

# REPLACEABLE PRECAST KILN OUTLET SECTORS

# SIMPLIFY MAINTENANCE AND **INCREASE PRODUCTION**

A damaged sector at the kiln outlet can result in costly kiln stops for essential repairs. A new concept from FLSmidth prolongs the lifetime of kiln outlet sectors and drastically reduces the replacement time.

## Outlet sector system

The new outlet system consists of permanent sectors which are bolted directly to the kiln shell, two sets of hanging sectors which are precast before installation. The hanging sectors can simply be hung onto the permanent sectors without the need for drying and hardening before startup. The system furthermore includes a set of closing sectors, to ensure an efficient seal towards the cowl shell, thus minimising dust emissions from the kiln outlet.

The replaceable sectors are easy to handle, which helps minimise installation time. Replacing

a damaged sector is a very straightforward and efficient procedure. For a small investment, large benefits can be gained by reducing the replacement frequency of the outlet sectors and avoiding costly kiln stops.

## Increased control

In addition to improving kiln availability, the new concept provides increased control of the casting process. A second set of hanging steel sectors can be procured, to ensure that they are ready for installation during the next shutdown. This moves the casting process out of the kiln and into a controlled facility.

During installation of the sectors the kiln will be available for turning which makes installation and maintenance more flexible. Due to the fact that no drying is required after installation, up to two days can be saved when replacing the sectors.

## KEY BENEFITS

**Short  
installation time**

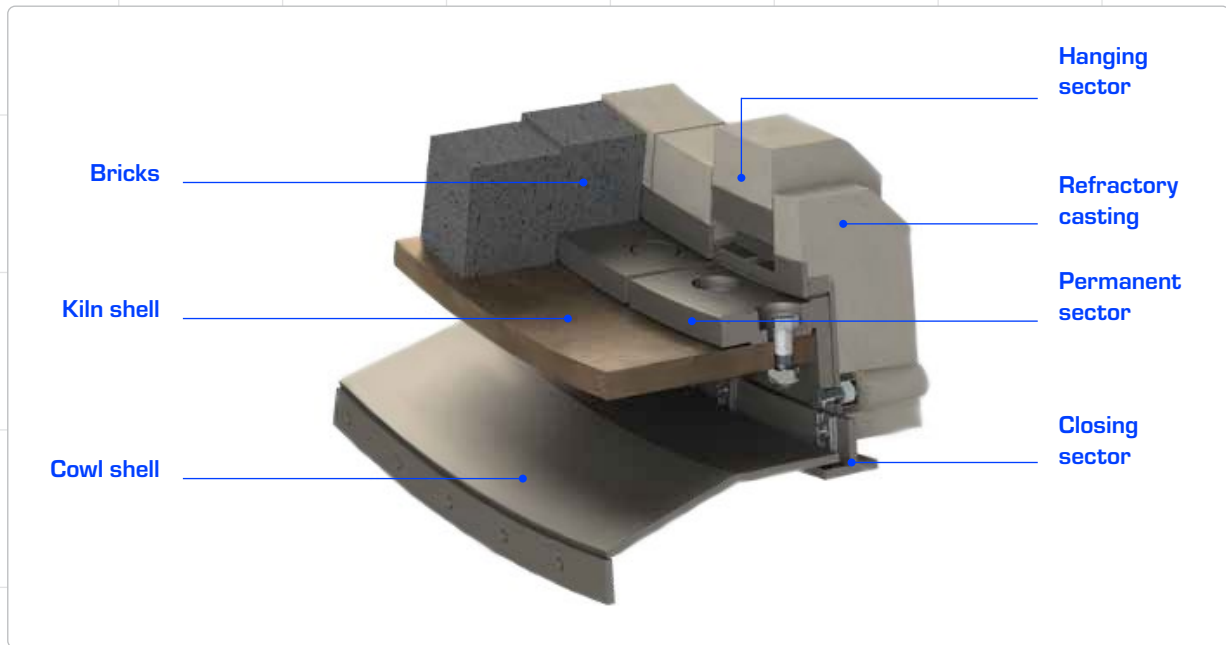
**Long  
lifetime**

**Reduces  
maintenance time**

**Reduces clinker  
dust emission**

**Can be installed  
on all kilns**

## SHORTENING DOWNTIME



### Installation procedure

1. Install a full ring of permanent sectors and bolt them to the kiln shell.
2. Attach the closing sectors and bolt them to the permanent sectors.
3. Hang two precast hanging sectors on each permanent sector and bolt them together.

### Scope of supply

The first purchase of the outlet sector system consists of:

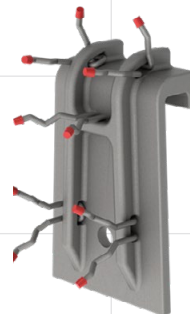
- A complete set of permanent parts (permanent sectors, closing sectors including fasteners)
- Two complete sets of hanging sectors delivered precast and ready for installation.
- Tools for handling and installation.

A low-porosity cement castable is specified by FLSmidth. The cement castable combines the best refractory properties of several natural,

high-alumina raw materials. The castable has high mechanical strength and excellent shock and abrasion resistance.

The life expectancy of the refractory casting exceeds a full production campaign, effectively more than doubling the lifetime compared with other outlet sectors on the market.

The extended lifetime allows sufficient time to procure the next set of hanging sectors with refractory casting.



HANGING SECTOR WITH ANCHORS



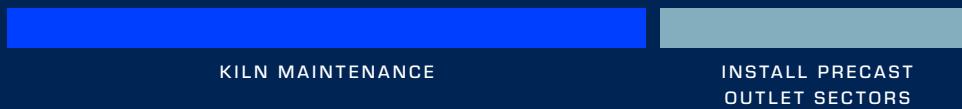
HANGING SECTOR WITH REFRACTORY CASTABLE

# IMPROVED MAINTENANCE SCENARIO

## TYPICAL MAINTENANCE SCENARIO:



## MAINTENANCE SCENARIO WITH FLSMIDTH PRE-CAST OUTLET SECTORS:



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