces then the material flow decreases and the load inside the mill can increase. The torque limits and speed are monitored to detect this behavior and stop the drive in case an overload is detected.
Term	<b>mill power ride-through</b>
Acronym	n/a
Category	application
Application	GMD, RMD
Definition	Controls the drive during ride-through so it can cope with network disturbances and voltage dips without stopping the mill. This function also provides smooth acceleration back to the speed set point after the supply voltage recovers, thus reducing the mechanical stress of the drive train.
Term	<b>mill turn 180°</b>
Acronym	n/a
Category	application
Application	GMD, RMD
Definition	Controlled half revolution of a grinding mill (for cement industry only).
Term	<b>motor control center</b>
Acronym	MCC
Category	product
Application	general
Definition	Assembly of one or more enclosed sections having a common power bus and principally containing motor control units to govern in predetermined manner the performance of an electric motor. Motor control centers are in modern practice a factory assembly of several motor starters. A motor control center can include variable frequency drives, programmable controllers, metering and protection.

## N

Term	<b>norms and standards</b>
Acronym	NS
Category	system
Application	general
Definition	Rules regulating the practice to design, to manufacture and to test equipments.

## O

**Term** **object linking and embedding**  
**Acronym** OLE  
**Category** product  
**Application** general  
**Definition** Industrial connectivity standard that enables the transfer of automation data between automation hardware and software. The OPC foundation is responsible for defining and maintaining all OPC specifications. OPC is based on client/server technology. OPC is a function library which provides a common API (Application Programming Interface) for automation systems.

**Term** **OLE for process control**  
**Acronym** OPC  
**Category** product  
**Application** general  
**Definition** OPC stands for OLE for process control. OPC is a published industrial standard for system interconnectivity. The OPC foundation maintains all the OPC specifications. It enables applications to exchange data on one or more computers using a client/server architecture. OPC defines a common set of interfaces. So applications retrieve data in exactly the same format regardless of whether the data source is a PLC, DCS, gauge, analyzer, software application or anything else. As a result, OPC is as an out-of-the-box, plug and play communication solution.

**Term** **on site/off site**  
**Acronym** n/a  
**Category** general  
**Application** general  
**Definition** example: "He is currently on site".

**Term** **on-site/off-site**  
**Acronym** n/a  
**Category** general  
**Definition** Example where the term is used as adjective: "He sent us the report of the on-site inspection".

**Term** **online**  
**Acronym** n/a  
**Category** general  
**Application** general  
**Definition** Do not write "on-line".

**Term** **open-loop control**  
**Acronym** n/a  
**Category** system  
**Application** general  
**Definition** Type of control system that computes its input into a system using only the current state and the model of the system. The open-loop control does not use feedback to determine if its output has achieved the desired goal of the input.

**Term** **overduty cycle mode**  
**Acronym** n/a  
**Category** application  
**Application** RMD, GMD  
**Definition** Allows the drive system to generate additional torque for a certain amount of time in order to reduce load inside the mill when overloaded.

## P

**Term** **partial discharge**  
**Acronym** PD  
**Category** system  
**Application** general  
**Definition** Localized dielectric breakdown of an electrical insulation system under high voltage stress.

Term **pedestal mounted**  
Acronym n/a  
Category system  
Application GMD  
Definition The ring motor is mounted on the sides, approximately half way up the motor height, on pedestals built on the base. This design is mostly used for mills larger than 26 feet in diameter.

Term **pinion**  
Acronym n/a  
Category system  
Application RMD  
Definition A pinion is a round gear used to transmit the torque from the motor to the ring-gear mill.

Term **power electronics controller**  
Acronym PEC  
Category product  
Application general  
Definition ABB-embedded control platform used for the control of the cycloconverter. It also controls digital and analogue signals necessary to control, protect and monitor the gearless mill drive system (see AC800PEC).

Term **power factor**  
Acronym PF  
Category system  
Application general  
Definition System in an electrical circuit; angle between the voltage and the current. It also reflects the contribution of apparent, active and reactive electrical power in a supplied circuit.

Term **power factor correction**  
Acronym PFC  
Category system  
Application general  
Definition Correction of the power factor to maximize its value close to 1.

Term **process field bus**  
Acronym PROFIBUS  
Category system  
Application general  
Definition Process field bus. Industrial control standard for field bus communication in automation technology.

Term **programmable logic controller**  
Acronym PLC  
Category product  
Application general  
Definition Microprocessor device that controls a dedicated process through digital and analogue signals.

Term **pulse**  
Acronym n/a  
Category system  
Application general  
Definition Current pulsations created by rectifiers in a power electronic system. Its value reflects the type of network and the topology of the rectifier. In GMD systems, depending of the power rating 12-pulse or 18-pulse are commonly used. In RMD systems 12-, 18- or 24-pulse. Write: 12-pulse/18-pulse converter.

## Q

Term **quadrant (4-quadrant)**  
Acronym n/a  
Category system  
Application general  
Definition A sector equal to one quarter of a circle, which defines in which mode the motor is acting.  
I and III quadrant: Torque and speed have same direction, so the drive is accelerating (motoring).  
II and IV quadrant: Torque is in the opposite direction than speed, so the drive is decelerating (braking).

## R

Term **rectifier**  
Acronym n/a  
Category product  
Application general  
Definition An electrical device used to convert alternating current (AC) into direct current (DC). Also see inverter.

Term **regenerative braking**  
Acronym n/a  
Application general  
Definition Braking (operation modes in quadrants II and IV) of a load by means of reversing the power flow from the load to back the network as opposed to thermally dissipating the rotating energy of the load into mechanical brake or a resistor (braking chopper).

Term **ring motor**  
Acronym n/a  
Category product  
Application GMD  
Definition Motor built around its driven equipment allowing direct magnetic torque transmission. Especially used for high power and high torque applications rated above possible mechanical transmission. Avoiding a mechanical gearbox, the system provides very high efficiency and availability.

Term **ride-through**  
Acronym n/a  
Category system  
Application GMD, RMD, HPGR  
Definition The capability of a drive system to stay alive during a voltage drop or a voltage loss. The drive sets the torque reference to zero. The mill will start to slow down and the drive takes the energy of the still rotating machine to stabilize (motor is in generator operation). The drive stays in ride-through mode until either main power is back to normal conditions or the machine speed reaches 10% rated speed. In the latter case the drive trips.

Term **ring gear**  
Acronym n/a  
Category system  
Application RMD  
Definition A gear cut on a ring shaped rim, which is mounted around the mill.

Term **ring-gear mill drive**  
Acronym RMD  
Category system  
Application RMD  
Definition Mill configuration where the torque generated by the motor is transmitted via a pinion (sometimes through a gearbox) to the ring gear, permitting the mill to turn.

## S

Term **squirrel cage motor**  
Acronym SCM  
Category product  
Application RMD  
Definition Asynchronous machine type that has the rotor short-circuited, looking like a squirrel cage. (Also see machines).

Term **semiautogenous mill**  
Acronym SAG  
Category application  
Application GMD, RMD  
Definition Rotating drum used to reduce the size of raw material by the projection and the self-gravity of the material itself. A SAG mill works by means of 10% additional metallic balls charge.



Term	<b>service mode</b>
Acronym	n/a
Category	system
Application	RMD
Definition	Mode set on the drive, which allows to perform maintenance on the mill, such as creeping, inching or automatic positioning.
Term	<b>short-circuit power</b>
Acronym	n/a
Category	system
Application	general
Definition	Power available in an electrical circuit when it is short-circuited. The value defines the stability of the circuit under its normal loading condition.
Term	<b>shutdown (the)/ to shut down</b>
Acronym	n/a
Category	general
Application	general
Definition	One word when used as a noun. Two words when used as a verb.
Term	<b>snubber circuit</b>
Acronym	n/a
Category	system
Application	general
Definition	Device damping the transient signal during the control and the commutation of power electronic switch.
Term	<b>stall protection</b>
Acronym	n/a
Category	application
Application	general
Definition	Protection used to avoid overloading situation while the mechanical driven equipment is locked.
Term	<b>standstill detection</b>
Acronym	n/a
Category	application
Application	GMD, RMD
Definition	Detects if the motors are at standstill before the operator is allowed to start the mill again. This function protects the mechanical system from the stress of starting the mill when it is still rocking.
Term	<b>startup (the)/ to start up</b>
Acronym	n/a
Category	application
Application	general
Definition	Act of starting for the first time a system or an installation. Write: one word when used as a noun. Two words when used as a verb.
Term	<b>static converter</b>
Acronym	SC
Category	product
Application	general
Definition	Static device using power electronics to convert the line power flow in a different frequency and/or voltage and/or current.
Term	<b>SupportLine</b>
Acronym	n/a
Category	service
Application	general
Definition	Hotline to support users with technical problems related of GMD systems. Phone: +41 (0) 844 845 845 Fax: +41 (0) 58 586 73 08 E-mail: minerals.supportline@ch.abb.com

Term **synchronous condenser**  
Acronym SC  
Category application  
Application general  
Definition Device identical to a synchronous motor, where the shaft is not connected to anything but spins freely. Its purpose is to adjust conditions on the electric power transmission grid. It either generates or absorbs reactive power to adjust the grid's voltage or to improve power factor.

Term **synchronous motor**  
Acronym SM  
Category product  
Application GMD, RMD  
Definition see machines

## T

Term **tension easy check**  
Acronym TEC16  
Category service  
Application GMD  
Definition Maintenance tool used to check and reset the preload on the ring motor core bolts during maintenance actions. This tool is designed for core bolts with thread M16.

Term **test certificate**  
Acronym TC  
Category system  
Application general  
Definition Document certifying the conformity of the equipment under the appropriate norms and standards.

Term **test instruction**  
Acronym TI  
Category system  
Application general  
Definition Process under which the tests of the equipment have to be executed.

Term **Thyristor**  
Acronym n/a  
Category product  
Application general  
Definition Power electronic semiconductor with controllable turn-on capability.

Term **ton**  
Acronym n/a  
Category product  
Application general  
Definition Plural = tons/Do not write: tonne

Term **transient recorder**  
Acronym n/a  
Category system  
Application GMD  
Definition Device used to record the signals of the GMD system at a fast sampling rate to the VMS system. Especially helpful during test, start-up and troubleshooting.

Term **trapezoidal mode**  
Acronym n/a  
Category product  
Application general  
Definition Type of supply control voltage optimized to enhance the performance of the motor while minimizing the side effect of the cycloconverter to the network.

## U

Term	<b>uninterruptible power supply</b>
Acronym	UPS
Category	product
Application	general
Definition	Device that provides energy backup when the electrical power supply fails or drops to an unacceptable voltage level.

## V

Term	<b>video monitoring system</b>
Acronym	VMS
Category	product
Application	GMD, RMD
Definition	Systems monitoring the signals relevant for the control, the operation and the protection of the GMD or RMD system and considered as HMI interface.

Term	<b>voltage source inverter</b>
Acronym	VSI
Category	product
Application	general
Definition	Type of frequency converter topology consisting of a rectifier, which creates a constant DC voltage and an inverter unit that creates the output voltage, which can be varied in amplitude and frequency. It is used to run the ring-gear mill.

## W

Term	<b>Wechselstrom Antrieb/Achsial Zement</b>
Acronym	WAZ
Category	product
Application	GMD
Definition	Denomination of the ring motor type. Followed by the bore diameter in cm, the active stator length in cm and the number of poles.

Term	<b>WIDIPRO</b>
Acronym	n/a
Category	service
Application	GMD
Definition	Equipment for diagnosing and investigating the condition of insulation and windings of electrical machines and apparatus.

Term	<b>work instruction</b>
Acronym	WI
Category	system
Application	general
Definition	Process under which the works have to be executed.

Term	<b>worldwide</b>
Acronym	n/a
Category	general
Application	general
Definition	Do not write "world wide".

## X

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## Y

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## Z

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# Contact us

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