LIME KILN

UPPER CLOSURE

Application

Upper closure

This device has a very important role in the operation of the lime kiln. Its design allows, on one hand, to maintain adequate pressure in the process chamber of the kiln and, on the other, precisely distributes the input material inside the process chamber.

The upper closure is installed on the top section of the lime kiln. It consists of a charging throat equipped with a flap, after opening which a portion of feed material is loaded into the hopper. Inside the hopper there is a discharge cone. When the feed has been poured into the hopper and the upper flap is in the closed position, the process of emptying the hopper into the appropriate place in the kiln process chamber takes place. In the first phase the cone rotates to the desired position, then the lowering process is carried out and the mixture is introduced into the process chamber. The whole loading process ends with the cone being lifted to the closed position. The opening and closing movement of both the flap and the cone is performed with the use of a hydraulic aggregate. An electric motor is responsible for rotation of the cone.

In addition to normal operation of the kiln the upper closure is designed for initial loading of an empty lime kiln and preparing it for firing-up. After filling the portion of feed mixture into the hopper, the hopper with the cone moves down until its legs touch the surface of feed in the kiln. At this point, the bottom of the basket is opened and a portion of feed is poured out. The electric drive of the winch installed in the upper closure is responsible for the process of lowering the basket. The upper closure is equipped with sensors monitoring the movement of all parts of the device. Control depending on the mode of operation can be carried out remotely or locally.

Technical specification

WORKING CAPACITY	m^3	65	100	150	200	250	300	400
PORTION IN THE BASKET	kg	700	800	1200	1400	1500	1800	2000
ENGINE POWER	kW	1,5		3		4		7,5
WEIGHT	kg	6000	6245	7978	8114	9343	10349	12778

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