



## Mobile Flood Defence System Cologne on the Rhine – All Districts

The IBS was commissioned with an option contract concluded in late 2004 for the construction of all mobile walls to be used in the districts of Cologne. For the mobile flood defence system of the city of Cologne and for the project-specific requirements, IBS has developed a new generation of supports that are high-duty and at the same time optimised for low weight. The free standing support structures resulting thereof were examined in load and breaking tests for their deformation and fracture behaviour with the participation of principal representatives. All statically relevant structural components were also examined and released by an independent test engineer.



*The mobile HWS system in Cologne is considered to be the worldwide largest of its kind*

In all, the mobile system in Cologne comprises 3.300 supports and anchor plates and 35.000 dam beams on a total of 1.750 transport pallets. Such a row of numbers can only be achieved with industrial manufacturing, especially in view of ensuring the tight delivery deadlines. The IBS has the production and processing capacities that are required for this. At the same time, serial production ensures high precision and consistency of the required structural component quality.



*Corner support posts*



*Transit area with height transition*



*4.20 m high mobile support posts*



*Wermelskirchener Straße – one of eight storage facilities*

The mobile system of the IBS used in Cologne is predestined for the use in large mobile systems with flood heights of more than 1.50 m, especially in economical terms. All structure details relevant for the setup of thousands of individual parts have been optimised – from the anchoring technology to the storage and transport technology.

**Client:** Stadtentwässerungsbetriebe Köln, AöR

**Authorising Body:** District government of Cologne

**Protection Height:** HQ100 or 200 + 0,1 m freeboard

**Design criteria:** hydr. water pressure + 30 kN single load or 20 kN/m<sup>2</sup> dummy load

**Heights:** 0,30 m up to 4,20 m

**Length of the defence line/Area:** 9.500 m/14.000 m<sup>2</sup>