

## Project Report "K+S KALI GmbH, Philippsthal (DE)" Doors for Special Requirements in Underground Salt Mining



Ever more frequently, doors are being demanded for unusual surroundings and have to withstand very heavy loads there. Eleven installed stacking doors in a mine at a depth of 700 metres prove the expertise of Butzbach in the area of these type of special designs.

The installed doors are used for sealing off various areas within the mine in eastern Hesse in which the internationally positioned potash producer K+S KALI GmbH mines potash crude salt. The door filling of eight doors is made up of fibre-glass in the shade of Brilliant and three doors were equipped with a special filling. Despite the rough conditions, the doors

must ensure smooth operation underground every day. Due to the high salt content and the considerable amount of dust formed in the mine, the doors must also be particularly resistant to corrosion. The so-called "seawater-resistant coating" of the door elements ensures this. An additional significant demand on the part of the customer was the resistance to wind load of the 6x3-metre doors: Due to the high differences in pressure prevalent in the mine, the doors must withstand in total a wind load of 1.0 to 1.5 kN/m<sup>3</sup>.

The transport of the door elements 700 metres below the earth's surface (they were delivered in special packaging so that

they could then be transported down the shaft hanging from the pit cage) as well as the installation underground were also challenges in addition to the required product properties.