Invoque™
SUSTAINABLE PERFORMANCE DEWATERING SOLUTIONS

Successful large-scale experiment in METHA plant of Hamburg Port Authority AöR, validated by CUTCET Institut GmbH, Clausthal-Zellerfeld

Generation of 1,000 tons of dry sediment using Invoque™ three-component high-performance dewatering process that contains no harmful chemicals.

The following benefits were delivered compared to the incumbent treatment:

- Enhanced dewatering rate by 15%
- Improved sediment shear strength by 27%
- 20% higher solids content in the dewatered sediment
- Increased batch throughput by up to 25%
- Created sustainable value chain for extracted sediments from River Elbe
- Easy to use, low complexity solution
- Reduced maintenance cycle and costs

DEWATERING RESULTS
LARGE-SCALE EXPERIMENT 2016
Solids content in %

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<thead>
<tr>
<th></th>
<th>2014</th>
<th>2016</th>
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<tbody>
<tr>
<td></td>
<td>62.6</td>
<td>71.7</td>
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DEWATERING RESULTS
LARGE-SCALE EXPERIMENT 2016

SHEAR RESISTANCE
LARGE-SCALE EXPERIMENT 2016
kN/sqm

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<thead>
<tr>
<th></th>
<th>2014</th>
<th>2016</th>
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<tbody>
<tr>
<td></td>
<td>57.3</td>
<td>72.8</td>
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<tr>
<td>Enhanced</td>
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<td>27%</td>
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INVOQUE™ BENEFITS

- Improved filtrate quality
- No added burdens
- Improved energy consumption
- Improved throughput
- Faster dewatering rates
- Broad applicability
- Cost efficient
- Environmental protection
- What is precious to you?