



Mobile Flood Defence System Hitzacker on the Elbe



The historic old town of Hitzacker is located at the mouth of the river Jeetzel into the river Elbe. Hitzacker has been badly affected by several floods in the past. During the Elbe flood in April 2006, the media reported extensively from Hitzacker, because of the devastating damage caused by a water level of 7.63 m, which has never before been reached. Planning was already underway with authorities and engineers searching for a solution, which would integrate the architectural design of the old town of Hitzacker and guarantee high operational reliability at the same time.

The contract section B-2 "mobile flood defence wall" was funded by the European Union, the Federal Republic of Germany and the state of Lower Saxony.

IBS, was awarded the contract for contract section B-2, due to its optimally adapted technical solution. The test assembly was carried out in November 2008.

As the Elbe is the westernmost river in Europe affected by melting snow, the ice load up to the height HQ 100 (+15.15 meters above mean sea level) had to be taken into account when designing the mobile wall. Aluminium profiles in conventional dimensions were not suitable for such loads. Therefore, two different types of dam beams are used in Hitzacker. Hot galvanized steel profiles are used up to HQ 100 level. The freeboard area is protected with conventional aluminium profiles.



Hot galvanized steel dam beams up to HQ 100 level



Centring logs on the foot of the post

So called centring logs were attached to the underside of the footplate at all centre posts, which ensure an exact fitting of the post on the anchor plate.

The post almost aligns itself independently above the anchor plate.



Exact fitting of the post through locking

In addition, safety is increased during construction, because the screw is inserted directly above the centring into the threads of the anchor plate so cants of the screw are mainly excluded.

Because the posts do not slip on the anchor plate damage to the foot seal is prevented thus providing an extended service life.

Constructor: JDV Jeetzeldeichverband (River Regulation Flood Control Works) Lüchow

Regulatory Authority: Lower Saxony State Office for Water Management, Coastal and Conservation – Site Lüneburg – (NLWKN)

Protection target: HQ 100 + 1,20m freeboard

Load criteria: hydr. water pressure + 45 kN/m ice load

Height: 0,7 – 1,5 m, up to 3,20 m in the dyke type as 2nd dyke security

Total length/area: 570 m / 820 m² incl. the 2nd dyke security in dyke type and openings