#### Masa GmbH, 56626 Andernach, Germany

# 'Safety' with certainty

Masa has the complete expertise for the high-quality production of stones and slabs from lightweight and heavyweight concrete as well as lime-sand bricks and porous concrete stones in large batch sizes. The company thus covers production in all relevant material groups in the building materials industry with its plants, machines and components.

In the past years the requirements for the safety of industrial plants and, hence, also for plants for the manufacture of building materials have been continuously tightened. The new machine directive is now also to be accompanied by stricter monitoring of the market. In order to cater to this trend, Masa has concerned itself in detail with the topic for many years, has continuously amassed know-how and has adapted its internal organisational structures to the needs of the market.

The multitude of new laws, standards and other regulations has become very unclear for the customer. Therefore, Masa has acquired the necessary knowledge and experience in the solving of safety problems over the past years. Today, Masa is able to offer safety technology that is optimised for the individual customer, as well as being practically orientated and reliable. Both the plant operating personnel and the operating companies benefit directly due to a high degree of protection against industrial assistants.

For Masa, it is additionally important that the implementation of the corresponding standards takes place in close coordination with the customer, so that safety as well as convenient and economic plant operation are not mutually exclusive.

The comprehensive Masa safety concept consists of several intermeshed factors:

#### Safety from the outset

The design of a new plant begins with the risk evaluation and risk minimisation. As stipulated by the legislator, this process starts before the design and continues throughout the entire project. Each Masa designer has the company's own wealth of safety expertise at his disposal.

The safety concept drawn up corresponds to the latest legal standards. However, the broad wealth of experience offers further advantages and the focus at Masa is not exclusively on compliance with the respectively applicable legal requirements. In fact, Masa also continuously works on new technical solutions to increase the intrinsic safety of the plant components. Beyond that, Masa expressly attaches importance to the quality and the lifespan of the necessary safety devices. The components used are particularly well suited to the harsh everyday life in dusty, aggressive environments.

#### Mechanical and electrical safety devices

All safety-relevant plant components are secured by protective fences, appropriately secured entrances, safety light barriers, safety light curtains and devices adapted to the specific customer. Special robust transfer key systems offer extreme loadability and switching security. High productivity can be ensured by a stop/start behaviour specified individually for each component.

#### Safe production processes

The Masa safety concept is not only limited to the use of mechanical and electrical safety

devices, however. Plant safety and plant efficiency should not be mutually exclusive. Since every block making machine also has areas where product monitoring is necessary in direct proximity to plant components, Masa has developed a process that allows the machine operator a period of time of several machine cycles in which to safely inspect the quality or height of the products. On the so-called 'fresh' or production side, the Masa concept offers the possibility to safely check the stones without interrupting the actual production of the machine or the function of the downstream plant parts. The machine operator has sufficient time for this. The quality control on the dry side is also conceived in such a way that the operating personnel can easily sort out those products that do not meet quality requirements without loss of time in the block production. The plant components that the employee accesses during checking or during sorting out are, however, safely switched off.

## Technical documentation, safety videos, etc.

An important component in the creation of the Masa safety concept, apart from the internal risk evaluation and minimisation, is also the transfer of these findings to under-



Signs and other safety-relevant notices on plant components are decisive for the employees' safety understanding and sensitise them to possible sources of danger.



Safety interlock systems for the safe opening of doors – in combination with local release terminals for plant safety



Light curtain/light barrier



Securing method using a personal padlock

standable and comprehensive safety documents. Masa supplies explanatory technical operating instructions for each plant component that also provide important plant safety instructions. Beyond that, Masa has prepared comprehensive safety materials. These consist of written safety documentation and a safety video. The safety documentation initially describes the locations of potential hazards in the plant. These include, for example, dangers of being crushed and cut, electric shocks, fire or injuries due to falling. Furthermore, there is an explanation of why accidents occur, how safety precautions are complied with and how certain ('wrong') decisions can lead to hazards. In a further section, information is given on how to prevent accidents. Beyond that, recommendations are given for safe working practices. Work safety needs to be 'lived' by all employees. Internal company safety programs support this stance. Masa has prepared a safety video for its plants for all employees and for better visualisation. Possible sources of danger are shown in the video, in addition to which safe conduct is taught. The safety materials made available by Masa can only form a part of an overall internal company safety concept, however. Further important elements are, for example, personal protective equipment, the carrying out of regular safety inspections, the setting up of company-wide safety training or the attachment of safety notices.

Masa is one the pioneers in the field of safe plant design in the building materials industry and has many years of experience and know-how at its disposal. It is at the same time important to the company to develop an optimum safety concept in a common dialogue with the users - because plant safety is ultimately the result of a partnershiplike cooperation between user and manufacturer and only in this way can it lead to a safe and efficient plant. From a purely financial/material point of view, safety is also always associated with costs, but every accident prevented - regardless of which country - is worth this investment. That's why there is only 'one' safety concept for

### FURTHER INFORMATION

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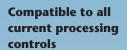
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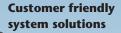


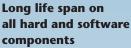
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Laboratory devices