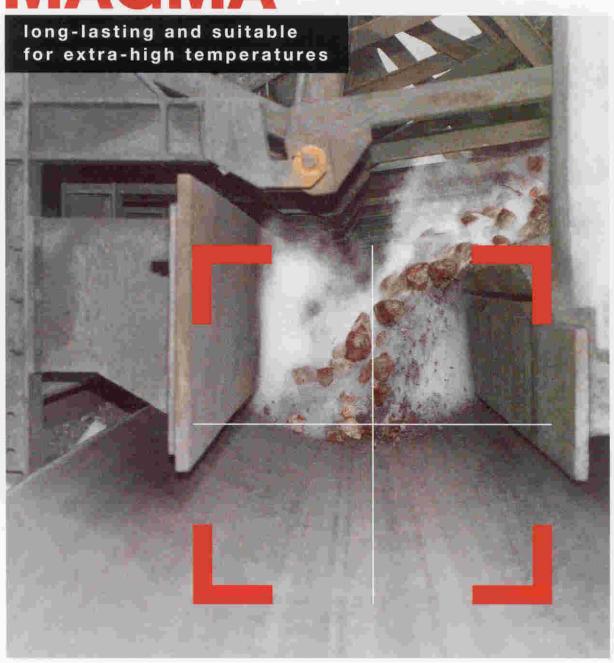


Conveyor Belts for Hot Materials

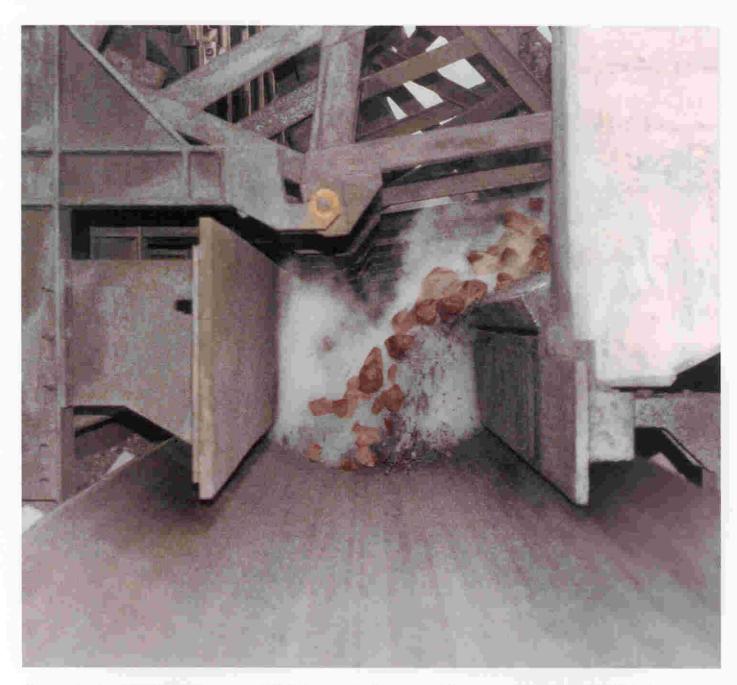
MAGMA





PHOENIX

Conveyor Belts for Hot Materials



Phoenix heat resistant conveyor belts have been successfully used for decades in the cement and iron and steel industries.

They ensure trouble-free operation at temperatures of up to 240°C and also brief peak temperatures that may far exceed this figure.

MAGMA range belts are used for conveying a wide variety of materials including cement, coke, slag, ash, moulding sand, clinker, etc.

In view of the increasing demands, the long experience of Phoenix in the handling of hot bulk materials was put to work in conjunction with practical test methods to develop the conveyor belt generation MAGMA.

The Test Methods

Phoenix has exploited the newest findings in the field of polymer materials in the development of this new generation of conveyor belts.

Two new test methods were evolved specially for MAGMA.

Over and above the usual methods of thermal ageing in accordance with DIN, ISO or international guidelines, these Phoenix test procedures provide valuable data for practical application and belt design.

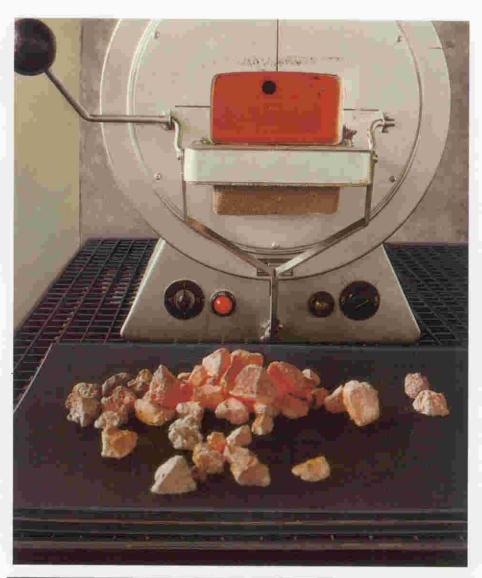
In addition they ensure highest quality with acceptance testing in accordance with the orderer's requirements.

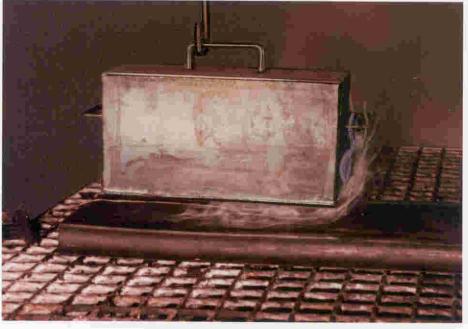
PHOENIX Shock Test

The behaviour of Phoenix hotmaterial conveyor belts is investigated by means of shock testing.

In this test, the various materials – the temperatures of which may be higher than 500 °C – are allowed to impinge on the belt specimens.

The Phoenix shock test simulates the influencing factors as experienced in practice from glowing pockets in the bulk material.





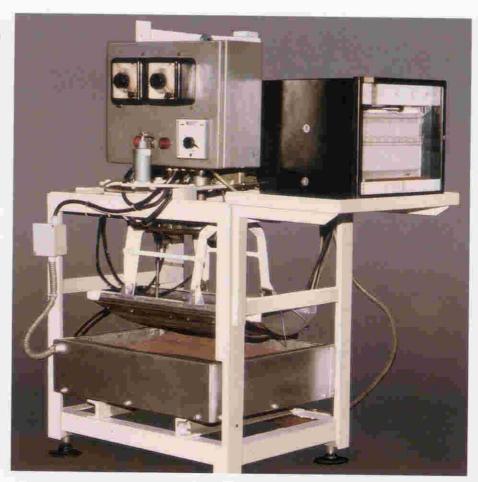
The Test Methods



The Phoenix continuous test rig simulates the conditions occurring in practical belt operation:

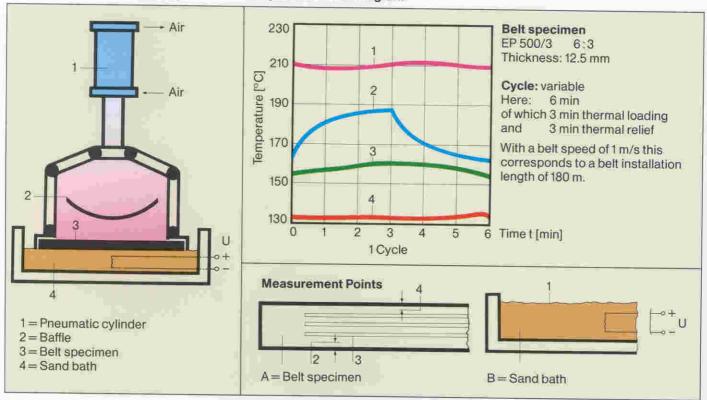
- conveyed material temperatures of up to 250°C
- thermal loading and relief: heating-up in the upper run cooling-down in the return run
- contact with exchangeable conveyed material
- duration of thermal loading and relief
- dynamic loading during reversal at pulleys.

With this test method the temperature is determined at each position of the test belt by means of thermocouples and is recorded over the duration of the test.



PHOENIX Continuous Test Rig

Temperature-Time Diagram



The Programme



With the MAGMA range of conveyor belts the plant operator is offered robust and long-life conveyor belts for handling hot materials under diverse thermal conditions.

The information given in the table alongside is for fine-grained conveyed material.

In the case of coarser-grained materials, higher temperatures than stated here are permissible.

Other factors to be taken into account are:

- length of belt installation
- belt speed
- ambient temperature
- facilities for belt cooling.

Belt Type	Additional Properties	Permissible Material Temperature in °C		
		min.	continuous	max.
MAGMA	. K	- 30	+ 150	+ 180
MAGMA PLUS	-	- 30	+ 180	+ 220
MAGMA EXTRA	flame resistant	- 30	+ 150	+ 180
MAGMA SUPER	acid resistant	- 30	+ 200	+ 240

The newly developed high temperature belts MAGMA are supplied in single-ply, two-ply or multy-ply construction.

MAGMA is offered as steel cord belt where high strength is required or where tensioning distances are very short.

Belt splicing of the MAGMA type can be done both with Phoenix and with suitable other commercial splicing materials for high-temperature applications.

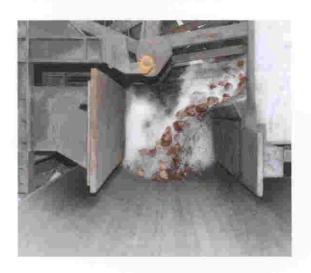
MAGMA PLUS, MAGMA EXTRA and MAGMA SUPER should be spliced only with appropriate Phoenix material.

Splicing lengths are the same as for conventional belt qualities.

Our specialists are glad to assist with all problems.

Descriptive material on the whole Phoenix conveyor belt range will be sent on request.





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