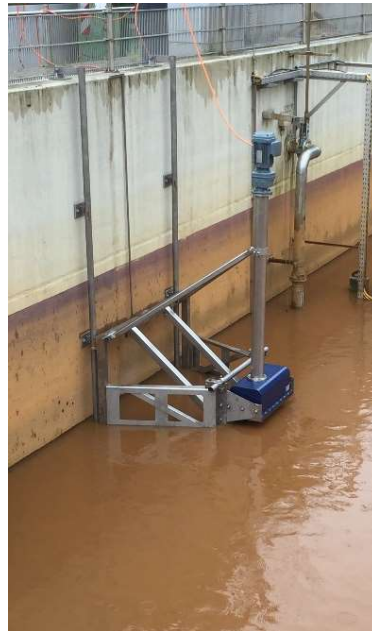
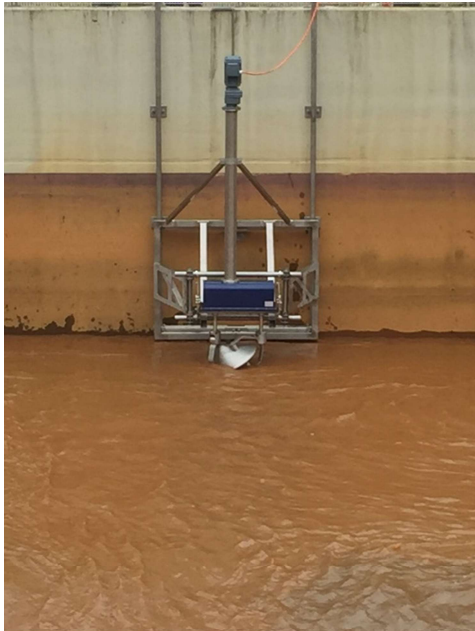




## Iron and manganese removal Water production, Hamburg, Germany



**HAMBURG WASSER**  
Hamburg  
<http://www.hamburgwasser.de>

**Operation:**  
1 Backwash water basin max. 880 m<sup>3</sup> with 1 OLOID Type 600 I with cardan-shaft drive and wall guide

**Period:**  
Since 2015 (2 OLOID Type 600)  
Since 09/2017 1 OLOID Type 600 I

**Success:**  
Homogenisation of the basin

Preventing settling of the solid iron

### Description of the plant

When drinking water is produced in a waterworks in the south of Hamburg, iron and manganese removal is necessary to treat groundwater into drinking water. The sludge-containing backwashing water resulting from the filter rinsing contains the removed iron and manganese. The separation of the sludge is no longer carried out in the basin by gravity, but in a special treatment plant. The clear water should be brought back into drinking water treatment prospectively. The rinsing water is collected in a settling tank (20 x 22 m). The sludge-containing water must be homogenised for subsequent treatment in order to ensure a constant concentration. Particularly difficult is the strongly fluctuating water level from 0 to 2 m.

### OLOID use

The OLOID Type 600 I ensures the necessary homogenization in the basin, so that no solids (especially iron) settle.



Before OLOID installation

After OLOID installation (see picture above)

### Conclusion

A more energy efficient homogenisation and levitation of the iron sludge is possible with the help of the innovative OLOID technology. The pivoting stream jet in planning consumes 11 kW and thus a multiple of the two OLOID Type 600 devices (approx. 800 W each). Thus, in a continuous operation of the two systems, cost savings result solely from the energy costs through the use of the OLOID technology.

By using an OLOID Type 600 I with wall guide (instead of 2 with floats), the flow velocity in the basin could be improved, resulting in further energy savings